GUIDE TO THE NU31 SERI FILE

[The NU31 Seri file contains specific data on the Seri Indians. The Seri were located at approximately 112 N. latitude and 29 W. longitude in islands in the Gulf of California and the mainland of Sonora Mexico. The territory of the Seri has shifted considerably. When McGee visited the Seri in the 1890's they were primarily located on Tiburon Island. In 1930 Kroeber found them about equally divided between the island and the mainland. In 1952 about 80% of the Seri lived on the mainland in a settlement called Desemboque. The Seri called themselves Kunkaak or Kmike, the appellation "Seri" coming apparently from the Opata and translating as "spry." The entire area inhabited by the Seri lay within the climatic and vegetation zone of the Sonora Desert. The Seri subsisted mainly on turtles, fish, and other foods from the sea. They supplemented their diet with vegetable products which they collected, as well as game. Food was eaten raw. According to McGee, in 1780 the Seri numbered about 2,000. In 1955, Malkin counted 236, their numbers having been reduced by warfare and epidemics.

In the past the Seri were composed of from four to six subgroups who spoke different dialects of the Seri language, which is part of the Hokan Phylum (see 11: Moser for an extended discussion of these bands). The bands disappeared, however, and all sources report quite a homogeneous culture. According to Kroeber, the name Seri has been used in four different senses: 1) for the entire group of Serian speakers who composed the various bands, 2) for the inhabitants of Tiburon Island and the immediately adjacent mainland (McGee's sense), 3) for islanders associated with the missions around Hermosillo in contrast to those inhabiting Tiburon, and 4) for the modern mixture of all the Serian groups, both islanders and mainlanders (Kroeber's sense).

The line of descent of kin groups, which according to 11: Moser constitutes clans in Murdock's sense, seems to be quite a debatable point. According to McGee and 3: Davis and Dawson, these groups were clearly and definitively matrilineal. Kroeber says that his informant denied this, and Kroeber attributes the claim to the equation of primitivity and matrilineality by the Morgan school of anthropology. 11: Moser seems equally convinced that the kin groups were unequivocally patrilineal.

There are 12 sources in the Seri file, one of which is a translation from Spanish (6: Monzón). 1: McGee is a major monograph on the Seri, published in 1898. 2: Kroeber is a short ethnographic summary with a critique of McGee and Davis. 3: Davis and Dawson is a semi-popular cultural summary. The rest of the sources in the file consist of studies of more specialized subjects. 4 and 9: Malkin are studies of ethnozoology of the Seri, while 5: Dawson is on the ethnobotany. 6: Monzón is on social structure. 7: Marroquín is on problems of sanitation and disease. The author also makes recommendations for the alleviation of these problems and the integration of the Seri into Mexican culture. 8: Ascher is essentially a theoretical article on how ethnography can benefit archeology. He studied Seri harpoon shafts, inferring behavior from a quantitative analysis. 10: Davis is a report of a trip made to the Seri for the purpose of collecting items of material culture for a museum. 11: Moser is a discussion of the structure and organization of bands, which no longer existed at the time of his study. 12: Moser is a study of the methods of manufacturing "blue clay" which was used as a cosmetic, pottery paint, and as medicine. Data on "clans" will be found in both categories 614 and 618. Data on bands will be found in categories 619 and 642. The file was processed in 1961-1968.]

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THE SERI INDIANS

By W J McGee.

INTRODUCTION

Salient Features

Something has been known of the Seri Indians (Seris, Ceris, Ceres, Heris, Tiburones) since the time of Coronado, yet they remain one of the least-studied tribes of North America. The first systematic investigation of the tribe was made in the course of expeditions by the Bureau of American Ethnology in 1894 and 1895; it was far from complete.

The Seri Indians are a distinctive tribe in habits, customs, and language, inhabiting Tiburon island in Gulf of California and a limited adjacent area on the mainland of Sonora (Mexico). They call themselves *Kun-kaak* or *Kmike:* their common appellation is from the Opata, and may be translated "spry". Their habitat is arid and rugged, consisting chiefly of desert sands and naked mountain rocks, with permanent fresh water in only two or three places; it is barred from settled Sonora by a nearly impassable desert. Two centuries ago the population of the tribe was estimated at several thousands, but it has been gradually reduced by almost constant warfare to barely three hundred and fifty, of whom not more than seventy-five are adult males, or warriors.

The Seri men and women are of splendid physique; they have fine chests, with slender but sinewy limbs, though the hands and especially the feet are large; their heads, while small in relation to stature, approach the average in size; the hair is luxuriant and coarse, ranging from typical black to tawny in color, and is worn long. They are notably vigorous in movement, erect in carriage, and remarkable for fleetness and endurance.

The Seri subsist chiefly on turtles, fish, mollusks, water-fowl, and other food of the sea; they also take land game, and consume cactus fruits, mesquite beans, and a few other vegetal products of their sterile domain. Most of their food is eaten raw. They neither plant nor cultivate, and are without domestic animals, save dogs which are largely of coyote blood.

The habitations of the Seri are flimsy bowers of cactus and shrubbery, sometimes shingled rudely with turtle-shells and sponges; in some

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Juan Bautista", with "the small island San Augustín" lying before it (in such manner as to identify this islet with Isla Tasajue), and located "the large island Tiburon farther northward, opposite a mountainous coast".[1] He added:

> The waterless but cattle-stocked plains between the place Pitic and the coast, and thence up to the river Ascension, are inhabited by a meager remnant of the Seri tribe, while on Tiburon island, opposite this coast, the Tiburones dwell. The Seris were formerly very numerous, by far the fiercest of all the Indian tribes of northern Mexico, and very warlike. Through ceaseless war with the Tibaroneс and the troops from the Spanish presidios they are now nearly extinct.[2]

Elsewhere the Tiburones were characterized as enemies of the Seri,[3] while the "Heria" tribe was enumerated as a branch of the "Pimas Bajas" people. Herr Mühlenpfordt's characterization of the Seri and the Tiburon islanders as enemies would appear to be groundless, yet not wholly incomprehensible; in the first place, the earlier literature indicates that the term Seri (Seris, Ceris, Herts, etc.) was an alien designation of lax application,[4] doubtless extended occasionally or habitually to marauding nomads, regardless of affinity; again there is conclusive evidence that in many instances Seri convert-captives attached to the missions and pueblos were often regarded as tribal apostates and outlaws whose lives were forfeit; and, moreover, the region in which Herr Mühlenpfordt gained his information was and still is one of abounding tale, whose frequent exaggeration and not infrequent invention conceal and distort the simple facts.

In 1850, Don Diego Lavandera transmitted to the Mexican Society of Geography and Statistics, through the hands of Señor José F. Ramirez, certain documents, accompanied by a note to the effect that "The tribe of the Seris speak Arabic, and it is understood by the Moors at the first interview"—this note merely expressing a prevailing current opinion. Undertaking to test the opinion, Señor Ramirez sent to Lavandera, in Sonora, a number of words in three Arabic dialects, at the same time asking for the Seri equivalents; and the inquiry yielded a Seri vocabulary (probably the first ever printed) of eleven words. Of these none show the slightest affinity with the Arabic dialects; at least four (horse, chamber, population, wine) express concepts alien to the Seri; and only three or four can be identified with Seri terms recorded in later vocabularies. No reference is made to Señor Lavandera's aboriginal informant; but there is a strong presumption that it was the official interpreter at Hermosillo and Pueblo Seri—a presumption

[1] "Versuch einer getreuen Schilderung der Republik Mexiko besonders in Beziehung auf Geographie, Ethnographie, und Statistik": Hannover, 1844, Band I, p. 441; Band II, p. 445. [113]

[2] Ibid., Band II, pp. 479-480.

[3] Ibid., Band, I p. 230.

[4] Pimentel defines "Seris" as the "name of a tribe of Sonora, originating probably in the Opata language" (Cuadro descriptivo y comparativo de las lenguas indígenas de México—Memoria sobre las Lenguas Indígenas de México, 1862, p. 225); while Pimentel defines two suggestively similar Opata words, "*Serarai*, paso mesurado y bueno", and "*Siverái*, velocidad de la persona que corre" (Vocabulario Manual de la Lengua Opata, Bol. Soc. Mex. Geog. y Estad., tomo v, 1863, p. 366), i. e., a good and direct pace, and the speed of a person running, respectively (cf. postea, p. 125). [101]

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be defined (apparently on the basis of the Tenochtlo vocabulary systematized and published by Pimentel) as a distinct linguistic family with two dialectic branches,[1] viz:

IX FAMILIA.—SÉRI.

XXXIII. *Séri*, por los séris, séris, tiburones, tepocas, salineros, en Sonora.
61. I. *Upanguaima*, por los upanguaimas, en Sonora.
62. II. *Guaima*, por los guaimas, guaymas, guayamas, cocomaques, en Sonora.

Orozco's map assigns to the Seri family an immense area (recalling Villa-Señor's "despoblado") extending from just above the mouth of the Yaqui, northward to the thirtieth parallel on the coast, stretching inland nearly to Cucurpe, Opodepe, and Ures, and including Tiburon; the "Salineros" lying adjacent to the coast in the north, the "Tepocas" medially, and the "Guaymas" in the south, within this area. In elucidating the map he wrote, under the title "El séri.—El upanguaima.—El guaima":

The Séris, a tribe inhabiting Sonora, forms, with its subtribes, a separate family. By their language, by their customs, and by their physiognomy, they are completely set apart from affiliation with the surrounding nations; and apparently they have lived in the district which they now occupy from times anterior to the establishment of the Pima race and its affines; their use of poisoned arrows recalls the Caribs of the Islands, as well as of the continent, and it seems not unlikely, although very curious, that they are related to them. The Séris, known also as Tiburones, a name derived from the island of Tiburon in the Mar de Cortés, which serves them as a shelter, considered as parts of their tribe the Tepocas and the Salineros.

The "Upanguaima" (a very small tribe occupying the Seri border) and the "Guaimas", as well as the "Cocomaques" were combined chiefly on the authority of Jesuit writers.[2] In describing the State of Sonora he further wrote:

The Séris, bounded by the sea on the west, the Pimas Altos on the north, the Opatas and the Pimas Bajos on the east, and the pueblos of Rio Yaqui on the south, form the smallest nation of Sonora, but at the same time the most cruel and deceitful and the least capable of reduction to political organization. Hardly uniting with the smaller pueblos as at Populo and Belen, the rest of the nation engaged so constantly in cruel warfare that it was necessary to persecute and exterminate them. . . . Small as was the tribe, three divisions are known: the Salineros, extending to the confines of Pimeria Alta; south of them the Tepocas, nearest to the island of Tiburon; the Guaymas and Upanguaymas occupying the territory adjacent to the harbor of the same name, afterward added to the pueblo at Belen and blended with the Indians of Rio Yaqui. Ferocious and savage, they preferred to die in war against the whites rather than adopt their usages and customs; lazy and indolent, they so surrendered themselves to the passion of intoxication that mothers conveyed aguardiente from their mouths to the smallest babes. They are tall and well formed, the women not lacking in beauty. The poison with which they envenom their arrows is proverbial for deadly effect; they compound the venomous juice from a multitude of ingredients and fortify the compound by superstitious practices.[3]

[1] Geografía de las Lenguas y Carta Etnográfica de México, Precedidas de un Ensayo de Clasificacion de las Mismas Lenguas y de Apuntes para las Inmigraciones de las Tribus, por el Lic. Manuel Orozco y Berra; Mexico, 1864, p. 39.
[2] Ibid., p. 42.
[3] Ibid., pp. 253-254.

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TRIBAL FEATURES

Definition and Nomenclature

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According to Mashém and the clanmother known as Juana Maria, the proper name of the tribe known as Seri is *Kunkáak* (the first vowel obscure and the succeeding consonant nasalized; perhaps *Kⁿ-kiak* or *Kⁿ-kiak* would better express the sound). According to Kolusio, as rendered by M. Pinart, the Seri term for people or nation is *kom-kak*, while the Seri people are designated specifically as *Kmike*, this designation being practically equivalent phonetically (and doubtless semantically) to Sr Tenochio's general term for women, *kamykij*. Mashém was unable or unwilling to give the precise signification of the tribal appellation used by him, merely indicating Juana Maria and one or two other elderwomen squatting near as examples or types; but comparison of the elements of the term with those used in other vocables affords a fairly clear inkling as to its meaning. The syllable *kun* (or *kⁿ*, *kou*, *kom*, etc.) certainly connotes age and woman, and apparently connotes also life or living (*kun-kaie*=an old woman, McGee; *i-kom* =a wife, *ékam*=alive, Bartlett; *kikkam*=a wife, *kmam-kikamman*=a married woman, *Yak kom*=Yaqui tribe, Pinart; *kun-kabre*=an old woman, Tenochio), the forms being distinct from the word for woman (*kmamm*, McGee; *ék-e-mam*, Bartlett; *kmam*, Pinart and Tenochio) and widely different from the term for man (*kä-tämm*, McGee; *ék-e-tam*, Bartlett; *ktam*, Pinart; *tam*, Tenochio) with its several combining variants; there are also indications in numerous vocables that it connotes person or personality. On the whole, the syllable appears to be an ill-formulated or unerystallized expression, denoting at once and associatively (1) the state of living or being, (2) personality, (3) age or ancientness (or both), and (4) either femininity or maternity (much more probably the latter), this inchoate condition of the term being quite in accord with other characters of the Seri tongue, and frequently paralleled among other primitive languages. The syllable *kuak* (or *kak*, and probably *kok*, *koj*, *koick*, etc.) would seem to be a still more vague and colloidal term, despite the fact that it is used separately to designate the fire-drill. There are fairly decisive indications that it is composite, the initial portion denoting place and the final portion perhaps more vaguely connoting class or kind with an implication of excellence, both elements appearing in various vocables (too numerous to quote). On the whole, *kuak* would appear to be a typical egocentric or ethnocentric term, designating and dignifying Person, Place, Time,

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and Mode, after the manner characteristic of primitive thought;[1] so that it may perhaps be translated "Our-Great-(or Strong-)Kind-Now-Here". The combination of the two syllables affords a characteristically colloidal connotation of concepts, common enough in primitive use, but not expressible by any single term of modern language; in a descriptive way the complete term might be interpreted as "Our-Living-Ancient-Strongkind-Elderwomen-Now-Here," while with the utmost elision the interpretation could hardly be reduced beyond "Our-Great-Motherfolk-Here" without fatal loss of original signification. It should be noted that the designation is made to cover the animals of Seriland (at least the zoic tutelaries of the tribe) and fire as well as the human folk.

The proper tribe name is of no small interest as an index to primitive thought, and as an illustration of an early stage in linguistic development. It is significant, too, as an expression of the matronymic organization, and of the leading rôle played by the clanmothers in the simple legislative and judicative affairs of the tribe; and it is especially significant as an indication of the intimate association of fire and life in primitive thought.

The designation "Seri", with its several variants, is undoubtedly an alien appellation, and neither Mashém nor Kolusio could throw light on its origin or meaning, though they did not apparently regard it as opprobrious. Peñafiel describes it as an Opata term; and Pimentel's Opata vocabulary[2] (extracted from the grammar and dictionary compiled by Padre Natal Lombardo) indicates its meaning satisfactorily, albeit without special reference to the tribe. The key term in this vocabulary is "*Sirerài*, velocidad de la persona que corre." The accent over the first vowel serves to indicate prolongation, so that term and definition may be rendered, literally, *se-ererài*, speed of the person who runs. Analysis of the term shows that the essential factor or root is that introduced elsewhere in the same vocabulary as "*Ere*, llegar." Now, "llegar" is a protean and undifferentiated Spanish verb neuter, without satisfactory English equivalent; it may be interpreted as arrive, reach, attain, fetch, endure, continue, accomplish, suffice, ascend, or mount to, while as a verb active and verb reflective its equivalents are approach, join, proceed a little distance, unite, etc; it may be said to imply movement or process with a centripetal connotation—i. e., a connotation antithetic to that of the expressive irregular verb "ir" in its protean forms, including the ubiquitous and ever present "vamos" (an American slang equivalent of the Castilian verb "llegar" in certain of its phases is the strong interjectory phrase, "get together"). The prefix *se* is merely an intensive, running not merely through the Opata, but throughout various tongues of the Piman stock. In his extensive vocabulary of the Pima and Papago Indians of Arizona (1871),[3] Captain

[1] Cf. The Beginning of Mathematics, in the American Anthropologist, new series, vol. 1, 1899, p. 651.

[2] Vocabulario Manual de la Lengua Opata, por Francisco Pimentel; Boletin de la Sociedad Mexicana de Geografía y Estadística, tomo v, 1861, pp. 287–313.

[3] In the archives of the Bureau of American Ethnology.

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F. E. Grossmann defines the term "*se*, very, ad. (prefix)", and over a hundred and fifty of his terms illustrate the use of this adjectival or adverbial prefix as an undifferentiated yet vigorous intensive (e. g., *uf*, female or woman, *se-uf*, a lady—great or grand woman; *ó'k*, high or height, *se-ó'k*, highmost); and in the Pimentel vocabulary this signification is attested by several other terms (e. g., "*Seerai*, paso menudo y bueno"). Finally, the intervalated consonant *r* is a common participial element in the Piman, while the suffix *ái* is a habitual assertive termination, as shown by various terms in the Pimentel and other vocabularies. Dropping this termination, the expression becomes *se-erer*, or—without the nonessential participial element—*se-ere*, signifying (so far as can be ascertained from the construction of the language) "moving", or "mover", qualified by a vigorous intensive.[1] To one familiar with the strikingly light movement characteristic of the Seri—a movement far lighter than that of the professional sprinter or of the thoroughbred "collected" by a skilful equestrian, and recalling that of the antelope skimming the plain in recurrent impulses of unseen hoof-touches, or that of the alert coyote seemingly floating eerily about the slumbering camp—this appellation appears peculiarly fit; for it is the habit of the errant Seri to roam spryly and swiftly on soundless tiptoes, to come and go like fleeting shadows of passing cloudlets, and on detection to slip behind shrub or rock and into the distance so lightly as to make no audible sign or visible trail, yet so fleetly withal as to evade the hard-riding horseman. The Seri range over a region of runners: the Opata themselves are no mean racers, since, according to Velasco and Bartlett, "In twenty-four hours they have been known to run from 40 to 50 leagues";[2] and, according to Lumholtz, their collinguals, the Tarahumari, or "Counting-Runners", are named from their custom of racing,[3] and display almost incredible endurance:

> An Indian has been known to carry a letter from Guazapares to Chihuahua and back again in five days, the distance being nearly 800 miles. In some parts where the Tarahumaris serve the Mexicans they are used to run in the wild horses, driving them into the corral. It may take them two or three days to do it, sleeping at night and living on a little pinole. They bring in the horses thoroughly exhausted, while they themselves are still fresh. They will outrun any horses if you give them time enough. They will pursue deer in the snow or with dogs in the rain for days and days, until at last the animal is cornered and shot with arrows or falls an easy prey from sheer exhaustion, its hoofs dropping off.[4]

[1] The latter form (*se-ere*) corresponds precisely with the current Papago pronunciation of the term, though none of the various Papago informants consulted were able to interpret the expression; indeed, they simply relegated it to the category of "old names" which they deemed it needless to discuss. An archaic form of orthography used in the synonymy (pp. 139-139), is *Séeri*, which suggests the same sounding of the initial sibilant.

[2] From 105 to 120 miles. Bartlett, Personal Narrative, vol. i, p. 443.

[3] Memoirs of the International Congress of Anthropology, Chicago, 1894, p. 194. In a letter to Mr F. W. Hodge, under date of September 11, 1900, Dr Lumholtz says: "After renewed investigation I have come to another opinion regarding the meaning of the tribal name *Tarahumare*. This word is a Spanish corruption of the native name 'Rarámuri'. Though the meaning of this word is not clear, that much is certain that *rará* or *lará* means 'foot', and I therefore take it that we must be at least approximately correct when we say that the word signifies 'foot-runner'."

[4] American Anthropologist, vol. VIII, 1895, p. 82.

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The Papago, of the same region and linguistic stock, have a racing game in which a ball of wood or stone caught on the foot is thrown, followed, and thrown again until the two or more rival racers have covered 20 to 40 miles in the course of a few hours; and their feats as couriers and trailers are quite up to those of the Opata. Yet among all these tribes, and among the Mexicans as well, the Seri are known as *the* runners par excellence of the Sonoran province; and it is but natural that their astounding swiftness and lightness of foot should have brought them an appellation among contemporaries to whom these qualities peculiarly appeal.

Accordingly, both derivation and connotation give meaning to the name, and warrant the rendering (much weakened by linguistic infelicities) of "spry" or "spry-moving", used in substantive sense and with an intensive implication.

The chronicles of the tribe, especially those written during the seventeenth and eighteenth centuries, indicate that the alien designation was applied loosely and with little appreciation of the tribal organization, just as was the case elsewhere throughout the continent. Gradually the chroniclers took cognizance of intertribal and intratribal relations, and introduced various distinctions in nomenclature expressing tribal or subtribal distinctions of greater or less importance. One of the earliest distinctions was that between the Seri and the Tepoka, and this distinction has been consistently maintained by nearly all later authorities, despite the commonly accepted fact (brought out most authoritatively by Hardy) that the tongues of the tribes are substantially alike. Another early distinction was that made between the Seri and the Guayma; it was based primarily on diversity of habitat and persistent enmity, though all the earlier authorities agreed, as well shown by Ramirez, that the tongues were essentially identical. The distinction has been maintained by most authorities and strongly emphasized by one (Pinart, as quoted by Bandelier), and since the Guayma are extinct, and hence beyond reach of direct inquiry, the early interpretation of tribal relation must be perpetuated.[1] Still another distinction was that made between the Upangnayma and the Guayma, and inferentially the Seri also; although the grounds for this distinction were not specifically stated, it seems to have grown out of diversity in habitat merely; but there were clear implications that the tribe or subtribe was affiliated linguistically with the Guayma, and thence with the Seri, and this assignment has been adopted by leading authorities, including Pimentel and Orozco. Among the earlier distinctions based on indus-

[1] In view of the clear indications, both a priori and a posteriori, that the latest Guayma survivors must have taken the language of the Pimas (Yaqui) tribesmen with whom they found refuge, and in view of his failure thus far to present his data for public consideration, M Pinart's inference that the Guayma belonged linguistically to the Piman stock can hardly be admitted to hold against the specific statements of the Jesuit missionaries and such accomplished inquirers as Ramirez and Pimentel.

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trial factors was the setting apart of the Salineros, or Seri Salineros; yet this distinction, fortuitous and variable at the best, expressed no essential character and has not been maintained. A much later distinction was that between the Seri and Tiburones, emphasized by Mühlenpfordt and exaggerated by Buschmann; but there seem to have been no better grounds for it than misapprehensions naturally attending a slowly crystallizing nomenclature. In any event it has not been maintained.

At several stages the chroniclers coupled the Seri with other tribes, on various grounds: in the eighteenth century they were thus combined with the Pima, the Piato, and especially the Apache tribes. In the earlier half of the nineteenth century they were frequently coupled in similar fashion with the Pima and Apache tribes, and in the later half of the nineteenth century, and even in its last lustrum, they have been similarly combined with the Yaqui. The later combinations seem to explain the earlier: the Yaqui outbreaks withdraw portions of the arm bearing population from the Seri frontier, and the marauders take advantage of the withdrawal so regularly that a Yaqui scare is invariably followed by a Seri scare, and hence the two warlike tribes are constantly associated in the minds of the Sonorenses as synchronous insurrectionists; and scrutiny of the earlier chronicles indicates that most of the so-called combinations of former times were of similar sort.

On putting the chronicles together, it seems clear that the term "Seri" was originally of lax application, but was gradually restricted to the tribe inhabiting Tiburon and ranging adjacent territory, including the collingual but inimical Guayma and Upanguayma, and also the collingual and cotolerant Tepoka; and that the various Piman tribes, as well as the Apache, were always distinct, and commonly if not invariably inimical.

The ethnic relations of the Seri people attracted early and repeated attention. Humboldt gave currency, albeit not unquestioningly, to a supposed Chinese or related Oriental affiliation; Hardy noted the similarity of the Seri tongue to that of the Patagonians; Lavandera classed the language as Arabic; Stone and Bancroft circulated a supposed identification of the speech with the Welsh; Ramirez, and more especially Pimentel, narrowed the field of affiliation to Mexico and defined the tongue as distinct; Orozco y Berra, and more especially Malte-Brun, slightly reextended the field and suggested affiliation with the Caribs; while Herzog, Gatschet, and Brinton reextended the field in another direction and saw, in a vocabulary obtained from a Seri scion but alien thinker, similarities between the Serian and Yuman tongues. The recent researches tend strongly to corroborate the evidence collected and the conclusions reached by Ramirez and Pimentel; for the somewhat extended comparisons between the Serian and neighboring languages (introduced and discussed in other paragraphs) indicate that the

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Seri tongue is distinct save for two or three Cochimi or other Yuman elements, which may be loan words such as might readily have been obtained through the largely inimical interchange of earlier centuries described by Padre Juan Maria de Sonora and other pioneer observers—certainly the slight and superficial similarities with other tongues of the region seem insufficient to meet the classific requirement of supposititious descent from "a common ancestral speech".[1] Accordingly the group may be defined (at least provisionally) as a linguistic family or stock, and may be distinguished by the family name long ago applied by Pimentel and Orozco, with the termination prescribed in Powell's fifth rule,[2] viz, *Serian*. Conformably, the classification of the group would become—

Serian stock, comprising—

- Seri tribe, including Tiburones and (certain) Salineros;
- Tepoka tribe;
- Guayma tribe;
- Upanguayma tribe.

Naturally this classification is provisional in certain respects. It is little more than tentative in so far as the Tepoka are concerned, since no word of the Tepoka tongue has ever been recorded, so far as is known, and since the tribe is still extant and within reach of research; it must be held provisional also in respect to the separateness of the stock, which may be found in the future to be affiliated with neighboring stocks, though the effect of the more recent and more critical researches in eliminating supposed evidences of affiliation points in the opposite direction. The arrangement is in some measure provisional also with respect to the relations between the long-extinct Guayma and Upanguayma and the type tribe, especially since contrary suggestion has been offered in terms implying the existence of unpublished data; yet the presumption in favor of the critical work by Ramirez, Pimentel, and Orozco is so strong that practically this feature of the classification may be deemed final.

No attempt has been made to render the tribal synonymy exhaustive, though search of the records has incidentally brought out the more important synonyms, as follows:

Seri Tribe

CERES—1826; Hardy, Travels, p. 95.
CERI—1875; Pimentel, Lenguas Indígenas, tomo II, p. 229.
CERIS—1745; Villa-Señor, Theatro Americano, p. 391.
CERIS TEPOCAS—1760; Velasco, Noticias Estadísticas, p. 132.
HERI—1854; Buschmann, Die Spuren der aztekischen Sprache, p. 221.
HERIS—1645; Ribas, Triumphos de Nuestra Santa Fee, p. 358.
IRITUSES—1730 (?); Van der Aa, map.

[1] Indian linguistic families, by J. W. Powell, in Seventh Annual Report, Bureau of Ethnology, 1885-'86 (1891), p. 11.
[2] Ibid., p. 98.

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Sadi—1806; San Francisco Chronicle, January 24.
Se-ehe—Etymologic form.
Seres—1844; Mühlenpfordt, Republik Mejico, Band I, p. 210.
Seri—1751; [Ortega], Apostolicos Afanes, p. 344.
Seris—1694; Mange, Roumen de Noticias (Documentos para la Historia de Mexico, série 4, tome I, p. 255).
Seri Salineros—1842; Alegre, Historia de la Compañia de Jesus, tome III, p. 117.
Seris Salineros—1694; Mange, Roumen de Noticias (Documentos, série 4, tome I, p. 321).
Serys—1751; [Ortega], Apostolicos Afanes, p. 307.
Soris—1900; Deniker, The Races of Man, p. 533.
Sseri—1903; Gatschet, Der Yuma Sprachstamm, p. 129.
Zeris—1731; Dominguez, Diario (MS.).
Kaike—1879; Pinart, MS. vocabulary.
Kómkak—1879; Pinart, MS. vocabulary.
Kunkaak—1898; Mercer and Johnson, "Seriland", Nat. Geog. Mag., vol. VII, p. 123.
Salineros—1727; Rivera, Diario y Derrotero, I. 514–1519.
Tiburon—1790; Cortez (Pacific Railroad Reports, vol. III, p. 127).
Tiburones—1792; Arricivita, Cronica Seráfica, segunda parte, p. 426.
Tiburon Ceres—1826; Hardy, Travels, p. 290.

Tepoka Tribe

Tepeco—1847; Disturnell, Mapa de los Estados Unidos de Mejico, New York.
Tepoca—1748; Villa-Señor, Theatro Americano, p. 392.
Tepoca Ceres—1826; Hardy, Travels, p. 290.
Tepocas—1748; Villa-Señor, Theatro Americano, p. 391.
Tepococ—1895; Velasco, Bol. Soc. Mex. Geog. y Estad., tomo XI, p. 125.
Tepoka—Phonetic form.
Tepopa—1875; Dewey, map.
Tepoques—1757; Venegas, Noticia, tome II, p. 343.
Topokis—1702; Kino, map (in Stocklein, Der Neue Welt-Bott).
Topoquis—1701; Kino, map (in Bancroft, Works, vol. XVII, 1883, p. 360).

Guaymas Tribe

Baymas—1754; [Ortega], Apostolicos Afanes, p. 377.
Gayama—1826 (?); Pike (Balbi), (in Pimentel, Lenguas Indigenas, tomo II, p. 234).
Guaima—1901; Buckingham Smith, Heve Grammar, p. 7.
Guaimas—1702; Kino, map (in Stocklein, Der Neue Welt-Bott).
Guayamas—1757; Venegas, Noticias, tome II, p. 79.
Guayma—1701; Juan Maria de Salvatierra, Report (Documentos para la Historia de Mexico, série 4, tome V, p. 154).
Guaymas—1730; Juan Maria de Salvatierra, Report (Documentos para la Historia de Mexico, série 4, tome V, p. 126).
Guaymi—1882; Bancroft Works, vol. III, (Native Races, vol. III), p. 704.
Guaymis—1844; Mühlenpfordt, Republik Mejico, Band I, p. 210.
Guymas—1748; Villa-Señor, Theatro Americano, p. 401.
Gueymas—1748; Villa-Señor, Theatro Americano, p. 402.
Guiamas—1765; [Neutwig?], Ruolo Ensayo, p. 229.
Guimies (?)—1701; Kino, map (Bancroft, Works, vol. XVII, 1883, p. 360).

Upanguayma Tribe

Houpin Guaymas—1929; Hardy, map.
Jumpanguaymas—1863; Velasco, Bol. Soc. Mex. Geog. y Estad., tomo VIII, p. 282.
Jupanguaymas—1748; Villa-Señor, Theatro Americano, p. 401.

I: McGee E-5 (1894-1895)1898 NU31 Seri NU31

101 UPAN GUAIMAS—1768; [Kenitwig?], Rudo Ensayo, p. 229.
UPANGUAIMA—1864; Orozco y Berra, Geografía de las Lenguas, p. 42.
175 UPANGUAIMAS—1878; Malte-Brun, Congrès International des Américanistes, tome II, p. 38.
UPANGUAYMA—Synthetic form.
UPANGUAYMAS—1882; Bancroft, Works (Native Races, vol. I, p. 605).
UPAN-GUAYMAS—1890; Bandelier, Investigations in the Southwest, p. 75.

Possibly the name *Cocomaques* (1864, Orozco y Berra, Geografía de las Lenguas, p. 42), or *Cocomaques* (1727, Rivera, Diario y Derrotero, I. 1514-1519) should be introduced among the synonyms of the Seri, but in the absence of definite information it may perhaps better be left unassigned.[1]

101 Of the four tribes assigned to the stock, the Upanguayma have been extinct probably for more than a century; the Guayma may survive in
197 a few representatives probably of mixed blood and adopted language; the Tepoka have never received systematic investigation, but appear to survive in limited numbers on the eastern coast of Gulf of California about the embouchure of the Rio Ignacio sand-wash; while the Seri alone continue to form a prominent factor in Sonoran thought.

EXTERNAL RELATIONS

131 The most conspicuous characteristic of the Seri tribe as a whole is
648 isolation. The geographic position and physical features of their habitat favor, and indeed measurably compel, isolation: their little principality is protected on one side by stormy seas and on the other by still more forbidding deserts; their home is too hard and poor to tempt conquest, and their possessions too meager to invite spoliation; hence, under customary conditions, they never see neighbors save in chance encounters on their frontier or in their own predatory forays—and in either case the encounters are commonly inimical. The natural isola-
[186] tion of the habitat is reflected in modes of life and habits of thought; and during the ages the physical isolation has come to be reflected in a bitter and implacable hereditary enmity toward aliens—an enmity apparently forming the strongest motive in their life and thought, and indeed grown into a persistent instinct. Thus the Seri stand alone in every respect; they are isolated in habitat and still more intensely isolated in habits of thought and life from all contemporaries; they far out-Ishmael the Ishmael of old on Araby's deserts.

648 The isolation of the Seri in thought and feeling is well illustrated by the relations with their nearest neighbors (activitally as well as geographically), the Papago Indians. The Papago are much esteemed
[115] in Sonora as fearless fighters, always ready to join or even to lead a forlorn hope; yet when the expedition of 1895 was projected it was found no easy matter to induce the picked Papago guards quartered at Costa Rica to enter Seriland. They were ready, indeed mildly eager, for fray, provided it were on the frontier; but they held back in dread

[1] These names seem rather to be Yuman, cf. Cocopa, Cocomaricopa, Kohuan, etc.

I: McGee E-5 (1896-1897)1898 NU): Seri NU31

the tribe is prolific and well-fitted to survive unless cut off in consequence of the hereditary antipathy toward alien blood and culture. 161

The population estimates of the past are naturally vague. In 1645 Ribas spoke of the tribe as "a great people"; and a century later Villa-Señor expressed himself in somewhat similar terms, and described their range in such manner as to indicate a population running into thousands. A few years after Villa-Señor (in 1750), Parilla claimed to have annihilated the entire tribe, with the exception of 28 captives; but according to Velasco's estimates, the people numbered fully 2,000 some thirty years later, when the tribe was, however, once more nominally annihilated. In 1824 Troncoso estimated the Seri at over 1,000, and two years later Rétio reckoned the population of Isla Tiburon alone at 1,000 or 1,500, while Hardy thought the entire tribe might number 3,000 or 4,000 at the utmost. About 1841 De Mofras put the aggregate population at 1,500; and at the time of the vigorous invasion by Andrade and Espence (1844), when a considerable number of the tribe were captured and a few slain, the total population was estimated at about 550—though it is probable that a good many tribesmen were left out of the reckoning. According to the chroniclers, a number of the Seri were slain after, as well as before, this invasion; and in 1846 Velasco estimated the tribe at less than 500, including 60 or 80 warriors. This estimate was in harmony with that made by Señor Encinas, who reckoned the tribe at 500 or 600 at the beginning of his war, in which half the tribe lost their lives. The figures of Velasco and Encinas correspond fairly with the reckoning by Mashém in 1894, due allowance being made for natural increase and for the losses through occasional skirmishes; and Mashém's count is shown not to be excessive by the considerable number of jacales and rancherías and well-trodden pathways found throughout Seriland in 1895. 161 175

On the whole it seems probable that the Seri population extended well into the thousands at the time of the Caucasian invasion; it seems probable, also, that the body was then too large for stability under its feeble institutional bonds, and hence threw off by fission the Guaymas and Upanguaymas fractions, and the Angeles, Populo, and Pueblo Seri fragments. Furthermore, it seems probable that the prolific group fairly held its own against these normal losses and repeated decimations by battle up to the Miguelete-Cimarrones war of 1780, despite the vaunted annihilation in 1750; but that thenceforward the death-rate due to increasingly frequent encounters with incoming settlers exceeded the birth-rate, gradually reducing the tribe from some 2,000 to the 250 or 300 surviving the Encinas conflict. Finally, it seems probable that the tribe has again held its own and perhaps increased slowly under the renewed isolation of the last decade or two. [101]

2: Kroeber E-5 (1930)1931 NU31 Seri NU31

Davis has had fuller opportunity to investigate, but confined my attention to the social and religious sides of their life. There was the more reason for this since it is in dealing with these latter aspects, where verbal communications are as important as observation, that McGee's monograph is most tenuous and dubious. I also secured linguistic notes for the preliminary placing of the curious tonal speech of the Seri.

Seri culture in its present form is a fragmentary thing such as could hardly have existed under purely native conditions. Religion especially has suffered, no doubt under Christian influence, without many elements of Christianity having been taken over in exchange. Of mythology, only tatters seem to remain; of ritual, little more; only shamanism seems to be fairly well preserved. Nor, beyond the Spanish names for God and the cross, do the Seri give evidence of being or having been Catholics. The result is that they seem remarkably religionless. I do not know of a native people that appears so free from superstition and so unspiritual in its attitudes. Possibly I conferred with the wrong informants; but those I talked with seemed unsecretive. Social culture is better preserved, as is evident from a set of kinship terms that are numerous, precise, and untouched by Spanish concepts. On the other hand, there is little formal social organization. Whether this is also the result of a loss, is hard to say. The Seri may never have had sibs or clans; but the fact that they appear to lack them now is no positive evidence that they were without them three centuries ago. Shifts of residence, contraction of territory, shrinkage of numbers, amalgamation of distinct bands, may well have obliterated much of such social fabric as they once possessed. Games and the calendar are wholly native and intact, but taboos connected with sex, age, food, and the like seem fewer than among the backward tribes of the southwestern United States. It seems reasonable to construe this condition as the result of varyingly hostile, parasitic, and missionizing Spanish-Mexican contacts; especially when one realizes how overwhelmingly, though also spottily, this influence has affected the other tribes of Sonora—the Yaqui, Mayo, Pima, and Opata.

Historically the Seri are not a tribe but the consolidated remnant of a series of dialectically distinct tribes that once held the barren coast of Sonora from Guaymas to Puerto Libertad. Tiburon Island is the stronghold in which the mixed survivors, probably now numbering less than 200, have taken refuge, and, owing to its inaccessibility, drought, and poverty, have succeeded in maintaining themselves and their blended and reduced culture. Toward the interior, it is doubtful if they ranged beyond the present line of the Southern Pacific railroad, if that far. Orozco y Berra indeed assigns them territory up the Sonora River to Ures, on his famous map, which is still basic to all other ethnic maps of Mexico. But from Hermosillo

2: Kroeber E-5 (1930) 1931 NU31 Seri NU31

to Ures is good farming country, and why the only non-agricultural people in Sonora should have held this stretch, is hard to see. Moreover, Orozco's bringing the Serian tribes so far inland as to abut on the Opata, severs the continuity of the American Pima Alto and Papago with the Mexican Pima Bajo, whose speech is almost identical. This identity is best understood as the reflection of a continuous occupation by the Pima of the whole foothill country from the Gila to the Mayo, between the Serian desert lowlanders and the Opata in their mountain valleys, with the Yaqui, Mayo, and other Cahita peoples replacing the Serians south of Guaymas where heavier rainfall and large flowing rivers made the lowlands attractive to farming peoples. The natural inland frontier of the Seri along the Sonora River would have been at the Siete Cerros, a low range some 25 miles, more or less, west of Hermosillo, where grass ends and creosote bush and giant sahuaro cactus soon become dominant beside mesquite. This boundary would have put the farmers on farm land, the roving gatherers into the succulently overgrown desert and along the food-stocked coast.

The Seri, then, in the wider sense, including the Guaymas, Tepocas, etc., were anomalous among the native peoples of Sonora in habitat as well as in culture. Now a similar country, almost waterless and cactus dominated, is the central segment of Mexican California. Here lived the Cochimi, dialectically the most divergent of the Yuman peoples, and with a culture similar to that of the Seri at least in its level. The habitat enforced a similar subsistence economy, unsettled living, scattering of population, inability of serious accumulation of property, and hence no doubt a relative paucity of most organizational aspects of culture. Whether the content of Cochimi culture was equally similar is difficult to say because of the melting away of the people. At any rate the question arises whether Cochimi and Seri are not historically connected, especially as both their languages are related to Yuman, whereas all other Sonora tribes are Uto-Aztecans. The connection seems the more possible in that southwest of Tiburon lies San Esteban Island; beyond that, San Lorenzo; and beyond, the great peninsula. The open-water distance nowhere exceeds fifteen miles. This is a difficult but not impossible gap to cross on cane rafts; and the Seri have skilful knowledge of currents and winds. The passage across the Infiernillo between mainland and Tiburon is little more than a mile at the narrowest point, but they often paddle five in their open boats to take advantage of weather conditions. The Seri remember navigating to San Esteban, and there is historical mention of crossings of the Gulf.

The final evidence for or against derivation of the Seri from Baja California will probably be linguistic, and if, as seems possible though doubtful, Cochimi speech can still be recorded in the peninsula, the answer may be definitive. The materials at present available

2: Kroeber E-5 (1930) 1931 NU31 Seri NU31

SERIAN TERRITORY AND TRIBES

The close speech unity of the Seri, Tepoca, Salineros, Guaymas, and Upanguaymas is affirmed by all the older authors. The name Seri has however been used in several senses, even in pre-ethnologic days: (1), for the entire group of related tribes, sometimes excluding and sometimes including the Guaymas; (2), for the inhabitants of Tiburon Island and the immediately opposite stretch of mainland; (3), for the inlanders more or less associated with the mission establishments from Hermosillo upstream, in contrast with the "Tiburones" of the island; (4), for the modern fusion of mainlanders and islanders, which evidently includes descendants of all Serian tribes except the Guaymas and Upanguaymas, who became absorbed in the lowermost Yaqui tribe or village of Belem. It is in this fourth and last sense that I use the term; my principal informant, in the tradition given, employed the third meaning; McGee mostly the second, with a strong implication of the thorough apartness and greater primitiveness of the islanders, as compared with their ethnic kinsmen.

The Tastioteños of my informant appear not to be known otherwise. The coastwise alignment of tribes from south to north seems to have been: Guaymas, Upanguaymas, Tastioteño, Seri or Tiburones, Tepoca, Salinero.

As already mentioned in the Introduction, it seems inherently unlikely that Serian territory extended as far up the Sonora river as Ures, near which Orozco y Berra puts the boundary. His undue extension is probably due to the fact that the missions to which Serians (other than Guaymas-Upanguaymas) became attached, were situated in the valley of the Opodepe or Horcasitas branch of the Sonora. According to McGee[19] these Missions were: Santa Magdalena de Tepoca, founded in 1688, soon abandoned, location long lost but probably up-stream from next; Nacameri, 7 leagues below Opodepe; Nuestra Señora del Pópulo, 9 leagues down, at Horcasitas; Nuestra Señora de los Angeles, 3-4 leagues down, maintained, with preceding, until 1767; Pitic or Pueblo de los Seris, more than 12 leagues down (opposite Hermosillo), founded last, in 1742. Nacameri and Pitic sound like Pima, not Seri, words. Whether the river valleys from Hermosillo up were actually Pima territory, as here surmised, will have to be established from documentary sources, possibly supplemented by recollections of the Pima surviving about Ures. It is conceivable that Serian tribes had driven the Pima out of the Sonora valley shortly before the founding of the missions, thus effectuating the division into Pima Bajos and Altos; or that the Pima shrinkage out of the middle of their territory began after their mis-

[19] Pp. 68, 69, 70, 72.

8: Ascher E-5 (1960) 1962 NU31 Seri NU31

Elsewhere (Ascher 1961) I have disputed this portrayal of the potential of existing ethnography, citing examples where qualitative and quantitative models have been constructed from ethnography and suggesting that one task for archeology is to codify the literature in a manner useful to itself. Regardless of doubts about existing ethnographies for archeological purposes, the worth of future ethnography for archeology will depend on the acquisition of the relevant kinds of information. Although discussion on the subject has been recorded (Tax *et al.* 1953: 229-232), no specific guides have been produced. This paper provides and discusses an example, which can be used as a paradigm, model, or guide of the kind of information to be collected from ongoing communities which would be of general value for archeology. The subject culture is that of the Seri Indians of Sonora, Mexico; the example describes a persistent trait complex associated with fishing for the Pacific green turtle, with particular emphasis on one trait in the complex, the harpoon foreshaft.

Example from the Seri Indians

The Seri, who numbered approximately 200 individuals in 1960, occupy a band of coastal desert about four miles wide and seventy miles long in the state of Sonora in western Mexico. The band extends along the Gulf of California from Kino Bay in the south to Desemboque in the north, opposite the largest island in the Gulf, Tiburon. Although the region is desert, with an estimated average rainfall of less than eight inches per year, falling mostly in July and August, it is comparatively rich in succulents and small land mammals. The Gulf forms a natural trap for large fish and marine mammals and is a breeding ground for the Pacific green turtle. The scantiness of fresh water has constituted, in the past and present alike, the single crucial limiting factor to agriculture and human occupancy.

In the past the Seri may have comprised from four to six tribal groups, and they were certainly numerically larger, with a maximum estimated population of 2,000 (Kroeber 1931: 53, 30). Until very recently they also occupied Tiburon Island, and at some more remote period they extended south, north, and east over a territory whose bounds are uncertain (Kroeber 1931: 5). On the basis of linguistic change, Kroeber (1931: 54) calculated that the Seri could have inhabited this general region for 1,000 years. It is uncertain whether the original occupation stemmed from Baja California via the Gulf of California or from the north and west via an overland route or routes (Kroeber 1931: 39-51). The first contact with Europeans occurred as early as 1540 (McGee 1898: 51).

In culture content the Seri are most closely affiliated with the Pima (Kroeber 1931: 51), but they do not share the practice of agriculture with them or with their western neighbors. The Seri are primarily fishermen; secondarily they gather the fruits of succulents; and to a still lesser extent they hunt game. McGee (1898: 214)

BrMalkin E-5 (1953-1955)1962 NU31 Seri NU31

[R6A]

OUTLINE OF SERI CULTURE

Territory

131 Historically the Seri territory at its greatest expansion extended from the coast of Mar del Cortez to Hermosillo and from Porto Libertad to Guaymas and included also the Tiburon Island.

101 Ethnically, the Seris represented a collection of [197] dialectically distinct tribes, the Guyma, Tepoca, etc., perpetually at war with each other, whose common characteristic was their culture, and who were framed in to the north by the Pima Alto and Papago, to the west by the now extinct Cochimi, to the east by the Opata and Pima Bajo and to the south by the Cahita, Mayo and the Yaqui.

648 But their area had fluctuated much. After the 131 bitter and disastrous wars against the Mexicans from the late 18th century through most of the 19th, the Seris lost out and were forced by the Mexican government to settle on Tiburon. This incarceration did not last long. McGee had already in 1894 found them on the mainland and Kroeber found them equally divided between Tiburon and Kino. In 1930 when he visited, evidently they lived largely in Kino Bay. As the Mexicans pressed on Kino moving in, in ever greater numbers, and as Japanese fisheries worked the Gulf out of Desemboque attracting the fish-loving Seris, their main settlement has moved once more. About 1940 most of the Seris moved into Desemboque and at the time of my visit, almost all of them lived [361] there while only two families made Tiburon their "permanent" camp. School and availability of the medical facilities as well as the location of the Mexican traders in Desemboque, part of whose scheme the Indians have become, attracted the Seris. Only occasionally today they roam inland or visit other areas, either owing to the hunting or fishing expeditions.

Numbers

161 Seri numbers fluctuated as much as their territory and had suffered immense diminution. I shall list the estimates below, indicating the source of the information:

	Authority		Source
1780	Velasco	2,000	McGee
1824	Troncoso	1,000+	"
1826	Ratio (Tiburon only)	1,000-1,500	"
1826	Hardy	3,000-4,000	"
1841	de Mofras	1,500	"
1844	...	550	"
1846	Velasco	500	"
c.1855	Encinas	500-600	"
c.1865	"	250-300	"
1894	Mashem, native	250-350	"
1930	Thomson	175	Kroeber
1934	Mex. En. Cifras	160	Ethn. Synth. Mex.
1943	Smith, Jr.	248	MS. Univ. of Ariz.
1955	Malkin	236	Malkin

11: Moser L-5 (1956-1961) 1963
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SERI BANDS

EDWARD MOSER

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ABSTRACT

In previous publications on the Seri, frequent reference to distinct Seri groups points to historical tribal divisions at some level. Recent research among the Seri has determined the former existence of six bands which included three dialect groups. Three of the bands were subdivided into clans. These six bands, whose formation may have been caused largely by internal struggles, were eventually crushed and reduced to a single group by the devastation brought about by external conflict.

INTRODUCTION

The Seri tribe is located in Mexico along the coast of Sonora between Bahia Kino and Puerto Libertad, and on Tiburon Island (Fig. 1). Today it consists of approximately two hundred and eighty persons who call themselves *kongkaak*[1] "the people." Although at one time it was comprised of six distinct bands (Fig. 2), the tribe has now lost its band organization. However, much of the late history of these now-defunct tribal units remains vivid in the minds of the Seri. The purpose of this paper is to present some of the salient features of these former bands, to discuss certain interrelations between them, and to recount the Seri version of the disintegration of the band system.[2]

Three published studies on the Seri should be mentioned.[3] Of these, the reports by Kroeber and by Griffen are the more reliable. All three investigators mention tribal divisions which Griffen rightly designates as bands.

BANDS

BAND I *xika ʔai kkoii* "they who live toward the true wind"

This group is commonly referred to in the literature as the Tepoca or Salinero. As shown on Fig. 1, they inhabited an area which extended from a point slightly north of Puerto Lobos to Punta Tepopa on the south. The territory extended inland, encompassing the general area delimited by the San Ignacio River.

642 BAND II *xika xnai kkoii* "they who live toward the south wind"
● 101 This group is commonly referred to as the Tastioteño. These
131 people roamed the coastal area from Guaymas to Bahia Kino.

BAND III *ta?eoiokw kongkaak* "the people of Tiburon Island"

This band is referred to in the literature as the Seri or Tiburones. At one time their territory included only the northern and eastern coasts of Tiburon Island. Later it was extended to include the whole coastal strip of the mainland directly opposite the island.

BAND IV *?eno kongkaak* "the people of the desert"

The area this band occupied in the center of Tiburon Island is shown in Fig. 2.

642 BAND V *xnaamotat* "they who came from the direction of the
131 south wind"
173 The Seri believe that this band came originally from a region
628 south of Guaymas. It may have been the Upanguayma group
[101] mentioned in the literature. Its members came in contact with the members of Band II with whom they resided, apparently for a period of years. Whether the *xnaamotat* were Seri or non-Seri,
[197] I have been unable to ascertain. Since no informant suggests that this group spoke another language besides Seri, it seems reasonable to believe that it was simply a distinct dialect group.

642 The *xnaamotat* were a belligerent people and, after fighting
628 broke out between them and the members of Band II, they
721 traveled northward. Eventually they established themselves on
[131] the relatively small coastal strip located east of Punta Tepopa as shown in Fig. 2.

642 BAND VI *xika ?ast ano koii* "they who live in the mountains"

[101] This group, which has been recognized previously only by
[131] Griffen, inhabited San Esteban Island. It laid claim also to the greater part of the coast on the southern end of Tiburon Island. One informant stated that in earlier times this band had ranged over all of Tiburon Island except for the northern two-thirds of the eastern coast, but that they were slowly pushed southward by the movements of other groups.

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Dialect 3 was spoken by Band VI. This dialect, which is also extinct, is described by the informants as musical and is referred to as "singing talk." Expressions which are recalled are characterized by sharp pitch contours and heavy stress. Several grammatical constructions from this dialect have been found to contain morphemes unknown to present-day speakers.

The elicitable utterances and expressions of dialects 2 and 3 appear to employ the same segmental phonemes as present-day Seri.

BAND SUBDIVISIONS

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Three of the six bands were subdivided. The territorial subdivisions of those three, Bands I, III, and VI are shown on Figs. 3-5.

Band I

Band I became divided into six groups, each group occupying a subdivision of the band territory. Each such subdivision was called an *i?iziitng*. The name of the most prominent camp in each *i?iziitng* was generally used also as the name of that subdivision. The names of these subdivisions are;[4]

xaah ?akaila	"(arrows) shot at the cliff"
paiik ?aokwt	"driftwood huts"
xpano ?ax	"fresh water in the sea"
?aasixp	"white mesquite"
?axwoli?om	"place of clams"
xapoya?	"sea lion . . ."

Band III

This band became subdivided into fifteen groups, named as follows;

?ah?ax	"whichever water"
kiaxin	"long and narrow"
sakpatix	"_____"
?aank	"clam (species of)"
?atkisa	"rotten testicle"
taih it	"willow trunk"
inoo?kw kixax	"rattling stone bay"
xnitzk	"facing the wind"
takata	"_____"
?eeme	"camp"
?ast ?ax	"stone point (of arrow)"
sosnitaa	"in front of Alcatraz Island"
xoxaokl	"the large ones"
kail iti ktamkw	"men of the dry lake bed"
?ax ipak	"the other side of the water"

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Little information could be elicited about subdivisions 7, 8, 9, and 10. The reason for this might be that Band VI was slow in abandoning those coastal areas (if it actually did inhabit them) as it was being displaced by Bands III and IV.

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The Seri say that long ago several men, called *?ant i?akimhoh* "they who explain the land," came to Tiburon Island and told the people along the eastern shore that they owned also a corresponding strip of land on the mainland. Thus the inhabitants of subdivisions 2, 3, 4, 5, and 6 laid claim to the coastal areas directly across the channel from them as shown by the dotted lines on Fig. 4. They assumed that their new territories extended inland to include as much terrain as they chose to claim. At first the people went to their mainland areas primarily to gather cactus fruit. Eventually some of them remained on the mainland and established subdivisions 11 and 12. This establishment superseded the claims of the five Tiburon Island subdivisions to their mainland territories. Although the mainland subdivisions 11 and 12 formed, in some respects, a separate band in their own right, they retained their name, *ta?eowkiw kongkaak* "the people of Tiburon Island." Eventually this group returned to Tiburon.

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Of subdivisions 13 and 14 which are shown on Fig. 4, very little is known. The people of subdivision 13 inhabited an area encompassing the northern end of the dry lake, La Playa Noriega (San Bartolo). Some of the Seri believe that these people were giants. Although in this area I have found clay figurines and other artifacts common to abandoned camps elsewhere, the Seri do not know the names of the camps of this subdivision. Subdivision 14 occupied the area surrounding the southern end of the same dry lake.

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Subdivision 15 occupied the general area which is now Villa de Seris, a settlement on the southern edge of Hermosillo. As Hermosillo grew, it became increasingly difficult for these Seri to maintain their customary way of life, and they eventually returned to Tiburon Island.

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BAND VI

Band VI became divided into four subdivisions, the names of which are:

xnitom	"_____"
pahii	"flint"
kofte okl ifa	"large iguana peninsula"
kotih	"tubular"

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The map of Seriland appearing on pp. 8A and 8B has been processed for the files in the following manner:

1:pacific E-1 (1874-1875)1875 NU31 Ser1 NU31

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SERII

[p. 8 blank]

[p. 8-A]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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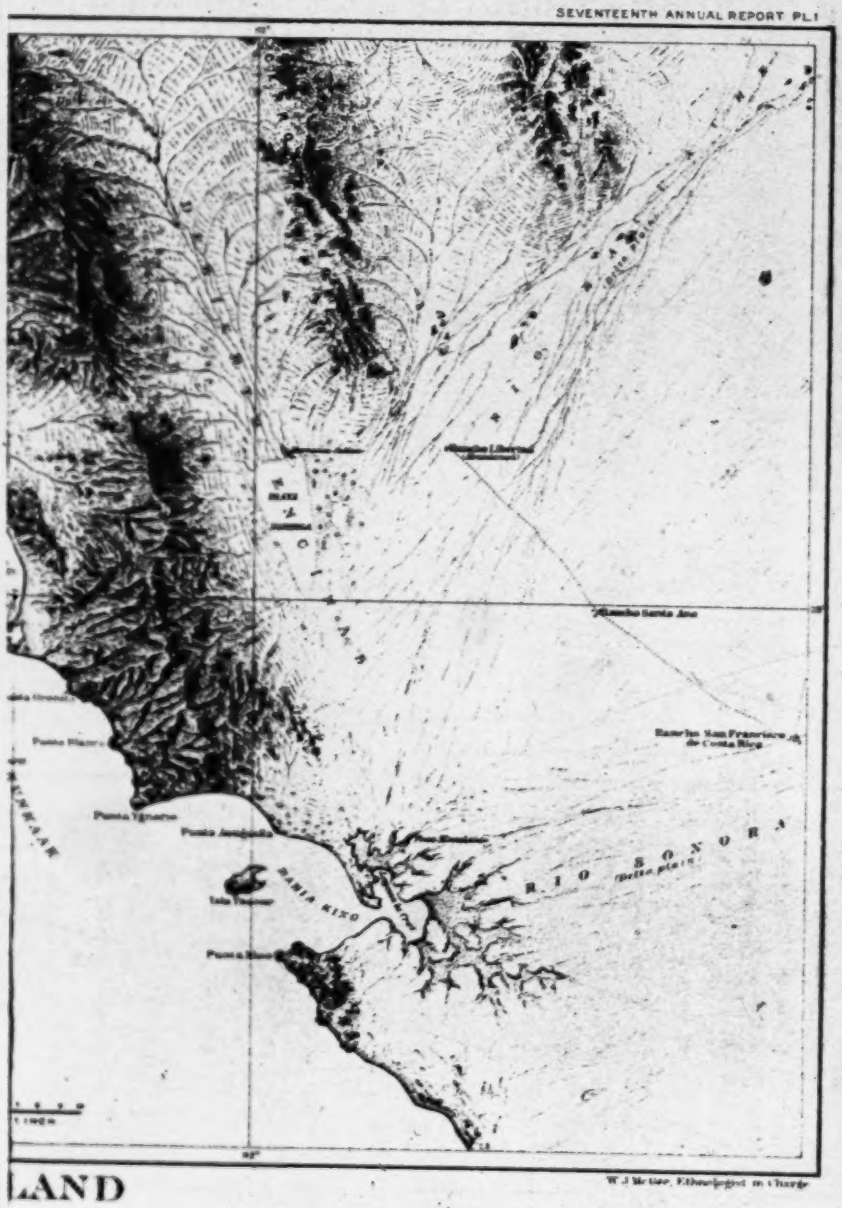

[p. 8-8]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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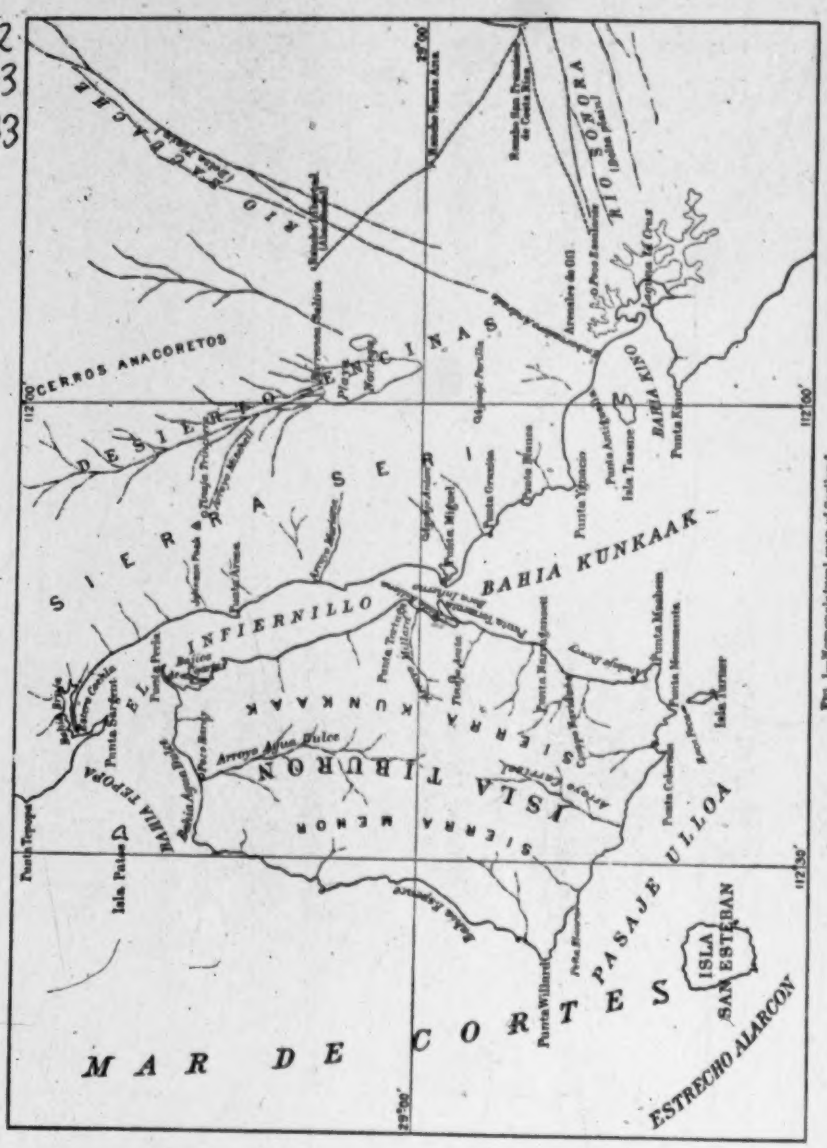

FIG. 1.—Nomenclatural map of Seriland.

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FIG. 1. Area of Present Seri Occupation

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One descendant of this band states that long ago his ancestors wandered north from the region of Guaymas. Eventually, they established land rights to the coastal area extending from Campo Ona on the south to Puerto Lobos on the north. Before long, however, they relinquished claim to the area between Campo Ona and Punta Tepopa. [173] [167] [425]

It is to be understood, of course, that groups from this band, as well as groups from other bands, at times ranged far afield from their respective territories. Band I, for instance, had campsites as far north as the mouth of the Colorado River. [484]

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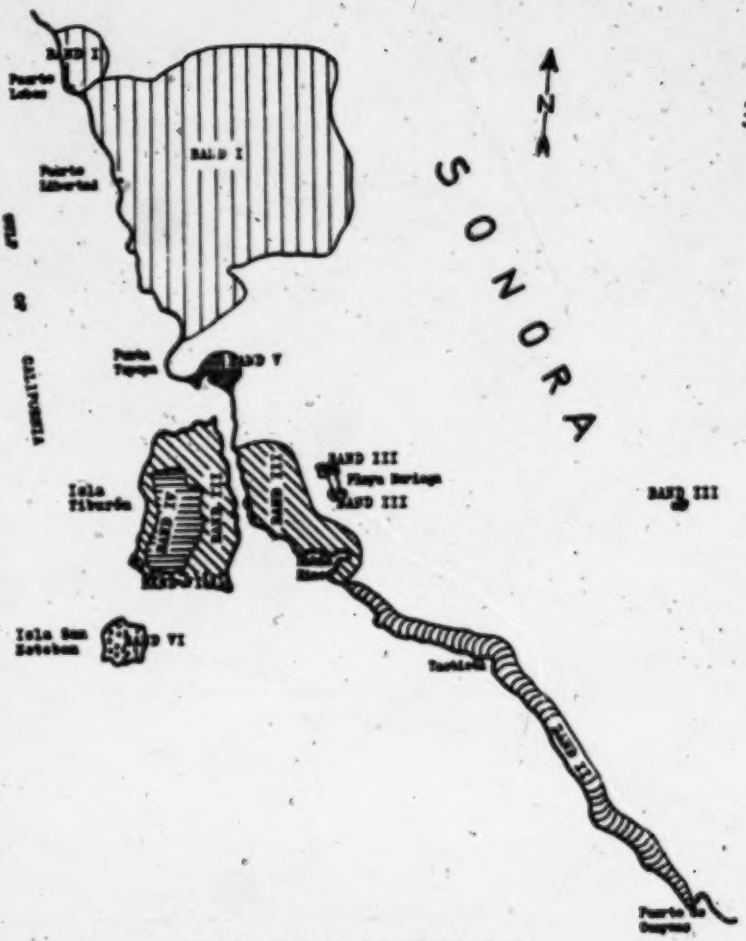

FIG. 2. Distribution of Seri Bands

DIALECTS

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The existence in former times of three distinct but mutually intelligible dialects seems evident.

Dialect 1 was spoken by Bands I, II, III, and IV. Any diversity of speech among these four bands seems to have been confined to word formation. The Seri language of today is derived largely from this dialect. [192]

Dialect 2 was spoken by Band V. This dialect is extinct and only scanty data on it can be gathered. From a number of expressions gathered, it appears that the dialect was characterized by extreme intonational contours. [194]

11: Moser L-5 (1956-1961) 1963
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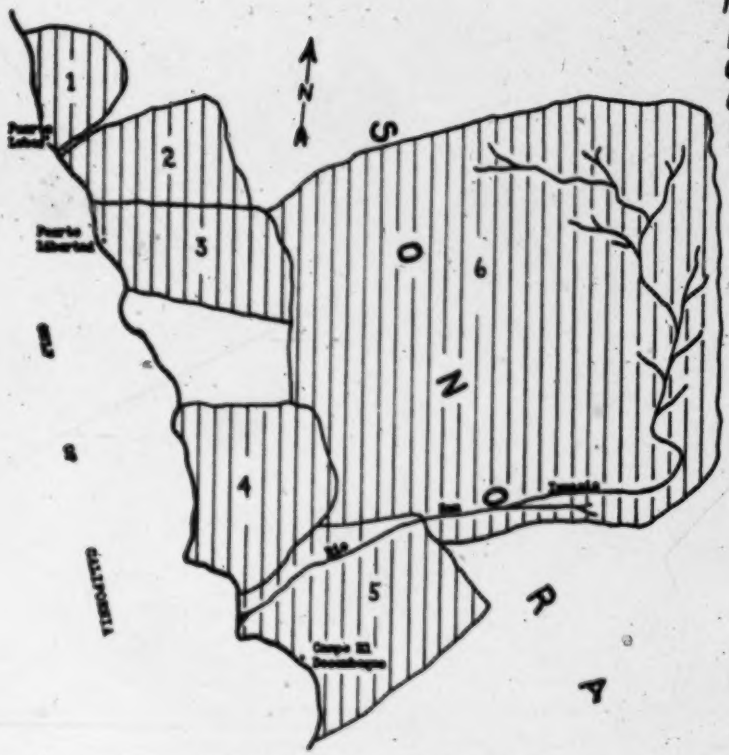

FIG. 3. Subdivisions of Band I

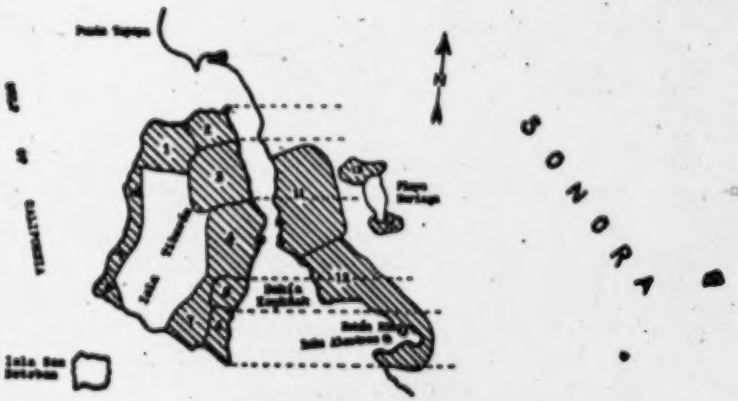

FIG. 4. Subdivisions of Band III

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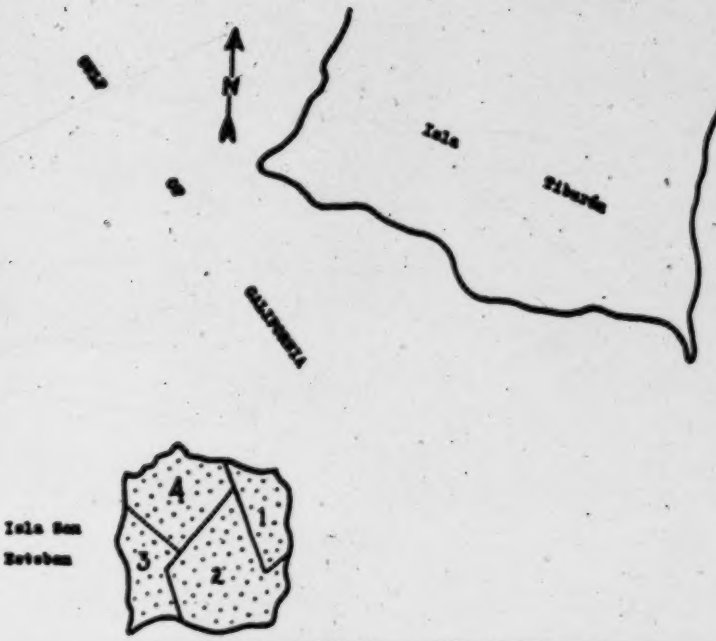

FIG. 5. Subdivisions of Band VI

BAND SOCIAL STRUCTURE

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The social structure of the bands can be properly understood only in relation to the social structure of their smaller units, the *i?iziitang*. The kin group which resided in and dominated each such subdivision constituted a clan.[5] This group conforms to Murdock's three major specifications for clan designation.[6]

Murdock's first specification states that a kin group, to constitute a clan, must be based explicitly on a unilinear rule of descent. The kin group of each Seri band subdivision was based on patrilineal descent. An individual was closely associated with the group of kinsmen of his subdivision, all of whom were related to him through males only. The father was the head of his household. For example, he assumed leadership in marriage negotiations. Upon his death, the eldest son took his place.

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592

The second specification states that such a kin group must have residential unity. Seri marriages were exogamous with respect to the subdivision,[7] and the rule of residence was patrilocal. The domicile was set up near the home of the groom's parents.

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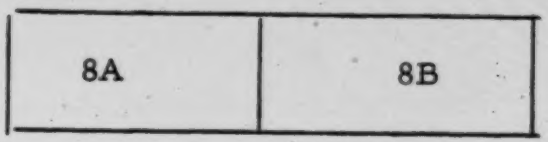
The map of Seriland appearing on pp. 8A and 8B has been processed for the files in the following manner:



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SERII

[p. 8 blank]

[p. 8-A]

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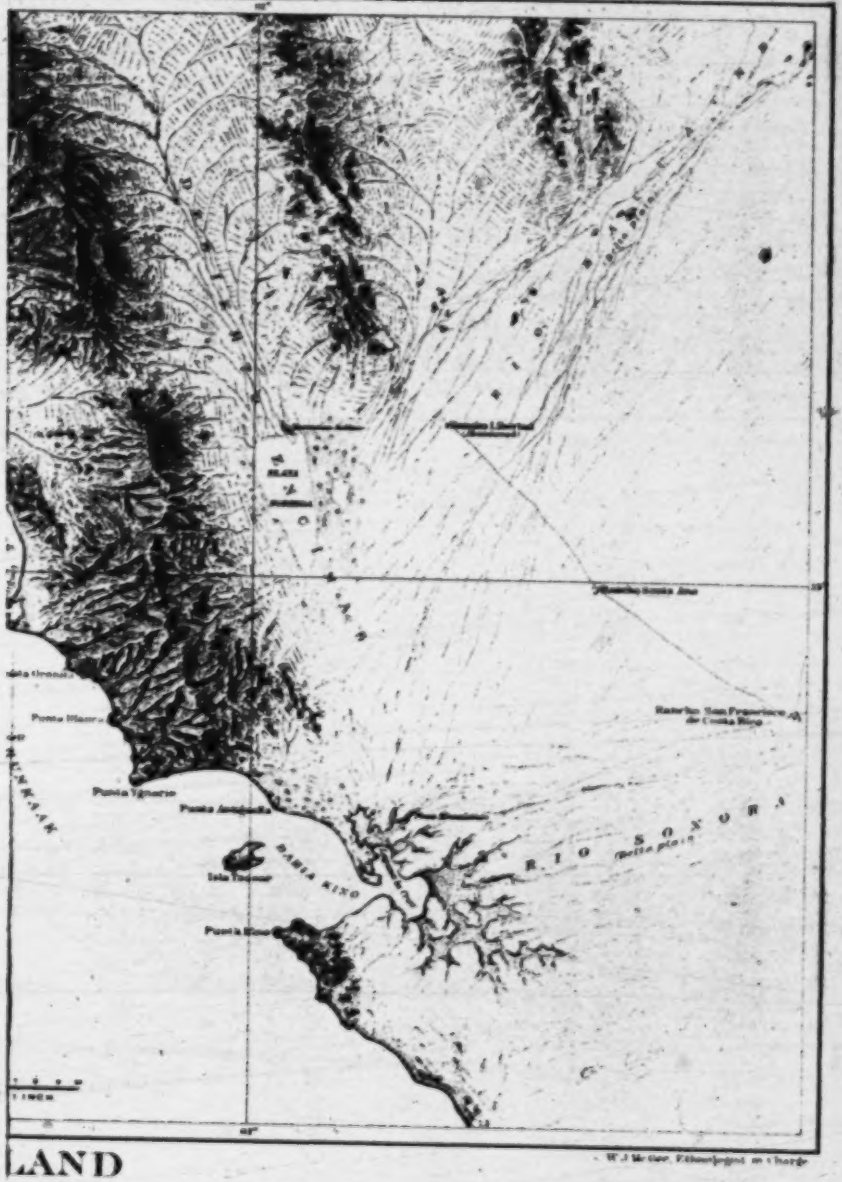

LAND

[p. 8-8]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

The principal ethnologic results of both expeditions relating to the Seri Indians are incorporated in the following pages; the data concerning the Papago are reserved for further study. The topographic surveys of the 1895 expedition covered a zone averaging 50 miles in width, extending from the international boundary to somewhat beyond Rio Sonora. Mr Johnson, by whom these surveys were executed, was on furlough from the United States Geological Survey, and his resumption of survey work prevented the construction of finished maps, except that of Seriland (plate I), which forms but a small fraction of the area surveyed. The results of the remaining, and by far the greater, part of the topographic surveys are withheld pending completion of the inquiries concerning the Papago Indians.

The geographic nomenclature found requisite in the field and in writing is partly new and partly restored, yet conforms with general and local custom so far as practicable; and nearly all of the new names have been applied in commemoration of explorers or pioneers. Most of the names pertaining to Seriland proper are incorporated in the map forming plate I; the others (including a few minor corrections) appear in the outline map forming figure 1, prepared after the larger sheet was printed.[1]

The following list of place-names is designed primarily to give the meaning and raison d'être of the nomenclature; with a single exception,[2] the names are Hispanized or Mexicanized in accordance with local usage.

Nomenclature of Seriland.[3]

*SERILAND: Extra-vernacular name of tribe, with English locative.

MAR DE CORTÉS (Sea of Cortés—Gulf of California): Customary Sonoran designation, applied by Ulloa (1539) in honor of Hernando Cortés, first discoverer of the gulf.

*PASAJE ULLOA (Ulloa passage): Generic Spanish; specific applied in honor of Captain Francisco de Ulloa, first navigator of the passage and the upper gulf, 1539.

*ESTRECHO ALARCON (Alarcon strait): Named in honor of Hernando de Alarcon, second navigator of the gulf, 1540.

EL INFIERNILLO (The Little Hell): Local designation, retained by the Hydrographic Office, U. S. N. (miswritten "Estrecho Infernillo" on larger map).

†BOCA INFIERNO (Mouth of Hell): A colloquial local designation (miswritten "Puerto Infierno" on larger map).

*BAHIA KUNKAAK (Kunkaak bay): Generic Spanish; specific the vernacular name of the Seri tribe (miswritten "Tiburon bay" on plates IV and V).

[1] The larger map was drawn early in 1896, and a preliminary edition in the form of a photolithograph of the drawing was published in the National Geographic Magazine, vol. VII, 1896. It is proper—and historically desirable—to explain that while a considerable part of the copy for this paper was prepared at about the same time, circumstances prevented the completion of the manuscript and the final rectification of the nomenclature and bibliographic references until September 1, 1900.

[2] Johnson peak. It is proper to say that this name was applied by the author (and leader of the expedition) after the drawing was completed and submitted by Mr Johnson, as a meager tribute to his excellent work in the field and on the drawings named.

[3] An asterisk indicates new names, an obelisk old names restored or colloquial names adopted.

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1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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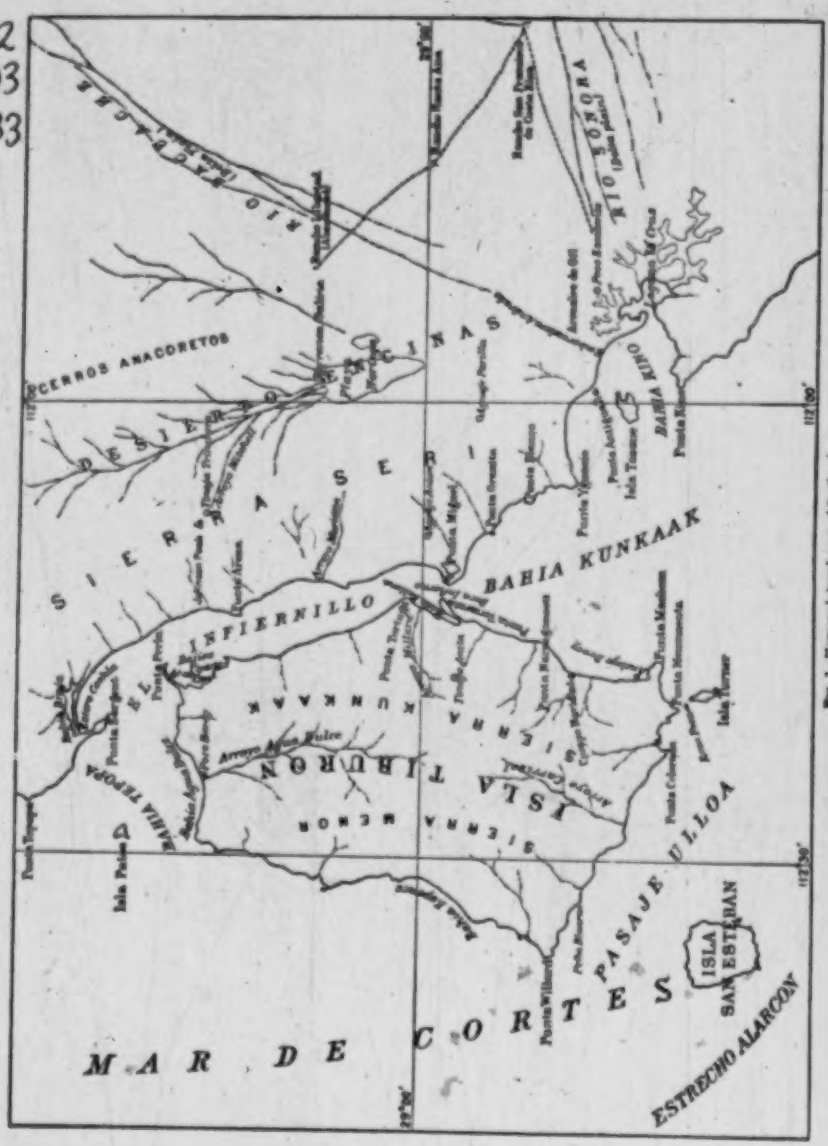

FIG. 1—Ethnographical map of Seriland.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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175 X

BAHIA KINO (Kino bay): Long-standing name given in honor of Padre Eusebio Francisco Kino, an early Jesuit missionary (the "Bahia San Juan Bautista" of various early maps); adopted in Anglicized form by the Hydrographic Office, U. S. N.

†BAHIA TEPOPA (Tepopa bay): Specific a corruption of Tepoka, the extra-vernacular name of a local tribe related to the Seri; applied in 1748 by Padre Consag, and used by most navigators and cartographers of later dates, though it does not appear on the charts of the Hydrographic Office, U. S. N.

BAHIA AGUA DULCE (Freshwater bay): Named by Lieutenant R. W. H. Hardy, R. N., 1826; name retained (in Anglicized form) by Hydrographic Office, U. S. N. (The name is misplaced on Hardy's map, but the bay is correctly located in his text, p. 269.)

†BAHIA BRUJA (Witch bay): Named (in honor of his vessel) by its discoverer, Lieutenant Hardy, 1826.

*BAHIA ESPENCE (Spence bay): Named in honor of Pilot Tomás Espence (Thomas Spence), second circumnavigator of the island, who landed in the bay in 1841.

†ESTERO COCHLA (Cockle inlet): Named by Lieutenant Hardy, 1826.

*BAJIOS DE UGARTE (Ugarte shoals): Named in honor of Padre Juan de Ugarte, first visitor to the shoals and circumnavigator of Tiburon, 1721.

*BAHA BALLENA (Whale roadstead): Named from the stranding of a whale about 1867, an incident of much note among the Seri.

*ANCLAJE DEWEY (Dewey anchorage): Named in honor of its discoverer, Commander (now Admiral) George Dewey, in charge of the surveys by the Hydrographic Office, U. S. N., 1873.

LAGUNA LA CRUZ (Lagoon of the Cross): Name adopted (Anglicized) by Hydrographic Office, U. S. N.; the "Laguna de los Cervalitos" (Lagoon of the Little Banks) of Colonel Francisco Andrade, 1844.

ISLA TIBURON (Shark island): Name of long standing; used alternatively with "Isla San Agustin" since the seventeenth century, both names being apparently applied to Isla Tasnee by several writers, and also to Isla Angel de la Guarda (the second largest island in the gulf) by Kino and others, while the present Tiburon was regarded as a peninsula.

ISLA SAN ESTEBAN (Saint Stephen island): Name of long standing; in consistent use since early in the seventeenth century.

*ISLA TASNEE (Pelican island): Name recast by the use of the Seri specific in lieu of the Spanish (Alcatráz), which is too hackneyed for distinctive use.

ISLA TURNER (Turner island): Name used (and probably applied in honor of Rear-Admiral Thomas Turner, U. S. N.) by the Hydrographic Office, U. S. N.

ISLA PATOS (Duck island—i. e., Island of Ducks): Name of long standing; adopted by the Hydrographic Office, U. S. N.

ROCA FOCA (Seal rock): Name used (and probably applied) by the Hydrographic Office, U. S. N.

PEÑA BLANCA (White crag): Name used (and probably applied) by the Hydrographic Office, U. S. N.

PUNTA TEPOPA (Tepopa point): Named (probably corruptly) from a local tribe related to the Seri; used by the Hydrographic Office, U. S. N.

PUNTA SARGENT (Sargent point): Name applied by Lieutenant Hardy in 1826 to what is now known as Punta Tepopa; adopted for the minor point by the Hydrographic Office, U. S. N.

*PUNTA PERLA (Pearl point): Name applied in commemoration of the traditional pearl fisheries of the vicinity.

*PUNTA ARENA (Sand point): A descriptive designation.

*PUNTA TORTUGA (Turtle point): Name applied in recognition of the extensive turtle fisheries of the Seri in the vicinity.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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*PUNTA TORMENTA (Hurricane point): Name applied in recognition of the nearly continuous gales and tide-rips by which navigation is rendered hazardous, and by which the long sand-spit has been built.

PUNTA MIGUEL (Miguel point): Recast from "San Miguel point", partly through association with the name of a Papago guard accompanying the expedition of 1895; in the old form the name is of long standing, was probably applied by Escalante in 1700, and was adopted by the Hydrographic Office, U. S. N., 1873.

*PUNTA GRANITA (Granite point): A descriptive designation.

*PUNTA BLANCA (White point): A descriptive designation.

*PUNTA NARRAGANSETT (Narragansett point): Specific (of Algonquian Indian derivation) applied in commemoration of the vessel employed in the surveys by the Hydrographic Office, U. S. N., in 1873, the point being that at which the commander of the *Narragansett* located the principal Seri rancheria of that time and made observations on the tribe.

*PUNTA YGNACIO (Ygnacio point): Specific applied in honor of Don Ygnacio Lozania, a trusted aid in the 1895 expedition, who had visited this point in connection with the Andrade expedition of 1844; described as "Dark bluff" on charts of the Hydrographic Office, U. S. N.

*PUNTA ANTIGUALLA (Antiquity point—i. e., Point of Antiquities): Name applied in recognition of a great shell-mound which has retarded the transgression of the sea and produced the point.

PUNTA KINO (Kino point): Name of long standing; specific in honor of the early missionary; used by the Hydrographic Office, U. S. N.

*PUNTA MASHÉM (Mashém point): Specific in honor of the Seri chief Mashém (sometimes called Francisco Estorga or Juan Estorga), who speaks Spanish and acted as Seri-Spanish interpreter in 1894.

PUNTA MONUMENTA (Monument point): Named by the Hydrographic Office, U. S. N.

PUNTA COLORADA (Red point): Recast from the "Red Bluff point" of the Hydrographic Office, U. S. N.

PUNTA WILLARD (Willard point): Origin of name unknown; used by the Hydrographic Office, U. S. N.

*EMBARCADERO ANDRADE (Andrade landing): Named in memory of the embarkation for Tiburon of Colonel Francisco Andrade, 1844.

*CAMPO NAVIDAD (Christmas camp): Named in memory of a camp occupied December 24–26 by the expedition of 1895.

*SIERRA SERI (Seri range): Generic Spanish, specific the extra-vernacular tribe name.

*SIERRA KUNKAAK (Kunkaak range): Specific the vernacular tribe name.

*SIERRA MENOR (Minor range): A descriptive designation.

*CERROS ANACORETOS (Anchorite hills): A designation suggested to Topographer Johnson by the solitary series of spurs rising singly or in scattered groups from the sheetflood-carved desert plain.

*JOHNSON PEAK: Name applied in commemoration of the first and only ascent of the peak, and of its occupation as a survey station, December 7 and 8, 1895, by Willard D. Johnson, accompanied by John Walter Mitchell and Miguel (Papago Indian).

*DESIERTO ENCINAS (Encinas desert): Generic Spanish, specific in honor of the intrepid settler on the outskirts of the desert, Señor Pascual Encinas.

*PLAYA NORIEGA (Noriega playa): Generic Spanish, specific in honor of Don Andrés Noriega, kinsman of Señora Anita Encinas, a resident on the outskirts of the desert, and the leading Mexican aid in the expedition of 1895.

*ARENALES DE GIL (Gil sandbanks): Generic Spanish, specific in honor of Fray Juan Crisóstomo Gil de Bernabe, sole missionary to Seriland, massacred at this point in 1773.

*RIO SONORA (Sonora river): Generic Spanish, specific a long standing and originally colloquial corruption of Señora, a designation said to have been applied

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

by Spanish pioneers to a hospitable native chief(tejaose; afterwards apparently fixed through the name of an early mining camp and garrison and perhaps by similarity to a local aboriginal (Opata) term connoting maize, i. e., sonot.

RIO BACUACHE (Bacuache river): Name of long standing; specific doubtless from the Opata term hacut, "snake", with a locative termination, i. e., "Snake place".

†ARROYO CARNIZAL (Reedy arroyo): Generic and specific Spanish; colloquial designation used by the Seri chief Mashém in describing the island; a traditional name of long standing.

†ARROYO AGUA DULCE (Freshwater arroyo): A traditional name like the former, also used by Mashém.

*ARROYO MILLARD (Millard arroyo): Named in memory of S. C. Millard, aid and interpreter in the expedition of 1895 (died 1897).

*ARROYO MARIANA (Mariana arroyo): Named in honor of Mariana (Papago Indian), a guard accompanying the 1895 expedition, who had once approached this arroyo on a hunting expedition.

*ARROYO MITCHELL (Mitchell arroyo): Named in honor of John Walter Mitchell, photographer of the 1895 expedition.

†POZO ESCALANTE (Escalante well): Generic Spanish, specific in honor of Sergeant Juan Bautista de Escalante, the first Caucasian to cross El Infiernillo (in 1700), who is reputed to have dug the shallow well still existing; the name has been retained ever since alternatively with "Agua Amarilla" (Yellow water); doubtless the "Carrizal" of certain early maps; the site of the only mission ever established in Seriland, and of the massacre of Fray Cristostomo Gil in 1773.

*POZO HARDY (Hardy well): Named in honor of Lieutenant R. W. H. Hardy, R. N., second known Caucasian visitor to the spot, 1826.

*AGUAJE ANTON (Anton water, or water-hole): Generic a common Mexican term; specific applied in memory of Anton (Papago Indian), a guard and visitor to the spot in the expedition of 1895.

*AGUAJE PARILLA (Parilla water): A traditional water (not found by the expedition of 1895) named in memory of Colonel Diego Ortiz Parilla, the vaunted destroyer of the Seri in 1749, whose imposing expedition may have reached this point.

*BARRANCA SALINA (Saline gorge): Generic colloquial Mexican, specific denoting the character of the practically permanent water; the designation applied by Mexican vaqueros and Papago hunters, who occasionally visit the locality.

*TINAJA ANITA (Anita basin): Generic a useful Mexican term for a water-pocket, or rock basin containing water supplied by storms or seepage; specific a tribute to Anita Newcomb McGee, M. D., Actg. Asst. Surg. U. S. A.; perhaps the "Aguaje de Andrade" of 1844.

*TINAJA TRINCHERA (Entrenched basin): Specific a common Mexican term for the ancient entrenchments found on many mountains of Papagueria; applied in recognition of a few low, loose-laid stone walls about the tinaja, the only structures of the kind known in Seriland.

RANCHO SAN FRANCISCO DE COSTA RICA: Name applied by the founder, Señor Porcual Encinas, about 1850.

RANCHO SANTA ANA: Name applied by the founder, Señor Encinas, about 1870.

RANCHO LIBERTAD: Name applied by the founder, Señor Encinas, about 1875.

The fairly full geographic nomenclature of Seriland merely expresses the necessity for place names, felt in some measure by all intelligent beings, and realized especially by explorers and describers of the region. Excepting the ranchos and perhaps Pozo Escalante, they denote natural features only, and, with the same exceptions, the features are seen but rarely or from great distances by enlightened men. Despite

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

also a center for radiating trails, the best-beaten of these leading toward the fresh waters of Tinaja Anita and Arroyo Carrizal; and even the rancherias half-way thence to Punta Mashém send their most permanent paths over 15 miles of intervening ranges and spall-strewn valleys toward the same waters. According to Mashém's cautious statements, there is a minor Seri metropolis at the northwestern spur of Sierra Kunkaak, within reach of Pozo Hardy and Arroyo Agua Dulce, and two or three smaller rancherias along the western shore; but these were not reached by the 1895 expedition.

4. The seas washing Seriland are notably troubled by tides and winds. Gaping toward the Pacific, and narrowing and shoaling for the 800 miles of its length (measured from midway between Islas de Tres Marias and Cabo San Lucas), Gulf of California approaches Bay of Fundy, Bristol channel, and broad sound as a tide accumulator; while the semidiurnal sweep of the waters in the upper half of the gulf is conditioned by the constriction of the basin to a fraction of its average cross-section at the narrows between Isla Tiburon and Punta San Francisquito. Toward the head of the gulf the ordinary spring tides range from 20 to 25 feet, and may be much increased by favoring winds; the debacles culminate there, but the currents culminate off Seriland in the great tide-gate half dammed by the islands of Tiburon, San Esteban, San Lorenzo, and Salsipuedes,[1] with their marine buttresses, and through the breaches of Pasaje Ulloa, Estrecho Alarcon, and Canal de Salsipuedes flow, four times daily, some two or three cubic miles of water in tremendous tidal floods, probably unsurpassed in vigor elsewhere on the globe. Naturally the islands and the adjacent coasts afford extraordinary examples of marine transgression; and while exceptional wave-work is a factor, the transgression is undoubtedly due mainly to the extraordinary tidal currents in this gateway of the gulf. The fierce currents and the frequent storms of the region condition local navigation, and have undoubtedly contributed to the development of the peculiarly light, strong, and serviceable water-craft of the aboriginal navigators among the islands.

El Infiernillo derives its distinctive characteristics largely from the local character of the tides. Bahia Kunkaak is a funnel-shape embayment so placed as to catch half the volume of the incoming tide and to

[1] Originally the name Islas Sal-si-puedes (Get-out-if-canst) was applied to the various islands of this gateway of the gulf, including San Lorenzo, San Esteban, and San Agustin (now Tiburon), together with the smaller islets, as shown in the map of Padre Fernando Consag (in Noticia de la California y de su Conquista, etc., por el Padre Miguel Venegas, 1757, tomo iii, p. 194); and Padre Consag's account of the currents encountered in 1746 explains the designation: "The great sea which runs here even in fair weather would not allow us to stay, and it was with great difficulty we took in a little water. We now attempted to weather the Cape of San Gabriel de Sal-si-puedes, so greatly dreaded by seamen on account of these islands, several contiguous points of land and many ledges of sunken rocks extending a great way from the land. Here the sea is so agitated by the current that a gale or a calm makes but little difference" (English translation of Venegas' Noticia, titled A Natural and Civil History of California, 1759, vol. ii, pp. 312-313). Hittell speaks of "the group of islands known as Salsipuedes, the largest of which is now called Tiburon" (History of California, 1885, vol. i, p. 223). Dewey restricted the name to a single small island near the Baja California coast. Further references to the islands and their designations are noted postea, p. 66.

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I

INTRODUCTION

121 localities, but I think it is advisable to include others, whose nature is not so different from the main places of Seris' habitations.

361 13 I have selected then 25 localities and I shall give their main characteristics below:

1. **Punta Peñasco** — a village along the upper shores of the Gulf of California, close to the U.S., [491] connected by a paved highway from Gila Bend. Typical Sonoran zone with extensive sand flats. Very rarely visited by the Indians.

2. **Porto Libertad** — rocky shores, located some 30 miles north of Desemboque. A Mexican village frequently visited by the Seris.

3. **Desemboque** — Seris' main settlement after 1940, just north of and around Punto Tzopqa, only a few miles from Tiburon. A narrow strip of poor land, thoroughly permeated with alkali and salt. Vegetation is very sparse. The mesquite, elephant bush, creosote bush, *Cholla* and *Sahuaro* are the main trees. No *Palo Verde* or *Palo Fierro*. *Ocotillios*, *Sahuaros* and mesquite are stunted and scarce, only toward the mountains increasing in frequency and size. Along the shores, sand dunes [172] with kitchen middens, partly covered by vegetation. An arroyo nearby is empty except on a few occasions during the year when flash flood after rains rushes through. Rainfall very scarce. During the summer of 1953 I spent there, it rained very little—only twice and that was short and feeble. [312] Water is obtained from a well, near which there is a Mexican ranch where, owing to irrigation, some vegetables are grown and weeds are present such as *Datura*. The coast is largely rocky. Narrow beaches lack wide sand bars. Hence the fauna here is poor.

4. **Estero Sargente** — alkali flats and mud flats some 25 km. south of Desemboque along the coast. Vegetation very scarce. *Sahuaros* and *Ocotillios* and other desert trees grow some distance from the shore. Short grasses in some places clump the coastal dunes. Breeding and feeding place of many shore birds, especially of willets and egrets. On the alkali flats near the shore are many peculiar insects, not found in Desemboque, particularly tiger beetles and Oedemerids.

5. **Campo Vivora** — little more than half way down toward Desemboque from Estero Sargente, also along the coast. So named after supposedly ● [103] numerous rattlesnakes. Clumpy grasses. Favorite encampment of the Seris and others while fishing and hunting turtle. The only loggerhead turtle I have seen was right here.

[491] 6. **Porto Kino** — fishing village directly due east of Hermosillo, nowdays connected with Sonora's

[P. I [illegible]

2: Kroeber E-5 (1930) 1931 NU31 Seri NU31

text, without reference to the locality of the dialect from which they are taken.[13]

Gabb's vocabulary therefore represents a Cochimí dialect or language north of the latitude of Tiburon; Bartlett's, a Cochimí dialect, or possibly mixture of dialects, farther south, somewhat more nearly abreast the Seri, but of undetermined provenience.[14]

Words from both these Cochimí sources are reproduced as they appear in the Bureau manuscripts, except that the accents have been put after instead of on the vowels, and that Gabb's syllabifying hyphens have been omitted where their absence seems irrelevant to his phonetic intent. Gabb states that his *ch* is as in German; his ch is presumably as in Spanish and English.

In the Seri, Yuma, and Cocopa lists, the circumflex denotes long open, the macron long close vowels; small capitals, vowels obscure in quality; superior vowels, glides or whispered vowels. Of consonants, q is velar k; X, velar fricative; x, palatal fricative; c, sh; L, surd l; italicised stops, unvoiced and unaspirated stops (intermediates); ð, interdental sonant fricative; v, *F*, bilabial v and f. The apostrophe denotes the glottal stop; its reverse, the Greek rough breathing sign, an aspiration;[15] a superior period, consonantal length.

In Yuma and Cocopa, the prime accent denotes stress accent;[16] in Seri, high tone. Seri low tone is shown by italicized vowels; middle tone, by lack of indication.

The comparative vocabularies of Seri, Cochimí, Yuman and Cocopa are given on the following page.

[12] B, sun, yho, C, ño; B, summer, mesibo, C, mejibó, June to August, season of pitahaya harvest, also yeur; B, autumn, amadá, appi, C, amadá-appi, August to October; B, winter, masibói, C, majibói, December to February; B, spring, masibo'a, C, majiben, February to April; B, 4, magarubugua', C, the same (but: B, 5, muguacoqui, C, naganná tajurg ignimel). Bartlett's vocabulary is general, whereas Clavigero chiefly gives names of foods, plants, animals, and points of ethnographic interest.

[13] Buschmann in his Spuren der Aztekischen Sprache, 469-472, 495-511, 1859, has assembled and discussed all available Cochimí material then in print, except Clavigero's.

[14] The initial pronominal h- of Seri body-part words might perhaps more properly have been written with a rough breathing, '.

[15] There is a tendency for the stressed syllable in Yuma and Cocopa to be higher in pitch, but the tone seems an incidental accompaniment, and not organic. The same is true of Mariccopa and Walapai, and I now believe, contrary to previously expressed opinion, of Mohave and Diegueño.

batea--winnowing basket
batello--flat basket
cahuama--sea turtles, used as food by the Seri
guaraches--rawhide sandals
palanca--shoulder poles, used in carrying water
pangas--Seri boats shaped like dories
piojo--body lice

so named must be of the same sex as the first. The significance of land ownership needs further investigation.

Many of the Seri still prefer, when possible, to live in their chosen band area. Sometimes a person, when he is approaching death, will ask to be taken to his own i?iziitting, where he can die and be buried in the area of his choice.

NOTES

1. Due to printing limitations, stress on Seri words has been omitted, and several orthographic symbol changes have been made for this paper. The phonetic values of the symbols used are the following: p is voiceless labial stop; t is vl. dental stop; k is vl. velar stop; ? is glottal stop; f is vl. labial flat spirant; w is vl. labial grooved-rounded spirant; s is vl. alveolar spirant; x is vl. alveo-palatal spirant; l is vl. lateral spirant; h is vl. velar spirant; x is vl. back velar spirant; m is labial nasal; n is dental nasal; ng is velar nasal; y is palatal semivowel; i is a high close front vowel; e is a low close front vowel; a is a low open central vowel; o is a mid close back vowel.

2. These data were compiled during field trips to the Seri camps during the years 1956-61, the studies being carried out under the auspices of the Summer Institute of Linguistics. The principal informant was R. Herrera T. whose information was checked with and supplemented by nine of the older members of the tribe. I am indebted to my colleague, David Thomas, who read an earlier draft of this paper and made helpful suggestions.

3. 1) W. J. McGee, "The Seri Indians," *Bureau of American Ethnology, Annual Report*, No. 17, Part 1. Washington, 1898. 2) A. L. Kroeber, "The Seri," *Southwest Museum Papers*, No. 6. Los Angeles, 1931. 3) W. B. Griffen, "Notes on Seri Indian Culture, Sonora, Mexico," *Latin American Monograph Series*, No. 10, Gainesville, 1959.

4. It will be noted that between subdivision 3 and 4 on Fig. 3 there is an unnumbered area, the status of which is uncertain.

5. Kroeber states that McGee's concept of Seri maternal lineages crystallized into totemic clans with matron rule seem a fantasy. In Kroeber's opinion, "The Seri may never have had sibs or clans; but the fact that they appear to lack them now is no positive evidence that they were without them three centuries ago. Shifts of residence, contraction of territory, shrinkage of numbers, amalgamation of distinct bands, may well have obliterated much of such social fabric as they once possessed."

Griffen discusses the nature of the former Seri bands and states, "they may have been patrilineal and exogamous. The criteria . . . that Julian Steward has exposited for the formation of exogamous, patrilineal bands . . . are and presumably would have been met formerly in the Seri habitat." Griffen lists other aspects of this type of band which are also verified to some extent by his data. From reading his material, it is obvious that he suspects the existence of clans at some earlier period. He emphasizes the need for further investigation.

6. G. P. Murdock, *Social Structure*, Macmillan Co., New York, 1949.

7. Marriages were usually contracted within the band.

8. As Kroeber points out, their memory likely covers only the latter part of the period of Spanish contacts.

9. The Seri recall nothing of Seri-Pima contacts and little of Seri-Apache relations.

10. The story is related that one day some Seri entered a cave where they found several Papago jugs filled with seeds. Being hungry, the people ate the seeds and left some arrows as token payment. The Seri say that the Papago apparently believed the arrows were intended as an insult. Fighting broke out soon afterward.

11. The Seri concept of the band annihilations is seen to be in contradiction to McGee's statement (p. 133): "Concordantly with their primary characteristic, the Seri have avoided ethnic and demotic union beyond the narrow limits of their own kindred; and even of these they seem to have cast out parts, annihilating the Guayma and Upanguayma, displacing and nearly destroying the Tepoka, and outlawing individuals and (apparently) small groups."

12: Moser L-5 (no date) 1964
(ca. 1960) NU31 Seri NU31

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ACKNOWLEDGMENTS

I am indebted to Richard Felger, Department of Zoology, University of Arizona, for information concerning plants referred to in this article. H. Wesley Peirce of the Arizona Bureau of Mines identified the mineral material used in the pigment.

NOTES

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1. The phonetic values of the symbols used are the following: t is voiceless dental stop; k is vl. velar stop; ? is glottal stop; W is vl. labial grooved-rounded spirant; s is vl. alveolar spirant; z is vl. alveo-palatal spirant; l is vl. lateral spirant; j is vl. velar spirant; x is vl. back velar spirant; m is labial nasal; n is dental nasal; i is a high close front vowel; e is a low close front vowel; a is a low open central vowel; o is a mid close back vowel.

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2. The restriction as stated to me by various women pertains only to young girls below the age of menarche. Actually, however, none of the above-mentioned young men and women, most of them in their twenties, was allowed to observe.

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3. Plant specimens are deposited in the Herbarium of The University of Arizona.

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4. The blue "pencil" which McGee describes (McGee 1898: 166) and pictures (McGee 1898: Plate XXVII facing p. 170) is apparently the *?antezj kóil*.

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1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

THE SERI INDIANS

By W J McGee.

INTRODUCTION

Salient Features

Something has been known of the Seri Indians (Seris, Ceris, Ceres, Heris, Tiburones) since the time of Coronado, yet they remain one of the least-studied tribes of North America. The first systematic investigation of the tribe was made in the course of expeditions by the Bureau of American Ethnology in 1894 and 1895; it was far from complete. 114

The Seri Indians are a distinctive tribe in habits, customs, and language, inhabiting Tiburon island in Gulf of California and a limited adjacent area on the mainland of Sonora (Mexico). They call themselves *Kun-kaak* or *Kmike:* their common appellation is from the Opata, and may be translated "spry". Their habitat is arid and rugged, consisting chiefly of desert sands and naked mountain rocks, with permanent fresh water in only two or three places; it is barred from settled Sonora by a nearly impassable desert. Two centuries ago the population of the tribe was estimated at several thousands, but it has been gradually reduced by almost constant warfare to barely three hundred and fifty, of whom not more than seventy-five are adult males, or warriors. 101 [131] 133 161

The Seri men and women are of splendid physique; they have fine chests, with slender but sinewy limbs, though the hands and especially the feet are large; their heads, while small in relation to stature, approach the average in size; the hair is luxuriant and course, ranging from typical black to tawny in color, and is worn long. They are notably vigorous in movement, erect in carriage, and remarkable for fleetness and endurance. 142 [147]

The Seri subsist chiefly on turtles, fish, mollusks, water-fowl, and other food of the sea; they also take land game, and consume cactus fruits, mesquite beans, and a few other vegetal products of their sterile domain. Most of their food is eaten raw. They neither plant nor cultivate, and are without domestic animals, save dogs which are largely of coyote blood. 105

The habitations of the Seri are flimsy bowers of cactus and shrubbery, sometimes shingled rudely with turtle-shells and sponges; in some

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

105 cases these are in clusters pertaining to matronymic family groups; in other cases they are isolated, and are then often abandoned and reoccupied repeatedly, and are apparently common property of the tribe. The habitations afford some protection from sun and wind, but not from cold and wet, which are hardly known in winterless and nearly rainless Seriland.

The Seri clothing consists essentially of a kilt or skirt extending from waist to knees; sometimes a pelican-skin robe is worn as a blanket or mantle, and used also as bedding; the head and feet, as well as the bust and arms, are habitually bare, though a loose-sleeved wammus reaching not quite to the waist is sometimes worn. These garments were formerly woven of coarse threads or cords made from native vegetal fibers; the belt is generally of twisted human hair, of horse hair, of dressed deerskin, or of snake skin; the robe consists of four, six, or eight pelican skins sewed together with sinew. The pelican-skin robes are still used, though the aboriginal fabric is commonly replaced by cotton stuffs obtained through barter or plunder. Cords of human hair and skins of serpents are used for necklaces.

The sports and games of the Seri Indians include racing and dancing, and there are ceremonial dances at the girls' puberty feasts, accompanying the rude music of improvised drums. Decoration is ordinarily limited to symbolic face-painting, which is seen especially among the females, and to crude ornamentation of the scanty apparel. A peculiar pottery is manufactured, and the pieces are sometimes decorated with simple designs in plain colors.

The bow and arrow are habitually used, especially in warfare, and turtles and fish are taken by means of harpoons, shafted with cane and usually tipped with bone, charred wood, or flotsam metal. The arrows are sometimes provided with chipped stone points, though the art of chipping seems to be accultural and shamanistic. The ordinary stone implements are used for crushing bone and severing sinew or flesh, and also for mulling seeds and other food substances; they are mere cobbles, selected for fitness, and retained only if their fitness is increased by the wear of use, after the manner of protolithic culture. Graceful balsas are made from canes, bound together with mesquite-fiber cords; and on these the people freely navigate the narrow but stormy strait separating Tiburon and the neighboring islets from the mainland. They make a distinctive pottery, which is remarkably light and fragile. Its chief use is carrying water to habitations (always located miles from the spring or tinaja) or on desultory wanderings. Shells are used for cups, and to some extent for implements. They have a few baskets, which are not greatly different from those made by neighboring tribes.

The modern Seri are loosely organized in a number of maternal groups or clans, which are notable for the prominence given to mother-right in marriage and for some other customs; and there are indications that the clan organization was more definite before the tribe was so

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greatly reduced. The leading clans are those of the Pelican, the chief tribal tutelary, and the Turtle, a minor tutelary. At present polygyny prevails, professedly and evidently because of the preponderance of females due to the decimation of warriors in battle; but both custom and tradition tell of former monogamy, with a suggestion of polyandry. The primary marriage is negotiated between the mothers of the would-be groom and the prospective bride; if the mother and daughter in the latter family look with favor on the proposal, the candidate is subjected to rigorous tests of material and moral character; and if these are successfully passed the marriage is considered complete, and the husband becomes a privileged and permanent guest in the wife's household. Family feeling, especially maternal affection, is strong; but petty dissensions are common save when internal peace is constrained by external strife. The strongest tribal characteristic is implacable animosity toward aliens, whether Indian or Caucasian; certainly for three and a half centuries, and probably for many more, the Seri have been almost constantly on the warpath against one alien group or another, and have successfully stayed Spanish, Mexican, and American invasion. In their estimation the brightest virtue is the shedding of alien blood, while the blackest crime in their calendar is alien conjugal union.

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The Seri vocabulary is meager and essentially local; the kinship terms are strikingly scanty, and there are fairly full designations for food materials and other local things, while abstract terms are few. Two or three recorded vocables seem to resemble those of the Yuman languages, while the numerals and all other known terms are distinct. The grammatic construction of Seri speech appears not to differ greatly from that of other tongues of Sonora and Arizona; it is highly complex and associative. The speech is fairly euphonious, much more so than that of the neighboring Papago and Yaqui Indians.

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The Seri Indians appear to recognize a wide variety of mystical potencies and a number of zoic deities, all of rather limited powers. The Pelican, Turtle, Moon, and Sun seem to lead their hierarchy. Creation is ascribed to the Ancient of Pelicans—a mythical bird of marvelous wisdom and melodious song—who first raised Isla Tasnoe, and afterward Tiburon and the rest of the world, above the primeval waters. Individual fetishes are used, and there is some annual ceremony at the time of ripening of cactus fruits, and certain observances at the time of the new moon. The most conspicuous ceremony is the girls' puberty feast. The dead are clothed in their finest raiment, folded and fastened in small compass like Peruvian mummies, placed in shallow graves, and covered with turtle-shells, when the graves are filled with earth and heaped with stones or thorny brambles for protection against beasts of prey. Fetishes, weapons, and other personal belongings are buried with the body, as well as a dish of food and an olla of water, and there are curious customs connected with the place of

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

105 sepulture. There is a weird, formal mourning for dead matrons, and suggestions of fear of or veneration for the manes.

Seriland is surrounded with prehistoric works, telling of a numerous 172 population who successfully controlled the scant waters for irrigation, built villages and temples and fortresses, cultivated crops, kept domestic animals, and manufactured superior fictile and textile wares; but (save possibly in one spot) these records of aboriginal culture cease at the borders of Seriland. In their stead a few slightly worn pebbles and bits of pottery are found here and there, deeply embedded in the soil and weathered as by the suns of ages. There are also a few cairns of cobbles marking the burial places, and at least one cobble mound of striking dimensions but of unknown meaning; and there are a few shell-mounds, one so broad and high as to form a cape in the slowly transgressing shoreline (Punta Antigualla), and in which the protolithic implements and other relics are alike from the house-dotted surface to the tide level, 90 feet below.

The absence of relics of a superior culture, and the presence of Seri relics throughout deposits of high antiquity, suggest that the tribe is indigenous to Seriland; and this indication harmonizes with the peculiar isolation of the territory, the lowly culture and warlike habits of the people, the essentially distinct language, the singular marriage custom, and the local character of the beast-gods. And all these features combine to mark the Seri as children of the soil, or autochthones.

Recent Explorations and Surveys

114 Present knowledge of Seriland and its inhabitants is based primarily on the work of two expeditions by the Bureau of American Ethnology, 121 conducted in 1894 and 1895, respectively; and, secondarily, on researches [122] into the cartography and literature (descriptive, historical, and scientific) of the region. Both of the expeditions were projected largely for the purpose of making collections among little-known native tribes in the interests of the National Museum, and the general ethnologic inquiries were ancillary to this purpose.

The 1894 expedition was directed chiefly toward work among the Papago Indians in the vaguely defined territory known as Papagueria, lying south of Gila river and west of the Sierra Madre in southwestern Arizona and western Sonora (Mexico). Outfitting at Tucson early [122] in October, the party moved southward, visiting the known Papago rancherias and seeking others, and thus defining the eastern limits of the Papago country. On the approach to the southern limits of the tribal range toward Rio Sonora, the evil repute of the Seri Indians sounded larger and larger, suggesting the desirability of scientific study of the tribe; and it was decided to attempt investigation. Accordingly the party was reorganized at Hermosillo, and, with the 114 sanction of the Secretary of State and Acting Governor, Señor Don Ramón Corral, proceeded to Rancho San Francisco de Costa Rica,

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X 175 during the rainy season, which only lasts about a month or six weeks", nor "any vestige of Indians to be seen except a solitary hut erected by the Tiburons to serve them when they go there to fish"; and, noting the report that Padre Kino had visited this point, he quite appositely questioned the truth of the tradition, partly on the ground of the absence of fresh water, partly because "the Tepoca Indian establishment" mentioned in the tradition "is many leagues farther to the northward." Awakened by an approaching storm, he was under way next morning at daylight, and, getting out of the "bad holding ground", was caught by a gale and carried back to his "old anchorage in Freshwater Bay", where he found the Indians rejoicing over the success of a ceremonial incantation to which they ascribed his return. The reconnaissance map [114] is ill-drawn, locating "Fresh Water B." on the mainland side and apparently combining "Sargent's Point" and "Arnold's Island" as "Sargents I."; "San Miguel Pt." is properly located, and idealized route lines traverse the "Canal peligroso de San Miguel" (El Infernillo), which is of greatly exaggerated width. The careful itinerary shows, however, that Hardy scarcely entered this strait, and made but three or four anchorages in the vicinity—i. e., in Bahia Agua Dulce, in Bahia Bruja, probably in Cockle harbor (or "Cochia Inlet"), and finally off Isla Patos.

Hardy's notes on the Indians are first hand, and hence of exceptional [114] value. He says:

● 105 X 175 The Indians on the island of Tiburon are very stout, tall, and well-built fellows, exceedingly like the Twakehli tribe of Indians in Patagonia, and with a language so like theirs that I imagined I was transported back into those wild regions. They by no means look so ferocious as they are represented, and there is something peculiarly mild in the countenances of the females. Their dress is a sort of blanket, extending from the hips to the knees. But most of the old women have this part of the body covered with the skins of the eagle, having the feathers turned *towards the flesh*. The upper part of the body is entirely exposed, and their hair is dressed on the top of the head in a knot which greatly sets off the effect of their painted faces. The men use bows and stone-pointed arrows; but whether they are poisoned I do not know. They use likewise a sort of wooden mallet called Macána, *for close quarters in war*. They have a curious weapon which they employ for catching fish. It is a spear with a double point, forming an angle of about 5 degrees. The insides of these two points, which are 6 inches long, are jagged; so that when the body of a fish is forced between them it can not get away on account of the teeth.[1]

He saw "about fifteen or twenty canoes made of three long bamboo bundles fastened together", and observed that, when engaged in turtle fishing, the Indian "paddles himself from the shore on one of these by means of a long elastic pole of about 12 or 14 feet in length, the wood of which is the root of a thorn called mesquite, growing near the coast", this pole serving also as a harpoon shaft, provided with a harpoon head and cord, such as those still in use. Respecting the inventory appurtenances, he says:

My attention was directed by the old women to a pile of bushes outside the hut, which had a staff of about 5 feet in length sticking up through the center. From

[1] Op. cit., p. 349-350.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31.

the upper end of the staff was suspended by a cord 12 or 14 inches long a round stone ball, and to this ball was fastened another string furnished with bits of cork, surrounded with small feathers stuck into them at the distance of about 3 inches apart: the only use of the stone ball being to prevent the wind from blowing out horizontally the string which was furnished with feathers. . . . Upon examining the bunky pile, I discovered a wooden figure with a carved hat, and others of different shapes and sizes, as well also as feathern bags, the contents of which I was not permitted to explore.[1]

He also mentions that "in their festivities the Indians wear the head (with the horns on)" of the buro or mule deer. He adds:

It is believed that the Córas Indians have discovered a method of poisoning their arrows, and that they do it in this way: They kill a cow and take from it its liver. They then collect a number of rattlesnakes, scorpions, centipedes, and tarantulas, which they confine in a hole with the liver. The next process is to beat them with sticks in order to enrage them, and being thus infuriated, they fasten their fangs and exhaust their venom upon each other and upon the liver. When the whole mass is in a high state of corruption the old women take the arrows and pass their points through it. They are then allowed to dry in the shade, and it is said that a wound inflicted by them will prove fatal. Others again say that the poison is obtained from the juice of the yerba de la flecha (arrow wort).[2]

He purchased some of the arrows, which were stone-tipped, and had "certainly had an unguent applied to them".

He was impressed by indications of family affection, and noted the custom of having two wives. Concerning tribal relations he says:

These people have been always considered extremely ferocious, and there is little doubt, from their brave and warlike character, that they may formerly have devastated a great part of the country; but in modern days their feuds are nearly confined to a neighboring tribe of the same name as themselves (Córas), who speak the same language and in all probability originally descended from the same stock. They are said to be inferior to those of this island both in courage and stature, and they are never suffered to cross the channel. From what I was told . . . the Tiburow Córas have lately returned from a sanguinary war with the Tépoca Córas, in which the former were victorious.[3]

Later in his itinerary Hardy noted a typical Yaqui revolution, with a characteristic effort to secure the cooperation of the Seri.[4] He defined the Seri habitat as "the island of Tiburow, the coast of Tépoca, and the pueblo of Los Córas, near Pitic";[5] and he estimated the population at "3,000 or 4,000 at the very utmost",[6] and quoted the estimate of Don José María Retio, viz, that the Seri population of Tiburon was 1,000 to 1,500.[7]

Like most of those visitors to the Seri who have returned to tell their tale, Hardy "praised the bridge that carried him over" and gave the tribe passable character—worse, of course, than that of any other, yet hardly so bad as painted at Pitic.

A noteworthy traveler in western America during 1840–1842 was M. Duflot de Mofras, an attaché of the French legation in Mexico. He

[1] Op. cit., pp. 286–288.
[2] Ibid., pp. 288, 289.
[3] Ibid., pp. 289, 290.
[4] Ibid., p. 295 et seq.
[5] Ibid., p. 427.
[6] Ibid., p. 428.
[7] Ibid., pp. 225, 340.

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The captives were imprisoned over night in the mint, the children weeping, the women chattering angrily or humbly, and the men sulking. Next day the Hermosilleños began distributing the children among themselves, some families taking three and many two, while the adults were transferred to Pueblo Seri, placed in charge of a single keeper, and set to gathering fuel, etc. Naturally this unstable status did not long persist; "within two months they began to disappear, fleeing to their respective and native haunts, stealing and carrying with them the children from whom they had been separated";[1] and, according to Espence, they committed "many murders on the Pitic and Guaimas roads" as they returned to Tiburon.[2]

While the Tiburon captives were escaping, the campaigning continued; and, in November, 1844, several Seri families, comprising 63 men, women, and children, who had been scavengering Rancho del Burro ("manteniéndose allí á merced de los desperdicios de dicho rancho"),[3] were captured and transported to the mint at Hermosillo, and soon afterward transferred to Pueblo Seri. During the same month a report came from Rancho del Pocito, on the Guaymas road, that Seri marauders (assumed to belong to the 16 families left on the island) had killed 10 head of stock; and a detachment of 15 cavalry was sent to inflict punishment. Early in December this party met a Seri force of over seventy warriors, including some of those captured on Tiburon and escaped from Pueblo Seri; after a battle of four hours the troops found their ammunition exhausted, several of their carbines out of order, and all but four or five of their horses winded; so that they were driven to parley with the Indians and to procure their surrender by pacific means—especially promises of good treatment.[4] Subsequently a municipal commission from Hermosillo reminded the defeated Seri of their surrender, and "three, four, or eight" of them presented themselves ("presentándose tres, cuatro ú ocho hombres"), and were probably added to the colony at Pueblo Seri.

Espence's journal clearly indicates a complete circumnavigation of Tiburon, the second in history (that of Ugarte in 1721 being the first); and naturally some of his notes are of ethnologic value:

The Ceris Indians are tall, well formed, not very corpulent; the women are remarkable for small breasts and feet and high instep. At night they travel ill; this is to be attributed to the reflection of the sun on the sand, which is quite white, and as they all live on the shore where they gain sustenance, which is fish and plankton [mariscu], they are daily exposed to a glare which injures their vision. Their favorite food is turtles and horses. . . . They are all in the most savage condition it is possible to conceive. Their language is guttural, and they are most filthy in their persons, as in their food, which is mostly eaten raw, or at the best half

[1] Velasco, Noticias Estadísticas, p. 127.
[2] Ibid., p. 179.
[3] Ibid., p. 128.
[4] Ibid., p. 129. This native recital is far from unique among the chronicles of conquest over the Seri. All of the records recount victories more or less brilliant, even when there are strong indications between lines that the Conquistadores were outnumbered, outfought, forced from the field, and even driven into the protection of the pueblos. The Seri side of the story has never been told.

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+175 soaked; they endure a thousand miseries on the island, yet the love they have for it is incredible. They are always accompanied by innumerable dogs, . . . which they have domesticated.[1]

Velasco adds:

The Cuna subsist on fish, the seeds of grass, and countless shrubs, as well as on the flesh of horses and deer, which they kill. There is no better proof of this fact than this—on approaching the said Cuna, one instantly perceives that their bodies exhale an intolerable stench, like that of a corpse of eight or more days, totally rotten, so that it is necessary to withdraw far as possible from them.[2]

Of all the Indian tribes known in Sonora, none are more barbarous and uncivilized than the Cuna. They are perverse to the limit, vicious beyond compare in drunkenness, infinitely filthy, the bitterest enemies of the whites, like the worst of the Indians.[3]

He adds also that the men wear a pelican-skin robe and a breechclout of cotton cloth, with most of the body uncovered; "they have their faces painted or barred with prominent black lines. They use no foot-gear of any kind, and many have the nasal septum pierced and adorned with pieces of greenstone or ordinary glass." "They are robust in stature, tall and straight, generally with bright black eyes. The women are not uncomely, and of bronzy color [de color abronzado]. Their clothing is made of pelican skins fastened together, retaining the feathers; with this they are covered from the waist downward", the remainder of the body being bare. The women of Hermosillo provide them with cast off garments when they approach the city, and these they wear, unwashed, until they fall to pieces. "The said tribe, in addition to being the vilest and most brutal known in the country, are preeminently treacherous and traitorous, so that forty of their outbreaks may be counted during the efforts to reduce them to civilized life." At the time of the Cimarrones outbreak, the Seri of Tiburon and Tepoka numbered 2,000;
[161] "to day [about 1846 or 1847], counting the 230, which are all that inhabit Tiburon and the most that can be presented, including the Tepoka Seri [los Ceris Tepocas], who have always been much fewer, their whole number will not amount to 500 persons of all sexes and ages, and the warriors can not exceed 60 or 80 at the most." The Seri are not polygamous, though apparently promiscuous ("se nota en sus matrimonios mucha tolerancia mútamente"). They "adore the moon, which they venerate and respect as a deity; when they see the new moon, they kneel and make obeisance; they kiss the earth and make a thousand genuflections, beating their breasts."[4]

+175 The remarkably vigorous expedition of Alvarado and Espence occurred within the memory of men still active, and naturally it lives in tradition at Hermosillo and Bacuachi, and among the ranchos lying toward the border of Seriland; indeed, one of the two Mexicans accompanying the 1895 expedition, Don Ygnacio Lezania, retained shadowy impressions of participating in an invasion of the island, which could have been none other than that planned by Governor De

[1] Velasco, Noticias Estadísticas, pp. 169-171.
[2] Ibid., p. 170.
[3] Ibid., pp. 127-128.
[4] Ibid., pp. 131-132.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

†175 premature termination of the work, few of the observations and other results were ever published. General Stone himself traveled extensively in Sonora, and delved deeply in the historical records of northern Mexico; and, while there is no indication that he ever came in personal [114] contact with the Seri, he collected and sifted current local information relating to the tribe with notable acumen. In certain "Notes" prepared in Washington in December, 1860, he wrote:

105 †175 The *Curis* are a peculiar tribe of Indians occupying the island of Tiburon and the neighboring coast. They are yet in a perfectly savage state, and live solely by fishing and hunting. Having been at war with the whites from the time of the first missions, they have become reduced in numbers to about 300, counting some 90 warriors. They are of large stature, well made, and athletic. In war and in the chase they make use of poisoned arrows, the wounds from which are almost always fatal. In preparing the poison, it is said they procure the liver of a deer or cow, and by irritating rattlesnakes and scorpions with it, cause it to be struck by a great many of these reptiles. They then hang up the mass to putrefy in a bag, and in the drippings of this bag they soak their arrowheads. I can not vouch for the truth of this statement, but it is current in Sonora. I was informed by a gentleman in Hermosillo that one of his servants, who was slightly shot by a Cori's arrow, died quickly from the effect of the wound (which mortified almost immediately) in spite of the best medical treatment. Their language is guttural, and very different from any other Indian idiom in Sonora. It is said that on one occasion some of these Indians passed by a shop in Guaymas, where some Welsh sailors were talking, and on hearing the Welsh language spoken, stopped, listened, and appeared much interested, declaring that those white men were their brothers, for they had a tongue like their own. They are very filthy in their habits, and are said to be worshipers of the moon.[1]

†175 Another Mexican traveler of note who collected local and contemporary information concerning the Seri, though enjoying no more than slight inimical contact with them, was Herr Clemens A. Pajeken, of Bremen (for some time a resident of California). He classed as wild Indians ("Wilde Indianer, Indios bronces") the Seri and Apache tribes. Of the former he wrote:

105 †175 Curis. This is a small tribe, their number not exceeding 400 souls, or rather head (dasses Seelenzahl oder besser Kopfzahl); yet the government of the State could not restrain this little band of robbers and marauders that for more than twenty years have perpetrated their atrocities on travelers between the port of Guaymas and the city of Hermosillo, the metropolis of the State. . . . The Curis appear not to grasp the idea that they are human. Like the prey-beasts of the wilderness, they go out to slay men and animals, sparing only their own kind. In many respects they are viler than the beasts, since they slay without need merely to satisfy a lust for slaughter. They are not only the simplest and laziest of the Indians of Sonora, but also the most treacherous and deceitful. During the Spanish rule, from the time the first visit was made to lead them toward social life, they have rebelled more than forty times. Only a couple of families [sin pasar Familias] still reside in the village [Pueblo Seri], where they make clubs and subsist on the offal of the shambles. The proper home of these barbarians is the island of Tiburon and the adjacent coasts, whither they return after their outbreaks, although it is an incredibly desert region. Thence they repair to the highways to kill travelers and arri-

[113]

[1] Notes on the State of Sonora, by Charles P. Stone, 1860; Washington, 1861, p. 18. Reprinted in Historical Magazine, vol. v, 1861, pp. 180-186.

1: McGee E-5 (1894-1895)1898 NU31 Ser1 NU31

orus, or to the ridges to steal cattle. They confine themselves to the bow and arrow, and the latter are poisoned, so that every wound made by them is deadly, or at least highly dangerous. On my second journey into the interior of the country my horse received an arrow in the hip; the arrow, which entered 4 inches, could not be withdrawn until the following day; and for seven months the wound suppurated. . . . Their chief food consists of oysters, mussels, snakes, with fish and other sea food, which they consume entirely raw and which surrounds them with an intolerable stench; though this may be partly due to their exceeding uncleanliness, since the process of washing is wholly unknown to them. Their clothing consists of a kilt of pelican skin. They tattoo their faces, and some pierce their noses to insert a certain green stone [obsidian]. They are of dark copper color, large and strongly built. Although in their faces no human sentiments can be discerned, yet they can not be called ugly. Their limbs are so beautifully proportioned that the Spanish ladies in Hermosillo view with envy the slender shapes and the comely hands and feet of the young Ceris maidens. They wear no headdresses, and as their coarse, shaggy hair is neither combed nor cleaned, it sticks out in tangled tufts in all directions like spines on a hedgehog; this alone gives them a forbidding appearance. Their speech is quite like their character; it is guttural, discordant, and meager, resembling more the howling of wild animals than human speech, wherefore it is difficult for a human to learn. They have no religion—at least, I do not deem the gambols and amusing capers in which they indulge at the new moon to be religious customs. The tribe is constantly diminishing in numbers, and it is hoped they may soon disappear from the earth by natural decrease—unless the State government sooner undertakes a war of extermination.[1]

105 175*

Herr Pajeken's record bears inherent evidence (at least to one familiar with the region) of reflecting the current local knowledge and opinion concerning the Seri with unsurpassed—indeed unequaled—fidelity; and it is also of value in that it indicates the approximate number of the tribe then surviving in Pueblo Seri, and in that it gives the contemporary estimate of the tribal population.

114 175*

Among the more careful students of the Seri at second hand should be mentioned Buckingham Smith, an enthusiastic collector, translator, and publisher of rare Americana. In the introduction to an anonymous and dateless grammar of the Heve language he wrote in 1861:

175*

The lower Pima are in the west of the province [of Sonora], having many towns extending to the frontier of the indomitable Seri, who live some 20 leagues to the north of the mouth of the Hiaqui, and have their farthest limit inland some dozen leagues from the sea, finding shelter among the ridges and in the neighboring island of Tiburon.

He added in a note:

The Guaimas speak nearly the same language as the Seri, are few in number, and live among the Hiaqui in Belen and elsewhere, having retreated before the sanguinary fury of their conquerors.[2]

114 175*

While the scientific knowledge of the Seri began with Bartlett's visit, it assumed definite shape only through the classic researches of Don Francisco Pimentel (Count Herras) in the early sixties. His analysis and classification of the Seri tongue rest on a short vocabulary

[113]

[1] Reise-Erinnerungen und Abenteuer aus der neuen Welt in ethnographischen Bildern, von F. A. Pajeken; Bremen, 1861, pp. 97-98.

[2] A Grammatical Sketch of the Heve Language, translated from an unpublished Spanish manuscript in Library of American Linguistics, vol. iii, New York, 1861, p. 7.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

limited as it is to a single line of symbolic portrayal, is still more abjectly meagre.

Any comparison of the Seri esthetic with that of other Amerind tribes serves only to emphasize its paucity: the tribes of the plains, with their eagle-feather headdresses, elaborately arranged scalp-locks, widely varied face-painting, and ritualistic camp circles; the Pueblo peoples, with their ornate masks, elaborate altars, figured staffs, and painted pottery; the denizens of the eastern woods, with their feather-decked peace-pipes, divinatory games, fringe-bordered garments, and prayer-inscribed arrows; the coastwise peoples of the upper Pacific, with their labrets and tattoo-marks, totem-poles and carved house-fronts, painted canoes and prodigal potlatches; the neighboring desert tribes, with their festal footraces, decorated pottery and basketry, pendent scarfs and garters, and well-wrought caskets for family fetishes; even the timid acorn-eaters of California, with their sacramental baskets, artistically befringed kilts, bead-strings of far-traveled nacre, and patiently wrought fabrics of rare feathers—all of these seem rich in esthetic motives when contrasted with "los pobrecitos" of arid Seriland. And the contrast is only intensified when the economic motives of the various tribes are compared: the industrial motives of the Seri are fairly numerous and diverse; they are skilful huntsmen, successful fishermen, capable navigators, and competent warriors (as attested by the protection of their principality for centuries), so that despite the absence of agriculture and the avoidance of commerce, their industrial range is not very far below the aboriginal average; and while they are deficient in thrift, this shortcoming is balanced by a peculiarly developed vital economy whereby they are delicately adjusted to their environment, as has been already shown. On the whole, it would appear that the Seri are not only lower in esthetic development than the contemporary tribes thus far studied, but also that they stand at the bottom of the scale in the ratio of esthetic to industrial motives.

THE SIGNIFICANCE OF DECORATION

Largely through recent researches among the American aborigines, it has been shown that decorative and many if not all other esthetic concepts normally arise in symbolism, gradually expand in conventionism, and eventually mature in a realism which is itself the source of ever-extending esthetic motives; and the observations on the lowly Seri afford opportunity for somewhat extending the generalizations based on higher tribes.

When peoples of unequal cultural development are compared, it is commonly found that the higher are the more independent in action and thought: thus, advanced peoples make conquest of nature for their own behoof, while primitive peoples are largely creatures of environment; Caucasian citizens are self-conscious lawmakers, while Amerind tribesmen are semiconsciously dominated by mysteries fearsomely

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

INDUSTRIES AND INDUSTRIAL PRODUCTS

105 The pacific vocations of the Seri are few. They are totally without agriculture, and even devoid of agricultural sense, though they consume certain fruits and seeds in season; they are without domestic animals, though they live in cotoleration with half-wild dogs, and perhaps with pelicans; and they are without commerce, save that primitive and inimical interchange commonly classed as pillage and robbery. Accordingly, their pacific industries are limited to those connected with (1) sustentation, chiefly by means of fishing and the chase; (2) navigation and carrying, (3) house-building, (4) appareling, and (5) manufacturing their simple implements and utensils; and these constructive industries are balanced and conditioned by the destructive avocation of (6) nearly continuous warfare.

FOOD AND FOOD-GETTING

312 The primary resource of Seriland is raised to the first place in realized importance only by its rarity, viz, potable water—a commodity so abundant in most regions as to divert conscious attention from its paramount role in physiologic function as well as in industrial economy. The overwhelming importance of this food-source is worthy of closer attention than it usually receives. Classed by function, human foods are (1) nutrients, including animal and vegetal substances which are largely assimilated and absorbed into the system; (2) assimilants, including condiments, etc, which promote alimentation and apparently aid metabolism; (3) paratriptics, or waste preventers, including alcohol and other stimulants, which in some little-understood way retard the waste of tissue and consequent dissipation of vital energy; and (4) diluents, which modify the consistency of solid foods and thereby facilitate assimilation, besides maintaining the water of the system. Classed by chemic constitution, the foods may be divided into (1) proteids, or nitrogenous substances, including the more complex animal and vegetal compounds; (2) fats, or nonnitrogenous substances in which the ratio of hydrogen and oxygen is unlike that of water, and which are second in complexity among animal and vegetal compounds; (3) carbohydrates, or nonnitrogenous compounds of carbon with hydrogen and oxygen in the proportions required to form water, which are among the simpler vegetal and animal compounds; and (4) minerals, chiefly water, with relatively minute quantities of various salts. Both classifications are somewhat indefinite, largely because most articles of food combine two or more of the classes; yet they are useful in that they indicate the high place of the simple mineral water among food substances. Quantitatively this constituent stands far in the lead among foods; the human adult consumes a daily mean of about 4½ pounds of simple liquids and 2½ pounds of nominally solid, but actually more than half watery, food; so that the

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

000 and groups; the linguistic activities serve to extend social relations in space and time, and the sophic activities to integrate and perpetuate all relations; but it is through the industrial activities that human intelligence interacts with physical nature and makes conquest of the material world. Accordingly, industries act as a steady and never-ceasing stimulus to intelligence; accordingly, too, the industrial activities afford the simplest and surest measure of intellectual advancement.

Under this view of the place of industrial activities in human phylogeny, certain phases of Seri technology acquire importance and especial significance.

105 177 1. One of the most conspicuous features of Seri craft is its local character. The foodstuffs, the materials for apparel and habitations, and the substances utilized in the several lines of simple handicraft are essentially local; moreover, the characteristic methods and devices evidently reflect local environmental conditions. There are, indeed, a few phenomena suggesting, and a still less number demonstrating, extraneous origin; the balsa and the kilt are sufficiently similar to devices of other districts to suggest, though not to prove, genetic identity (indeed, the sum of indications of local origin is much weightier than the several suggestions of extraneous derivation); the iron harpoon-points and arrow-tips are mainly of local flotsam, and are essentially provincial in modes of employment; the chipped stone arrow-tips, though local in material, are foreign in motive; but on summarizing the industrial phenomena, it would appear that by far the greater share are essentially local, while the few of exceptional (and extraneous) character can be pretty definitely traced to importation through the social interactions of recent centuries.

105 182 13 2. An equally conspicuous feature of the industrial craft of the Seri is the dominance of chance in both processes and devices. The traditional "fisherman's luck" is made exceptionally uncertain by the sudden gales and shifting currents of Seriland shores, while the absolute necessaries of life on land are still more capricious than those alongshore; this uncertainty of resources has profoundly affected the somatic features of the tribesman, as indicated elsewhere (ante, p. 150); and that the mental attributes of the folk are even more profoundly affected is attested by the rôle played by chance in the selection and shapement of the prevailing tools of stone and shell. The large rôle of chance in Seri life is also revealed, though less directly, in the overweening [771] mysticism of zootheistic faith, with its material reflection in zoomimic craft.

3. When the local and fortuitous features of the Seri industries are juxtaposed they are found to express a notably inchoate or primitive stage of industrial development. In both the local and the fortuitous or accidental aspects, the activities are so closely adjusted to the immediate environment as to approach the instinctive agencies and movements of bestial life, and correspondingly to diverge from the composite

1: McGee E-5 (1894-1895);1898 NU31 Seri NU31

and cosmopolite characters of higher humanity; the dearth of extraneous devices denotes absence or intolerance of that acultural interchange accompanying and marking the progress of peoples; and the dearth of inventions denotes feebleness of creative faculty and absence of that self-confidence which accompanies and measures progress in nature-conquest. 105 13 182 [177]

4. When the local and fortuitous features of the Seri craft are viewed in their serial or sequential relations, they are found to reflect and attest autochthonal development. Excepting the few acultural processes and devices whose acquisition may confidently be traced to certain social interactions of the historic period, the Seri technic is too closely tied to local environment to warrant any supposition of importation from other districts. The question of the birthplace of the people may be left open in this case as in every other; but the birthplace of practically all those activities and activital products which define the folk as human was manifestly Seriland itself—so that the tribe, considered as a human folk rather than as a zoic variety, must be classed as autochthonous. 105 177

Summarily, then, the Seri industries are significant as (1) local, (2) fortuitous, (3) primitive, and (4) autochthonous; and these features combine to illumine a noteworthy stage in primitive thought. 185

5. On juxtaposing these significant features of Seri technic, they are found to reflect the tribal mind with noteworthy fidelity, and hence to indicate the sources of Seri mentations, and of the local culture in which these mentations are integrated. The local foodstuffs—especially that vital standard of values in arid regions, water—are periodic sources of the strongest aspirations and inspirations of industrial life, and the methods and devices for food-getting are but the legitimate offspring of the inevitable relation between effort and environment; the conspicuous rôle of chance is but the composite of the hard and capricious environment on the one hand, and of the lowly thought reflecting that environment on the other hand; the zoic faith into which the magma of recurrent chance has semicrystallized finds carnate symbols either in local beasts or in fantastic monsters suggested by those beasts; even the mating instinct, second only to thirst among the impelling action-factors of the folk, is so profoundly and bitterly provincial as to exclude foreign ideals to a degree unparalleled among known peoples. The industrial materials are local—but not more local than the thoughts in which they are reflected; the technical methods are unmistakably the offspring of the environment—but they are equally the offspring of minds reflecting that environment and no other; the few and simple devices stand for integrations of experiences, instinctive rather than ratiocinative, the germ of invention rather than even its opening bud—but the experiences bear the marks of that environment and no other. Accordingly, the mental side of Seri industry, and, indeed, of all Seri life, appears to be the counterpart of the physical side. 13 181 182

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

but as the vicarious and visible exponent of an ever-immanent beast-god—the clan tutelary; her appeals to her brothers for administrative aid are precisely parallel to her intuitive passage from zoomimicry into the field of mechanical chance defined by protolithic implements; and the appeal, like the execution of the law either by herself or by her brothers, is controlled and regulated in absolute deference to the zoic pantheon. Thus, the inchoate tribal laws, expressed in habitual lines of action and modes of thought, are by no means conscious products of human wisdom, but are confidently imputed to a superhuman wisdom on the part of myth-magnified beasts of a mystical olden time; and, similarly, the power of executing these laws is by no means cognized as conscious human faculty, but is faithfully imputed to supernal potencies of mythical monsters. Essentially, therefore, the tribal law is putatively *zoocratic;* and the social organization may justly be classed as a putative *zoocracy.*

To prevent possible confusion, it may be desirable to note specifically that the Seri government is not matriarchal in any proper sense. As pointed out elsewhere, matriarchy is not (at least among the American aborigines) an antecedent of patriarchy, but a correlative of that form of government; and it would be especially erroneous and misleading to designate as matriarchal a tribe like the Seri, whose chiefs and subchiefs (i. e., appellate clan-administratives) are invariably masculine. Neither would it be just, despite the dominance of matrons in legislative and judicative matters, to regard the tribal government as a gynecocracy, such as have been noted in various parts of North America—e. g., in Sonora, according to a current tradition as to the origin of the name of the province, and among the Pomo Indians of California, according to Cronise as interpreted by Powers;[1] for the actual control is exercised by the warrior brothers, while the ideal control is vested in that zoic pantheon of which the matrons are putative mouthpieces. Physically and practically the Seri government is an adelphiarchy, as already indicated; but in the minds of the tribesmen themselves it is an inchoate theocracy putatively headed by a pantheon of animate monsters, whose prelates are personified in the painted clan-mothers.

Summarily, then, the Seri are zoocosmatic in esthetic, zoömimic in technic, zootheistic in faith, and putatively zoocratic in government, while even the Seri tongue is so largely mimetic or onomatopoetic in form as to accord with the industries and institutions; and in view of the intimate interrelations between the several lines of activity, it would seem preferable to determine the culture-status from the coincident testimony of all the lines, but feasible to measure it in terms of any one or more of these activital lines.

Now, on comparing the characteristics of the Seri with those of other known tribes of North America, many resemblances and a few differ-

[1] Tribes of California, pp. 220-221.

3:Davis & Dawson E-5 (1922-1940) 1945
NU31 Seri NU31

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FIG. 2. THE PELICAN SKIN ROBE
A TYPICAL WOMAN'S GARMENT BEFORE THE ADVENT OF THE COTTON CLOTH AND RAGS THAT REPLACED IT.

191 bounded coastal plain, lived a life so independent and so oblivious of the outside world that they might well have been on another planet.

182 The hard, inhospitable natural environment afforded by Seriland long ago moulded
● 105 the characteristics of its people and their whole mode of life. The distance between reliable food sources in the sea and supplies of fresh water created a pedestrian habit whereby they acquired a remarkable fleetness of foot and tremendous physical endurance against thirst and weariness on the trail. The monotonous sea-food diet induced a wandering, roving life in search of game and vegetal produce to supplement their meager rations. They became a homeless, burden-bearing people, wandering in family

[p. 194(A)]

105 groups or clans between the waterholes and
182 their temporary dwellings by the sea, chasing for game or searching for cactus fruits, sleeping wherever weariness overtook them, or where the successful end of a hunt left them gorged and drowsy. Under a climate where frost is almost unknown they needed no protection except from the sun, and built no other dwellings than their brush-heap jacals (Fig. 3). Living in animal-like savagery, without commerce or industry, the Seri's every bodily character and function were directed toward the provision, day by day, of the food and water necessary for life.

312 Potable water, a commodity so abundant in most regions as to divert conscious attention from its paramount role in physiologic function and in industrial economy, attained in Seriland the primary place of importance because of its rarity. In that arid land it is scanty to the extreme. Two thirds of the meager supply is confined to a single rivulet in the interior of Tiburon Island (Fig. 4). Because of this and other widely separated aguajes within the island whose shores provided the greater part of their food resources, the Seris early found this island the most tolerable habitat in their desolate realm.

225 The most conspicuous single article in the
[262] dietary of the Seri, and undoubtedly that which first determined the location of his habitat, is the green sea turtle which is abundant throughout the Gulf of California, but particularly so in the narrow channel between Tiburon Island and the mainland. There the shallow lagoons abound with its marine grass food plant, and the sandy beaches provide optimum conditions for egg laying and hatching. In consequence of this natural provision for abundant food, easily obtained, perhaps half the aggregate life of the Seri tribe came to be spent within easy reach of the feeding and breeding grounds of the turtle.

[361] The most extensive and permanent of all Seri communities was established on the channel side of the island, just back of the lagoon in which the turtles feed and whose sands provided eggs and the succulent flesh
225 of newly-hatched turtle young. When fe-
501 males could not be captured at the laying grounds, the big chelonians were speared

[p. 194(B)]

[text continues on p 195(B)]

3:Davis & Dawson E-5 (1922-1940) 1945
NU31 Seri NU31

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648
[123]

their minds and to live among them without undue fear of losing his life. Through the kindness of Señor Thomson the senior author succeeded in making himself a friend of the Seri and, enlarging upon this friendship through long periods of living and traveling among them, has acquired an intimate knowledge of these strange people.

105
178

In 1922 the fishing industry of the Gulf of California was not yet well developed, and it was to be ten years before the village of Kino should appear on the maps of the Sonora coast. The Seris were still isolated in their desert domain and their numbers, then about 250, were maintaining themselves out of reach of the infectious diseases of the white man. The clan life had disappeared, and the people lived as a single tribe with their old chief, Juan Tomas, 90 years old at that time

[161]

[291]
[481]
[482]
[415]

FIG. 15. MOVING DAY AMONG THE SERIS
THESE BURDENS, BORNE FOR MANY MILES OVER ROCKS, THROUGH CACTUS AND DEEP SAND, CONTAIN UTENSILS FOR HOUSEKEEPING WHEREVER THE SERIS MAY STOP.

[p.263(B)]

3:Davis & Dawson E-5 (1922-1940) 1965
NU31 Seri NU31

105
178 and a veteran of nearly a century of warfare against the soldiers of Sonora. The turtle remained their most important source of food, and the pitahaya harvest the most enjoyed. The crafts of their old culture were largely gone, however. Hoop-iron had come in for many uses: harpoon points, scrapers, and knives. The bow and arrow had been almost entirely supplanted by rifles of which the tribe possessed more than thirty. The handmade olla was fast disappearing in favor of the five-gallon tin can, and water
[482] carrying, now much done by the males, was accomplished by means of a palanca, borne on the heavily calloused shoulder, to which a can was suspended from each end.

It seemed that the balsa building art was
178 encountered barely as it passed into extinc-
396 tion, for the last balsa known to have been made by the Seris was found in use near
[126] Kino, in 1922. This rare prize was immediately bargained for and in exchange it was agreed that the tribesman should have lumber to build a boat large enough for all the people of his family. A few months later the finished craft, caulked with a "pitch" made

[p. 264(A)]

5:Dawson N-5 (1940) 1944 NU31 Seri NU31

DESERT
PLANT LIFE

SIXTEENTH YEAR NUMBER 9

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SOME ETHNOBOTANICAL NOTES ON THE SERI INDIANS

105 121 If the natural resources of a region may be said to reflect the degree of cultural and social development of its aboriginal people, we may easily understand why the Seris of Sonora, now approaching extinction and with much modified habits and culture, are considered the most primitive and savage of American Indians. Certainly the arid coast of Sonora, destitute [133] of water but for a few widely separated, stagnant holes, with a dry, rocky soil habitable only by the most frugal and thorny of desert vegetation, presents little in the way of resources to a native people. It was, indeed, [262] only along the ocean shore that the Seris found animal food sufficient to sustain them, principally, the sea turtle and the pelican. This food source proved adequate to support a tribe of some 2000 in pre-Columbian times, but the limited habitat of the pelican and turtle brought about extreme isolation of the people. Thirty-mile-long Tiburon Island became their principal home, separated from the mainland by the narrow but tempestuous channel, El Infiernillo, across which they frequently voyaged in their buoyant balsas to search out vegetal supplements to their monotonous sea food diet. It is this use of vegetable materials, not only as food but in other phases of the domestic economy of these people in earlier times, with which these notes are particularly concerned.

225 Primary occupation of the Seris aside from their continual movement to and from the water holes was, necessarily, their search for food, for they cultivated nothing and conserved little. Fish were exceedingly abundant in the waters around their island, but their very limited tool sense, pro- [227] viding them with almost no fishing devices, excluded much of this food from their diet. Clams and other shellfish were to be had, but it was the abundant green sea turtle, feeding upon luxuriant growths of marine grass, *Ruppia maritima*, in the shallow, sandy lagoons along El Infiernillo, that provided their meat staple. The turtles could be captured with ease during egg laying season as they crawled over the beach, but at other times they had to be 396 speared from a watercraft. No sizable timber grows in Seriland and before the advent of flotsam boards and hoop-iron it would have strained the

5:Dawson N-5 (1940) 1944 NU31 Seri NU31

an important handicraft among these Indians. They made a shallow, coil type basket such as is characteristic of many southwestern tribes. The Seri basket, however, was remarkable for its extreme lightness in proportion to capacity, a quality due to the spongy character of the coil made of a whisp of splints of the torote. Several torotes are found in the region, the commonest species being *Jatropha cardiophylla*. Also used were the torote amarillo, *Jatropha spatulata*, torote blanco, *Bursera microphylla*, and torote prieto, *Bursera laxiflora*. The woof consisted of splints of palo blanco, *Acacia Willardiana*, or of baraprieta, *Caesalpinia gracilis*, deftly interlaced by means of a bone awl to form a smooth, practically waterproof utensil.

In pre-Columbian times the Seris commonly sought wild game, mostly deer, without the aid of weapons, using only their tremendous physical endurance against their prey, chasing the animal until it was exhausted and could be thrown to the ground. With the introduction of iron, however, the development of the bow and arrow achieved prominence, for the shaping and fastening of points had long retarded the exploitation of these implements. Few straight stemmed or straight grained plants grow in Seriland suitable for making arrow shafts, but on the flanks of the deeper gorges of Sierra Seri and Sierra Kunkaak on Tiburon Island, the Indians found one leafy shrub that filled the need, *Sapium biloculare*. The juice of this plant is also said to have been used for arrow poison. The bow was preferably of palo blanco, wrapped and strung with mesquite fiber cord.

The modern Seri tribe consists of barely more than 100 souls, with early extinction threatening from imported diseases. Their natural habits are now vastly modified and they live a comparatively sedentary life near the village of Kino, scavengering for fish heads and other refuse discarded by the fishermen, now and then fishing for themselves when in need. Every year, however, they trek off to the cactus forest for the annual feast, and in late summer many may be seen camping among the mesquite groves near the Kino well where an abundance of both mesquite beans and water makes for easy living.

SERI BANDS

EDWARD MOSER

114

Mr. Moser, of the Summer Institute of Linguistics, holds a Master's degree in Linguistics from the University of Pennsylvania. He has been doing research on the Seri language during trips to Sonora since 1952.

ABSTRACT

105 621 642 614 [178] In previous publications on the Seri, frequent reference to distinct Seri groups points to historical tribal divisions at some level. Recent research among the Seri has determined the former existence of six bands which included three dialect groups. Three of the bands were subdivided into clans. These six bands, whose formation may have been caused largely by internal struggles, were eventually crushed and reduced to a single group by the devastation brought about by external conflict.

INTRODUCTION

10 13 [161] 178 62 642 121 621 642 The Seri tribe is located in Mexico along the coast of Sonora between Bahia Kino and Puerto Libertad, and on Tiburon Island (Fig. 1). Today it consists of approximately two hundred and eighty persons who call themselves *kongkaak*[1] "the people." Although at one time it was comprised of six distinct bands (Fig. 2), the tribe has now lost its band organization. However, much of the late history of these now-defunct tribal units remains vivid in the minds of the Seri. The purpose of this paper is to present some of the salient features of these former bands, to discuss certain interrelations between them, and to recount the Seri version of the disintegration of the band system.[2]

114 Three published studies on the Seri should be mentioned.[3] Of these, the reports by Kroeber and by Griffen are the more reliable. All three investigators mention tribal divisions which Griffen rightly designates as bands.

BANDS

642 101 131 BAND I *xika ?ai kkoii* "they who live toward the true wind"

This group is commonly referred to in the literature as the Tepoca or Salinero. As shown on Fig. 1, they inhabited an area which extended from a point slightly north of Puerto Lobos to Punta Tepopa on the south. The territory extended inland, encompassing the general area delimited by the San Ignacio River.

3: Lothrop E-5 (1924-1925) 1928
SH6 Yahgan SH6
Seri NU31

have made themselves as comfortable as other tribes occupying an equivalent environment. That they did not, to the writer, indicates a lack of something vital in their mental makeup.

The brief comparison we have made between primitive European and Fuegian cultures shows that although the Fuegians had partly attained the technological plane called Neolithic in the Old World, nevertheless in most respects they were scarcely better off than the semi-simian Neanderthal man of Europe. Clearly then they were laggards or backsliders in the development of mankind, so that in depicting their manner of life we are justified in assuming that we are recreating a vista of life in Europe or elsewhere many thousands of years ago.

However, the tribes of Tierra del Fuego are not a unique phenomenon, as we shall show by comparison with an equally though differently untutored New World group.

B.—Fuegians Compared with the Seri

The Seri, who inhabit a barren territory on the eastern shore of the Gulf of California and the adjacent islands, of which the largest is Tiburon, are one of the most primitive Indian tribes on the North American continent. Their climate is hot and dry. Their food supply is abundant—both marine and terrestrial. Like Fuegia the region occupied by the Seri is isolated from the main stream of cultural development, so that the native society probably represents a form of life much more wide-spread long ago.

Like the Fuegians, the Seri had no agriculture and no domestic animals except the dog, which indeed seems to have been half-wild. Their most important food was the turtle, which they caught with a harpoon having a detachable head tied to a cord. This may be compared to the Yahgan seal-spear. Long ago they used a two-headed barbed spear with the barbs facing inward to catch fish. The Yahgan also employed a two-headed fish-spear, but did not set the barbs inward. For boats the Seri made reed balsas with high pointed ends, a seaworthy craft but one which can be used only in warm climates because in rough weather the crew are drenched with spray or wet by water coming through the floor. These balsas the Seri propelled with clam-shells or boards held in the hands. In addition to spearing fish off-shore the Seri also caught them with their hands in shallow pools at low tide like the Ona, and they obtained on the beach large quantities of shellfish—chiefly clams and oysters.

3: Lothrop E-5 (1924-1925) 1928
SH6 Yahgan SH6
Seri NW31

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171
105

On shore the Seri gathered various wild vegetal foods. They clubbed roosting pelicans at night. They caught also many deer and rabbits. We use the word caught advisedly, for usually the Seri, fleet of foot and hardy, ran these animals down and literally caught them in their hands. Meat was eaten raw except when there was an oversupply. Then it was partly cooked to tempt their jaded appetites. At times in hunting and regularly in war they employed a bow and arrows of simple type. The arrow had a wooden tip, rarely a chipped stone point.

For tools the Seri used a bone or a wooden awl, a wooden marline spike, a stone hammer and anvil, and a clam-shell. The latter served as a knife, but its shape was not modified, nor was it set in a handle. Manual dexterity was at a minimum among these people, and their implements and weapons were even more primitive than those of the Fuegians.

The fundamental Seri garment was a pelican-skin robe, which, like the Yahgan cape, was shifted from side to side with the wind in inclement weather. Also they wore at times a kilt and sleeved shirt of woven material, and thus they placed themselves on a higher cultural plane than the Fuegians, for they not only had acquired the art of weaving, but of tailoring their garments, neither of which were known to the Indians of Tierra del Fuego. In addition, the Seri wore a belt, often of snake-skin, and sometimes sandals of turtle-flippers. They adorned their persons with necklaces of seeds, of wooden beads, of shell, and of hair. They painted designs on the faces much more elaborate in character than those of the Ona and Yahgan.

Seri houses, scarcely better than the Ona windbreak, were arches of saplings partly shingled with sponges and turtle-shells. Inadequate even in a warm climate, yet they offered more protection comparatively than the Fuegian houses. As the Seri were constantly moving from place to place, these rude shelters were frequently abandoned to be reoccupied on some other occasion.

Of household furniture the chief article was a globular pottery water-jar, because water was scarce in Seriland and had to be transported long distances. A yucca ring-base was provided for the water-jar, and at times two jars were transported in nets slung on a shoulder yoke. In addition the Seri sometimes made a cooking-pot, an open dish, miniature vessels, and crude figurines; they also used a shell cup, and made simple coiled baskets. Their

3: Lothrop E-5 (1924-1925) 1928
SH6 Yahgan SH6
Seri NU31

babies they carried on wooden frames like the Ona. Fire they made with a drill.

From the above remarks it appears that other inhabitants of the New World lived on a technological plane different in detail but no higher than the natives of Tierra del Fuego. Indeed in many respects—notably the lack of a knife and a scraper—the Seri are the more primitive. Yet their need was not so great, because the climate they enjoyed did not make such demands on their vitality.

When we examine social institutions we find the Seri on a markedly higher plane than the Fuegians. The tribe as a whole had marked national consciousness. It was divided into exogamic totemic clans based on maternal descent. Authority was lodged in the matrons, delegated to the elder brother for such masculine occupations as war and hunting. Religious concepts and practices also were on a higher plane than in Tierra del Fuego.

On the whole then we may say that the Seri, like the Fuegians, were a marginal group representing an early cultural stream; that both peoples were markedly deficient in houses, tools, and accouterments; but that the Seri, being closer to the fringe of higher culture, had borrowed in rudimentary form such higher arts as pottery-making and weaving, and had become endowed with more advanced religious and social practices. In both cases it seems that, although migratory by nature, their peregrinations had been circumscribed within fixed limits with resultant cultural atrophy, so that centuries had passed with little modification in their form of life.

The status of very primitive groups like the Fuegians and the Seri has bearing on the unknown pioneers who settled the New World, for the simplest and crudest tribes of the present may reflect the condition of their primitive migratory ancestors. We shall examine then the evidence afforded by such backward groups to throw light on the time when the Americas were settled and on the nature of the culture that was first introduced.

Boas,[1] Wissler,[2] Kroeber,[3] and others have brought forward evidence that man reached the New World in a state of cultural development corresponding to the beginning of the Neolithic period in Europe. This hypothesis rests on fairly well assured

[1] The History of the American Race; *Annals N. Y. Acad. of Science*, XXI, 1912.
[2] The American Indian, New York, 1917.
[3] American Culture and the Northwest Coast; *Amer. Anthr.*, N.S., XXV, no. 1. Also Anthropology, New York, 1923.

1: McGee, W. J. The Seri Indians. 17th Annual Report of the Bureau of American Ethnology, Part 1, pp. 1-344. Washington: Smithsonian Institution, 1898.

HRAF copy

[The linguistic materials on pp. 295-344 have not been processed for the files.]

[The sections included in the files provide a general account of Seri culture and a history of Seri contacts with Mexicans and Europeans. The early sections of the work provide a very detailed account of the Seri habitat and include information on physical characteristics and contacts. The cultural sections deal with food getting techniques, eating, clothing, body decoration and ornamentation, material culture, military tactics, marriage, burial, clan and family organization, political leadership and attitudes toward foreigners. Much of the book is couched in a developmental framework and the author considers the Seri to be quite primitive. Considerable attention is also given to the relation of cultural characteristics, environment and physiological characteristics. Although the author, an ethnologist, did field work in the

1: McGee, W. J.

general Seri area he was not able to penetrate Seri territory and obtained most of his information from interviews and observations of Seri who lived near or visited the vicinity of a Mexican rancheria. --Analyst]

Field date: 1894-1895
Analyst: Betty Potash

Evaluation: Ethnologist-5
Processed in 1961

2: Kroeber, Alfred L. The Seri. Southwest Museum Papers, No. 6, Los Angeles, 1931.

Pp. 60; 15 photographs

Yale: C52.320 5-7

[This work is the result of field studies by the author following the work of McGee and Davis (see 1: McGee and 3: Davis and Dawson, this file). The author, consequently, does not attempt any examination of the material or economic culture which was more fully investigated by Davis; he instead confines his efforts to the presentation of a small amount of new material, considerable discussion of McGee's work, and a comparative summary of Seri culture. Thus, although this source does not add a great deal of new information on the Seri, it is especially valuable as a critical study and in its summation of knowledge of the Seri. It is an excellent introduction to the Seri, being both brief and general. --Analyst]

Field date: 1930
Analyst: George R. Bedell

Evaluation: Ethnologist-5
Processed in 1961

3: Davis, Edward H. and E. Yale Dawson. The Savage Seris of Sonora. The Scientific Monthly, Vol. 60, pp. 193-202, 261-268. Washington: American Association for the Advancement of Science, 1945.

Yale: A79 185 60

[This source is a semi-popular, rather staccato account of the main features of Seri culture. The senior author first visited the Seri in 1922 as a member of the Museum of the American Indian, Heye Foundation. These articles give a brief history of Seri relations with the white men, some idea of the changes in their culture as a result of contact and loss in population, and sketches of the annual cycle, food, livelihood, and social organization. --Analyst]

Field date: 1922-1940
Analyst: Timothy J. O'Leary

Evaluation: Ethnologist-Naturalist-5
Processed in 1961

4: Malkin, Borys. Seri Ethnozoology: A Preliminary Report. Davidson Journal of Anthropology, Vol. 2, No. 1, pp. 73-83. Seattle: Seattle Anthropological Association, 1956.

Cornell University Library: GN 1 D25+

[This article is based on field work done principally in Desemboque, Sonora, as part of a wider comparative study in ethnozoology of several aboriginal groups. It includes data on economic uses, fishing and hunting, food preferences and taboos, pets, and, in some cases, acculturative influences on Seri beliefs and customs concerning animals. The author devotes a large part of his work to more exact knowledge, including native classification of animals, sex differentiation, knowledge of habitats, seasonal factors influencing animal life, age, growth changes and daily variation, food, mating and nesting habits and certain fears of venomous and other animals. Although brief, the article presents an unusually complete report of Seri knowledge of their environment. --Analyst]

Field date: 1953-1955 Evaluation: Ethnologist-5

Analyst: George R. Bedell Processed in 1961

5: Dawson, E. Yale. Some Ethnobotanical Notes on the Seri Indians. Desert Plant Life, Vol. 16, pp. 132-138. Pasadena: American Succulent Societies, 1944.

Harvard University: Gray Herbarium

[This brief article presents, along with an introductory note on the Seris and their culture, information concerning the cultural usages of about two dozen desert plants native to the region. Diet, tools, basketry, boat-building and burial practices are some of the subjects treated, but the emphasis is on the identification of the plants concerned and the manner in which they are used. Five photographs accompany the text. The author has published a number of articles dealing with desert plant life. --Analyst]

Field date: 1941
Analyst: George R. Bedell

Evaluation: Naturalist-5
Processed in 1961

6: Monzón, Arturo. La Estructura social de los Seris [Seri Social Structure]. La Sociologia en Mexico, Vol. 1, pp. 89-92. Mexico, D. F., 1953.

Pan American Union Library [HRAF MS pp. 6]

[Translated from the Spanish for HRAF by George R. Bedell]

[The material presented in this source was collected by the author, a well-known Mexican anthropologist, on a three-week visit to the Seri in January, 1952. The data primarily pertains to social relationships within Seri society, as evidenced in household and family relations, and rules and regulations governing the selection of marital partners. Information is also presented on the concept of the social personality. Incidental data may also be found in this article on settlement patterns, household size, relations with non-Seris, sex behavior, and community organization. --Analyst]

Field date: 1952
Analyst: John Beierle

Evaluation: Ethnologist-5
Processed in 1961

7: Marroquín, Alejandro D. The Situation of the Seri Indians of Sonora. Boletín Indigenista, vol. 17, pp. 332-343. Mexico, D.F.: Instituto Indigenista Interamericano, 1957.

Hraf copy

[This source is synthesized from a report by the author on the Seri population and some of its principal problems. It first appeared in Acción Indigenista, No. 36, the information bulletin of the National Indian Institute. The article discusses the problems of sanitation and disease among the Seri with relation to epidemics, dwellings, domestic animals, and alcoholic beverages. In the field of demography, it treats the composition of the population with respect to age, sex and the labor force, indicating division of labor by sex and specialization. In closing, the author presents his recommendations for alleviating some of the problems encountered by the Seri in changing from an independent, semi-nomadic existence to a sedentary life closely interrelated with the Mexican national culture.--Analyst]

Field date: 1955
Analyst: Hesung C. Koh

Evaluation: Ethnologist-5
Processed in 1962

8: Ascher, Robert. Ethnography for Archeology: A Case from the Seri Indians. Ethnology, Vol. 1, pp. 360-369. Pittsburgh: University of Pittsburgh Press, 1962.

HRAF copy.

/This source gives an example of the type of ethnographic data collected from ongoing communities which would be of general value for archeology. The example presented is one particular trait, the making of a harpoon foreshaft, in the trait complex associated with fishing for the Pacific green turtle. From the similarities and variations in this foreshaft construction the author believes that a grouping into classes could be devised, based on individual differences, for example, in manual dexterity required to make these foreshafts which would approximate a normal distribution curve. In addition to amplifying and supporting the above, the author also believes that the data confirms the proposition that behavior can be inferred from the quantitative analysis of its results, and further that "... such quantitative data, if coupled with similar data from other cultural settings, are capable of being used to develop general statistical models of artifact typology which would facilitate

8: Ascher, Robert.

making classifactory decisions based on behavioral realities." (p. 368)
--Analyst/

Field Date: 1960
Analyst: John Beierle

Evaluation: Ethnologist-5
Processed in 1963-1964

9: Malkin, Borys. Seri Ethnozoology. Occasional Papers of the Idaho State College Museum, Number 7. Pocatello, Idaho, 1962.

Pp. v, 68; bibliography; appendix

Yale: CE78 I18 ✓ I3 7

/This source is basically a study of native attitudes and beliefs concerning the various animals found in the native environment. Additional information is also given on the types of animals used as food and the way in which these foods are prepared. After a brief outline of Seri culture, the author takes several major groups of the animal kingdom--mammals, birds, reptiles and amphibians, fishes, mollusca, crustacea, insects and arachnoids, and what the author calls miscellaneous (Annelid worms, Porifera, etc.)--and discusses each from the Seri standpoint in regard to taxonomy and recognition, sex differentiation, age, size and weight, development, food habits, geographical and seasonal distribution, migrations, daily rhythm, habitat and toxicity. A useful list of native animal names with their binomials precedes each division discussed in the text.

9: Malkin, Borys.

The data from which this source was compiled were gathered by the author, with the aid of native informants, during the summer of 1953 and for one week in 1955. The work was accomplished primarily at the Seri settlement of Desemboque. --Analyst/

Field date: 1953-1955
Analyst: John Beierle

Evaluation: Ethnologist - 5
Processed in 1963

NU31 Seri

10:Davis, Edward Harvey. The Seri Indian. In Charles Russell Quinn and Elena Quinn, arrangers and editors, Edward H. Davis and the Indians of the Southwest United States and Northwest Mexico. Downey, Cal., Published by Elena Quinn, 1965, pp. 139-224.

Yale: CE78 S7 + Q85.

[This is a popularized account of the author's journey to the Seri of Tiburon Island in the Gulf of California for the purpose of collecting artifacts for the Museum of the American Indian, Heye Foundation, New York. Roberto Thomson, an old and trusted friend of the Seri and the author's chief guide and interpreter on the expedition, was able to establish peaceful relations between the Seri and the author and his small party, thus enabling them to live among several small groups of Seri households, travel with them on their frequent quests for food and water, and to participate actively in many other daily activities of the people.]

Field dates: 1922 - ca. 1939
Analysts: John Beierle, marker
Sigrid Khera, checker

Evaluation: Ethnologist - 5
Processed in 1966-1968

11: Moser, Edward. Seri Bands. The Kiva, Vol. 28, No. 3, pp. 14-27. Tucson: Arizona Archaeological and Historical Society, 1963.

Yale: C52 319k 28.

[This short article is a description of the structure and organization of bands among the Seri, a food-gathering tribe on the Western Mexican coast. Points of discussion include: territorial distribution of band settlements, their internal subdivisions and dialects spoken, the unilineal features of the clans within the bands, and dynamics of the formation and collapse of the band system. On the last point, the author argues that much internal enmity and hostility within the tribe led to its original splitting up or division into independent band units, but hostile relations and warfare with the Mexican government finally led to destructive changes in band form to the stage where the Seri today remain a single, rather homogeneous society. While the author claims that Seri clans are patrilineal, several sources in this file argue for a matrilineal clan form. On pp. 21-22 of the source the author discusses the composition of the band as being made up of subdivisions called i?iziitang each of which is dominated by a kin group constituting a clan. The author points out that these clans conform to all three major specifications for clan entity as designated by G. P. Murdock in his Social Structure (1949, p. 68), and are therefore "true" clans in the Murdockian sense. The discussion of clans in this source, therefore, has been marked for 618

111 Moser, Edward.

rather than 614; this in contrast to other sources in this file where given less specific information similar data have been placed in the 614 category.

Footnotes appearing in the text will be found at the end of the source in category 116, p. 27.]

Field date: 1956-1961
Analyst: Gilbert Winer

Evaluation: Linguist-5
Processed in 1967

12: Moser, Mary Beck. Seri Blue. The Kiva, Vol. 30, No. 2, pp. 27-32. Tucson: Arizona Archaeological and Historical Society, 1964.

Yale: C52 319k 30.

[This brief source treats of the methods for manufacturing and preparing "blue clay," a pigment which is a base for cosmetics used in facial painting, body decoration, pottery and ornament design, and as a shamanistic healing substance. In some detail, the author describes all the processes and procedures which she saw her woman informant use in converting plant and mineral matter into the pigment. The social or economic implications or ramifications of cosmetic use or preparation are not dealt with by the author. Footnotes appearing in the text will be found at the end of the source in cat. 116, p. 32.]

Field date: ca. 1960
Analyst: Gilbert Winer

Evaluation: Linguist-5
Processed in 1967

Fuller, Grace P. The Seri Indians. The Southern Workman, Vol. 34, pp. 271-278. Hampton, Virginia: The Hampton Institute Press, 1905.

Yale: Lfm 81 H 18s v. 34

[This is a summary of the Seri and their culture as presented in 1: McGee. Because the original source has been included in this file, this secondary source has not been processed.]

NU31 Seri

González Bonilla, Luis Arturo. Los Seris [The Seris.] Revista Mexicana de Sociología, 3, 2, (1941); 93-107. México Instituto de Investigaciones Sociales de la Universidad Nacional Autónoma, 1941.

Yale: Mexico Nm10 M57e v. 3.

[The author, with the institute mentioned above, made personal observations during a visit of two days to the island of Tiburón and apparently gathered the rest of his field data in the area of Bahía Kino, where many of the Seris spend at least part of the year as employees and dependents of the local commercial fishing enterprises. This work, entirely in Spanish, gives brief data on various aspects of Seri environment and culture, supplemented by some supporting evidence from previous literature. Subjects treated are: geography, climate, physical anthropology, face painting, the family, sexual relations, domestic economy, diet, clothing, housing, festivals, dances, religion, crime, illnesses and medical practices. A short vocabulary, a map and twelve photographs (mostly portraits) are included. While brief, this article is nevertheless a valuable addition to the sparse information on contemporary Seri life, customs, and especially, the effect of acculturation and assimilation to the national culture.]

NU31 Seri
NU8 Cahita

Richards, H. M. M. A Lebanonian amongst a strange people. Lebanon County Historical Society, Papers and Addresses, 6, No. 4 (1913): 77-92. Lebanon, Pa., 1913.

3 plates.

Yale: Ck19.30 6.

[In this source, Richards notes his impressions of a brief visit to Tiburón Island in late 1873. Little contact was made with the Seri and the data contained in the article are very meager. Richards later visited the Yaqui and had rather more to say about them.]

Woelke, Walter von. De Seri-Indianen [The Seri Indians]. De Aarde en Haar Volken, Vol. 58, pp. 257-264. Haarlem: Drukkerij Loosjes, 1922.

Yale: E10 + A71 v. 58

[Because this source is apparently based on the work of McGee, which has been included in the Seri file, it has not been processed.]

Lindig, Wolfgang. Die Seri: Ein Hoka-Wildbeuterstamm in Sonora, Mexiko [The Seri: A Savage Hokan Collecting Group in Sonora, Mexico]. International Archives of Ethnography, Vol. 49, Part 1, pp. 1-116. Leiden: E. J. Brill, 1960.

Yale: Nk10 + In86 49: 1

[This is a general ethnography of the Seri which gives a thorough summary of their culture and a comparative and historical reconstruction of their prehistory. Because the ethnography upon which the conclusions are based is apparently secondary, the source has not been processed for the files.]

Lindig, Wolfgang. Über die Bestattung bei den Seri in Sonora, Mexiko [Concerning Burial by the Seri in Sonora, Mexico]. Baessler-Archiv, Vol. 32, part 1, pp. 191-199. Berlin: Dietrich Reimer, 1959.

Yale: Nk10 B14 32i1

[This source consists of a brief study of Seri burial practices, comparing them with those of other groups, especially of northwest Mexico and southwest United States. Because the information is derived from other writings which in most cases have already been processed for the files, this source was not included.]

Masturzi, Giovanni. Una Expedición a la Isla del Tiburón--Vida, Costumbres y Tradiciones de los Indios Seris [An Expedition to Tiburon Island--Life, Customs and Traditions of the Seri Indians]. Memorias de la Sociedad Científica "Antonio Alzate," Vol. 52, pp. 267-278. Mexico: Académia Nacional de Ciencias Antonio Alzate, 1934.

Yale: A54 240 52-53

This brief source, based on an eight day stay by the author on Tiburon Island in October, 1930, contains a very short summary of Seri culture which adds very little to our available material. Because of the slight additional information offered, and the journalistic style of the author which implies a limited scientific objectivity to his observations, this source has not been processed for the files.

1:McGee E-5 (1894-1895)1898 NU31 Seri NU31

133 312 refer to one or more saline barrancas about the western base of the same seminange, probably in Arroyo Mariana.

In brief, Arroyo Carrizal, Tinaja Anita, and Pozo Escalante are the only permanent waters, and Pozo Hardy, Barranca Salina, and Tinaja Trincheras the only subpermanent waters actually known to Caucasians in all Seriland, though it seems probable that permanent water may exist at Aguaje Parilla and in Arroyo Mariana, and impermanent supplies near Bahia Kspence. There may be one or two additional places of practically permanent water in smaller quantity, and a few other places in which saline water might be found either at the surface or by slight excavation, and which may be approximately located by inspection of the map under guidance of the principles set forth in the preceding paragraphs; but this would seem to be the limit of trustworthy water supply. During the humid seasons the waters are naturally multiplied, yet it is improbable that any of the arroyos except Carrizal and Agua Dulce and a few minor gulches along the more precipitous shores shed water into the gulf save at times of extraordinary local flood.[1]

133 The geologic structure of the Sonoran province is complex and not well understood. So far as the meager observations indicate, the basal rocks are granites, frequently massive and sometimes schistose, sometimes intersected by veins of quartz, etc. The granitic mass is upthrust to form the nuclei of Sierra Madre and other considerable ranges; it also approaches the surface over large areas of plains. Resting unconformably on the granites lie heavy deposits of shales and limestones, commonly more or less metamorphosed; these rocks outcrop on the slopes of most of the main ranges and form the entire visible mass of some of the lower sierras and buttes, while they, too, sometimes approach the surface of the sheetflood-carved plain. The rocks, both calcareous and argillaceous, combine the characters of the vast Mesozoic limestone deposits of eastern Mexico and the immense shale accumulations of corresponding age in California, and hence probably represent the later half of the Mesozoic. This is the only sedimentary series recognized in the province. Both the granites and the sedimentary beds are occasionally overlain by volcanic deposits, chiefly in the form of much-eroded lava-sheets and associated tuff-beds, which sometimes form considerable ranges and buttes (notably Sierra Kankaak, of Isla Tiburon); these remnantal volcanic deposits are probably late Mesozoic or early Tertiary. Newer volcanics occur locally, forming mesas, as about Agua Nueva (40 miles northwest of Hermosillo), or even coulees apparently filling barrancas of modern aspect, as in the vicinity of Bacuachito,[2] or rising into cinder cones surrounded by

113 [1] The physiographic features of the Sonoran province in general are treated in greater detail in a paper on Sheetflood Erosion, Bull. Geol. Soc. Am., vol. VIII, 1897, pp. 87-112, and in a paper on Papagueria, Nat. Geog. Mag., vol. IX, 1898, pp. 265-371; while certain local features are described in a paper on Seriland, prepared jointly with Willard D. Johnson, Nat. Geog. Mag., vol. VII, 1896, pp. 133-157. The aggregate available fresh water of Seriland is estimated on p. 166.

[2] Noted by Willard D. Johnson.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

137 in the driest areas. Nearly all of the plants have roots of exceptional length, and are protected from evaporation by a glazed epidermis and from animal enemies by thorns or by offensive odors and flavors; while most of the trees and shrubs are practically leafless except during the humid seasons. Grasses are not characteristic, and there is no sward, even in cases; but certain grasses grow in the shadow of the arborescent tufts and in the fields of the farmer ants, or spring up in scattered blades over the moister portions of the surface. The arborescent vegetation represents two characteristic types, viz, (1) trees and shrubs allied to those of humid lands, but modified to fit arid conditions; and (2) distinctive forms, evidently born of desert conditions and not adapted to a humid habitat, this type comprising the cacti and related forms, as well as forms apparently intermediate between the cacti and normal arborescent type. The various plants of the district, including those of the distinctive types, are communal or commensal, both among themselves and with animals, to a remarkable degree; for their common strife against the hard physical environment has forced them into cooperation for mutual support. The tufts or clusters in which the vegetation is arranged express the solidarity of life in the province; commonly each cluster is a vital colony, made up of plants of various genera and orders, and forming a home for animal life also of different genera and orders; and, although measurably inimical, these various organisms are so far interdependent that none could survive without the cooperation of the others.[1]

In Seriland proper, as in other parts of the Sonoran province, a prevailing tree is the mesquite (*Prosopis juliflora*); on the alluvial fan of Rio Sonora it grows in remarkable luxuriance, forming (with a few other trees) a practically continuous forest 20 to 40 feet in height, the gnarled trunks sometimes reaching a diameter of 2 or 3 feet; over the Rio Bacuache fan and much of the remaining plain surface it forms the dominant tree in the scattered vital colonies; and here and there it pushes well into the canyon gorges. The roots of the mesquite are of great length, and are said to penetrate to water-bearing strata at depths of 50 to 75 feet; its fruit consists of small hard beans embedded in slender woody pods. Associated with the mesquite in most stations are the still more scraggy and thorny cat-claw (*Acacia greggii*) and ironwood (*Olneya tesota*), both also yielding woody beans in limited quantity. Similarly associated, especially in the drier tracts, and characteristically abundant over the plains portions of Isla Tiburon, are the paloverdes (*Parkinsonia torreyana*, etc), forming scraggy, wide-branching, green-bark trees 5 to 15 feet high, and commonly 3 to 10 inches in diameter of trunk. Over the mountain sides, especially of Sierra Seri and Sierra Kunkaak, grow sparsely the only straight-trunk trees of the region, rooted in the rocks to the average number of a few score to the square

[113]

[1] The vital characteristics of the region here described in some detail in The Beginning of Agriculture, American Anthropologist, vol. viii, 1895, pp. 350-376; The Beginning of Zoculture, American Anthropologist, vol. x, 1897, pp. 295-320; and Expedition to Seriland, Science, vol. iii, 1896, pp. 483-502.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

SUMMARY HISTORY

There is some doubt as to who was the first among the Caucasian explorers of the Western Hemisphere to set eyes on the Seri Indians. Nuño de Guzman, rival of Cortés and invader of Jalisco and Sinaloa, must have approached the southern boundary of Seri territory about 1530, though there is no record of contact with these tribesmen. Diego Hurtado de Mendoza, one of Cortés' captains, coasted along southern Sonora in 1533 to a point considerably beyond Rio Yaqui, where he was massacred on his return, and hence left no record of more northerly natives.[1] Both of these pioneers must accordingly be eliminated from the list of probable discoverers of the Seri.

In the course of their marvelous transcontinental journey, Alvar Nuñez Cabeza de Vaca and his companions also approached Seriland, and apparently skirted its borders shortly before meeting Captain Diego de Alcaraz, of Guzman's party; this was in April, 1536, according to Bandelier.[2] Vaca wrote: "On the coast is no maize: the inhabitants eat the powder of rush and of straw, and fish that is caught in the sea from rafts, not having canoes. With grass and straw the women cover their nudity. They are a timid and dejected people."[3] He added half a dozen ambiguous sentences, of which only a part, apparently, refer to the "timid and dejected people"; half of these describe a poison used by them "so deadly that if the leaves be bruised and steeped in some neighboring water, the deer and other animals drinking it soon burst". The people were identified as Seri (Ceris) by Buckingham Smith and General Stone,[4] and the identification may be considered as strongly probable, provided the Tepoka be classed with the Seri.

The next Caucasians to approach Seriland appear to have been the two Spanish monks, Fray Pedro Nadal and Fray Juan de la Asuncion, who, in 1538, sought to retrace Vaca's route, and traveled northward to a river somewhat doubtfully identified as the Gila;[5] but the meager accounts of this journey contain no clear reference to the Seri Indians.

On March 7-19, 1539, the Italian friar Marcos de Niza left San Miguel de Culiacan under instructions from the Viceroy, Don Antonio

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[1] Theodore H. Hittell, History of California, 1885, vol. i, pp. 43-44.

[2] Contributions to the History of the Southwestern Portion of the United States (Hemenway Southwestern Archaeological Expedition), Papers of the Archaeological Institute of America, American series, v, 1890, p. 44.

[3] Relation of Alvar Nuñez Cabeça de Vaca, translated from the Spanish by Buckingham Smith, New York, 1871, p. 172.

[4] Ibid, p. 173.

[5] Cf. Bandelier, Magazine of Western History, iv, 1886, p. 660.

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de Mendoza, to explore the territory traversed by Vaca, under the guidance of the negro Estevanico, the only one of Vaca's three companions remaining in Mexico; in good time he reached a point probably not far from the center of the present state of Sonora, whence messengers were sent coastward to return duly accompanied by certain "very poor" Indians wearing pearl-oyster (?) ornaments, who were reputed to inhabit a large island (almost certainly Tiburon) reached from the mainland by means of balsas. Bandelier identified these coastwise Indians with the Guayma tribe, a supposed branch of the Seri;[1] but if the "large island" were Tiburon, it would seem more probable that the Indians belonged to the tribe now known as Seri, while both description and location suggest the Tepoka. This record is of questionable weight, partly by reason of the doubtful identification of the Indians, and partly because the friar's itinerary was found to be misleading by his immediate successors, because of the fact that portions of his narrative were based on hearsay; though it is just to note that Bandelier, after critical study, deemed the record about as trustworthy as others of the time, and to add that the disparagement of Niza's discoveries by his followers was in accord with the fashion of the day—indeed it was little more severe relatively than the criticism of the strikingly trustworthy Ulloa by his first follower, Alarcon.

On July 8–19, 1539, according to the collection of Ramusio, three vessels sent out by Cortés to discover unknown lands—"Of Which Fleete was Captaine the right worshipfull knight Francis de Ulloa borne in the Citie of Merida"—sailed from Acapulco.[2] Skirting the mainland northwestward, they explored Mar de Cortés, or Gulf of California; and on September 24 (as fixed by interpolation from Ulloa's excellent itinerary) they descried and described the features of the coast in such fashion as to locate their vessels (one was already lost) off the southern point of Tiburon, and in sight of the islands of San Esteban and San Lorenzo, as well as locally prominent points on the mainland of Lower California. Here they "discerned the countrey to be plaine, and certaine mountaines, and it seemed that a certaine gut of water like a brooke ran through the plaine" (p. 322). Judging from other geographic details, this "gut of water" was certainly the tide-torn gateway now named Boca Infierno; while the next day's sailing (it is noteworthy that this was "north" instead of northwestward as usual) carried them by "a circuit or bay of 6 leagues into the land with many coues or creeks", evidently Bahia Tepopa with the northern end of the turbulent strait El Infiernillo. The record shows clearly that Ulloa discovered Tiburon, but failed (quite naturally, in view of the route pursued and the peculiar configuration at both extremities of the strait) to perceive its insular character. No mention is made of inhabitants or habitations on this land-mass, though both are described on the

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[1] Ibid., pp. 681–682; Papers of the Archæological Institute of America, American series, v, p. 118.
[2] The Voyages of the English Nation to America, collected by Richard Hakluyt and edited by Edmund Goldsmid, 1889, vol. III, p. 317.

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neighboring island of Angel de la Guarda in terms that would be applicable to the Seri.

On Monday, February 23, 1540, according to Winship,[1] Captain-General Francisco Vazquez Coronado set out on his ambitious and memorable expedition to the Seven Cities of Cibola. His course lay from Compostela along the coast of Culiacan, and thence northward through what is now Sinaloa and Sonora. On May 9–20, 1540, Hernando de Alarcon set sail on the ancillary expedition by sea; he followed the coast from Acapulco to Colorado river, and although he undoubtedly saw and was the first to name Tiburon,[2] and claimed to have "discovered other very good havens for the ships whereof Captaine Francis de Ulua was General, for the Marquesse de Valle neither save nor found them",[3] he made no specific record of any of the features of Seriland or of contact with the Seri Indians. Meantime Coronado's forces were divided, a considerable part of the army falling behind the leader; and some time during the early summer the belated army, under Don Tristan de Arellano, founded the town of San Hieronimo de los Corazones, which in the following year (1541) was transferred to a place in Señora (Sonora) not now identifiable. From Corazones Don Rodrigo Maldonado went down to the seacoast to seek the ships, and brought back with him "an Indian so large and tall that the best man in the army reached only to his chest", with reports of still taller Indians along the coast.[4] It is impossible to locate Maldonado's route with close accuracy, but in view of geographic and other conditions it is evident (as recently shown by Hodge[5]) that he must have descended Rio Sonora and approached or reached the coast over the broad delta-plain of that stream south of Sierra Seri, and thus within Seri territory. The reported gigantic stature practically identifies the Indians visited by him with the Seri, since no other gigantic tribes were consistently reported by explorers of western North America, and since the 6-foot Seri warriors, with their frequent Sauls of greater stature, are in fact gigantic in comparison with the average Spanish soldiery of earlier centuries. There are indications that the fame of these giants of the Southern sea spread to Europe and filtered slowly throughout the intellectual world, and that the fancy-clothed colossi grew with their travels, after the manner of their kind—indeed, there is no slender reason for opining that these half-mythical islanders were the real originals of Jonathan Swift's Brobdingnagians,[6] despite his location of their fabled land a

[1] The Coronado Expedition, 1540-1542, Fourteenth Annual Report of the Bureau of Ethnology, 1896, p. 362.

[2] As a harbor or anchorage marked "del Tiburon" on the map of "Domingo del Castillo, Piloto", drawn in 1541, and reproduced in Historia de Nueva-España, escrita por su esclarecido Conquistador Hernán Cortés, aumentada con otros documentos, y notas, por el ilustrissimo señor Don Francisco Antonio Lorenzana, Arzobispo de Mexico: Mexico, 1770, p. 258.

[3] The Voyages of the English Nation to America, vol. iv, p. 6.

[4] Winship, op. cit., p. 483.

[5] Coronado's March to Quivira, in J. V. Brower, Harahey (Memoirs of Explorations in the Basin of the Mississippi, vol. iii), 1899, p. 26.

[6] Cf. The History of Oregon, California, and the other Territories on the Northwest Coast of North America, by Robert Greenhow, 1845, p. 97; History of California, by Theodore H. Hittell, 1898, vol. i, p. 149.

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subsequent episode in their history or century in time. The description of the effect of the poison is especially suggestive of the Seri; as pointed out on a later page, the Seri arrow-venom is magical in motive, but actually consists of decomposing and ptomaine-filled organic matter, so that it is sometimes septic in fact, while the arrow-poison of the neighboring Opata, Jova, and other Piman tribes was (so far as can be ascertained) vegetal; and these accounts seem to attest septic poisoning rather than the effects of any known vegetal toxic.[1]

Such (assuming the validity of the several identifications) are the earliest records concerning the truculent tribesmen and the desolate district known centuries later as the Seri and Seriland.

About 1545 began the Dark Ages in the history of northwestern Mexico; the excursion of Guzman, and the journeys of Cabeza de Vaca and Friar Marcos and of Coronado himself, died out of the memory of the solitary adventurers and scattering settlers who slowly infused Spanish culture and a strain of Caucasian blood into the Sonoran province; even the route taken by Coronado's imposing cavalcade was lost for centuries, to be retraced only during the present generation, largely through the determinations of Simpson, Bandelier, Winship, and Hodge.[2] It is true that Don Francisco de Ibarra penetrated the territory in 1563, and remained until rumors of gold in other districts drew him elsewhere; it is also true that Captain Diego Martinez de Hurdaide pushed into the province in 1584, and entered on a career of subjugation, waging persistent war with the Yaqui, which resulted in the acquisition of the territory of Sonora by treaty April 15, 1610;[3] yet few records of exploration or settlement were written before the advent of the Jesuit missionaries, toward the end of the seventeenth century.

Still more astounding was the eclipse of knowledge of the gulf. Despite Ulloa's survey of the entire coast, recorded in an itinerary so detailed that every day's sailing may readily be retraced, and despite Alarcon's repetition of the surveys and extension of the discoveries far up Rio Colorado (where his work was verified by that of Melchior Diaz), a mythic cartography arose to shadow knowledge and delude exploration for a century and a half; for "upon the authority of a Spanish chart, found accidently by the Dutch, and of the authenticity of which there never were, or indeed could be, any proofs obtained, an opinion prevailed that California was an island, and the contrary assertion was treated even by the ablest geographers as a vulgar error";[4] and a mythic strait formed by cartographic extension of the Gulf of California indefinitely northward haunted the maps of the seventeenth century. This error was adopted by various geographers, including Fredericus

[1] It should be noted that Mr. F. W. Hodge, whose large acquaintance with the Southwest and its literature gives his opinion great weight, is inclined to class the Indians in question as Opata.

[2] Op. cit., pp. 50-72.

[3] Somera Histórico y Descriptivo, por F. T. Dávila, 1851, p. 6.

[4] A Natural and Civil History of California; translated from the original Spanish of Miguel Venegas; London, 1759, vol. i, preface.

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de Witt in 1663, Peter van der Aa in 1690, and even Herman Moll so late as 1708; but it was consistently rejected by Guillaume Delisle and other French geographers. The myth was finally punctured by Padre Kino in 1701; though even he and all his erudite co-evangels were apparently unaware that his observations only verified those of Ulloa, Alarcon, and Diaz.

During the stagnant sesquicentury 1645–1895 there was little record of the Seri Indians, though that little indicates recognition of their lesiling characteristics and their insular habitat. Writing especially of the Yaqui before 1645, Padre Andrés Perez de Ribas declared (freely translated):

> There is information of a great people of another nation called Heris; they are excessively savage, without towns, without houses, without fields. They have neither rivers nor streams, and drink from a few lagoonlets and waterholes. They subsist by the chase, but at harvest time they obtain corn by bartering salt extracted from the sea and deerskins with other nations. Those nearest to the sea also subsist on fish; and it is said that there is, in the same sea, an island on which others of the same nation live. Their language is exceedingly difficult.[1]

The same author mentions cannibalism among the aborigines of northwestern Mexico, saying:

> The vice of those called anthropophagi, who eat human flesh, introduced by the devil, enemy of the human genus, among nearly all those nations during their heathenism, is more or less common. In the Acaxee and mountains this inhuman vice is customary as eating of flesh obtained by the chase; it is of daily occurrence among them; just as they sally in chase of a deer, they go out over mountains and fields in search of enemies to cut in pieces and eat roasted or boiled.[2]

[114] There is nothing to indicate that the anthropophagy was confined to, or even extended to, the Seri—a fact of interest in connection with later opinion. Ribas' reference to an island inhabited by the Heris (Seri) indicates that the occupancy of Tiburon was fully recognized by the native tribes of the region.

Throughout the seventeenth century the western coast of Gulf of California, and in lesser degree the eastern coast also, became famous for pearl oysters, and expeditions were sent out and fisheries established at different times. The earliest of these expeditions was that of Captain Juan Iturbi in 1615; he sailed well up the gulf, reaching latitude 30° according to his reckoning (though the accounts imply between lines that he turned back at the Salsipuedes), collecting many pearls along the western coast "so large and clear that for one only he paid, as the King's fifth, 900 crowns";[3] and on his return he carried the fame of the Californian pearls to Ciudad Mexico, whence it resounded to Madrid and reverberated through all Europe. One of the more noteworthy

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[1] Historia de los Triumphos de Nuestra Santa Fee entre Gentes las mas Barbaras y Fieras del Nuevo Orbe; Madrid, 1645, p. 556. The "Heris" are identified as Seri by Bandelier (Final Report of Investigations among the Indians of the Southwestern United States, in Papers Arch. Inst. Am., American series, iii, 1892, p. 74).

[2] Op. cit., p. 11.

[3] Venegas, op. cit., vol. i, p. 188.

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pearl-gathering expeditions was that of Admiral Pedro Portal de Casanate, which covered several years; he "took a very careful survey of the eastern coast of the gulf" in 1648, but was deterred from establishing a garrison by "the dryness and sterility of the country";[1] yet neither this voyage nor any of the others appears to have resulted in any considerable rectification of the maps, or in valuable records relating to the aboriginal inhabitants. Various records indicate, however, that both pearl fishers by sea and gold seekers by land must have met the warlike Seri—and sometimes survived to enrich the growing lore concerning the tribe, and to establish the existence of their island stronghold.

New light dawned on Sonoran history with the extension of evangelization by the Order of Jesuits into that territory under the pilotage of Padre Eusebio Francisco Kino (Kaino, Kuino, Kühn, Kühne, Quino, Chino, etc.), who sailed from Chacala, March 15, 1683,[2] for California, with the expedition of Admiral Isidro Otondo y Antillon. This expedition failing, the padre returned to the mainland in 1686, and during the same year obtained authority and means for establishing missions in Sonora, of which one was to be "founded among the Seris of the gulf coast".[3] Although the record of the padre's movements is hardly complete, it would appear that several years elapsed before he actually approached, and also (contrary to the opinion of two centuries) that he never saw, the real Seri habitat. According to the anonymous author of "Apostolicus Afanes" (identified by modern historians as Padre José Ortega), Padre Kino made many journeys over the inhospitable wastes now known as Papagueria during the years 1690–1701,[4] and must have seen nearly the whole of the northern and eastern portions of the territory; but only a single journey led him toward Seriland. In February, 1694, he, with Padre Marcos Antonio Kappus, Ensign Juan Mateo Mange (chronicler of this expedition), and Captain Aguerra, set out for the coast; and Mange's itinerary is so circumstantial as to locate their route and every stopping place, with a possible error not exceeding 5 miles in any case.

According to Mange's itinerary, the explorers left Santa Magdalena de Buquibava, on the banks of Rio San Ignacio or Santa Magdalena, February 9, traveling northwestward down the valley of that river (for the most part) 12 leagues to San Miguel del Bonna; the original party having been enlarged at Santa Magdalena by the addition of Nicolas Castrijo and Antonio Mesquita, with two Indians for guides. On February 10 they traveled from Bonna 5 leagues southward (evidently in the valley of Rio San Ignacio, which is here 5 to 25 miles in width), to sleep at the watering place of Ocuse, or San Bartolome. The

[1] Venegas, A Natural and Civil History of California, vol. i, p. 102.

[2] Venegas, Noticia de la California, vol. i; Madrid, 1757, p. 219.

[3] The Works of Hubert Howe Bancroft, vol. xv (History of the North Mexican States, vol. i, 1531–1800), 1886, p. 251.

[4] Apostolicus Afanes de la Compañia de Jesus, escritas por un Padre de la misma Sagrada Religion de su Provincia de Mexico; Barcelona, 1754, p. 209 et seq.

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next day they journeyed westward along the wash (of San Ignacio), stopping, as was their custom, to baptize the sick and others, and after covering 10 leagues camped at a tanque. On February 12 they continued westward over mesquite-covered plains for 4 leagues, and then turned northwestward for 3 leagues along the San Ignacio to Caborca, where they spent the remainder of the day in evangelical work. Next morning, after saying mass, they again proceeded westward "por la vega del rio abajo" (down the bank of the river); at 2 leagues distance they arrived at the place at which the river "sinks", but continued westward along the sand-wash 5 leagues farther, passing the night at a tanque of turbid water. On February 14 they again celebrated mass, and then proceeded westward over the plains ("prosiguiendo nosotros al Poniente por llanos"); at 4 leagues they reached a rancheria which was dubbed San Valentin (still persisting as a Papago temporale; the "Bisanig" of various maps), watered from a well in the river bed; proceeding westward ("prosiguiendo al Poniente") 6 leagues farther, they ascended a sierra trending from south to north ("trasmontada una sierra que sita de Sur á Norte") of which they named the principal peak Nazareno, in a dry and sterile barranca in which they afterward slept; from this sierra they saw "the Gulf of California, and, on the further coast, four mountains of that territory, which we named Los Cuatro Stos. Evangelistas, and toward the northwest an islet with three cerritos named Las Tres Marias, and in the southwest the Isla de Seris, to which they retreat when pursued by soldiers for their robberies, which we call San Agustin and others Tiburon."[1] The record continues:

On the fifteenth, after saying mass, we continued our route to the west by a dry and stony ravine which there is between the mountains, and at 3 leagues we met some Indians taking water from a small well in earthen jars, who, on seeing us, ran away, dying from fear; but at two musket shots we overtook them, treated them kindly, and brought them back to the well that they might assist in watering the horses, giving them all the water necessary, for the reason that they had not drunk the day before. For this reason we called this place Paraje de las Ollas. They were naked people, and only covered their private parts with small pieces of bare skin; and one of them was so aged that by his looks he must have been about 120 years old. We continued to the west over barren plains, arid and without pasture, a country as sandy as a sea-beach, until we reached the sand-banks, where the horses had great difficulty; and after another 7 leagues Father Kappus and the other people camped without water, and with only pasture of salt grass; but Padre Kino and I [Mange], with guides, and the governor of Los Dolores [Aguerra], in order to be foreshanded, went west 3 leagues farther, crossing the bed of Rio San Ignacio; we arrived at the banks of an arm of the sea to which, in the sixty years that the province of Sonora had been peopled, no one had come, and we were the first who had the great privilege of seeing the Island of the Seris and that of Tres Marias, as well as the mountains of Cuatro Evangelistas, in California, on the other side of the gulf, the width of which, according to the measuring instruments at this position of 30° [actually about 30° 30'], is some 20 leagues. We returned to the bed of the river [San Ignacio], where we found a well nearly dry; we drew from it water for the horses, who had had nothing to drink, and took some ourselves, although it was turbid, muddy, and disagreeable.

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[1] Translated somewhat freely from Bonnycastle de Kaibeha, in Documentos para la Historia de Mexico, cuarta serie, tomo i, 1856, pp. 196-216.

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Now, this itinerary recounts, in definite and unmistakable terms, the incidents and localities of a journey down the valley of Rio San Ignacio (also called Santa Magdalena, Altar, Ascuncion, Pitiquito, Caborca, etc, in different parts of its course), from the present city of Santa Magdalena by the present town of Caborca to the coast at a point almost directly west of both Caborca and Santa Magdalena. Moreover, Kino's map of 1702[1] locates "Nazareno" on this river, and permits identification of the sierra with Dewey's "three conspicuous peaks" placed directly inland from the lagoon at the mouth of San Ignacio river, on the Hydrographic Office charts; it also locates Caborca (miswritten "Cabetka") in approximate position. Furthermore, it would have been physically impossible for the rather heavily outfitted Kino party, with carriages and churchly equipage, to traverse the untrodden and forbidding wastes from Caborca to even the nearest part of Seriland within the period of two days and a fraction, and the distance of 29 leagues (some 74 miles), detailed in the itinerary. The direct way from Caborca to Tiburon would lie due southward, over sierra-ribbed and barranca-cut plains never yet explored by white men, nor even traversed by Indians so far as known, for more than 100 miles in an air line; while the nearest practicable route, passing by way of Cieneguilla, Las Cruces, Pozo Noriega, Bacuachito, Sayula, Tonuco, Rancho Libertad, and Barranca Salina (or Aguaje Parilla) measures fully 200 miles, and requires at least six days for the passage with good horses and light equipage. The Kino party might, indeed, have turned southwestward at Caborca and pushed to the now abandoned landing at the anchorage below Cabo Lobos;[2] but the directions and distances specifically stated, and the specific identification of Rio San Ignacio at the end and at other points of the journey, all prove that this was not the route actually traveled. The terminus of the trip so clearly fixed by the itinerary is over 100 miles from the nearest point of Seriland proper; moreover, Tiburon is rendered invisible both from the coast and from Cerro Nazareno not only by distance, but by intervening sierras, notably those projecting into the Gulf to form Cabo Lobos and Punta Tepopa. It follows that Kino and Mange completely missed Seriland in their expedition to the coast, and there is nothing to indicate that they ever saw the Seri tribesmen. Their descriptions of the Indians encountered fairly fit the peaceful Papago of the interior and the timid Tepoka of the coast; and neither Mange's narrative nor other contemporary records suggest contact between the exploring party and the distinctive holders of Tiburon. The specific and repeated references in the itinerary to the island of San Agustin, or Tiburon, evidently relate to the ancient Isla de Santa

[1] Tabula Californiæ, anno 1702 (Via terrestris in Californiam comperta et delineata per R. Patrem Eusebium Fran. Chino è S. J. Germanorum. Adnotatio nova Missionibus ejusdem fœtis ab anno 1698 ad annum 1701), in Stocklein, Der Neue Welt-Bott, Augspurg und Grätz, 1726.

[2] Elaborately mapped and established (on paper) as the "Puerto y Villa de la Libertad" in 1881 (Boletin de la Sociedad Mexicana de Geografia y Estadistica, 1882, x, p. 283 et seq.), and actually maintained from 1873 to 1884 as the port of Libertad (not the abandoned Rancho Libertad on the border of Seriland), or Guaymas, according to Davila (Sonora Histórico y Descriptivo, pp. 149, 249).

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Inas, the modern Isla Angel de la Guarda,[1] one of the most prominent geographic features visible either from Cerro Nazareno or from the adjacent coast. There is no reason to infer that Kino or any of his party ever detected their error in identification of geographic features which must have been conspicuous in the lore of the aborigines and settlers of Sonora; indeed, the error well attests the prominence of the Seri and their habitat in the local thought of the time.[2]

An effect of the Jesuit invasion was to give record to episodes growing out of alien contact with the Seri. One of the earliest of these records recounts nocturnal raids by the "Seris Salineros" for robbery and murder in the pueblos of Tuape, Cucurpe, and Magdalena (de Tepoca).[3] In January, 1700, Sergeant Juan Bautista de Escalante set out with fifteen soldiers to this mission of Santa Magdalena de Tepoca on an expedition of protection and reprisal; and here he learned that the "Seris Salineros" had killed with arrows three persons. Taking their trail, he reached Nuestra Señora del Populo only to find that ten families of converts had deserted to steal cattle, whereupon he started in search of them; he overtook them 20 leagues away, and, despite armed resistance on their part, arrested and whipped them and returned them to the pueblo. Among the captives were two "Seris Salineros" concerned in the murders at Tepoca, and three others guilty of similar outrages at the Pueblo de los Angeles de Pimas Cocomacaguas; these he executed as a warning to the others, after taking their depositions and confessions, and after they were shrived by Padre Adano Gilo (or Adan Gilg), the priest of Populo. This duty performed, he resumed the trail of the Seri, accompanied by the padre; and, approaching the sea, he found a port, as well as an island to which most of the Seri had escaped in balsas, leaving eight of their number, who were arrested and turned over to the priest.[4]

This is the first record of actual invasion of Seriland by Caucasians. According to Bancroft, it "may be deemed the beginning of the Seri wars which so long desolated the province".[5]

The next noteworthy episode occurred when Sergeant Escalante, who had returned to Tuape and Santa Magdalena (de Tepoca), again set out for the coast on February 28, 1700, taking a new route (probably down Rio Bacuache). He traveled 30 leagues, passing four watering places, and on March 6 arrived at the Paraje de Aguas Frias (probably

[1] Identified by Alexandre de Humboldt in his Carte Générale du Royaume de la Nouvelle Espagne, of 1804 (in Atlas Géographique et Physique, Paris, 1811). So late as 1849 the old name was sometimes retained, e. g., on Robert Greenhow's map accompanying his History of California and Oregon.

[2] In one of the last letters from his pen, dated November 28, 1680, the late Dr Elliott Coues wrote, "I find you trailing Kino and Mange in 1684 precisely as I had them, and I make no doubt of the substantial accuracy of your typewritten MS. I accept your position that the large island they sighted and named San Agustin was not Tiburon, but Angel de la Guarda Isl."

[3] A mission founded in 1680 by Padre Melchor Bartiromo (Historia de la Compañia de Jesus en Nueva España, que esta escribiendo el P. Francisco Javier Alegre, 1842, tomo iii, p. 117), of which the location has long been lost.

[4] Documentos de Historia, op. cit., tomo i, p. 321.

[5] Op. cit., p. 278 (the year is misprinted 1680 on this page and in the index).

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114 175 The specific references to the Seri and their insular habitat by Ribas, by Kino and his chronicler, and by the various recorders of Escalante's expeditions, establish the extent of the lore concerning people and place, even before the end of the seventeenth century. This lore found measurable expression in maps prepared in Europe, even by those cartographers who purposely or otherwise ignored the surveys of Ulloa and Alarcon. In his "newest and most accurate" map of America, 1662, Fredericus de Witt depicted the Gulf of California ("Mare Vermio olim Mare Rubrum") as extending northward to connect with the mythic Strait of Anian ("Fretum Aniani"), yet he located Rio Colorado ("R. de Tecon") and Rio Gila ("R. de Coral") approximately, placing the largest island in the gulf, named "I. Giganto", just off their (common) embouchure;[1] and an anonymous map of the Pacific ocean, apparently by the same author and of closely corresponding date, is essentially similar.[2] The map of the northern part of America by Peter van der Aa, about 1690, is also similar, though on smaller scale;[3] and the same may be said of that cartographer's new map of America, issued about the same time, in which the island is designated "I. de Gigante".[4] A somewhat later map by Van der Aa (although supposed to have been issued in 1690) is greatly improved; the "Mer de California" is brought to rather indefinite end a little above the mouth of Rio Colorado ("R. de bona guia"); the "Pimases" are placed in proper position with respect to the Gila ("R. de Coral"), and the "Herises" are located a third of the way and the "Abomeses" half way down the gulf; while a greatly elongated island stretches from the one to the other off the province of "Sonora".[5] The origin of the name "Giganto" is uncertain; it may be borrowed from a land feature. As used in some cases it apparently connotes the size of the island, while the use in other cases evidently connotes gigantic inhabitants.

Naturally, in view of the slow and imperfect diffusion of knowledge characteristic of early times, cartographers were dilatory in introducing the observations of Kino and Escalante. The map of America by Herman Moll, about 1708,[6] represents the "Gulf of California or Red Sea", connecting the "South Sea" with the "Straits of Annian", and depicts Rio Colorado ("Tison R.") and a composite river apparently designed to represent Rio Gila (made up of "R. Sonaca", "R. Azul", and "R. Colorado", with two other long tributaries from the south) embouching separately a little below midlength of the gulf. Somewhat above these are three islands, one of which is designated "Gigate

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[1] Novissima et Accuratissima Septentrionalis ac Meridionalis Americæ, Amstelodami. (In American Maps, 1670-1700, Library U. S. Geological Survey, 135.)

[2] Mar del Zvr, Hispanis, Mare Pacificum. (Ibid., 138.)

[3] 'T Noorder Deel van Amerika, Leyden. (Ibid., 139.)

[4] Nouvelle Carte de l'Amerique, Leyden. (Ibid., 136.)

[5] L'Amerique Septentrionale dressé sur les Nouvelles Observations, etc., Leyden. (Ibid., 137.) This island is not named, but is undoubtedly the Santa Inez of several other maps—the Angel de la Guarda of the present.

[6] North America, according to ye Newest and most Exact Observations, etc., London. (Ibid., 68.)

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Isle", while "Pimeria" is located correctly with respect to Rio Gila, though too close to the sea, and "R. Sonora" is located too far southward, with a province of the same name just north of it. There is no reference to the Seri, but a locality in Lower California opposite Sonora is named "Gigante".[1] Quite similar is the map of North America drawn and engraved by R. W. Seale about 1722, though the provinces of Pimeria and Sonora are brought closer together, while the magnified Gila is named Colorado ("Timn R." also being retained).[2] The map of North America presented to the Duc de Bourgogne by H. Iaillot about 1720 is much the same; the "Isle de California" is separated from the continent by "Mar Vermejo ou Mer Rouge" with four islands, of which the southernmost, "I. de Gigante", lies somewhat below the separate mouths of "R. de Tecon" and "R. de Coral", while the extravagantly magnified Gila of previous maps is partially replaced by a still more extravagant "R. del Norte", rising in a mythical lake above the fortieth parallel and falling into the gulf under the thirtieth.[3] The map of Mexico and Florida by Guillaume "De l'Isle", published in Amsterdam by Covens and Mortier, 1722, patently begs the question as to the northern extension of "Mer de Californie" by cutting off the cartography at the critical point. "R. del Tizon" is retained as a subordinate river, while the separate and greatly magnified Gila corresponds with that of the Iaillot map, the upper tributary being "R. Sonora ou de Hila"; "R. di Sonora" is depicted in approximate position, with the province of the same name extending northward and "Seris" located a little above the mouth of the river. No islands are shown in the vicinity, but the name "Gigante" appears on the western coast of the gulf, about latitude 29°.[4] The map of North America by the same author, supposed to date about 1740 though probably earlier, recalls the Van der Aa map of 1690 (?); "Mer de Californie ou Mer Vermeille" ends doubtfully about latitude 34°, where "R. de bona guia" and "R. de Coral" bound the "Campagne de bona guia", and fall separately into the gulf near its head; the "Pimases", "Herises", "Sumases", "Albinoses", and "Ahomeses" are distributed thence southward along the coast to about the twenty-eighth parallel, while a nameless island stretches parallel with the coast of "Sonora" from about 28° to 32°.[5]

With one or two exceptions, these maps demonstrate the prevailing neglect or ignorance of the classic explorations along the western coast of America early in the sixteenth century; yet they introduce features representing vague knowledge of the Seri Indians and their insular habitat, undoubtedly derived (like that of Padre Kino and Sergeant Escalante anterior to their expeditions) from native sources.

[1] Doubtless the mountain "La Gigante", named by Admiral Otondo toward the end of the seventeenth century (Documentos para la Historia de Mexico, cuarta série, 1857, tomo v, p. 123), and noted by Hardy in 1826 (Travels in Interior of Mexico in 1825, 1826, 1827, and 1828, London, 1829, p. 313).

[2] "A map of North America, with the European settlements and whatever else is Remarkable in ye West Indies, from the latest and best Observations. (American maps, loc. cit., 119.)

[3] "Amerique Septentrionale Dressée sur les Principales Parties. (Ibid., 146.)

[4] "Carte du Mexique et de la Floride, des Terres Angloises et des Isles Antilles, etc. (Ibid., 194.)

[5] "L'Amerique Septentrionale . . . par G. de l'Isle. Amsterdam, Chez Pierre Mortier. (Ibid., 171.) The island is, of course, Santa Inez, i. e., Angel de la Guarda.

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The Kino map of 1702 gradually came to be recognized as trustworthy in important particulars, and brought to an end the baseless extension northward of the gulf; yet it was seriously inaccurate in details, particularly those affected by the erroneous identification of the second-largest island in the gulf with the largest. Accordingly Isla Santa Ines (the modern Isla Angel de la Guarda) is omitted from its proper position, and replaced by "I. S. August" close to the eastern coast; yet the land-mass of Tiburon is roughly defined as a peninsula bounded on the north by "Portus S. Sabina" (Bahia Tepopa) and on the south by "Baya S. Ios. Bapt." (Bahias Kunkaak and Kino). Two other considerable islands are represented as dividing the width of the bay west-southwest of "I. S. August", and are named "2. Salta-Inael"; although evidently traditional, their positions correspond roughly with those of San Esteban and San Lorenzo. The map locates the "Topokis" between Rio San Ignacio and Rio Sonora, with the "Guaimas" immediately below the latter.[1] Kino's three pier-like islands bridging the gulf were adopted in Delisle's map of America, published in Amsterdam by Jean Covens and Cornelle Mortier about 1722, in greatly reduced size, though larger islands are shown farther northward; and an ill-defined peninsula corresponding to Tiburon is retained.[2] The D'Anville map of 1746 embodies Kino's discoveries about the head of the gulf and retains his pier-like islands, yet not only corrects his error in omitting the second greatest island of the gulf, but perpetuates equal error in the opposite direction: "I. de S. Vicente" is made the largest of the islands and located near the western coast a little below the mouth of Rio San Ignacio, while "I. de Sta. Ines" is made second largest and is located southeast of it and near the eastern coast. The third island in size is named "Seris", while the fourth and fifth, completing the Kino trio, are called "Is. de Sal", and the mainland projection remains defined on the south by "B. de S. Juan".[3] The Vaugondy map of 1750 locates the transverse trio of islands in greatly reduced size, and omits the larger islands of the gulf.[4] The islands, etc., of the Covens and Mortier map of 1757 correspond closely with D'Anville's map of 1746, and a nameless bay defines a peninsula in the position of Tiburon.[5] The Pownall map of 1783 also follows that of D'Anville so far as the islands are concerned, though the position of that corresponding to the present Angel de la Guarda lies beyond the limit of the sheet; "I. de Ines" lies some distance below the mouth of "Sta. Madalena" river, off the territory of the "Sobas" and "Seris"; "Seris I." is smaller, the two "Sall Is." are smaller still, and there is an ill-defined projection of the mainland, bounded on the south by "? B. de S. Juan".[6]

While the makers of the later of these maps were engaged in perpet-

[1] Map in Stöcklein, op. cit.

[2] Carte d'Amerique, etc. (American maps, Inv. cit., 38.)

[3] Amérique Septentrionale . . . par le Sr. d'Anville, Paris. (Ibid., 39 and 41.)

[4] Amérique Septentrionale . . . par le Sr. Robert de Vaugondy, Paris. (Ibid., 37.)

[5] L'Amérique Septentrionale, etc., Amsterdam. (Ibid., 100.)

[6] A new map of North America, with the West India Islands. . . . Laid down according to the Latest Surveys, and Corrected from the Original Materials of Governr Pownall. London. (Ibid., 58.)

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great depth by Kino's "Pto. de Sta. Sabina" and "Bahia de Sn. Juan Baptista", in such wise as to define a decided peninsula, while the "Seris" are located 2° farther southward and below Rio Sonora, and the "Guaimas" still farther down the coast.[1] Another illustration of the chaotic notions of the time is afforded by the Baegert map, published in 1773, and credited largely to Consag.[2] The sheet locates the author's routes of arrival (1751) and departure (1768), the former overland from far down the coast to the mouth of "Torrens Hiaqui," and thence directly across "Mare Californiae", via "Tiburon" (lying just off the mouth of the river, in latitude 28°), with the usual congeries of islands, headed by "I. S. Ang. Gart" (Angel de la Guarda), in latitude 30°–31°, and the usual shore configuration above the debouchure of Rio Sonora; "Los Seris" are located in the interior between Rio Sonora and "Torrens Hiaqui", while just above the mouth of the latter lies "Guaymas M.[ision] destr. per Apostatas Seris". The Pownall map of 1786 incorporates Padre Consag's results on reduced scale, but omits the islands toward the eastern shore of the gulf.[3]

On the whole the cartography of a century indicates that the striking explorations of Ulloa, Alarcon, and Diaz were utterly neglected; it indicates, too, that Kino's observations were promptly adopted, but that his erroneous identification of the island seen from Nazareno occasioned confusion; yet there is nothing to indicate definite knowledge of Escalante's discoveries. Apparently the cartographic tangle began with the failure to discover the narrow strait traversing Seriland, coupled with hearsay notions of an insular Seri stronghold; it was complicated by Kino's erroneous identification of the hearsay island; and it grew into the mapping of a traditional islet about the position of Tiburon, and the extension of the mainland into a peninsula embracing the actual land-mass of that island[4]—the islet lying about the site of the modern Isla Tasaue, and often appearing under the name San Agustin.[5] Accordingly, so far as maps are concerned, Escalante's discoveries were no less completely lost than those of Ulloa.

The recorded history of the Seri Indians during the earlier two-thirds of the eighteenth century is largely one of zealous effort at conversion on the part of the Jesuit missionaries, who repeatedly approached the territory by both land and sea; yet the records touch also on events of exploration and on the characteristics of the tribe.

One of the earliest chroniclers was Padre Juan Maria de Sonora, who in 1690–1701 inspected many of the missions of Lower California and

[1] Noticia de la California, tomo i, p. 1.

[2] California, per P. Ferdinandum Consag, S. I., et alios, in Nachrichten von der amerikanischen Halbinsel Californien. . . . Geschrieben von einem Priester der Gesellschaft Jesu (identified as Jacob Baegert by Ban, Smithsonian Report, 1863, p. 382), Mannheim, 1773.

[3] A New Map of the Whole Continent of America, London. (American maps, loc. cit., 4.)

[4] This cartography reappeared occasionally up to about the middle of the nineteenth century, as illustrated by the Greenhow map accompanying the edition of his history issued in 1845.

[5] This condition is revealed in Mühlenpfordt, Versuch einer getreuen Schilderung der Republic Mejico, etc.; Hannover, 1844.

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Sonora and acquainted himself in exceptional degree with the neophytes and their wilder kindred. About the beginning of 1701 he crossed with great danger ("pasó con grande peligro") from Loreto to the eastern coast, and, accompanied by two "Indios Guaymas, caciques," proceeded among the Sonoran settlements.[1] On February 18 he was at the new town of Magdalena (de Tepoca), "where, with great labor, Padre Melchor Bartiromo had gathered more than a hundred souls of the maritime nation of Tepocas", and where the visitors were accorded an enthusiastic reception. He went on to say:

> It is notable that where the Tepocas and Salinoras are located the sea is populous with islands [muy poblado de islas], and the first of these toward the coast contains foot-folk [gente de á pié], who live on it. Then there are two islands much nearer the mainland of California, and it is said that they [the Tepoka] are able to navigate in their barquillos [balsas] to the adjacent coast; and the pronunciation of these Tepocas, who are all Seris by nation, of certain words of the Cochimies of [Lower] California, who occupy the opposite coast, indicates that they have communicated in other times.[2]

This record is especially significant as indicating the affinity between the Seri and the Tepoka, as establishing the transnavigation of the Gulf by the Seri craft, and as explaining the possible passage of loan words from the Cochimi to the Seri, and presumptively from the Seri to the Cochimi.

A notable visitor to the shores of Seriland was Padre Juan María Salvatierra, who had previously "made a peace betwixt the Seris cristians, and the Pimas", soon violated by the former "in the murder of 40 Pimas". In August, 1709, he essayed the recovery of a vessel wrecked "on the barren coast of the Seris", which these Indians were engaged in looting and breaking up for the nails; and, by dint of his "persuasive elocution . . . not a little forwarded by the respectable sweetness of his air", aided by timely explosions of the bark's paterareos (mortars), he induced restitution, the restoration of peace, and the reinstatement of several of the robbing and murdering Seri as communicants.[3] Padre Salvatierra observed the distinctive character of the Seri tongue, but made no extended exploration of Seriland, either coastwise or interior.

The next noteworthy visitor was Padre Juan de Ugarte, who, at the instance of Salvatierra, undertook an exploration of the gulf coast complementary to Kino's land explorations about its northern terminus. Ugarte was the Hercules of Baja California history; he awed the natives by slaying a California lion, unarmed save with stones, and enforced orderly attention to his catechizing by seizing an obstreperous champion by the hair, lifting him at arm's length, and shaking him into submission; and under incredible difficulties due to absence of material and distance of timber, he built the first vessel ever con-

[1] Documentos para la Historia de Mexico, cuarta serie, tomo [illegible]. Mexico, 1857, pp. 120-126.
[2] Ibid., p. 122.
[3] Venegas, A Natural and Civil History of California, vol. i, pp. 406-411.

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of these missions to Seriland are significant: according to the anonymous author of Sonora's classic, "Rudo Ensayo", written in 1763, Nacameri lay in the valley of Rio Opodepe (or Horcasitas), 7 leagues below the town of the same name (still extant); 9 leagues down the same stream lay Populo (on the site of the present town of Horcasitas); Angeles lay 3 or 4 leagues farther downstream, or over 12 leagues above the site of Pitic[1] (the present Hermosillo); while various references indicate that the temporary mission of Santa Magdalena was located in the same valley, probably a few leagues above Opodepe.[2] Accordingly, the missions ranged from 100 to 150 miles inland, measured in an air line, or four hard days' journey, as shown by Escalante's record, from the Seri coast. The nearest mission at Angeles was 75 miles, or three days' journey, from the inland margin of Seriland proper, and the intervening territory was a depopulated expanse ("el grande despoblado") according to Villa-Señor,[3] ranged but not inhabited by Seri and Tepoka hunting parties. Never traversed by white men, save those of Coronado's parties nearly two centuries before and of Escalante's hurried expeditions of 1700, this "despoblado" was practically unknown; even the surprisingly well-informed author of "Rudo Ensayo" was unaware of the existence of Rio Bacuache, and noted only such prominent mountains as Cerro Prieto and "Bacoatzi the Great in the land of the Seris",[4] lying far outside the tribal home. The remoteness of the missions from the habitat of the tribe bears testimony to the dread with which they were regarded, and to the slightness of the influence exerted on the tribesmen by the zealous padres.

Despite the efforts of both priesthood and soldiery, the number of Seri converts at the missions was limited. In 1700 there were ten families at Populo; true, they had slipped away to maverick the herds ("por ladrones de ganados"), but Escalante overtook them and whipped them back to the shadow of the church; later he captured 120 Tepoka people (probably some twenty families, with a few strays), and recaptured 300 backsliders (perhaps fifty families or more), and haled them all to the mission, where lands were allotted to them and where they were carefully guarded by the ecclesiastics—until opportunity came for escape; and to this congregation Escalante added a few Seri prisoners taken on Tiburon, as noted above. In 1727 Brigadier Pedro de Rivera noted a dozen tribes in central Sonora, including the "Seris" and "Tepocas", numbering 21,746 "of all ages and both sexes", all receiving

[1] Rudo Ensayo, Guiteras' translation in Records of the American Catholic Historical Society of Philadelphia, vol. v, 1894, p. 134. Bandelier identified the author as Pedro Hontwig, S. J., of Hiaburas, eastern Sonora. (Final Report of Investigations among the Indians, etc., part 1, in Papers of the Archæological Institute of America," vol. III, 1890, p. 70). The name is written "John Hontwig" in a third-person reference in Guiteras' translation, but an editorial footnote adds, "Sr. Bandelier's printer's mistake for Hontwig.—L. F. F [lick]" (Ibid., p. 181).

[2] Noticias Estadísticas del Estado de Sonora, by José Francisco Velasco, Mexico, 1850, p. 151.

[3] Theatro Americano, Descripcion General de los Reynos, y Provincias de la Nueva-España, y sus Jurisdicciones, Joseph Antonio de Villa-Señor, y Sanchez, segunda parte; Mexico, 1748, p. 382.

[4] Op. cit., p. 132.

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the ministrations of "los Padres de la Compañía de Jesvs". He added: "Besides the above-named Indians there are found in the middle part of the province of Ostimuri, in the western part bordering on the Gulf of California, certain nations of pagans in small numbers; they are the Salineros, Cocomaques, and Guaymas."[1] Neither the numbers of Seri and Tepoka at the missions, nor the respective proportions at the missions and on the native habitat, were recorded by the brigadier. According to Alegre, eighty families (including those transferred from Pitic) were gathered at Populo and Angeles, under the specially sedulous efforts of Judge José Rafael Gallardo, in 1749;[2] although Padre Nicolas de Perea, "who for the longest time bore with their insolent behavior, . . . did not see more than 300 hundred persons when they had all come together".[3] It would appear that the great majority of the Populo and Angeles converts belonged to the Tepoka, while others belonged to the Guayma and Upanguayma, with whom the Seri were at war about that time;[4] yet there were enough representatives of the Seri to gain a shocking character for sloth, filth, thievery, treachery, obstinacy, and drunkenness. Assuming that a quarter of the converts were Seri (and this ratio is larger than any of the known records would indicate), there could hardly have been more than a hundred of the tribe gathered about the several missions at this palmiest time of Jesuit missionizing; and the records show that by far the greater portion of these were women, children, cripples, and viejillards, the warriors being commonly slain in the vigorous proselyting expeditions conducted by the civil and military coadjutors of the padres. If at this time the Seri population reached the 2,000 estimated by Dávila[5] and others, the proportion of proselytes (or apostates from Seri naturalism) was but 5 per cent of the tribe and naturally comprised the less vigorous and characteristic element. The writer of "Rudo Ensayo" reckons that during six years preceding 1761 the Seri stole from the settlers (for eating, the sole use to which they put such stock) "more than 4,000 mules, mares, and horses",[6] i. e., enough to sustain two or three hundred people, or a full thousand if this meat formed no more than a fourth or a fifth of their diet, as the contemporary records imply—and this was after the "extermination" of the Seri by D'arilla in 1750.

Evidently the good padres greatly overestimated their knowledge of and influence on this savage yet subtle tribe; actually they touched the Seri character only lightly and temporarily, contributing slightly

[1] Diario y Derrotero de la Caminada, Visita, y Observado en el Derrotero de la Visita general de Presidios, situados en las Provincias Internas de Nueva España; Guatemala, 1828, leg. 1544-1613.

[2] Historia de la Compañía de Jesvs, vol. iii, p. 280.

[3] Rudo Ensayo, p. 180.

[4] Bancroft, op. cit., vol. i, pp. 502-503. The former were annihilated or driven into the Yaqui country by 1763 (Rudo Ensayo, p. 180).

[5] Somera Histórica y Descriptiva, p. 210.

[6] Ibid., p. 140.

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to spontaneous acculturation, but never coming into relation with the tribe as a whole.

And despite the efforts of both soldiers and priests, the savages continued to ravage the settlements, to repel pioneering, to decimate the herds and murder the vaqueros who sought to protect them, to plunder everything portable and ambuscade punitive parties, and even to engage in open hostilities. "In 1739 the Seris, Tepocas, Salineros, and Tiburon islanders kept the province in great excitement, killing twenty-seven persons and threatening all the pueblos with a general conflagration";[1] and both before and after this date the recorded sanguinary episodes were too frequent for even passing mention, while the indications between lines point to robberies and assassinations and minor conflicts too many for full record even by the patient chroniclers of the time.

Sometime about the beginning of the eighteenth century the Spanish settlements pushed down Rio Sonora beyond the confluence of the Opodepe to the last water gap, made conspicuous by a marble butte in its throat and by the fact that here the sometimes subterranean flow always rose to the surface in a permanent stream of pure and cool water. Here, according to Padre Dominguez, "it was attempted to locate the Presidio of Cinaloa against the rapacity of the Zeris, Tepocas, and Pimas; and here General Idobro, of Cinaloa, wished to found a pueblo of Tiburon Indians, brought for the purpose [probably from Populo and Angeles] that they might be kept in subjection, but most of them returned to their island and attempted to make attacks from their hiding places."[2] Nevertheless, the padre found 29 married persons, 14 single, and 99 children of these "races" at the rancho. At the time of his visit the place was known as Rancho del Pitquin; later it became the Pueblo of Pitic, or Pitiqui, or Pitiquin, or San Pedro de Pitic,[3] and long afterward the city of Hermosillo, while the beautiful marble butte was christened Cerro de la Campana.

By 1742 the settlements were so far extended as to warrant the establishment of a royal fort in the water-gap at Pitic;[4] and the ecclesiastics kept pace with the military movement by founding the mission of San Pedro de la Conquista,[5] or "Pueblo de San Pedro de la Conquista de Seris"[6] (now abbreviated to "Pueblo Seris", or merely "Seris"); both fort and mission being designed primarily for better

[1] Bancroft, op. cit., p. 517.

[2] Diario del Padre Dominguez en Sonora y Sinaloa, 1721; manuscript in archives of the Bureau of American Ethnology.

[3] This place on Rio Sonora is not to be confounded with the Rancho (afterward Pueblo) of Pitiqui or San Diego de Pitiqui (The Geographical and Historical Dictionary of America and the West Indies . . . of Colonel Don Antonio de Alcedo, by G. A. Thompson, London, 1814, vol. IV, p. 159), or Pitic chiquito (Bol. Soc. Mex. Geog. y Est., vol. VIII, 1888, p. 634), or Pitiquin, now the town of Pitiquito on Rio San Ignacio.

[4] Alegre, Historia de la Compañia de Jesus, tomo III, p. 288; Villa-Señor, Theatro Americano, segunda parte, p. 389; Rubo Ramaya, p. 192.

[5] Bancroft, op. cit., vol. I, p. 528.

[6] Reise-Erinnerungen und Abenteuer aus der neuen Welt. von C. A. Pajeken. Bremen, 1855, p. 97.

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"Guaimas" and "Jupanguaimas". Alegre located the Seri on the coast of the gulf from a few leagues north of the mouth of Rio Yaqui to Bahia San Juan de Bautista (Bahia Kino), adding, "with them may be classed the Guaimas, few in number and of the same language".[1] Writing about the same time, José Gallardo observed: "The distinction is slight between the Seri and Upanguaima, the one and the other having the same idiom" ("Poco es la distincion que hay entre seri y upanguaima, . . . y unos y otros casi hablan un mismo idioma").[2] The author of "Rudo Ensayo" wrote: "The Guaimas speak the same language, with but little difference, as the Seris."[3] He mistook Cerro Prieto as their principal retreat; mentioned the mountains of Bacoatzi Grande, Las Espuelas, and others as other haunts; noted Tiburon and San Juan Bautista (San Esteban ?) islands as less-known shelters, and gave extended attention to "the poison they use for their arrows" as "the most virulent known in these parts"; for "even in cases where the skin only is wounded, the injured part begins to swell, and the swelling extends all over the body to such a size that the flesh bursts and falls to pieces, causing death in twenty-four hours." To test this poison, the Seri "bandage tightly the thigh or arm of one of their robust young men; then make an incision with a flint and let the blood flow away from the wound. When the blood is some distance from the incision, they apply the point of an arrow to it, steeped in the deadly poison. If at the approach of the point of the arrow the blood begins to boil and recedes, the poison is of the right strength, and the man who lends his blood for the experiment brushes it out with his hand to prevent the poison from being introduced into his veins." He was unable "to find out with certainty of what deadly materials the deadly poison is composed. Many a thing is spoken of, such as heads of irritated vipers cut at the very moment of biting into a piece of lung; also half putrefied human flesh and other filth with which I am unwilling to provoke the nausea of the reader." He added the opinion that "the main ingredient is some root."[4] Padre Joseph Och, who, with other German evangels including padres Mittendorf, Pfefferkorn, and Ruen (or Rohen), was stationed in northwestern Sonora shortly before the eviction of the Jesuits, was one of the recorders of aboriginal traits and features, though his record (like that of most of his confreres) is impoverished by his failure to discriminate tribes; but one of his notes is specific:

> As an extraordinary trapping [Zierde] the Seris pierce the nasal septum and hang small colored stones, which swing in front of the mouth, thereto by strings. A few carry, suspended from the nose, little blue-green pebbles, in which they repose great faith. They prize these very highly, and one must give them at least a horse or a cow in exchange for one.[5]

[1] Historia de la Compañia de Jesus, p. 716.
[2] The Works of Hubert Howe Bancroft, vol. III (The Native Races, vol. III), 1883, p. 704.
[3] Op. cit., p. 366.
[4] Ibid., pp. 197, 198.
[5] Nachrichten von verschiedenen Ländern des Spanischen Amerika, aus eigenhändigen Aufsätzen einiger Missionare der Gesellschaft Jesu, herausgegeben von Christoph Gottlieb von Murr, erster Theil; Halle, 1809, p. 254.

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It is significant fact, and one attesting the physical and intellectual distance of the padres from the normal Seri, that so few notes of ethnologic value were made during the Jesuits' régime. With a single exception, so far as is known,[1] they recorded not a word of the Seri tongue, not a distinctive custom beyond those evidently of common knowledge, none of the primitive ceremonies and ideas such as attracted their coadjutors in Canada and elsewhere. They made no reference to the alleged cannibalism so conspicuous in later lore; but their silence on this point cannot be regarded as evidential, since they were equally silent concerning nearly all the characteristic customs and traits. The neighboring Papago tribe met the invaders frankly as man to man, displaying a notable combination of receptivity and self-containment which enabled them to assimilate just so much of the Caucasian culture as they deemed desirable, yet to maintain their purity of blood and distinctiveness of culture for centuries; the Seri, on the other hand, met the invaders as enemies, to be first feared, then blinded, baited, and bled by surreptitious and sinister devices, and finally to be assassinated through ambuscade or remorseless treachery; and it is manifest that they surpassed the gentle padres in shrewdness and strategy, using them as playthings and tools, and carefully concealing their own characters and motives the while.

With the passing of the Jesuits, the publication of Sonoran records received a check from which the province has never completely recovered. True, the place of the order was partly taken by the Colegio Apostolico de Querétaro, which promptly dispatched fourteen Franciscan friars to Sonora, early in 1768, to take possession of the old missions and to found others;[2] it is also true that civil enactments and commissions, as well as military orders and reports, increased with the growth of population; but comparatively few of the events and actions found their way to the press. Seri episodes continued to recur with irregular frequency; according to Dávila, the Seri outbreaks and wars "exceed fifty in number since the conquest of Sonora",[3] and there are decisive indications that the Franciscan régime was not without its due quota of strife. Moreover, the period was one of somewhat exceptionally vigorous pioneering, of the initiation of mining and agriculture, and of conquest over the "despoblado" formerly ranged and inhabited by the Seri. It was during this period that the Seri were permanently dislodged from their outlying haunts and watering-places in Cerro Prieto; and it was during this period, too, that exploration and settlement were extended to Río Bacuachi with such energy as to displace the Seri from their other outlying refuge in the barrancas of this stream. But, as the events and lines of progress multiplied, the burden for the contemporary chronicler

[1] The Noticia de las Personas que han escrito ó publicado algunas obras sobre Idiomas que se hablan en la República of Mexico, by Dr José Guadalupe Romero, includes a MS. "Vocabulario de las Lenguas Kadeva, Pima y Seris", written by Padre Adamo Gilg (Bol. Soc. Mex. Geog. y Estad., 1860, tomo viii, p. 370).

[2] Dávila, Sonora Histórico y Descriptivo, p. 10; Bancroft, op. cit., p. 672.

[3] Ibid., p. 319.

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augmented without corresponding increase in incentive to writing, and it is little wonder that the custom of writing, copying, manifolding, and printing the contemporary records fell into desuetude.

Despite the meagerness of the Franciscan chronicles, the friars of this order are to be credited with making and recording one of the most noteworthy essays toward the subjugation of the Seri—an essay involving the first and last actual attempt to found a Caucasian establishment within Seriland proper. The ecclesiastical corps, sent out from Querétaro college under the presidency of Fray Mariano Antonio de Buena y Alcalde, reached Sonora early in 1768, and were distributed among the missions to which they were respectively assigned before the end of June; and Fray Mariano participated in the efforts to subdue the Seri ensconced in Cerro Prieto. After some months of apparently nominal siege, the hostiles straggled out of their retreat, whereupon "the governor, seeing them assembled and peaceful, besought the friar to instruct and baptize them";[1] the friar promptly acquiesced, with the provision that he should be furnished with the requisite appurtenances of a mission, including not only a church and sacred ornaments, but a house and living for a resident minister. The requirements delayed procedure, but resulted in the appointment of Fray Juan Crisóstomo Gil de Bernabe (already designated by the Querétaro college as Fray Mariano's successor) to take charge of the Seri mission. "The new president, desiring to gratify his proper zeal and the insistence of the governor as to the need of those miserable Indians for the bread of doctrinism", obtained candles and wine from private benefactors, and, despite his inability to find even a hut for shelter, established a sanctuary in the Ranchería de los Seris (Pueblo Seri) on November 17, 1772:

> It was impossible to satisfy the ambition of the missionaries to catechize all the Indians, because, although the whole nation was peaceable, the small portion of them were devoid of desire to hear doctrinism, as many of them had withdrawn to their ancient lurking haunts, principally on Isla Tiburon, whence they came to the Presidio Horcasitas, making false displays to the governor of great fidelity and obedience, petitioning that they should not be taken from the island, but should be given a minister to baptize them the same as those at Pitic; and they did not wish to join those nor to leave the rocky fastness of their libertinage and asylum of their crimes. . . . To conceal their purposes, they petitioned that a town for them should be established on the opposite coast, where they might assemble on leaving the island. Their request was embarrassing because on examination of the coast there was found only a single scanty spring in a cerrizal in a playa-like country [toda la tierra como de playa], with little fuel and no timber.

Not unnaturally Fray Crisóstomo hesitated to locate a mission on the practically uninhabitable site, in which, moreover, "the mission would be of no utility because the Indians did not really wish to leave their island and submit to religious instruction, nor could the coast supply the necessary food, as it was a barren sand waste, so that it would become

[1] Crónica Seráfica y Apostólica del Colegio de Propaganda Fide de la Santa Cruz de Querétaro en la Nueva España. . . . escrita por el Padre Fray Juan Domingo Arricivita, 2ª parte, Mexico, 1792, p. 438.

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*175 when exhumed six months later, attests the dry and saline soil in this vicinity. None of these conditions exist about Aguaje Pacilla at the southeastern base of Sierra Seri. The present absence of living carrizal at Pozo Escalante is of little significance, since the extinction of the plant might easily have been wrought either by the stock of later expeditions or by the rise of the salt-water horizon accompanying the local subsidence of the land; certainly dried roots and much-weathered fragments of cane still remain about the margin of the playa extending southward from the well.

The episode culminating in the assassination of Fray Crisóstomo was characteristic: beset at all points and rankling under the invasion of their range, the Seri sought anew to delude the governor with fair words, using their own reprobates and apostates at Pitic and elsewhere to point their asseverations; and remembering the facility with which the earlier ecclesiastics were duped into unwitting allies, they made the kindly and long-suffering friars the immediate object of their petitions. But some of the tribe galled under the lengthy and still lengthening blood-feud too deeply to tolerate the alien presence; and one of these, either alone or supported by the alleged accomplices or others, tried a typical ruse, suggested less by need than inherited habit; for the friar was helpless in their hands, and might have been slain in his jacal as easily as in the open. Typically, too, the assassination initiated or deepened factional dissension and further bloodshed.

[114] The Franciscan records are of even less ethnologic use than those of the Jesuits. Beyond his incidental expressions concerning Seri character and custom in connection with the founding and abandonment of Carrizal, it need only be noted that Arricivita makes hardly a reference to the Tepoka, but habitually combines the "Seris y Piatas"—the latter perhaps representing the "confederate Pima" of "Rudo Ensayo", or the Sobas occupying the lower reaches of Rio San Ignacio about that time.

Among the meager and scattered Franciscan records is a letter from Fray Francisco Troncoso, dated September 18, 1824, which is of note as containing an estimate of the Seri population at the time:

> This island [Tiburon] has more than a thousand savage inhabitants, enemies of those of California, and it has frequently occurred that, on balsas of reeds, . . . they have crossed over to invade the mission [of Loreto], killing and robbing some of those they found there.[1]

The record is of value also as indicating that the Seri traversed the gulf freely, and raided settlements and tribes of the peninsula ruthlessly as those of the mainland.

The Carrizal episode was followed by a half century of comparative silence concerning the Seri, though various contemporary records and later compilations indicate customary continuance of the Seri wars.

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[1] Incorporated in Escudero, Noticias Estadísticas de Sonora y Sinaloa. Mexico, 1849, p. 28.

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Among the more useful compilations is that of Velasco; and among the more important episodes noted by him was the Cimarrones-Migueletes war of 1790.[1] The Cimarrones included the greater part of the Seri of Tiburon and the Tepoka (then estimated at 2,000 of both sexes),[2] together with the "Pimas called *Pintos*, of the pueblos of Caborca, Tubutama, Oquitoa, etc", and supposedly certain other representatives of the Pima and Apache, who had shortly before marauded Magdalena and sacked Saric, killing a dozen persons;[3] the Migueletes were national troops assigned to Sonora under the command of Colonel Domingo Elizondo. The forces met in several bloody battles in Cerro Prieto, at Japangnaimas, and at Presidio Viejo; and the former, or at any rate the Seri, were once more "annihilated" ("reducidos a nulidad"). Nevertheless, the hydra-headed tribe retained enough vitality in 1807 to induce Governor Alejo Garcia Conde to send an army of a thousand men to Guaymas, en route to Tiburon, to repeat the extirpation—though the expedition came to naught for international reasons.

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Among the more useful contemporary records is an unpublished manuscript report by Don José Cortez, dated 1799, found in the Force library, translated by Buckingham Smith, and abstracted by Lieutenant A. W. Whipple for the Report of the Pacific Railway Survey. A subsection of this report is devoted to "the Seris, Tiburones, and Tepocas". It runs:

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The *Seri* Indians live towards the coast of Sonora, on the famous Cerro Prieto, and in its immediate neighborhood. They are cruel and sanguinary, and at one time formed a numerous band, which committed many excesses in that rich province. With their poisoned shafts they took the lives of many thousand inhabitants, and rendered unavailing the expedition that was set on foot against them from Mexico. At this time they are reduced to a small number; here, on many occasions, been successfully encountered by our troops; and are kept within bounds by the vigilance of the three posts (*presidios*) established for the purpose. None of their customs approach, at all, to those of civilization; and their notions of religion and marriage exist under barbarous forms, such as have before been described in treating of the most savage nations. The *Tiburon* and *Tepoca* Indians are a more numerous tribe, and worthy of greater consideration than the Seris, but their bloodthirsty disposition and their customs are the same. They ordinarily live on the island of Tiburon, which is connected with the coast of Sonora by a narrow inundated isthmus, over which they pass by swimming when the tide is up, and when it is down, by wading, as the water then only reaches to the waist, or not so high. They cross onto the continent, over which they make their incursions, and, after the commission of robberies, they return to the island; on which account no punishment usually follows their temerity. It is now twenty-three or twenty-four years since the plan was approved by His Majesty, and ordered to be carried out, of destroying them on their island; but, until the present season, no movement has been made to

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[1] Noticias Estadisticas del Estado de Sonora. Mexico, 1850, p. 124 et seq.

[2] Ibid., p. 132.

[3] Bancroft, op. cit., vol. iii, p. 662. It is incredible that such a confederation of so incongruous elements could ever have been effected; it is incomparably more probable that there was a concomitant outbreaks of the Seri, Pinto, and Apache, each stimulated by the removal of soldiers for defense against the other enemies, just as Seri outrages follow Yaqui outbreaks today; but it was undoubtedly a custom of the times (a custom still existing) to connect the several enemies in current thought and speech.

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put it into execution. To this end the troops of Sonora are being equipped; a corvette of the department of San Blas aids in the expedition and two or three vessels of troops from the companies stationed at the port of that name on the South sea.[1]

[114] The record is significant as voicing an ill-founded discrimination of the wandering Seri from the inhabitants of Tiburon, as echoing persistent conception of Tiburon as a peninsula, and as summarizing the characteristics of the tribe recognized at the end of the last century.

Meantime population and industries increased, while civil and military development pursued its course; the Presidio of Pitic expanded into a pueblo, and later into the city which gradually adopted the cognomen of General José María Gonzalez Hermosillo, a hero of Sonora in the stirring times of 1810–1812; Pueblo Seri became Mexicanized, retaining only a few Seri families in 1811, according to Manuel Cabrera;[2] Guaymas grew into a port of some commercial note; pearl fishing progressed along the coast and prospecting in the interior; despite constant harrying by Seri raids, the rancho of Bacuachito (probably the Bacoachizo of Escudero[3]) became a flourishing pueblo; and plans for ports in the northern gulf were broached and even tested. Moreover, the dawn of the nineteenth century stirred scientific interest in the native tribes, including the obstinate owners of Tiburon—an interest stimulated by Humboldt's American journeys of 1803.

Combining earlier cartography (originating with Kino) and persistent tradition up to the beginning of the nineteenth century, Humboldt mapped "Isla de Tiburon" nearly a degree too far northward, and separated from the mainland by a greatly exaggerated strait. The land portion of the map is strikingly defective, revealing in numerous imaginary mesas the author's penchant for Mexican plateaus, while "Rio Hiaqui" ("de Yaqui ou de Sonora" in the text) is combined with Rio Sonora and given an intermediate position, and "Rio de la Asencion" (Rio San Ignacio) is represented as passing through an estuary into the gulf just off the northern end of Tiburon; the "Indiens Seris" being located on a figuecentary mesa north of the latter river and due west of Caborca, Pitic (apparently a composite of San Diego de Pitic, or modern Pitiquito, with San Pedro de Pitic, or modern Hermosillo), and Altar.[4] His text corresponds:

On the right bank of Rio de la Asuncion live some very bellicose Indians, the Seris, to whom many Mexican savants ascribe an Asiatic origin by reason of the analogy offered by their name with that of the Seri located by the ancient geographers at the base of the Ottorocorras mountains.[5]

[1] Reports of Explorations and Surveys to ascertain the most practicable and economical Route for a Railroad from the Mississippi River to the Pacific Ocean, vol. III, part 3: Report upon the Indian Tribes, 1855, pp. 125–128. The original Cortes manuscript is now in the Library of Congress.

[2] In Velasco, op. cit., p. 137.

[3] Noticias Estadísticas de Sonora y Sinaloa, Compiladas y Ampliadas para la Comision de Estadística Militar, por el Lic. D. José Agustin de Escudero; Mexico, 1849, p. 96.

[4] Atlas Géographique et Physique du Royaume de la Nouvelle-Espagne, par Al. de Humboldt; Paris, 1811, carte générale.

[5] Voyage de Humboldt et Bonpland, troisième partie: Essai Politique sur le Royaume de la Nouvelle-Espagne, tome I; Paris, 1811, pp. 286–287.

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Naturally most of the scientific inquiries of the time were, like those of Humboldt, based on tradition rather than on direct observation. 175X [114]

Toward the end of the first third of the century an important contribution to actual knowledge of Serriland and the Seri at last grew out of the pearl industry. In May, 1825, Lieutenant R. W. H. Hardy, R. N., was commissioned by the "General Pearl and Coral Fishery Association of London" to investigate the pearl fisheries of the Californian gulf; and his task was performed with promptness and energy. On February 13, 1826, he visited Pitic (under Hermosillo):

> Half a league short [south] of it is another small place, called the Pueblo de los Cérros, inhabited by a squalid race of Indians who are said to indulge in constant habits of intemperance and to have lost the fire of the warrior. In its stead they manifest the sullen stupidity peculiar to those who, feeling themselves unfitted for companionship, strive to vent their pusillanimous rage upon objects the most helpless and unoffending, such as women, children, and dogs, who appear to be the chief victims of their revenge.[1]

His chief object in visiting Pitic was to obtain information concerning Tiburon, its natives, and its pearl-oyster beds; and he was rewarded with characteristic accounts of the ferocity of the tribesmen and their use of poisoned arrows, which he received with some incredulity.[2]

After examining the principal pearl fisheries of the western coast, Lieutenant Hardy reached the "Sal si Puedes" in the throat of the gulf, and, on August 9, "got aslant of wind, which carried us up to the northwest end of Tiburow island"[3]—i. e., apparently over the precise route sailed by Padre Ugarte in 1721. Anchoring on the island, he had the good fortune first to meet a native able to speak Spanish, and later to successfully treat the sick wife of the principal chief, after which he was treated with great consideration, and—unwittingly on his part—adopted into the tribe as a member of the chief clan by the ceremony of face painting, the symbol being that of the turtle totem, to judge from the superficial description. Taking slightly brackish water, just as Ugarte had done one hundred and five years before, and arming his crew, he spent the night near the rancheria (evidently in Bahia Agua Dulce). Next morning he "traveled over the greater part of the island" (!) in fruitless search for pearls and gold, and in the afternoon "got under weigh, and stood into a bay of the continent to the northeast of the island," discovering and naming "Sargent's Point", together with "Cockle Harbour", and "Bruja's bay" in the lee of the point, and also "Arnold's Island"; this island being apparently the present prominent cuspof Punta Sargent, now connected with the mainland by a continuous wave-built bar rising a little way above reach of tide. Anchoring in the bay named from his vessel (*La Bruja*), he examined the adjacent shore, ascertaining that "there is no fresh water near the spot, except

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[1] Travels in the Interior of Mexico in 1825, 1826, 1827, and 1828; London, 1829, p. 96.
[2] Ibid., p. 107.
[3] Ibid., p. 208.

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traversed the Californias and entered Sonora, and while he failed to see Serriland, he made a note on the tribe, valuable as a current estimate of the population:

> At the gates of the city of Hermosillo is established a Mission which contains 300 Seri Indians; 1,000 of them inhabit the coast to the north of Guaymas and Ile de Roquin (Isla del Tiburon).[1]

The next noteworthy episode in the external history of the Seri chronicled in the civil records of Sonora culminated in 1844. "The above-named Seris, although their number never became important, did not abandon their propensity to revolt, and, while they never rose en masse, made many factional uprisings. Ultimately . . . they displayed such boldness, robbing ranches, assassinating all they encountered, assaulting on the roads arrieros and other travelers", that a considerable force was sent against them from Hermosillo under the direction of Captain Victor Araiza. It was planned to support this land force by a sea party from Guaymas, but delays and misunderstandings caused the practical abandonment of the plan. Tiring of the delay, Araiza "declared war on the Indians, surprising them on Punta del Carrizal, killing 11, including several innocent women and children", and taking 4 captives of from 1 to 11 years in age; whereupon the army returned to Hermosillo.[2]

Disapproving of this undignified and inhuman crusade, the acting governor, General Francisco Ponce de Leon, planned a still more vigorous campaign by land and sea for the purpose of capturing the entire tribe and transporting them to Pueblo Seri, where a few of their kin were still harbored.[3] The command was intrusted to Colonel Francisco Andrade, who took personal charge of the land force, including 100 infantry from Guaymas, 60 infantry and 30 cavalry from Hermosillo, and considerable corps from Horcasitas and Altar. The naval auxiliary, in charge of Don Tomás Espence,[4] pilot, comprised a schooner of 12 tons; two launches, one carrying a 4-pound cannon and the other a 2-pound falconet; and one rowboat. On August 11, 1844, Espence sailed from Guaymas, and six days later cast anchor at the embarcadero (apparently a convenient place on the coast of Bahia Kino due west of Punto Kocalante—the Embarcadero Andrade of figure 1) opposite Tiburon. Andrade marched from Hermosillo August 13,

[1] Exploration du Territoire de l'Ouigan, des Californies et de la Mer Vermeille, entreprise pendant les années 1840, 1841 et 1842, tome 1[1] Paris, 1844, p. 314.

[2] Velasco, Noticias Estadísticas, pp. 134, 135. This chronicle is rendered peculiarly valuable by supplements in the form of Andrade's and Espence's journals, the latter incorporated (p. 122) after Velasco's own writing was completed. The whole was revised, extended, and republished in the several volumes of the first series of Bol. Soc. Mex. Geog. y Estad., 1850–1866.

[3] On August 14, 1844, Secretary Manuel Cubrera reported that "there are in this pueblo not more than fifteen families of Cora located within its borders, maintaining themselves by the manufacture of earthen ollas and by the garbage of their neighbors, i. e., in time of harvest they glean the wheat and corn left scattered, and the bones, entrails, and heads of the stock slaughtered for consumption by the inhabitants." (Incorporated in Velasco, op. cit., p. 138.)

[4] Thomás Spence, of Guaymas; apparently the "Mr. Spence" mentioned favorably by Hardy (Travels, p. 98).

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Here may be said to end, too, the local chronicles of the Seri; for although the state archives are crowded with charges, petitions, commissions, reports, and other papers pertaining to the irrepressible Seri; although these materials have overflowed to Ciudad, Mexico, and even to Washington, in official documents both numerous and voluminous; although Dávila in 1894 increased Velasco's forty Seri wars to fifty; and although the weightiest events in the internal history of the Seri have occurred since 1844, little attempt has latterly been made to reduce the abundant data to print.

The Mexican geographic knowledge of the time was surprisingly vague, as is shown by the current maps, for example, the Tanner maps which appeared in several editions: the 1846 edition recalls and evidently reflects the Humboldt map of the beginning of the century; "B. Ascencion" is represented as embouching through an estuary about 30° 20′, with the "Seris Indians" north of its lower half-length and west of "Pitic" and "Ft. del Alter"; Ures is located 3 or 4 miles southeast of this fort, and "Racuach" (the Bacuachito of the present) is 20 miles farther southeastward. Neither Río Sonora nor any of its important branches are indicated, while "Pitic" is placed several times too far from the coast and from Guaymas, in a featureless expanse of paper; "Rio Hiaqui" is shown as a branchless and conventional stream of a single crescentic curvature, embouching in about the right latitude. The coast of the gulf is distorted, and "Tiburon" is shown as an island much too large and nearly a degree too far north, separated from the mainland by a greatly exaggerated strait, with an elongated mesa ("Mt. del Picu") skirting the mainland coast—in short, the cartography is largely traditional if not fanciful.[1]

The career of the Seri during the half century 1844–1894 is traceable by aid of (1) unpublished documents, (2) published results of scientific inquiries and surveys, and (3) personal reminiscences of men living on the Seri frontier; but in a summary touching only salient points the first-named source may be passed over.

One of the first foreign visitors to follow Baron Humboldt in systematic inquiries concerning the aborigines of northwestern Mexico was Henri Ternaux-Compans; his information, [illegible] was secondhand and remote, yet he correctly recognized Isla Tiburon as "inhabited by the Seris, who have some huts also on the mainland".[2]

Later came Eduard Mühlenpfordt, an attaché of a German commercial company and later a Mexican state official, who traveled extensively and wrote partly at first hand, though there is little indication of personal acquaintance with Seriland or the Seri: he described "Bahia de San

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[1] "A Map of the United States of Mexico, as organized and defined by the several Acts of the Congress of that Republic, constructed from a great variety of Printed and Manuscript Documents, by H. S. Tanner. Third edition, 1846. The map in De Mofras (op. cit., atlas) is little better.

[2] Nouvelles Annales des Voyages, tome 69, 1837, p. 800 (cited by Buschmann, Über Spuren der aztekischen Sprache im nördlichen Mexiko und höheren amerikanischen Norden, in Abhandlungen der Königlichen Akademie der Wissenschaften zu Berlin, aus dem Jahre 1854, zweiter Supplement Band: Berlin, 1859, p. 399).

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Juan Bautista", with "the small island San Augustin" lying before it (in such manner as to identify this islet with Isla Tasnne), and located "the large island Tiburon farther northward, opposite a mountainous coast".[1] He added:

> The waterless but cattle-stocked plains between the place Pitic and the coast, and thence up to the river Asenzion, are inhabited by a meager remnant of the Seri tribe, while on Tiburon island, opposite this coast, the Tiburones dwell. The Seris were formerly very numerous, by far the fiercest of all the Indian tribes of northern Mexico, and very warlike. Through ceaseless war with the Tiburones and the troops from the Spanish presidios they are now nearly extinct.[2]

Elsewhere the Tiburones were characterized as enemies of the Seri,[3] while the "Heris" tribe was enumerated as a branch of the "Pimas Bajas" people. Herr Mühlenpfordt's characterization of the Seri and the Tiburon islanders as enemies would appear to be groundless, yet not wholly incomprehensible; in the first place, the earlier literature indicates that the term Seri (Seris, Ceris, Heris, etc.) was an alien designation of lax application,[4] doubtless extended occasionally or habitually to marauding nomads, regardless of affinity; again there is conclusive evidence that in many instances Seri convert-captives attached to the missions and pueblos were often regarded as tribal apostates and outlaws whose lives were forfeit; and, moreover, the region in which Herr Mühlenpfordt gained his information was and still is one of abounding tale, whose frequent exaggeration and not infrequent invention conceal and distort the simple facts.

In 1850, Don Diego Lavandera transmitted to the Mexican Society of Geography and Statistics, through the hands of Señor José F. Ramirez, certain documents, accompanied by a note to the effect that "The tribe of the Seris speak Arabic, and it is understood by the Moors at the first interview"—this note merely expressing a prevailing current opinion. Undertaking to test the opinion, Señor Ramirez sent to Lavandera, in Sonora, a number of words in three Arabic dialects, at the same time asking for the Seri equivalents; and the inquiry yielded a Seri vocabulary (probably the first ever printed) of eleven words. Of these none show the slightest affinity with the Arabic dialects; at least four (horse, chamber, population, wine) express concepts alien to the Seri; and only three or four can be identified with Seri terms recorded in later vocabularies. No reference is made to Señor Lavandera's aboriginal informant; but there is a strong presumption that it was the official interpreter at Hermosillo and Pueblo Seri—a presumption

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[1] Vorwerk einer geschichte und beschreibung der Republik Mexico besonders in Beziehung auf Geographie, Ethnographie und Statistik: Hannover, 1844, Band I, p. 441; Band II, p. 415.

[2] Ibid., Band II, pp. 439-450.

[3] Ibid., Band, I p. 230.

[4] Pelandel defines "Seris" as the "name of a tribe of Sonora, originating probably in the Opata language." (Nomenclatura Geografica de Mexico—Etimologica de los Nombres de Lugar . . . por el Dr. Antonio Peñafiel, primera parte, 1897, p. 225); while Pimentel, Señora two edgewatively similar Opata words, "Sirarori, pase mercado y buenas", and "Sirorai, velocidad de la persona que corre" (Vocabulario Manual de la Lengua Opata, Bol. Soc. Mex. Geog. y Estad., tomo v, 1863, p. 208, l. c., a good and direct pace, and the speed of a person running, respectively ref. postea, p. 125).

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114 warranted by coincident historical records and statements of contem-
†175 poraries still living, to the effect (1) that an official interpreter was there then and for a long time later, (2) that neither then nor later were there other Seri representatives able to furnish vocabularies at Hermosillo, Pueblo Seri, or other towns, and (3) that at that time (as at most others) the relations between the Seri and the whites were such as to prevent amicable communication through casual meeting or otherwise.

Proceeding with his discussion, Señor Ramirez sought to correct the allegation of Abbé Hervas that "in the mission of Belen live three nations, called Hiaqui, Seri, and Guaimas, who speak *three different languages*." After quoting a Jesuit manuscript of July, 1730, reporting that "the language of the Seris is the same as that of the Guaimas", he added a significant statement contained in a manuscript report from the Bishop of Sonora, directed to Don José de Galvez, under date of September 20, 1784, concerning the mission of Belen: "Two nations of Indians, Pimas Bajos and Guaimas, live united, the latter having abandoned their pueblo under the continuous assaults of the Seris. The Pimas use their own language. . . . The Guaimas use their ancient language." Summarizing the evidence (of course secondhand and derived from the observations and reports of the missionaries), Señor Ramirez held as proved, first, "the existence of two diverse languages at the mission of Belen—that of the Guaimas and that of the Pimas Bajos"; and second, that "the Guaimas and the Seri are the same".[1] It would appear that Señor Ramirez hardly appreciated the significance of the statement of sixty-four years before that the Guayma were still using their "ancient" language, with the implication that they were acquiring familiarity with the Piman tongue—a familiarity that may well have misled later inquirers.

It is just to say that scientific knowledge of the Seri began with the visit to Hermosillo of United States Boundary Commissioner John Russell Bartlett, on December 31, 1851. True, Commissioner Bartlett approached no nearer Seriland than Hermosillo and Guaymas, and saw but a single Seri; yet he obtained an excellent vocabulary and considerable collateral information from this Indian. According to this information—

†175 The Cora tribe of Indians, with the exception of those which are christianized and reside in the village near Hermosillo, occupy the island of Tiburon in the Gulf of California, north of Guaymas. Although believed not to number over 100 warriors, they have long been the dread of the Mexicans between Guaymas and Hermosillo, as well as the country to the north, on account of their continual depredations and murders. Their practice is to lie in wait near the traveled roads, and there surprise small and unprotected parties. Their place of abode being on an island of the shores adjacent, and their subsistence being chiefly gained by fishing, they have no desire to steal animals, which would be of no use to them; nor do they take any prisoners. To murder and plunder small parties of Mexicans seems

[1] Lenguas Primitivas, in Boletin del Instituto Nacional de Geografia y Estadistica de la República Mexicana, third edition, tomo ii; Mexico, 1892, pp. 10-12.

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to be their only aim, and every arrow or lance thrown by the Ceris that pierces the skin causes death, as all are poisoned. Many expeditions, fitted out at a great expense, have been sent against them; but, though commanded by competent officers, all have failed. The number being so small, they manage when pursued to conceal themselves where they can not be found. The island of Tiburon, as well as the mainland adjacent, is exceedingly barren and destitute of water; hence parties have suffered greatly in the campaigns against them, without accomplishing anything. I was told that the Government had already expended more than $1,000 for every male of the tribe. The last serious attack of these people was made upon a gentleman traveling to Guaymas in his carriage with his family and attendants, embracing 16 persons. They were surprised in an unfrequented place and every soul put to death.[1]

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Commissioner Bartlett quoted Hardy's description of the arrow poison, and, speaking of the Seri tongue, added:

I found it an extremely harsh language, very difficult to express with our letters, and totally different from any aboriginal tongue I had heard spoken; . . . but it was impossible for me, without a close philological comparison with other Indian languages, to arrive at any correct conclusion as to whether this people are allied or not to other aboriginal tribes.

He also referred to a prevalent notion that "the Ceris were of Asiatic origin, in proof of which some statements were made too improbable to repeat. This idea seems to have originated from the resemblance between their name and that given by the ancients to the Chinese."

In order to obtain a Seri vocabulary, Commissioner Bartlett had a messenger dispatched "to a pueblo or village of these Indians near Hermosillo. The person sent for made his appearance in a few hours"; he was "a good-looking man, about 30 years of age. His complexion was fair, and resembled that of an Asiatic rather than an American Indian. His cheek bones were high, and his head round and well formed, though the anterior portion was somewhat angular and prominent. His hair was short, straight, and black. He was a full-blooded Ceris, and came originally from the island of Tiburon. In about three hours I completed the vocabulary quite satisfactorily to myself."[2] The vocabulary was not printed with the narrative; nor were references made to the Seri population, either in the pueblo or in Serilaud.

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While the vocabulary was not published by Commissioner Bartlett, it was preserved and passed into the hands of George Gibbs, who made a systematic transcript;[3] this came into possession of Dr Albert S. Gatschet, and a copy is preserved in the archives of the Bureau of American Ethnology. The name of the native informant is not recorded, but fortunately he was found still living, and was fully identified, during the expeditions of 1894 and 1895—especially toward the end of the

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[1] Personal Narrative of Explorations and Incidents in Texas, New Mexico, California, Sonora, and Chihuahua, Connected with the United States and Mexican Boundary Commission, during the years 1850, '51, '52, and '53; New York, 1854, vol. i, p. 403 et seq.

[2] Ibid., pp. 405–406.

[3] This transcript is entered in a blank schedule Vocabulary of 100 Words, printed by the Smithsonian Institution for Gibbs, with a supplementary sheet; it is dated January 1, 1857; and while the published "Narrative" implies that it was recorded December 31, 1850, the manuscript date is confirmed by the Seri interpreter, Kalunio.

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ascertained by extended inquiry). Kolusio also remembered "giving his language" (a bold if not sacrilegious act, according to his view) to two or three other persons, (one "not a Mexicano" though speaking Spanish, none "Americano"[1]); but the first-mentioned instance was the one most deeply impressed on his mind. At this time (1806) he retained a working knowledge of the Seri tongue, and was able to serve satisfactorily as a Spanish-Seri interpreter; yet careful test showed that he had forgotten numerous native terms, and sometimes inadvertently substituted other Indian (Yaqui, Papago, and probably Opata) and Spanish words; while he knew so little of the tribal customs and beliefs that inquiries pertaining to them were too nearly fruitless to be long pursued. Undoubtedly his knowledge of the Seri tongue was fresher and fuller in 1839; but since he was practically isolated from his tribe in early childhood, he probably never possessed much information concerning the esoteric characters of his people.

The next noteworthy scientific student of the Seri was Johann Carl Eduard Buschmann, who visited various Mexican tribes, but whose knowledge of the Seri was wholly secondhand. Quoting Villa-Señor and Arrecivita and other early writers, noting unfortunate passages from Bartlett, and magnifying Mühlenpfordt's misapprehensions into positive error, he reduced knowledge of this and neighboring tribes to chaos. The "Guaymas" were separated from the "Seris (oder Seres)", and these (at least by implication) from the "Tiburones", while the "Piatos" were combined with the Seri, the traditional alliance with the Apache was greatly overdrawn, and the "Heri oder Heris" and the "Tepocas" were treated as distinct.[2] No new facts were adduced, no use was made of local sources of information, and no notice was taken of other than literary data.

In 1857 the gigantic surveying enterprise of Jecker & Co. was undertaken, under a concession from the Government of Mexico, and the scientific surveys were intrusted to a commission headed by El Capitan Carlos Stone (General Charles Pomeroy Stone, U.S.A.). The commission headquartered at Guaymas, purchased vessels for the survey of the coast, and began operations also in the interior; Bahia Pinacati and George Island (named by Hardy in 1826) were surveyed, as well as the entire Sonoran coast south of Guaymas, and "one hundred miles of coast near Tiburon", besides many hundred square miles of valuable lands. At this stage friction developed between the progressive commission and the conservative Sonorenses, which ended in the expulsion of the scientific commission by the State government.[3] By reason of the

[1] At the time of inquiry the importance of the other vocabularies was not suspected, and the interrogation was not pushed far enough to permit identification of the persons to whom they were given.

[2] Die Spuren der aztekischen Sprache im nördlichen Mexiko und höheren amerikanischen Norden. Zugleich eine Musterung der Völker und Sprachen des nördlichen Mexiko und der Westseite Nordamerikas von Guadalázara an bis zum Eismeer. Von Joh. Carl Ed. Buschmann (in Abhandlungen der Königlichen Akademie der Wissenschaften zu Berlin, aus dem Jahre 1854, zweiter Supplement-Band); Berlin, 1859, pp. 218–231 and elsewhere.

[3] Arizona and Sonora, etc., by Sylvester Mowry; New York, 1864 pp. 98–102.

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premature termination of the work, few of the observations and other results were ever published. General Stone himself traveled extensively in Sonora, and delved deeply in the historical records of northern Mexico; and, while there is no indication that he ever came in personal contact with the Seri, he collected and sifted current local information relating to the tribe with notable acumen. In certain "Notes" prepared in Washington in December, 1880, he wrote:

> The Curis are a peculiar tribe of Indians occupying the island of Tiburon and the neighboring coast. They are yet in a perfectly savage state, and live solely by fishing and hunting. Having been at war with the whites from the time of the first missions, they have become reduced in numbers to about 300, counting some 80 warriors. They are of large stature, well made, and athletic. In war and in the chase they make use of poisoned arrows, the wounds from which are almost always fatal. In preparing the poison, it is said they procure the liver of a deer or cow, and by irritating rattlesnakes and scorpions with it, cause it to be struck by a great many of these reptiles. They then hang up the mass to putrefy in a bag, and in the drippings of this bag they soak their arrowheads. I can not vouch for the truth of this statement, but it is current in Sonora. I was informed by a gentleman in Hermosillo that one of his servants, who was slightly shot by a Curi's arrow, died quickly from the effect of the wound (which mortified almost immediately) in spite of the best medical treatment. Their language is guttural, and very different from any other Indian idiom in Sonora. It is said that on one occasion some of these Indians passed by a shop in Guaymas, where some Welsh sailors were talking, and on hearing the Welsh language spoken, stopped, listened, and appeared much interested, declaring that those white men were their brothers, for they had a tongue like their own. They are very filthy in their habits, and are said to be worshipers of the moon.[1]

Another Mexican traveler of note who collected local and contemporary information concerning the Seri, though enjoying no more than slight inimical contact with them, was Herr Clemens A. Pajeken, of Bremen (for some time a resident of California). He classed as wild Indians ("Wilde Indianer, Indios broncos") the Seri and Apache tribes. Of the former he wrote:

> Ceris. This is a small tribe, their number not exceeding 400 souls, or rather head [dessen Seelenzahl oder besser Kopfzahl]; yet the government of the State could not restrain this little band of robbers and marauders that for more than twenty years have perpetrated their atrocities on travelers between the port of Guaymas and the city of Hermosillo, the metropolis of the State. . . . The Ceris appear not to grasp the idea that they are human. Like the prey-beasts of the wilderness, they go out to slay men and animals, sparing only their own kind. In many respects they are viler than the beasts, since they slay without need merely to satisfy a lust for slaughter. They are not only the stupidest and laziest of the Indians of Sonora, but also the most treacherous and deceitful. During the Spanish rule, from the time the first visit was made to lead them toward social life, they have rebelled more than forty times. Only a couple of families [ein paar Familien] still reside in the village [Pueblo Seri], where they make ollas and subsist on the offal of the shambles. The proper home of these barbarians is the island of Tiburon and the adjacent coasts, whither they return after their outbreaks, although it is an incredibly desert region. Thence they repair to the highways to kill travelers and arri-

[1] "Notes on the State of Sonora, by Charles P. Stone, 1880; Washington, 1881, p. 19. Reprinted in Historical Magazine, vol. v, 1861, pp. 161-169.

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area, or to the ranges to steal cattle. They confine themselves to the bow and arrow, and the latter are poisoned, so that every wound made by them is deadly, or at best highly dangerous. On my second journey into the interior of the country my horse received an arrow in the hip; the arrow, which entered 4 inches, could not be withdrawn until the following day; and for seven months the wound suppurated. . . . Their chief food consists of oysters, mussels, snakes, with fish and other sea food, which they consume entirely raw and which surrounds them with an intolerable stench; though this may be partly due to their exceeding uncleanliness, since the process of washing is wholly unknown to them. Their clothing consists of a kilt of pelican skin. They tattoo their faces, and some pierce their noses to insert a certain green stone [obsidian]. They are of dark copper color, large and strongly built. Although in their faces no human sentiments can be discerned, yet they can not be called ugly. Their limbs are so beautifully proportioned that the Spanish ladies in Hermosillo view with envy the slender shapes and the comely hands and feet of the young Coris maidens. They wear no headdresses; and as their coarse, shaggy hair is neither combed nor cleaned, it sticks out in tangled tufts in all directions like spines on a hedgehog; this alone gives them a forbidding appearance. Their speech is quite like their character; it is guttural, discordant, and meager, resembling more the howling of wild animals than human speech, wherefore it is difficult for a human to learn. They have no religion—at least, I do not deem the gambols and amusing capers in which they indulge at the new moon to be religious customs. The tribe is constantly diminishing in numbers, and it is hoped they may soon disappear from the earth by natural decrease—unless the State government sooner undertakes a war of extermination.[1]

Herr Pajeken's record bears inherent evidence (at least to one familiar with the region) of reflecting the current local knowledge and opinion concerning the Seri with unsurpassed—indeed unequaled—fidelity; and it is also of value in that it indicates the approximate number of the tribe then surviving in Pueblo Seri, and in that it gives the contemporary estimate of the tribal population.

Among the more careful students of the Seri at second hand should be mentioned Buckingham Smith, an enthusiastic collector, translator, and publisher of rare Americana. In the introduction to an anonymous and dateless grammar of the Heve language he wrote in 1861:

The lower Pima are in the west of the province [of Sonora], having many towns extending to the frontier of the indomitable Seri, who live some 30 leagues to the north of the mouth of the Hiaqui, and have their farthest limit inland some dozen leagues from the sea, finding shelter among the ridges and in the neighboring island of Tiburon.

He added in a note:

The Guaimas speak nearly the same language as the Seri, are few in number, and live among the Hiaqui in Belen and elsewhere, having retreated before the sanguinary fury of their conquerors.[2]

While the scientific knowledge of the Seri began with Bartlett's visit, it assumed definite shape only through the classic researches of Don Francisco Pimentel (Count Herrua) in the early sixties. His analysis and classification of the Seri tongue rest on a short vocabulary

[1] Reise-Erinnerungen und Abenteuer aus der neuen Welt in ethnographischen Bildern, von F. A. Pajeken; Bremen, 1861, pp. 97-98.

[2] A Grammatical Sketch of the Heve Language, translated from an unpublished Spanish manuscript in Library of American linguistics, vol. III, New York, 1861, p. 7.

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collected by Señor D. A. Tenochio and transmitted to the Mexican Society of Geography and Statistics. Noting the condition of the tribe at the time, Señor Pimentel wrote:

> The Seris are now reduced to a few families only, inhabiting Senora, especially the island of Tiburon, for which reason they are also known sometimes by the name Tiburones. The Indians called Salineros, who live on the borders of Pimeria Alta, and the Tepocas, who live toward the south, belong to the Seri nation. The Seris have always been notable for their ferocity and barbarism, preferring death in war against the whites to the adoption of civilization. They are dreaded and notorious for their arrows, poisoned with a most virulent venom [emponzoñadas con activísimo veneno]. They are tall and well formed, and their women are good-looking. By reason of their distrust of the whites, it has not been possible to ascertain their traditions, further than that their ancestors came from distant lands of unknown direction. Of their religion it is known that they adore daily the rising sun.[1]

After brief discussion of the grammar, and extended comparison of some sixty out of the seventy vocables selected by Señor Tenochio, he concluded:

> Although in the list of Seri words consulted the foregoing reveal analogies with those of the Mexicano group, these are, without doubt, other terms belonging exclusively to the Seri or some other branch extraneous to the Mexican group; for this reason it would appear that the idiom represents a distinct family.[2]

The list of these distinct words was appended. Referring to the dialects, Señor Pimentel expressed the opinion, based on literary references, that the "Guayma" or "Cayama", "Upangualma", and "Cocomaques" may be considered as belonging to the Seri family.[3]

While Señor Pimentel gave credit to his informant, Señor Tenochio, he did not indicate the original source of the vocabulary; but the source may be defined approximately by a process of elimination: there is hardly a possibility that the terms were obtained from any tribesmen in Serriland, since they were all inimical to the whites, and since very few of them have ever known enough of the Spanish tongue to permit communication with the Mexicans; accordingly, it is practically certain that the Seri interpreter must have been either (1) a resident of Pueblo Seri or (2) an attaché of rancho San Francisco de Costa Rica (of which more anon); and in either case it would seem certain that the native informant could have been none other than the standard Seri-Spanish interpreter of the last half century—Kolusio. Indeed, Kolusio was, at the time, the only Seri habitué of Pueblo Seri possessing sufficient knowledge of the Spanish and enough intelligence and independence to "give his language", and was one of the two frequenters of the rancho similarly equipped.

Pimentel's contemporary, Licenciate Manuel Orozco y Berra, contributed in important measure to systematic knowledge of the Seri, which

[1] Cuadro Descriptivo y Comparativo de las Lenguas Indígenas de México, ó Tratado de Filología Mexicana, por Francisco Pimentel, segunda edicion corregida, tomo II; Mexico, 1875, p. 333. The first edition of the work was published in two volumes, dated, respectively, 1862 and 1865.

[2] Ibid., p. 911.

[3] Ibid., p. 906.

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he defined (apparently on the basis of the Tenochtic vocabulary systematized and published by Pimentel) as a distinct linguistic family with two dialectic branches,[1] viz:

IX FAMILIA.—SERI.

XXXIII. *Séri*, por los séris, séris, tiburones, tepocas, salineros, en Sonora.
81. 1. *Upanguaima*, por los upanguaimas, en Sonora.
82. 11. *Guaima*, por los guaimas, guaymas, gayamas, cocomaques, en Sonora.

Orozco's map assigns to the Seri family an immense area (recalling Villa-Señor's "despoblado") extending from just above the mouth of the Yaqui, northward to the thirtieth parallel on the coast, stretching inland nearly to Cucurpe, Opodepe, and Ures, and including Tiburon; the "Salineros" lying adjacent to the coast in the north, the "Tepocas" medially, and the "Guaymas" in the south, within this area. In elucidating the map he wrote, under the title "El séri.—El upanguaima.—El guaima":

The Séris, a tribe inhabiting Sonora, forms, with its subtribes, a separate family. By their language, by their customs, and by their physiognomy, they are completely set apart from affiliation with the surrounding nations; and apparently they have lived in the districts which they now occupy from times anterior to the establishment of the Pima race and its affines; their use of poisoned arrows recalls the Caribs of the islands, as well as of the continent, and it seems not unlikely, although very curious, that they are related to them. The Séris, known also as Tiburones, a name derived from the island of Tiburon in the Mar de Cortés, which serves them as a shelter, considered as parts of their tribe the Tepocas and the Salineros.

The "Upanguaima" (a very small tribe occupying the Seri border) and the "Guaimas", as well as the "Cocomaques" were combined chiefly on the authority of Jesuit writers.[2] In describing the State of Sonora he further wrote:

The Séris, bounded by the sea on the west, the Pimas Altos on the north, the Opatas and the Pimas Bajos on the east, and the pueblos of Rio Yaqui on the south, form the smallest nation of Sonora, but at the same time the most cruel and deceitful and the least capable of reduction to political organization. Hardly uniting with the smaller pueblos as at Populo and Belen, the rest of the nation engaged so constantly in cruel warfare that it was necessary to persecute and exterminate them. . . . Small as was the tribe, three divisions are known: the Salineros, extending to the confines of Pimeria Alta; south of them the Tepocas, nearest to the island of Tiburon; the Guaymas and Upanguaymas occupying the territory adjacent to the harbor of the same name, afterward added to the pueblo at Belen and blended with the Indians of Rio Yaqui. Ferocious and savage, they preferred to die in war against the whites rather than adopt their usages and customs; lazy and indolent, they so surrendered themselves to the passion of intoxication that mothers conveyed aguardiente from their mouths to the smallest babes. They are tall and well formed, the women not lacking in beauty. The poison with which they envenom their arrows is proverbial for deadly effect; they compound the venomous juice from a multitude of ingredients and fortify the compound by superstitious practices.[3]

[1] Geografía de las Lenguas y Carta Etnográfica de México, Precedidas de un Ensayo de Clasificación de las Mismas Lenguas y de Apuntes para las Emigraciones de las Tribus, por el Lic. Manuel Orozco y Berra; Mexico, 1864, p. 60.
[2] Ibid., p. 62.
[3] Ibid., pp. 353-354.

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The classifications by Pimentel and Orosco were widely accepted, and were given still wider currency by republication in standard works, such as the classic dictionary of the Nahuatl tongue by Rémi Siméon, in which is defined "La famille *Seri*, dans la Sonora, avec 3 idiomes: le *Seri*, le *Guaima* et l'*Upanguaima*."[1] In his ethnographic tableau of the nations and languages of Mexico, M V. A. Malte-Brun followed Orosco almost literally, save that he emphasized the suggested Caribbean affiliation of the Seri, saying:

> They make use of poisoned arrows, and when one studies their manners, their habits, their modes of life, one is tempted to find in them a strong affinity [grande affinité] with the Caribs of the continent and the islands.[2]

During the seventies Hubert Howe Bancroft was engaged in collecting material for his monumental series of works, and in arranging the ethnologic data for publication. Of the Seri he wrote:

> East of the Opata and Pima bajo, on the shores of the Gulf of California, and thence for some distance inland, and also on the island of Tiburon, the Ceri language with its dialects, the Guaymi and Tepoca, is spoken. Few of the words are known, and the excuse given by travelers for not taking vocabularies is, that it was too difficult to catch the sound. It is represented as extremely harsh and guttural in its pronunciation and well suited to the people who speak it, who are described as wild and fierce. It is, so far as known, not related to any of the Mexican linguistic families.[3]

The only vocabulary of this language which Bancroft was able to find was added (without reference to the aboriginal source); it comprised the eleven words collected by Lavanders and discussed by Ramirez in 1850.[4]

The Seri, with their affines, the Tepoka, Salinero, Guayma, and Upanguayma, were included by Bancroft in his arbitrarily defined "Northern Mexican family".[5] The accompanying map (which is highly inaccurate) located the "Salineros" on the gulf coast, considerably north of the common embouchure of "R. de Horcasitas" and "Rio de Sonora", while the "Seris" were more conspicuously represented about the broad estuary into which the rivers embouch, and the "Tepocas" were located still farther southward on both Tiburon and the mainland, the island being placed too far southward and the river much too far northward.[6] Numerous data relating to the Seri were incorporated in his text; all were second-hand, though many were taken from unique or rare manuscripts. The coastwise natives of Sonora were said to "live on pulverized rush and straw, with fish caught at sea or in artificial enclosures"; mention was made of the allegation that "the Sali-

[1] Dictionnaire de la Langue Nahuatl ou Mexicaine, rédigé d'après les Documents Imprimés et Manuscrits les plus authentiques et précédé d'une Introduction; Paris, 1885, p. xviii.

[2] Tableau de la Distribution ethnographique des Nations et des Langues au Mexique. Congrès International des Américanistes, Compte-rendu de la Seconde Session, tome II, 1878, p. 37.

[3] The Works of Hubert Howe Bancroft, vol. III (The Native Races, vol. III, 1883), p. 704). The "east" in this quotation is obviously a misprint for west.

[4] Ibid., p. 722.

[5] Op. cit., vol. I, pp. 604-605.

[6] Ibid., p. 671.

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Naturally the surveyors came into contact with the Seri tribesmen. Of them Commander Dewey wrote:

> During the greater part of the year Tiburon Island is resorted to by the Seris (or Ceres) tribe of Indians, who inhabit the adjacent mainland, and their huts and encampments may be seen in many places along the shore, principally on the eastern side of the island. They are reputed to be exceedingly hostile and to use poisoned arrows in opposing the landing of strangers on what they consider their domain, but during the stay of the *Narragansett* in the vicinity they were very friendly. At first they were shy and made threatening gestures, but soon finding that our intentions were peaceable, became friendly and returned our visits to the ships by frequent and lengthy calls on board ship. They are very expert in hunting with the bow and arrow and in catching fish and turtles, which abound in the surrounding waters. The canoes of these Indians deserve especial mention. They are made of long reeds, which are bound together with strings after the manner of fascines, three of which when fastened together . . . have sufficient buoyancy to support one or two persons. They kneel in these canoes when paddling, the water being at the same level in the canoe as outside of it.[1]

Illustrations of the "Tiburon canoe" (or balsa), drawn by H. Von Bayer, were also introduced.[2] In addition Mr Von Bayer succeeded in obtaining two photographs of Seri Indians, taken on shipboard; one of these is of special interest in that it illustrates the peculiar attitude of the Seri archer in the act of using his weapon.[3]

Unfortunately the surveys were confined to the coast, and the interior remained unmeasured and unmapped save on the basis of tradition and travelers' tales, supplemented by a few vague itineraries and traverses. Except along the international boundary and the railway (Ferrocarril de Sonora), the locations of pueblos and ranchos remained guesses, the delineation of mountains remained a work of imagination, and even the best cartographers continued to run in rivers at random or in such wise as to afford artistic effect.[4]

In 1879 M Alphonse L. Pinart traveled extensively in northern Mexico and southwestern United States, and made considerable linguistic collections among various tribes. Desiring to obtain a Seri vocabulary, he planned a visit to the tribal territory; but on reaching Caborca in March he was met by the information that the Seri were on the warpath, and had recently devastated a hacienda on their frontier and slain more than a dozen white settlers.[5] Thence he repaired

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[1] Publication No. 98, U. S. Hydrographic Office, Bureau of Navigation. The West Coast of Mexico, from the Boundary Line between the United States and Mexico to Cape Corrientes, including the Gulf of California (revised edition), 1888, p. 148.

[2] Ibid., pl. XV, p. 139 (one of these illustrations is reproduced in figure 29).

[3] The negatives of these pictures were retained by Mr Von Bayer, and have been kindly turned over to the Bureau of American Ethnology. Unfortunately the archery negative had been shattered, but enough of the fragments were preserved to show all essential details and to afford a basis for the drawing reproduced in plate XXIX.

[4] The imposing official map of 1890, titled Carta General de la República Mexicana, formada en el Ministerio de Fomento con los datos mas recientes, por disposicion del Secretario del Ramo, General Carlos Pacheco, engraved and printed by Erhard Hermanos, Paris, on a scale of about 30 miles to the inch, represents Rio Bavispe as about the right length and with its center in about the right location, but as running at almost exactly right angles to its actual course; and it contains divers other equally startling errors.

[5] Recorded by Gatschet, Zeitschrift für Ethnologie, Berlin, Band XV, 1883, p. 130. The location of the hacienda was not specified, but there are local traditions of Seri raids about that time, both at Hacienda Bavispe (between Cabora and Libertad anchorage) and at Bacuachita.

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to Pueblo Seri, and early in April obtained there a Seri-Spanish vocabulary of several hundred words, with a number of short phrases throwing some light on the grammatic construction. This record was transmitted to Dr Albert S. Gatschet. It comprises a title page inscribed "Vocabulario de la lengua Séri | Interprete el Gl. de los Seris | y otro Indio. | Pueblo de Seris | 4 Abril 1879"; four foolscap sheets (written on both sides, thus making 16 pages) of vocabulary; and a final page bearing two short phrases and inscribed "Los Séris, me dice el general de ellos, son como doscientos hombres de llevar armas—viven todavia parte en la isla de Tiburon, parte en la costa.' Pueblo de Seris, 4 Abril, 1879, Alph. Pinart." A transcript of this invaluable vocabulary is preserved in the Bureau of American Ethnology. There is nothing either in the original vocabulary or in the known correspondence relating to it to identify the aboriginal informant, but the identification is made easy through the coincident testimony of living witnesses and the unmistakable implication of the historical records to the effect that there was at that time but a single Seri Indian[1] resident at Pueblo Seri—i. e., the official interpreter, "El General" Kolusio. This identification is strengthened by the remarkable similarity between this vocabulary and that of Bartlett, a similarity made the more striking by the fact that one was recorded in English, the other in Spanish; the identification is supported, too, by Kolusio's memory of "giving his language" to a stranger "not a Mexicano" yet familiar with the Spanish; and the identification is practically established by the considerable number of terms expressing concepts alien to the Seri (e. g., ax, adobe, house, horse, hog, field, irrigate, pigeon, thresh, tobacco, shirt, the names of the months, etc), evidently acquired through long and intimate acquaintance with Mexican customs and domiciles and modes of thought—for all these concepts were familiar enough to Kolusio, yet to no other known Seri Indian of recent decades. Accordingly it may be deemed practically certain that M Pinart's vocabulary, like that of Commissioner Bartlett, was obtained from Kolusio; and it is at least strongly probable that both the Lavandera-Ramirez and the Tenochio-Pimentel vocabularies were derived from the same aboriginal source—an indubitably excellent source, save for the occasional interjection of alien notions, and the infrequent substitution of foreign equivalents for forgotten terms.

Barred from Seriland by the current war craze, M Pinart was prevented from obtaining much collateral information concerning the Seri; but he concluded (on grounds not stated) that "the Tepoca spoken on

[1] "The Seris, the chief tells me, comprise about 200 men fit to bear arms—they still live part on the island of Tiburon, part on the coast."

[2] M Pinart's reference to his interpreter is not only impersonal but ambiguous. "Interpreter by the chief of the Seri and another Indian" might be considered to imply two Seri Indians, though it may, with equal linguistic probability, be interpreted to mean the specified Seri and another Indian; and while the temporary presence of a second Seri at the pueblo seems possible, the sum of probabilities points as clearly the other way as to demand the native interpretation.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

the south of Rio del Altar is identical with the Seri",[1] and also that "the Guaymas were of the stock of the southern Pimas, or Nebomes".[2]

While M Pinart failed to publish, his linguistic collections were compared, systemized, and made public by Dr Albert S. Gatschet in a notable memoir on "Der Yuma-Sprachstamm", 1883. Comparing the Seri, as represented by the Pinart and Bartlett and Pimental vocabularies, with the Yavapai, M'Mat, and incidentally with the Kouino, Tonto, Cochimi, and other tongues, Dr Gatschet was led to adopt the suggestion of Professor Wilhelm Herzog[3] that the Seri is a dialect of the Yuman stock. In the comparative vocabulary, which comprises about a hundred and forty Seri words (selected from the 611 terms in the Pinart collection), there are perhaps a dozen terms presenting some similarity to those of one or more Yuman dialects; among these are terms for ax, tree, split, tobacco, heaven, pigeon, dog, and others of presumptively or certainly alien character.[4]

Herzog's suggested classification, with Gatschet's indorsement, was accepted even more promptly and widely than the earlier classifications of Pimentel and Orozco. It was tacitly adopted by Director J. W. Powell in his classic arrangement of Indian linguistic families of America north of Mexico;[5] it was explicitly approved by Adolph F. Bandelier in his "Final Report of Investigations";[6] and it was implicitly accepted and fortified by Dr Daniel G. Brinton in his work on "The American Race".[7] Brinton's Seri words were "chiefly from the satisfactory vocabulary obtained by the late John Russell Bartlett"; of the 21 terms, about 8 (including that for the alien concept "house") suggest affinity with the Yuman, chiefly in the Mohave dialect; the others are either wholly distinct or only superficially similar, e. g., in the concurrence of a consonant or two, or merely in the correspondence in number of syllables.[8]

Stated briefly, the scientific researches relating to Seriland and the Seri during the fifty years from the fourth decade of the century to the middle of the last decade resulted in (1) a satisfactory survey of the coast, (2) the collection of two excellent Seri vocabularies, with a few others of less extent, and (3) two discrepant linguistic classifications of the tribe, both widely quoted and accepted.

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[1] Gatschet, op. cit., p. 121.

[2] Bandelier, Final Report of Investigations among the Indians of the Southwestern United States, part i, in Papers of the Archæological Institute of America, American series, iii, Cambridge, 1890, p. 76. As already noted, it is probable that the Guaymas lost their "antigua idioma" (Ramirez, op. cit. p. 149) long before M Pinart's visit; and pending definite statement of the facts on which his conclusion rests it is necessary to retain the classification based on specific and repeated, albeit unskilled, observations of the identity of the Guaymas speech with that of the Seri.

[3] In correspondence with Dr Gatschet, op. cit., p. 120.

[4] Dr. Gatschet has recently revised the data and recognized the distinctness of the Seri tongue (Science, new series, vol. xx, 1904, p. 516-518).

[5] Seventh Annual Report of the Bureau of Ethnology, 1885-'86; Washington, 1891, p. 137.

[6] Op. cit., p. 76.

[7] The American Race: A Linguistic Classification and Ethnographic Description of the Native Tribes of North and South America; New York, 1891, p. 326.

[8] Mr. Hewett's discussion quotes, pp. 240-244, gives fuller details of this short vocabulary.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

† 175
648

ber of ill-advised prospecting parties, coming by land or water, paid the penalty of foolhardiness. Writing about 1864, Historian Velasco recurred to the Seri to say:

> This handful of bandits, assassins, thieves, brutes [inhumanos], infinitely vile and cowardly, on February 23 last, on the Guaymas road, at the place called Huerfano, assassinated 4 unhappy women, including a girl of 9 years, and 7 men who were conducting them in a cart toward that port.

He bitterly denounced the apparent apathy of the state and federal authorities, adding:

> When it is read in history fifty years hence that a handful of murderous Seris, certainly not more than 80 of the tribe able to bear arms, was able to domineer in the midst of their crimes with unexampled audacity on account of the debility of the government and the inhabitants, it will be regarded as a romance or a fable; for it seems impossible that in the nineteenth century such a condition of things could exist to degrade the reason, the morality, and the dignity of civilized man.

Yet a final note, apparently added in press, recorded that—

> In consequence of the last incident of the Seris, the prefect of Guaymas, Don Cayetano Navarro, took the field, returning with 12 women and 16 children prisoners; also 2 striplings and a visitlard. He slew 9 among those who had no leader. This was on Isla Tiburon. The Indians fled thence, and are supposed to be at Tepocoa.[1]

These may be considered as characteristic skirmishes attending the Encinas war. Other episodes followed, including the outbreaks of 1879, noted in part by M Pinart. Bacuachito suffered in various locally important events that will never be written: when Don Jesus Omada, a water guide to the expedition of 1895, was asked about the Seri at Bacuachito, he answered with cumulative vehemence, "They killed my father. They killed my brother! They killed my brother's *wife*!! They have killed half my friends!!!" As he spoke he was feverishly baring his breast; displaying a frightful scar over the clavicle, he exclaimed, "There struck a Seri arrow"; then he stripped his arm with a single sweep to reveal a ragged cicatrix extending nearly from shoulder to wrist, and added in a tone tremulous with pent bitterness, "The Seri have teeth!"

In the course of the half century from 1844 onward, the population of Sonora increased materially, and carried more than a proportionate increase in the development of agricultural and mineral resources; and, especially under the beneficent Diaz régime, the state passed from the condition of a remote frontier province into that of a well-governed commonwealth. Naturally this progress carried the Caucasian element, including that of blended blood, farther and farther away from the nonprogressive Seri; and thereby the horror and detestation awakened by the very utterance of the name of the lowly tribe were intensified beyond description or ready understanding. The traditions of arrow poisoning were kept alive, and, doubtless, growing; the recitals of carrion eating were repeated, and possibly—just possibly—magnified beyond the reality; the accounts of offense and defense by nails and

[1] Boletin de la Sociedad Mexicana de Geografia y Estadistica, tomo XI, 1862, pp. 124-125.

1: McGee E-5 (1894-1895)1898 NU31 Ser[illegible]31

point at which he had stopped; the other was a German naturalist-prospector with two mozos (servant-companions), purporting to hail from Chihuahua, who started across the delta-plain of Rio Bacuache and Desierto Encinas with saddle animals, and never reappeared. 648

Then came the second expedition of the Bureau of American Ethnology, to which several Papago domiciled at Costa Rica were attached as guards. While the party were at the rancho the day before the first entrada into Seriland via Barranca Salina, a party of vaqueros from Rancho Santa Ana tended a herd of stock to the barranca for water; one of the animals strayed behind a dune, and the vaqueros, following its trail, came on a small band of Seri already devouring the entrails, and attacked them so vigorously that they escaped only by outrunning the horses, leaving behind all their unattached possessions, including a bow and quiver of arrows and an ancient and nonusable army rifle. This incident, albeit typical, was untimely, and doubtless aided in rendering the Indians too wild to permit communication with the aliens during the ensuing weeks spent in their territory. 123 648

After the withdrawal of this expedition the Seri resumed their range over the borderland plain, with the evident intention of avenging the insult of the invasion. There were a number of skirmishes, in which some of the Papago guards of the 1895 expedition were wounded and had horses killed under them, though they did customary execution on the worse-armed Seri; and extensively published press items indicate that, toward the end of January, 1896, a party of five gold prospectors landed on Tiburon, whence one escaped. 648 721

A well-attested episode ensued toward the end of 1896: Captain George Porter and Sailor John Johnson spent the later part of the summer in cruising the coasts of the Gulf, collecting shells, feathers, and other curios in the small sloop *World*. About the end of October they apparently anchored in Bada Ballena; and a day or two later Captain Martin Mendez, of Guaymas, in charge of the schooner *Otila*, being driven up the gulf and into Bahia Kunkaak by storms, came on a horde of Seri looting Porter's vessel. The episode received publicity on Mendez's return to Guaymas; United States Consular Agent Crocker instituted inquiries, and Governor Corral sent a force to Costa Rica, where, after some delay, a parley was held with a strong band of Seri under the chiefship of "a seven-foot warrior named El Mudo (The Mute), . . . so called for his reticence of speech."[1] The testimony obtained at the parley and from Captain Mendez indicates that Porter and Johnson landed, or at least approached the shore, probably in a small boat; that they were met by a shower of arrows, under which Johnson immediately fell, while Porter defended himself with a shot- 648

[1] San Francisco Chronicle, October 16, 1896, p. 3. The details of the episode, including the correspondence of Consular Agent Crocker, were printed in the newspapers of San Diego (the place of residence of Porter and Johnson), as well as in those of San Francisco and other cities; and there was considerable correspondence concerning the matter with the State Department at Washington. Some reports recount that the bodies of Porter and Johnson were rent to fragments and devoured, but these details naturally lack confirmation. . El Mudo's portrait appears in plate XIX.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

648 gun, slaying five of the Seri before he was himself transfixed; that the vessel was then looted, and that Mendez and his crew were prevented from landing and apparently driven off by the Seri force. In the course of the parley the state officials "demanded the surrender of the ring-leaders in the massacre", with the alternative of "regarding the whole tribe as guilty and punishing them accordingly"; but El Mudo, evidently holding the invasion of the island as the initial transgression and deeming the loss of the tribe under Porter's marksmanship as more than commensurate with the Caucasian loss, peremptorily ended the conference and returned to the island. Vigorous efforts were made to pursue the tribesmen beyond their practically impassable frontier, with the usual product of ruined horses and famished riders. Then the episode died away in an armed neutrality strained somewhat beyond the normal. Meantime the Papago guards remained at Costa Rica. "They are continuously on the lookout for these Seris, and once or twice have killed a stray one or two."[1]

Both before and after the Porter-Johnson episode schemes were devised by various parties, chiefly Californians, for obtaining concessions covering Tiburon and its resources, most of these schemes involving plans for the extermination of the Seri; and press accounts indicate that a concession covering the islands of the gulf above the latitude of 29° (i. e., including about half of Isla Tiburon) was granted to an American company of much distinction. It would appear from numerous news items that representatives of the company sought to land on Tiburon, where they were first cajoled with offerings of food, afterward found to be poisonous, and later driven off by an enlarged force of naked archers. A recent publication bearing some official sanction announces that "Mr W. J. Lyons, of Hermosillo, Sonora, has secured a concession for the exploration of the island and in November of this year will fit out an expedition for that purpose."[2] The various movements are significant as indices of current opinion and official policy with respect to the tribe.

On the whole, the later episodes are natural sequels of the eventful and striking earlier history of the Seri; and they can only be interpreted as pointing to early extinction of one of the most strongly marked and distinctive of aboriginal tribes.

[113]

[1] The quotations are from the account of T. H. Hilsbee, of San Diego, prepared on his return from a visit to Costa Rica.

[2] El Estado de Sonora, Mexico. Sus Industrias, Comercio, Minería y Manufacturas. Obra Publicada bajo los Auspicios del Gobierno del Estado. Obra Ilustrada, Octubre de 1897. By J. R. Southworth, Nogales; p. 73.

2: Kroeber E-5 (1930) 1931 NU31 Seri NU31

farm, but because they have secondarily specialized their culture away from the old Seri-Walapai substratum.

The Baja Californians must be reckoned as having participated in the same basal, low-level, desert culture, though of course, like every other people, with certain variants and developments of their own. That we can name fewer Seri traits in their culture than in that of the preceding groups, is probably due to the less store of our knowledge of them. More significant of relationship is the smallness of the number of Seri traits which they are known to lack. It is entirely possible that if there existed adequate information for both sides of the Gulf, Seri and Cochimí similarity would prove to be the closest of all. But at present this possibility cannot be either conclusively proved or disproved.

Seri similarities with southern and even central California are fairly numerous, and can be attributed partly to the common non-agricultural subsistence, which would tend to induce the adoption or retention of similar cultural traits. On the other hand, the basic farming life of the Opata, Mayo, and north Sinaloan peoples must have operated at many points in the opposite direction in spite of their geographical nearness. Pueblo culture is so highly specialized that its mass would expectably show little kinship to Seri, and such is the trend of the available comparative data.

The Seri thus relate culturally to other peoples much as might be anticipated from their geographical position and subsistence opportunities. The Seri problem consequently has to be removed from the category of those which hold out a hope or illusion of being particularly significant for the solution of basic questions or broad hypotheses. It is essentially a problem of specific local ethnography, with wider significances revealable only by impartial comparative studies; but of special interest because of the relatively well-preserved status of parts of old Seri culture and the human appeal of three centuries of outlaw history. The thorough study of this culture will involve much grinding physical hardship and possibly some danger. It is to be hoped that when the work is undertaken, it will not be in a spirit of personal adventure, with emphasis on the external difficulties to be overcome, but with a serious desire and competence to secure facts and understanding.

ABBREVIATIONS USED

AA—American Anthropologist.
AMNH-AP—American Museum of Natural History, Anthropological Papers.
BAE-B—Bureau of American Ethnology, Bulletin.
BAE-R—Bureau of American Ethnology, Reports.
JAFL—Journal of American Folk-Lore.
UC-PAAE—University of California, Publications in American Archaeology and Ethnology.

8: Ascher E-5 (1960) 1962 NU31 Seri NU31

ethnologist in the field, and, used as a guide, the example can be applied to any behavior in which matter is changed. More investigations similar to that offered here are needed as the archeologist turns to interpretation, conceptualization, and synthesis, or to what Kroeber (1957: 193) has called "the larger and long-range movements or developments in global human culture."

NOTE

1. I hope it is not too presumptuous to dedicate this paper to the memory of A. L. Kroeber.

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[P. 58]

10:Davis E-5 (1922-ca.1939) 1965 NU31 Seri NU31

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so named must be of the same sex as the first. The significance of land ownership needs further investigation.

Many of the Seri still prefer, when possible, to live in their chosen band area. Sometimes a person, when he is approaching death, will ask to be taken to his own i?iziiting, where he can die and be buried in the area of his choice.

NOTES

1. Due to printing limitations, stress on Seri words has been omitted, and several orthographic symbol changes have been made for this paper. The phonetic values of the symbols used are the following: p is voiceless labial stop; t is vl. dental stop; k is vl. velar stop; ? is glottal stop; ƒ is vl. labial flat spirant; w is vl. labial grooved-rounded spirant; s is vl. alveolar spirant; z is vl. alveo-palatal spirant; l is vl. lateral spirant; h is vl. velar spirant; x is vl. back velar spirant; m is labial nasal; n is dental nasal; ng is velar nasal; y is palatal semivowel; i is a high close front vowel; e is a low close front vowel; a is a low open central vowel; o is a mid close back vowel.

2. These data were compiled during field trips to the Seri camps during the years 1956-61, the studies being carried out under the auspices of the Summer Institute of Linguistics. The principal informant was R. Herrera T. whose information was checked with and supplemented by nine of the older members of the tribe. I am indebted to my colleague, David Thomas, who read an earlier draft of this paper and made helpful suggestions.

3. 1) W. J. McGee, "The Seri Indians," *Bureau of American Ethnology, Annual Report*, No. 17, Part 1. Washington, 1898. 2) A. L. Kroeber, "The Seri," *Southwest Museum Papers*, No. 6. Los Angeles, 1931. 3) W. B. Griffen, "Notes on Seri Indian Culture, Sonora, Mexico," *Latin American Monograph Series*, No. 10, Gainesville, 1959.

4. It will be noted that between subdivision 3 and 4 on Fig. 3 there is an unnumbered area, the status of which is uncertain.

5. Kroeber states that McGee's concept of Seri maternal lineages crystallized into totemic clans with matron rule seem a fantasy. In Kroeber's opinion, "The Seri may never have had sibs or clans; but the fact that they appear to lack them now is no positive evidence that they were without them three centuries ago. Shifts of residence, contraction of territory, shrinkage of numbers, amalgamation of distinct bands, may well have obliterated much of such social fabric as they once possessed."

Griffen discusses the nature of the former Seri bands and states, "they may have been patrilineal and exogamous. The criteria . . . that Julian Steward has exposited for the formation of exogamous, patrilineal bands . . . are and presumably would have been met formerly in the Seri habitat." Griffen lists other aspects of this type of band which are also verified to some extent by his data. From reading his material, it is obvious that he suspects the existence of clans at some earlier period. He emphasizes the need for further investigation.

6. G. P. Murdock, *Social Structure*, Macmillan Co., New York, 1949.

7. Marriages were usually contracted within the band.

8. As Kroeber points out, their memory likely covers only the latter part of the period of Spanish contacts.

9. The Seri recall nothing of Seri-Pima contacts and little of Seri-Apache relations.

10. The story is related that one day some Seri entered a cave where they found several Papago jugs filled with seeds. Being hungry, the people ate the seeds and left some arrows as token payment. The Seri say that the Papago apparently believed the arrows were intended as an insult. Fighting broke out soon afterward.

11. The Seri concept of the band annihilations is seen to be in contradiction to McGee's statement (p. 132): "Concordantly with their primary characteristic, the Seri have avoided ethnic and demotic union beyond the narrow limits of their own kindred; and even of these they seem to have cast out parts, annihilating the Guayma and Upanguayma, displacing and nearly destroying the Tepoka, and outlawing individuals and (apparently) small groups."

12: Moser L-5 (no date) 1964
(ca. 1960) NU31 Seri NU31

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I am indebted to Richard Felger, Department of Zoology, University of Arizona, for information concerning plants referred to in this article. H. Wesley Peirce of the Arizona Bureau of Mines identified the mineral material used in the pigment.

NOTES

1. The phonetic values of the symbols used are the following: t is voiceless dental stop; k is vl. velar stop; ? is glottal stop; W is vl. labial grooved-rounded spirant; s is vl. alveolar spirant; z is vl. alveo-palatal spirant; l is vl. lateral spirant; j is vl. velar spirant; x is vl. back velar spirant; m is labial nasal; n is dental nasal; i is a high close front vowel; e is a low close front vowel; a is a low open central vowel; o is a mid close back vowel.

2. The restriction as stated to me by various women pertains only to young girls below the age of menarche. Actually, however, none of the above-mentioned young men and women, most of them in their twenties, was allowed to observe.

3. Plant specimens are deposited in the Herbarium of The University of Arizona.

4. The blue "pencil" which McGee describes (McGee 1898: 166) and pictures (McGee 1898: Plate XXVII facing p. 170) is apparently the *?aatezj kóil*.

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THE SERI INDIANS

By W J McGee.

INTRODUCTION

Salient Features

Something has been known of the Seri Indians (Seris, Ceris, Ceres, Heris, Tiburones) since the time of Coronado, yet they remain one of the least-studied tribes of North America. The first systematic investigation of the tribe was made in the course of expeditions by the Bureau of American Ethnology in 1894 and 1895; it was far from complete.

The Seri Indians are a distinctive tribe in habits, customs, and language, inhabiting Tiburon island in Gulf of California and a limited adjacent area on the mainland of Sonora (Mexico). They call themselves *Kun-kaak* or *Kmike:* their common appellation is from the Opata, and may be translated "spry". Their habitat is arid and rugged, consisting chiefly of desert sands and naked mountain rocks, with permanent fresh water in only two or three places; it is barred from settled Sonora by a nearly impassable desert. Two centuries ago the population of the tribe was estimated at several thousands, but it has been gradually reduced by almost constant warfare to barely three hundred and fifty, of whom not more than seventy-five are adult males, or warriors.

The Seri men and women are of splendid physique; they have fine chests, with slender but sinewy limbs, though the hands and especially the feet are large; their heads, while small in relation to stature, approach the average in size; the hair is luxuriant and coarse, ranging from typical black to tawny in color, and is worn long. They are notably vigorous in movement, erect in carriage, and remarkable for fleetness and endurance.

The Seri subsist chiefly on turtles, fish, mollusks, water-fowl, and other food of the sea; they also take land game, and consume cactus fruits, mesquite beans, and a few other vegetal products of their sterile domain. Most of their food is eaten raw. They neither plant nor cultivate, and are without domestic animals, save dogs which are largely of coyote blood.

The habitations of the Seri are flimsy bowers of cactus and shrubbery, sometimes shingled rudely with turtle-shells and sponges; in some

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105 sepulture. There is a weird, formal mourning for dead matrons, and suggestions of fear of or veneration for the manes.

172 Seriland is surrounded with prehistoric works, telling of a numerous population who successfully controlled the scant waters for irrigation, built villages and temples and fortresses, cultivated crops, kept domestic animals, and manufactured superior fictile and textile wares; but (save possibly in one spot) these records of aboriginal culture cease at the borders of Seriland. In their stead a few slightly worn pebbles and bits of pottery are found here and there, deeply embedded in the soil and weathered as by the suns of ages. There are also a few cairns of cobbles marking the burial places, and at least one cobble mound of striking dimensions but of unknown meaning; and there are a few shell-mounds, one so broad and high as to form a cape in the slowly transgressing shoreline (Punta Antigualla), and in which the protolithic implements and other relics are alike from the house-dotted surface to the tide level, 90 feet below.

The absence of relics of a superior culture, and the presence of Seri relics throughout deposits of high antiquity, suggest that the tribe is indigenous to Seriland; and this indication harmonizes with the peculiar isolation of the territory, the lowly culture and warlike habits of the people, the essentially distinct language, the singular marriage custom, and the local character of the beast-gods. And all these features combine to mark the Seri as children of the soil, or autochthones.

Recent Explorations and Surveys

114 Present knowledge of Seriland and its inhabitants is based primarily
121 on the work of two expeditions by the Bureau of American Ethnology,
[122] conducted in 1894 and 1895, respectively; and, secondarily, on researches into the cartography and literature (descriptive, historical, and scientific) of the region. Both of the expeditions were projected largely for the purpose of making collections among little-known native tribes in the interests of the National Museum, and the general ethnologic inquiries were ancillary to this purpose.

The 1894 expedition was directed chiefly toward work among the Papago Indians in the vaguely defined territory known as Papagueria, lying south of Gila river and west of the Sierra Madre in southwestern Arizona and western Sonora (Mexico). Outfitting at Tucson early
[122] in October, the party moved southward, visiting the known Papago rancherias and seeking others, and thus defining the eastern limits of the Papago country. On the approach to the southern limits of the tribal range toward Rio Sonora, the evil repute of the Seri Indians sounded larger and larger, suggesting the desirability of scientific study of the tribe; and it was decided to attempt investigation.
114 Accordingly the party was reorganized at Hermosillo, and, with the sanction of the Secretary of State and Acting Governor, Señor Don Ramón Corral, proceeded to Rancho San Francisco de Costa Rica,

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where a temporary Seri rancheria was found occupied by about sixty of the tribe, including subchief Mashém, who speaks Spanish. In this part of the work the expedition was accompanied by Señor Pascual Encinas, the owner of the rancho visited, and doubtless the best informed white man concerning the habits, customs, personnel, and habitat of the tribe. About a week was spent in intercourse with the occupants of the rancheria, when the studies were brought to an end through the illness of Señor Encinas, and the consequent necessity for return to Hermosillo. The expedition then proceeded northwestward and northward along a route so laid as to define the western limits of Papagueria proper, and reached Tucson near the end of the year. In addition to the leader, the party comprised Mr William Dinwiddie, photographer; José Lewis, Papago interpreter, and E. P. Cunningham, teamster. The outfit was furnished chiefly by Mr J. M. Bérger, of San Xavier (near Tucson). On the visit to the Seri frontier the party was accompanied by Señor Encinas, Don Arturo Alvemar-Leon (who acted as Spanish interpreter), and two or three attachés of Molino del Encinas.[1]

The second expedition was directed primarily toward investigation of the Seri, and only incidentally to continuation of the researches among the Papago. Outfitting at Tucson in October (again with the aid of Mr Berger), the expedition proceeded southward by a route different from those previously traversed, and carried forward a plane-table route survey covering a considerable zone from the international boundary at Sasabe to Rio Sonóra. Descending the previously unmapped course of Rio Bacuache, the expedition reached the Rancho de San Francisco de Costa Rica on December 1, 1895, and, although conditions were found unfavorable in that the Seri were on the warpath, immediately prepared for the extension of the work into Seriland.

A preliminary trip was made into the mainland portion of the Seri habitat, terminating at the crest of Johnson peak, the highest point in Sierra Seri. The triangulation and topographic surveys were carried over the territory traversed, and several points were fixed on Isla Tiburon; but the natives, agitated by a skirmish with vaqueros on the frontier a day or two earlier, had withdrawn to remoter parts of the territory, and were not encountered. The party returned to Costa Rica, a rude boat was completed, transported across the desert via Pozo Escalante to Embarcadero Andrade, and launched in Bahia Kunkaak. The surveys were extended to the southern portion of Sierra Seri and Isla Tasajne, and, after various difficulties and delays due to dearth of fresh water, to gales, and to other causes, the party (enlarged for the purpose) finally landed on Tiburon. Many Seri rancherias were found on

[1] The more noteworthy details of the organization and work of the two expeditions are set forth in the administrative reports of the Bureau for the fiscal years 1894-95 and 1895-96. Certain members of this party are shown in the accompanying half-tone, forming plate II: Señor Encinas seated at the end of the table; his son, Don Manuel (bareheaded), and Don Ygnacio Lozania at his right; a grandson behind him, and Señor Alvemar-Leon seated at his left, with Mashém kneeling over the table in the foreground.

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114 both sides of Bahia Kunkaak and El Infiernillo. Some of these had been occupied almost to the hour of the visit, but the occupants had taken flight, leaving most of their unattached possessions behind, [123] and were not seen, though it was evident that, like wary birds and game animals, they kept the invaders in sight from points of vantage and hidden lairs. The eastern scarps and foot-slopes of Sierra Kunkaak were traversed extensively and repeatedly; its crest was crossed by Mr Johnson with a small party at a point west of Punta Narragansett, [126] and the triangulation and topographic sketching were connected with the work on the mainland and carried over practically the entire surface of the island, being tied to the work of the Hydrographic Office about the coasts. Then, despairing of finding the wary natives, and having exhausted food supplies, the party returned to the mainland and thence to Costa Rica, arriving in the evening of December 31.

The original party comprised, in addition to the leader, Mr Willard D. Johnson, topographer; Mr J. W. Mitchell, photographer; Hugh Norris, Papago interpreter, and José Contrares, teamster. The party engaged in the expedition to Sierra Seri comprised the leader, Messrs Johnson and Mitchell, Mr L. K. Thompson of Hermosillo, Don Andrés Noriega of Costa Rica, José Contrares, and two Papago Indian guards, Miguel and Anton, of Costa Rica. The Tiburon party was made up of the leader, Messrs Johnson and Mitchell, S. C. Millard of Los Angeles, and Señores Andrés Noriega and Ygnacio Lozania, together with Ruperto Alvarez, a Yaqui Indian guard, and Miguel, Anton, Mariana, Anton Ortiz, and Anton Castillo, Papago guards; while Hugh Norris and José Contrares, with half a dozen Papago guards and other attachés of the rancho at Costa Rica, maintained an intermittent supply station at Embarcadero Andrade. Señor Encinas cooperated in the work of the expedition, part of the time at Costa Rica and part at Molino del Encinas, his principal hacienda in the outskirts of Hermosillo; while Mr Thompson and Dr W. J. Lyons aided in the work, the former at both Hermosillo and Costa Rica and the latter at Hermosillo.

The return trip from Costa Rica lay via Hermosillo, and permitted the extension of the plane-table surveys to this longitude. While at the city advantage was taken of the opportunity to obtain linguistic [115] and other data from "El General" Kolusio, a full-blood Seri retained at the capital by the State for occasional duty as a Seri interpreter, who was obligingly assigned to the service of the party by Señor Don Ramón Corral, then governor of Sonora. At Hermosillo the leader of the expedition left the main party, which then proceeded northwestward and northward along the route followed by the 1894 expedition on the return journey, the party comprising Mr Johnson, in charge, with Messrs Mitchell and Millard, Hugh Norris, and José Contrares; and the plane-table surveys were continued and combined with the route surveys made on the outward journey.

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The principal ethnologic results of both expeditions relating to the Seri Indians are incorporated in the following pages; the data concerning the Papago are reserved for further study. The topographic surveys of the 1895 expedition covered a zone averaging 50 miles in width, extending from the international boundary to somewhat beyond Rio Sonora. Mr Johnson, by whom these surveys were executed, was on furlough from the United States Geological Survey, and his resumption of survey work prevented the construction of finished maps, except that of Seriland (plate I), which forms but a small fraction of the area surveyed. The results of the remaining, and by far the greater, part of the topographic surveys are withheld pending completion of the inquiries concerning the Papago Indians.

The geographic nomenclature found requisite in the field and in writing is partly new and partly restored, yet conforms with general and local custom so far as practicable; and nearly all of the new names have been applied in commemoration of explorers or pioneers. Most of the names pertaining to Seriland proper are incorporated in the map forming plate I; the others (including a few minor corrections) appear in the outline map forming figure 1, prepared after the larger sheet was printed.[1]

The following list of place-names is designed primarily to give the meaning and raison d'être of the nomenclature; with a single exception,[2] the names are Hispanized or Mexicanized in accordance with local usage.

Nomenclature of Seriland.[3]

*SERILAND: Extra-vernacular name of tribe, with English locative.

MAR DE CORTÉS (Sea of Cortés—Gulf of California): Customary Sonoran designation, applied by Ulloa (1539) in honor of Hernando Cortés, first discoverer of the gulf.

*PASAJE ULLOA (Ulloa passage): Generic Spanish; specific applied in honor of Captain Francisco de Ulloa, first navigator of the passage and the upper gulf, 1539.

*ESTRECHO ALARCON (Alarcon strait): Named in honor of Hernando de Alarcon, second navigator of the gulf, 1540.

EL INFIERNILLO (The Little Hell): Local designation, retained by the Hydrographic Office, U. S. N. (miswritten "Estrecho Infernillo" on larger map).

†BOCA INFIERNO (Mouth of Hell): A colloquial local designation (miswritten "Puerto Infierno" on larger map).

*BAHIA KUNKAAK (Kunkaak bay): Generic Spanish; specific the vernacular name of the Seri tribe (miswritten "Tiburon bay" on plates IV and V).

[1] The larger map was drawn early in 1896, and a preliminary edition in the form of a photolithograph of the drawing was published in the National Geographic Magazine, vol. VII, 1896. It is proper—and historically desirable—to explain that while a considerable part of the copy for this paper was prepared at about the same time, circumstances prevented the completion of the manuscript and the final rectification of the nomenclature and bibliographic references until September 1, 1898.

[2] Johnson peak. It is proper to say that this name was applied by the author (and leader of the expedition) after the drawing was completed and submitted by Mr Johnson, as a meager tribute to his excellent work in the field and on the drawings named.

[3] An asterisk indicates new names, an obelisk old names restored or colloquial names adopted.

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BAHIA KINO (Kino bay): Long-standing name given in honor of Padre Eusebio Francisco Kino, an early Jesuit missionary (the "Bahia San Juan Bautista" of various early maps); adopted in Anglicized form by the Hydrographic Office, U. S. N.

†BAHIA TEPOPA (Tepopa bay): Specific a corruption of Tepoka, the extra-vernacular name of a local tribe related to the Seri; applied in 1746 by Padre Consag, and used by most navigators and cartographers of later dates, though it does not appear on the charts of the Hydrographic Office, U. S. N.

BAHIA AGUA DULCE (Freshwater bay): Named by Lieutenant R. W. H. Hardy, R. N., 1826; name retained (in Anglicized form) by Hydrographic Office, U. S. N. (The name is misplaced on Hardy's map, but the bay is correctly located in his text, p. 295.)

†BAHIA BRUJA (Witch bay): Named (in honor of his vessel) by its discoverer, Lieutenant Hardy, 1826.

*BAHIA ESPENCE (Spence bay): Named in honor of Pilot Tomás Espence (Thomas Spence), second circumnavigator of the island, who landed in the bay in 1844.

†ESTERO COCHLA (Cockle inlet): Named by Lieutenant Hardy, 1826.

*BAJOS DE UGARTE (Ugarte shoals): Named in honor of Padre Juan de Ugarte, first visitor to the shoals and circumnavigator of Tiburon, 1721.

*BADA BALLENA (Whale roadstead): Named from the stranding of a whale about 1887, an incident of much note among the Seri.

*ANCLAJE DEWEY (Dewey anchorage): Named in honor of its discoverer, Commander (now Admiral) George Dewey, in charge of the surveys by the Hydrographic Office, U. S. N., 1873.

LAGUNA LA CRUZ (Lagoon of the Cross): Name adopted (Anglicized) by Hydrographic Office, U. S. N.; the "Laguna de los Cercaditos" (Lagoon of the Little Banks) of Colonel Francisco Andrade, 1844.

ISLA TIBURON (Shark island): Name of long standing; used alternatively with "Isla San Agustin" since the seventeenth century, both names being apparently applied to Isla Tasnne by several writers, and also to Isla Angel de la Guarda (the second largest island in the gulf) by Kino and others; while the present Tiburon was regarded as a peninsula.

ISLA SAN ESTEBAN (Saint Stephen island): Name of long standing; in consistent use since early in the seventeenth century.

*ISLA TASNNE (Pelican island): Name recast by the use of the Seri specific in lieu of the Spanish (Alcatráz), which is too hackneyed for distinctive use.

ISLA TURNER (Turner island): Name used (and probably applied in honor of Rear-Admiral Thomas Turner, U. S. N.) by the Hydrographic Office, U. S. N.

ISLA PATOS (Duck island—i. e., Island of Ducks): Name of long standing; adopted by the Hydrographic Office, U. S. N.

ROCA FOCA (Seal rock): Name used (and probably applied) by the Hydrographic Office, U. S. N.

PEÑA BLANCA (White crag): Name used (and probably applied) by the Hydrographic Office, U. S. N.

PUNTA TEPOPA (Tepopa point): Named (probably corruptly) from a local tribe related to the Seri; used by the Hydrographic Office, U. S. N.

PUNTA SARGENT (Sargent point): Name applied by Lieutenant Hardy in 1826 to what is now known as Punta Topopa; adopted for the minor point by the Hydrographic Office, U. S. N.

*PUNTA PERLA (Pearl point): Name applied in commemoration of the traditional pearl fisheries of the vicinity.

*PUNTA ARENA (Sand point): A descriptive designation.

*PUNTA TORTUGA (Turtle point): Name applied in recognition of the extensive turtle fisheries of the Seri in the vicinity.

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*PUNTA TORMENTA (Hurricane point): Name applied in recognition of the nearly continuous gales and tide-rips by which navigation is rendered hazardous, and by which the long sand-spit has been built.

PUNTA MIGUEL (Miguel point): Recast from "San Miguel point", partly through association with the name of a Papago guard accompanying the expedition of 1895; in the old form the name is of long standing, was probably applied by Escalante in 1700, and was adopted by the Hydrographic Office, U. S. N., 1873.

*PUNTA GRANITA (Granite point): A descriptive designation.

*PUNTA BLANCA (White point): A descriptive designation.

*PUNTA NARRAGANSETT (Narragansett point): Specific (of Algonquian Indian derivation) applied in commemoration of the vessel employed in the surveys by the Hydrographic Office, U. S. N., in 1873, the point being that at which the commander of the *Narragansett* located the principal Seri rancheria of that time and made observations on the tribe.

*PUNTA YGNACIO (Ygnacio point): Specific applied in honor of Don Ygnacio Lozania, a trusted aid in the 1895 expedition, who had visited this point in connection with the Andrade expedition of 1844; described as "Dark bluff" on charts of the Hydrographic Office, U. S. N.

*PUNTA ANTIGUALLA (Antiquity point—i. e., Point of Antiquities): Name applied in recognition of a great shell-mound which has retarded the transgression of the sea and produced the point.

PUNTA KINO (Kino point): Name of long standing; specific in honor of the early missionary; used by the Hydrographic Office, U. S. N.

*PUNTA MASHEM (Mashém point): Specific in honor of the Seri chief Mashém (sometimes called Francisco Estorga or Juan Estorga), who speaks Spanish and acted as Seri-Spanish interpreter in 1894.

PUNTA MONUMENTA (Monument point): Named by the Hydrographic Office, U. S. N.

PUNTA COLORADA (Red point): Recast from the "Red Bluff point" of the Hydrographic Office, U. S. N.

PUNTA WILLARD (Willard point): Origin of name unknown; used by the Hydrographic Office, U. S. N.

*EMBARCADERO ANDRADE (Andrade landing): Named in memory of the embarkation for Tiburon of Colonel Francisco Andrade, 1844.

*CAMPO NAVIDAD (Christmas camp): Named in memory of a camp occupied December 24–26 by the expedition of 1895.

*SIERRA SERI (Seri range): Generic Spanish, specific the extra-vernacular tribe name.

*SIERRA KUNKAAK (Kunkaak range): Specific the vernacular tribe name.

*SIERRA MENOR (Minor range): A descriptive designation.

*CERROS ANACORETOS (Anchorite hills): A designation suggested to Topographer Johnson by the solitary series of spurs rising singly or in scattered groups from the sheetflood-carved desert plain.

*JOHNSON PEAK: Name applied in commemoration of the first and only ascent of the peak, and of its occupation as a survey station, December 7 and 8, 1895, by Willard D. Johnson, accompanied by John Walter Mitchell and Miguel (Papago Indian).

*DESIERTO ENCINAS (Encinas desert): Generic Spanish, specific in honor of the intrepid settler on the outskirts of the desert, Señor Pascual Encinas.

*PLAYA NORIEGA (Noriega playa): Generic Spanish, specific in honor of Don Andrés Noriega, kinsman of Señora Anita Encinas, a resident on the outskirts of the desert, and the leading Mexican aid in the expedition of 1895.

*ARENALES DE GIL (Gil sandbanks): Generic Spanish, specific in honor of Fray Juan Crisóstomo Gil de Bernabe, sole missionary to Seriland, massacred at this point in 1773.

*RIO SONORA (Sonora river): Generic Spanish, specific a long standing and originally colloquial corruption of Señora, a designation said to have been applied

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by Spanish pioneers to a hospitable native chieftainess; afterwards apparently fixed through the name of an early mining camp and garrison and perhaps by similarity to a local aboriginal (Opata) term connoting mains, i. e., meat.

RIO BACUACHE (Bacuache river): Name of long standing; specific doubtless from the Opata term *bacat*, "snake", with a locative termination, i. e., "Snake place".

†ARROYO CARRIZAL (Reedy arroyo): Generic and specific Spanish; colloquial designation used by the Seri chief Mashém in describing the island; a traditional name of long standing.

†ARROYO AGUA DULCE (Freshwater arroyo): A traditional name like the former, also used by Mashém.

*ARROYO MILLARD (Millard arroyo): Named in memory of S. C. Millard, aid and interpreter in the expedition of 1895 (died 1897).

*ARROYO MARIANA (Mariana arroyo): Named in honor of Mariana (Papago Indian), a guard accompanying the 1895 expedition, who had once approached this arroyo on a hunting expedition.

*ARROYO MITCHELL (Mitchell arroyo): Named in honor of John Walter Mitchell, photographer of the 1895 expedition.

†POZO ESCALANTE (Escalante well): Generic Spanish, specific in honor of Sergeant Juan Bautista de Escalante, the first Caucasian to cross El Infiernillo (in 1760), who is reputed to have dug the shallow well still existing; the name has been retained ever since alternatively with "Agua Amarilla" (Yellow water); doubtless the "Carrizal" of certain early maps; the site of the only mission ever established in Seriland, and of the massacre of Fray Crisóstomo Gil in 1773.

*POZO HARDY (Hardy well): Named in honor of Lieutenant R. W. H. Hardy, R. N., second known Caucasian visitor to the spot, 1826.

*AGUAJE ANTON (Anton water, or water-hole): Generic a common Mexican term; specific applied in memory of Anton (Papago Indian), a guard and visitor to the spot in the expedition of 1895.

*AGUAJE PARILLA (Parilla water): A traditional water (not found by the expedition of 1895) named in memory of Colonel Diego Ortiz Parilla, the vaunted destroyer of the Seri in 1749, whose imposing expedition may have reached this point.

*BARRANCA SALINA (Saline gorge): Generic colloquial Mexican, specific denoting the character of the practically permanent water; the designation applied by Mexican vaqueros and Papago hunters, who occasionally visit the locality.

*TINAJA ANITA (Anita basin): Generic a useful Mexican term for a water-pocket, or rock basin containing water supplied by storms or seepage; specific a tribute to Anita Newcomb McGee, M. D., Actg. Asst. Surg. U. S. A.; perhaps the "Aguaje de Andrade" of 1844.

*TINAJA TRINCHERA (Entrenched basin): Specific a common Mexican term for the ancient entrenchments found on many mountains of Papaguería; applied in recognition of a few low, loose-laid stone walls about the tinaja, the only structures of the kind known in Seriland.

RANCHO SAN FRANCISCO DE COSTA RICA: Name applied by the founder, Señor Pascual Encinas, about 1850.

RANCHO SANTA ANA: Name applied by the founder, Señor Encinas, about 1870.

RANCHO LIBERTAD: Name applied by the founder, Señor Encinas, about 1875.

The fairly full geographic nomenclature of Seriland merely expresses the necessity for place-names, felt in some measure by all intelligent beings, and realized especially by explorers and describers of the region. Excepting the ranchos and perhaps Pozo Escalante, they denote natural features only, and, with the same exceptions, the features are seen but rarely or from great distances by enlightened men. Despite

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137 the wealth of place-names and the strongly accentuated configuration which the nomenclature expresses, Seriland is one of the most hopeless deserts of the American hemisphere.

ACKNOWLEDGMENTS

122 Since most of the field work of the two expeditions lay in the neighboring Republic of Mexico, it became necessary to ask official sanction for the operations from the Mexican government; and it is a pleasure to say that every possible privilege and courtesy were extended by both federal and state officials. Especial acknowledgments are due to 000 the Mexican minister (and afterward ambassador) to the United States, his Excellency Don Mateo Romero (now deceased); to the Ministro de Fomento of the Mexican Republic, Excelencia Don Fernando Leal; and to the governor of the State of Sonora, Señor Don Ramón Corral. Equal acknowledgments are due to various United States officials, notably Honorable W. Woodville Rockhill, First Assistant Secretary of State when the expeditions were planned; and it is a pleasure to advert to the active interest taken in both expeditions by Honorable S. P. Langley, Secretary of the Smithsonian Institution, and to the careful attention given the 1894 expedition by the late Dr G. Brown Goode, Assistant Secretary of the Institution.

114 Mr Willard D. Johnson did invaluable service in connection with the second expedition, particularly in the execution of surveys and the 126 construction of maps in inimitable style. Mr William Dinwiddie is to be credited with the excellent photographs made during the 1894 expedition, with the representation of the devices used in Seri face-painting, and with various other aids to the investigation; while Mr J. W. Mitchell is to be credited with the photographs made on Isla Tiburon, and with other contributions to the success of the 1895 expedition.

000 Acknowledgments are due also to all of the participants in both expeditions, whose names appear in other paragraphs. Their contributions were not primarily intellectual, yet were of a kind and amount to be forever remembered among men who have worked and hungered and thirsted and stood guard together. The deepest debt connected with the field work is to the now venerable but ever vigorous pioneer, Señor Pascual Encinas; and no small part of this debt goes over to his estimable spouse, Señora Anita Encinas, who twice traversed the long road from Hermosillo to Costa Rica in the interest of the 1895 expedition.

The scientific results of the researches have been enriched by invaluable contributions from Director Powell's store of ethnologic knowledge, and by suggestions from Messrs Frank Hamilton Cushing, F. W. Hodge, James Mooney, and other collaborators in the Bureau of 114 American Ethnology. The qualities of the colored illustrations are due largely to the artistic skill of Mr Wells M. Sawyer, by whom they were designed, and of Mr DeLancey Gill, by whom the proofs were revised. The Spanish translations are due chiefly to Colonel F. F.

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Hilder, ethnologic translator of the Bureau, partly to Mr Emanuele Fronani; though neither can be charged with errors of interpretation or of Englishing, both finally shaped by the author. The somatic determinations and discussions were by Dr Ales Hrdlička, of New York; the tests for arrow poison were made by Dr S. Weir Mitchell, of Philadelphia; while the philologic comparisons were made almost wholly (with notable thoroughness and perspicacity, and in such wise as to illustrate the wealth and utility of the linguistic collections of the Bureau) by Mr J. N. B. Hewitt. Finally, it has become due, probably for the first time in the nearly four centuries of their history, to make public acknowledgment of services by Seri Indians, viz, subchief Mashém, the real sponsor for the Bureau vocabulary and many other data, and "El General" Kolusio, the outlaw interpreter of Hermosillo and contributor to certain historical identifications.

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also a center for radiating trails, the best-beaten of these leading toward the fresh waters of Tinaja Anita and Arroyo Carrizal; and even the rancherías half-way thence to Punta Mashém send their most permanent paths over 15 miles of intervening ranges and spall-strewn valleys toward the same waters. According to Mashém's cautious statements, there is a minor Seri metropolis at the northwestern spur of Sierra Kunkaak, within reach of Pozo Hardy and Arroyo Agua Dulce, and two or three smaller rancherías along the western shore; but these were not reached by the 1895 expedition.

4. The seas washing Seriland are notably troubled by tides and winds. Gaping toward the Pacific, and narrowing and shoaling for the 800 miles of its length (measured from midway between Islas de Tres Marías and Cabo San Lucas), Gulf of California approaches Bay of Fundy, Bristol channel, and Broad sound as a tide accumulator; while the semidiurnal sweep of the waters in the upper half of the gulf is conditioned by the constriction of the basin to a fraction of its average cross-section at the narrows between Isla Tiburon and Punta San Francisquito. Toward the head of the gulf the ordinary spring tides range from 20 to 25 feet, and may be much increased by favoring winds; the debacles culminate there, but the currents culminate off Seriland in the great tide-gate half dammed by the islands of Tiburon, San Esteban, San Lorenzo, and Salsipuedes,[1] with their marine buttresses, and through the breaches of Pasaje Ulloa, Estrecho Alarcon, and Canal de Salsipuedes flow, four times daily, some two or three cubic miles of water in tremendous tidal floods, probably unsurpassed in vigor elsewhere on the globe. Naturally the islands and the adjacent coasts afford extraordinary examples of marine transgression; and while exceptional wave-work is a factor, the transgression is undoubtedly due mainly to the extraordinary tidal currents in this gateway of the gulf. The fierce currents and the frequent storms of the region condition local navigation, and have undoubtedly contributed to the development of the peculiarly light, strong, and serviceable water-craft of the aboriginal navigators among the islands.

El Infiernillo derives its distinctive characteristics largely from the local character of the tides. Bahía Kunkaak is a funnel-shape embayment so placed as to catch half the volume of the incoming tide and to

[1] Originally the name Islas Sal-si-puedes (Get-out-if-canst) was applied to the various islands of this gateway of the gulf, including San Lorenzo, San Esteban, and San Agustin (now Tiburon), together with the smaller islets, as shown in the map of Padre Fernando Consag (in Noticia de la California y de su Conquista, etc., por el Padre Miguel Venegas, 1757, tomo III, p. 184); and Padre Consag's account of the currents encountered in 1748 explains the designation: "The great sea which runs here even in fair weather would not allow us to stay, and it was with great difficulty we took in a little water. We now attempted to weather the Cape of San Gabriel de Sal-si-puedes, so greatly dreaded by mariners on account of these islands, several contiguous points of land and many ledges of sunken rocks extending a great way from the land. Here the sea is so agitated by the current that a gale or a calm makes but little difference" (English translation of Venegas' Noticia, titled A Natural and Civil History of California, 1759, vol. II, pp. 312-313). Hittell speaks of "the group of islands known as Salsipuedes, the largest of which is now called Tiburon" (History of California, 1898, vol. I, p. 225). Dewey restricted the name to a single small island near the Baja California coast. Further references to the islands and their designations are noted postea, p. 65.

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133 concentrate the flow into a bore hurtling through Boca Infierno and thence throughout the shoaling strait with greatly accelerated velocity; meantime the body of the tidal stream is diverted around Tiburon, and then enfeebled in its northward flow by the expansion of the gulf above the Tiburon-San Francisquito gateway, so that the entire strait is flooded (to the limit fixed by the capacity of Boca Infierno) before the main tide flows into its head past Isla Patos and through Bahia Tepopa; and with this unobstructed inflow the strait is reflooded with a counterbore, whereby the waters are heaped and pounded into an unstable, swirling, churning mass.[1] The flooding is little less than catastrophic in magnitude and suddenness; indeed, the volume of water in the body of the strait between Punta Perla and Boca Infierno

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[1] Unquestionably the clearest view of El Infiernillo ever enjoyed by Caucasian eyes was that of Messrs Johnson and Mitchell from the exhilarating point of Sierra Seri (Johnson peak), which they occupied for about twenty-three hours on December 7 and 8, 1895. Mr Johnson's notes on the appearance of the strait are as follows: "On the occasion of the ascent of Sierra Seri, which rises from the coast, shutting off the view of Isla Tiburon from the desert on the east, I received a striking impression of the elaborate and beautifully symmetrical plan of the long swirling currents of El Infiernillo. The climb had been made from the east direct to the summit peak, so that the first sight of both island and gulf was not only from close at hand, but from an elevation of about a mile. The crest of the ridge was reached at the instant of sunset, and the spectacle of the innumerable current-markings was brief. Our position was nearly opposite the northern end of the strait; and its elevation was so great that the opposite mainland and island shorelines were seen in map effect rather than in perspective. The entire strait, to its northern end at Punta Perla, was in the shadow of the island; and the current design was revealed only in the shadow. At the shadow-margin extending from the northern tip of the island the lines were sharply cut off; and beyond, along the westward bend of waters forming Bahia Tepopa and opening into the gulf in full sunlight, there was no suggestion of them. Within the shadow the effect was that of a film of oil on a water-surface which had been stirred and allowed to come to rest—though the regularity of the lines was as though the stirring had been orderly. Not the slightest motion was perceptible from the peak during the minute or two that the spectacle lasted before the sun disappeared and twilight fell, though the suggestion from configuration alone was that of violent swirling. The general movement was evidently southward toward Boca Infierno, and the swirls were apparently the result of frictional resistance along both shores; the system of curving lines as a whole was very much that which would be presented by a broad feather thrust into a bottle. There were central lines in great number, somewhat sinuous though never crossing, diverging one by one toward the shores on either hand, where they curved backward with complex interference in large reversing arcs and many minute circlings. The straightening out of the curves in perspective was quite perceptible toward Boca Infierno, and beyond it was pronounced. The air appeared to be still, so that the current pattern was not at all obscured by waves; and the spectacle of the broad strait, appearing almost beneath me, inclosed with a crowded design of sweeping fine lines, the delicate clearness of which recalled a steel engraving, was peculiarly impressive. That we had been fortunate in the moment of reaching the summit was apparent next day. The spectacle was, indeed, repeated at sunrise and for a short period thereafter, though the general design was markedly different, and less intricacy of pattern was discernible, while the general effect was comparatively vague; perhaps the shadow of Sierra Seri was too heavy, or, more probably (so was my impression at the time), our position was not favorable for that direction of illumination. In full light during the day up to the hour of our departure in late afternoon, no hint or vestige of the current design remained. It was evident that the lines were brought out with expected clearness by the favorable illumination and comparative stillness of air; and it was particularly evident that the lines marked movements in the water, even if there were corresponding air-currents, since they harmonized perfectly with the configuration of the shores and with the trend of spits and bars and offshore markings seen through the shallow waters, especially toward the northern end of the strait. The accord between shore curves and the current lines seen in the evening indicated a southward motion much more vigorous than the reverse movement witnessed next morning; for the marked variation in the design noted in the morning was of a character strongly suggesting a reversed movement of the water, while the faintness of the markings then may perhaps have been due to comparative feebleness of current rather than to unfavorable lighting. Certainly the close agreement between the elaborate system of markings, as clearly revealed in the evening, and the prevailing curves of the shores would seem to indicate unmistakably that, whatever the direction and strength of flow, the markings were a product of current motion."

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SUMMARY HISTORY

There is some doubt as to who was the first among the Caucasian explorers of the Western Hemisphere to set eyes on the Seri Indians. Nuño de Guzman, rival of Cortés and invader of Jalisco and Sinaloa, must have appoached the southern boundary of Seri territory about 1530, though there is no record of contact with these tribesmen. Diego Hurtado de Mendoza, one of Cortés' captains, coasted along southern Sonora in 1532 to a point considerably beyond Rio Yaqui, where he was massacred on his return, and hence left no record of more northerly natives.[1] Both of these pioneers must accordingly be eliminated from the list of probable discoverers of the Seri.

In the course of their marvelous transcontinental journey, Alvar Nuñez Cabeza de Vaca and his companions also approached Seriland, and apparently skirted its borders shortly before meeting Captain Diego de Alcaraz, of Guzman's party; this was in April, 1536, according to Bandelier.[2] Vaca wrote: "On the coast is no maize; the inhabitants eat the powder of rush and of straw, and fish that is caught in the sea from rafts, not having canoes. With grass and straw the women cover their nudity. They are a timid and dejected people."[3] He added half a dozen ambiguous sentences, of which only a part, apparently, refer to the "timid and dejected people"; half of these describe a poison used by them "so deadly that if the leaves be bruised and steeped in some neighboring water, the deer and other animals drinking it soon burst". The people were identified as Seri (Ceris) by Buckingham Smith and General Stone,[4] and the identification may be considered as strongly probable, provided the Tepoka be classed with the Seri.

The next Caucasians to approach Seriland appear to have been the two Spanish monks, Fray Pedro Nadal and Fray Juan de la Asuncion, who, in 1538, sought to retrace Vaca's route, and traveled northward to a river somewhat doubtfully identified as the Gila;[5] but the meager accounts of this journey contain no clear reference to the Seri Indians.

On March 7–19, 1539, the Italian friar Marcos de Niza left San Miguel de Culiacan under instructions from the Viceroy, Don Antonio

[1] Theodore H. Hittell, History of California, 1885, vol. I, pp. 43–44.

[2] Contributions to the History of the Southwestern Portion of the United States (Hemenway Southwestern Archæological Expedition), Papers of the Archæological Institute of America, American series, V, 1890, p. 44.

[3] Relation of Alvar Nuñez Cabeça de Vaca, translated from the Spanish by Buckingham Smith; New York, 1871, p. 172.

[4] Ibid, p. 178.

[5] Cf. Bandelier, Magazine of Western History, IV, 1886, p. 668.

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de Mendoza, to explore the territory traversed by Vaca, under the guidance of the negro Estevanico, the only one of Vaca's three companions remaining in Mexico; in good time he reached a point probably not far from the center of the present state of Sonora, whence messengers were sent coastward to return duly accompanied by certain "very poor" Indians wearing pearl-oyster (?) ornaments, who were reputed to inhabit a large island (almost certainly Tiburon) reached from the mainland by means of balsas. Bandelier identified these coastwise Indians with the Guaymi tribe, a supposed branch of the Seri;[1] but if the "large island" were Tiburon, it would seem more probable that the Indians belonged to the tribe now known as Seri, while both description and location suggest the Tepoka. This record is of questionable weight, partly by reason of the doubtful identification of the Indians, and partly because the friar's itinerary was found to be misleading by his immediate successors, because of the fact that portions of his narrative were based on hearsay; though it is just to note that Bandelier, after critical study, deemed the record about as trustworthy as others of the time, and to add that the disparagement of Niza's discoveries by his followers was in accord with the fashion of the day—indeed it was little more severe relatively than the criticism of the strikingly trustworthy Ulloa by his first follower, Alarcon.

On July 8–19, 1539, according to the collection of Ramusio, three vessels sent out by Cortés to discover unknown lands—"Of Which Fleete was Captaine the right worshipfull knight Francis de Vlloa borne in the Citie of Merida"—sailed from Acapulco.[2] Skirting the mainland northwestward, they explored Mar de Cortés, or Gulf of California; and on September 24 (as fixed by interpolation from Ulloa's excellent itinerary) they descried and described the features of the coast in such fashion as to locate their vessels (one was already lost) off the southern point of Tiburon, and in sight of the islands of San Esteban and San Lorenzo, as well as locally prominent points on the mainland of Lower California. Here they "discerned the countrey to be plaine, and certaine mountaines, and it seemed that a certaine gut of water like a brooke ran through the plaine" (p. 322). Judging from other geographic details, this "gut of water" was certainly the tide-torn gateway now named Boca Infierno; while the next day's sailing (it is noteworthy that this was "north" instead of northwestward as usual) carried them by "a circuit or bay of 6 leagues into the land with many cooues or creeks", evidently Bahia Tepopa with the northern end of the turbulent strait El Infiernillo. The record shows clearly that Ulloa discovered Tiburon, but failed (quite naturally, in view of the route pursued and the peculiar configuration at both extremities of the strait) to perceive its insular character. No mention is made of inhabitants or habitations on this land-mass, though both are described on the

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[1] Ibid, pp. 681–682; Papers of the Archæological Institute of America, American series, v, p. 118.

[2] The Voyages of the English Nation to America, collected by Richard Hakluyt and edited by Edmund Goldsmid, 1890, vol. III, p. 317.

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[175] few degrees farther northward on the long-mysterious coast below the elusive "Straits of Anian".

About the middle of September, 1540, Captain Melchior Diaz, then in command at Corazones, selected 25 men from the force remaining at that point, and set out for the coast on what must have been one of the most remarkable, as it is one of the least-known, expeditions in the history of Spanish exploration; for he traversed either the streamless coast or the hardly more hospitable interior through one of the most utterly desert regions in North America, from the lower reaches of Rio Sonora to the mouth of the Colorado. The record of this journey is meager, ambiguous, and apparently inconsecutive; it indicates that he encountered the Indian giants seen by Maldonado, but confused them with the Indians of the Lower Colorado. On the return journey Diaz lost his life through an accident, and his party reached Corazones on January 18, 1541, after encountering hostility from Indians not far from that settlement. Word was sent to Coronado, then in winter quarters on the Rio Grande, who dispatched Don Pedro de Tovar to the settlement for the purpose of punishing the hostile natives; he, in turn, sent Diego de Alcaraz with a force to seize the "chiefs and lords of a village". This Alcaraz did, but soon liberated his prisoners for a petty exchange. "Finding themselves free, they renewed the war and attacked them, and as they were strong and had poison, they killed several Spaniards and wounded others so that they died on the way back. . . . They got back to the town, leaving 17 soldiers dead from the poison. They would die in agony from only a small wound, the bodies breaking out with an insupportable pestilential stink."[1]

The Coronado expedition had still further experience with (evidently) the same Indians; for as the army approached Corazones on the return a soldier was wounded, and was successfully treated, according to the record, with the juice of the quince. "The poison, however, had left its mark upon him. The skin rotted and fell off until it left the bones and sinews bare, with a horrible smell. The wound was in the wrist, and the poison had reached as far as the shoulder when he was cured. The skin on all this fell off."[2]

There is some question as to the identity of the Indians met by Diaz's men, Alcaraz and his force, and the Coronado army near Corazones; but various indications point toward the Seri. In the first place, the several Indian settlements mentioned in the records define what must have been then, as it was two centuries later, the Seri frontier, beyond which lay the "despoblado" of Villa-Señor, i. e., the immense area hunted and harried by roving bands from Tiburon; so that the Seri must frequently have crossed the paths pursued by the Spanish pioneers. In the second place, the accounts themselves seem to be typical records of contact with Seri Indians, which might be repeated for each

[1] Winship, op. cit., p. 502. [2] Ibid., p. 538.

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subsequent episode in their history or century in time. The description of the effect of the poison is especially suggestive of the Seri; as pointed out on a later page, the Seri arrow-venom is magical in motive, but actually consists of decomposing and ptomaine-filled organic matter, so that it is sometimes septic in fact, while the arrow-poison of the neighboring Opata, Jova, and other Piman tribes was (so far as can be ascertained) vegetal; and these accounts seem to attest septic poisoning rather than the effects of any known vegetal toxic.[1]

Such (assuming the validity of the several identifications) are the earliest records concerning the truculent tribesmen and the desolate district known centuries later as the Seri and Seriland.

About 1545 began the Dark Ages in the history of northwestern Mexico; the excursion of Guzman, and the journeys of Cabeza de Vaca and Friar Marcos and of Coronado himself, died out of the memory of the solitary adventurers and scattering settlers who slowly infused Spanish culture and a strain of Caucasian blood into the Sonoran province; even the route taken by Coronado's imposing cavalcade was lost for centuries, to be retraced only during the present generation, largely through the determinations of Simpson, Bandelier, Winship, and Hodge.[2] It is true that Don Francisco de Ibarra penetrated the territory in 1563, and remained until rumors of gold in other districts drew him elsewhere; it is also true that Captain Diego Martinez de Hurdaide pushed into the province in 1584, and entered on a career of subjugation, waging persistent war with the Yaqui, which resulted in the acquisition of the territory of Sonora by treaty April 15, 1610;[3] yet few records of exploration or settlement were written before the advent of the Jesuit missionaries, toward the end of the seventeenth century.

Still more astounding was the eclipse of knowledge of the gulf. Despite Ulloa's survey of the entire coast, recorded in an itinerary so detailed that every day's sailing may readily be retraced, and despite Alarcon's repetition of the surveys and extension of the discoveries far up Rio Colorado (where his work was verified by that of Melchior Diaz), a mythic cartography arose to shadow knowledge and delude exploration for a century and a half; for "upon the authority of a Spanish chart, found accidently by the Dutch, and of the authenticity of which there never were, or indeed could be, any proofs obtained, an opinion prevailed that California was an island, and the contrary assertion was treated even by the ablest geographers as a vulgar error";[4] and a mythic strait formed by cartographic extension of the Gulf of California indefinitely northward haunted the maps of the seventeenth century. This error was adopted by various geographers, including Fredericus

[1] It should be noted that Mr. F. W. Hodge, whose large acquaintance with the Southwest and its literature gives his opinion great weight, is inclined to class the Indians in question as Opata.

[2] Op. cit., pp. 39-73.

[3] Sonora Histórico y Descriptivo, por F. T. Dávila, 1894, p. 8.

[4] A Natural and Civil History of California; translated from the original Spanish of Miguel Venegas; London, 1759, vol. i, preface.

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A75 de Witt in 1662, Peter van der Aa in 1690, and even Herman Moll as late as 1708; but it was consistently rejected by Guillaume Delisle and other French geographers. The myth was finally punctured by Padre Kino in 1701; though even he and all his erudite co-evangels were apparently unaware that his observations only verified those of Ulloa, Alarcon, and Diaz.

M75 During the stagnant sesquicentury 1645–1695 there was little record of the Seri Indians, though that little indicates recognition of their leading characteristics and their insular habitat. Writing especially of the Yaqui before 1645, Padre Andrés Perez de Ribas declared (freely translated):

> There is information of a great people of another nation called Heris; they are excessively savage, without towns, without houses, without fields. They have neither rivers nor streams, and drink from a few lagoonlets and waterholes. They subsist by the chase, but at harvest time they obtain corn by bartering salt extracted from the sea and deerskins with other nations. Those nearest to the sea also subsist on fish; and it is said that there is, in the same sea, an island on which others of the same nation live. Their language is exceedingly difficult.[1]

The same author mentions cannibalism among the aborigines of northwestern Mexico, saying:

> The vice of those called anthropophagi, who eat human flesh, introduced by the devil, enemy of the human genus, among nearly all these nations during their heathenism, is more or less common. In the Acaxee and mountains this inhuman vice is customary as eating of flesh obtained by the chase; it is of daily occurrence among them; just as they sally in chase of a deer, they go out over mountains and fields in search of enemies to cut in pieces and eat roasted or boiled.[2]

[114] There is nothing to indicate that the anthropophagy was confined to, or even extended to, the Seri—a fact of interest in connection with later opinion. Ribas' reference to an island inhabited by the Heris (Seri) indicates that the occupancy of Tiburon was fully recognized by the native tribes of the region.

Throughout the seventeenth century the western coast of Gulf of California, and in lesser degree the eastern coast also, became famous for pearl oysters, and expeditions were sent out and fisheries established at different times. The earliest of these expeditions was that of Captain Juan Iturbi in 1615; he sailed well up the gulf, reaching latitude 30° according to his reckoning (though the accounts imply between lines that he turned back at the Salsipuedes), collecting many pearls along the western coast "so large and clear that for one only he paid, as the King's fifth, 900 crowns";[3] and on his return he carried the fame of the Californian pearls to Ciudad Mexico, whence it resounded to Madrid and reverberated through all Europe. One of the more noteworthy

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[1] Historia de los Trivmphos de Nvestra Santa Fee entre Gentes las mas Barbaras y Fieras del Nuevo Orbe; Madrid, 1645, p. 554. The "Heris" are identified as Seri by Bandelier (Final Report of Investigations among the Indians of the Southwestern United States, in Papers Arch. Inst. Am., American series, III, 1890, p. 74).

[2] Op. cit., p. 11.

[3] Venegas, op. cit., vol. I, p. 142.

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Now, this itinerary recounts, in definite and unmistakable terms, the incidents and localities of a journey down the valley of Rio San Ignacio (also called Santa Magdalena, Altar, Asuncion, Pitiquito, Caborca, etc, in different parts of its course), from the present city of Santa Magdalena by the present town of Caborca to the coast at a point almost directly west of both Caborca and Santa Magdalena. Moreover, Kino's map of 1702[1] locates "Nazareno" on this river, and permits identification of the sierra with Dewey's "three conspicuous peaks" placed directly inland from the lagoon at the mouth of San Ignacio river, on the Hydrographic Office charts; it also locates Caborca (miswritten "Cabetka") in approximate position. Furthermore, it would have been physically impossible for the rather heavily outfitted Kino party, with carriages and churchly equipage, to traverse the untrodden and forbidding wastes from Caborca to even the nearest part of Seriland within the period of two days and a fraction, and the distance of 29 leagues (some 74 miles), detailed in the itinerary. The direct way from Caborca to Tiburon would lie due southward, over sierra-ribbed and barranca-cut plains never yet explored by white men, nor even traversed by Indians so far as known, for more than 100 miles in an air line; while the nearest practicable route, passing by way of Cieneguilla, Las Cruces, Pozo Noriega, Bacuachito, Sayula, Tonnco, Rancho Libertad, and Barranca Salina (or Aguaje Parilla) measures fully 200 miles, and requires at least six days for the passage with good horses and light equipage. The Kino party might, indeed, have turned southwestward at Caborca and pushed to the now abandoned landing at the anchorage below Cabo Lobos;[2] but the directions and distances specifically stated, and the specific identification of Rio San Ignacio at the end and at other points of the journey, all prove that this was not the route actually traveled. The terminus of the trip so clearly fixed by the itinerary is over 100 miles from the nearest point of Seriland proper; moreover, Tiburon is rendered invisible both from the coast and from Cerro Nazareno not only by distance, but by intervening sierras, notably those projecting into the Gulf to form Cabo Lobos and Punta Tepopa. It follows that Kino and Mange completely missed Seriland in their expedition to the coast, and there is nothing to indicate that they ever saw the Seri tribesmen. Their descriptions of the Indians encountered fairly fit the peaceful Papago of the interior and the timid Tepoka of the coast; and neither Mange's narrative nor other contemporary records suggest contact between the exploring party and the distinctive holders of Tiburon. The specific and repeated references in the itinerary to the Island of San Agustin, or Tiburon, evidently relate to the ancient Isla de Santa

[1] Tabula Californiæ, anno 1702 (Via terrestris in Californiam comperta et detecta per R. Patrem Eusebium Fran. Chino è S. J. Germanum. Adnotatis novis Missionibus ejusdem Sectæ ab anno 1698 ad annum 1701), in Stockhein, Der Neue Welt-Bott, Augspurg und Grätz, 1726.

[2] Elaborately mapped and established (on paper) as the "Puerto y Villa de la Libertad" in 1881 (Boletin de la Sociedad Mexicana de Geografia y Estadistica, 1883, x, p. 263 et seq.), and actually maintained from 1878 to 1884 as the port of Libertad (not the abandoned Rancho Libertad on the border of Seriland), or Serna, according to Dávila (Sonora Histórico y Descriptivo, pp. 149, 306).

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Inas, the modern Isla Angel de la Guarda,[1] one of the most prominent geographic features visible either from Cerro Nazareno or from the adjacent coast. There is no reason to infer that Kino or any of his party ever detected their error in identification of geographic features which must have been conspicuous in the lore of the aborigines and settlers of Sonora; indeed, the error well attests the prominence of the Seri and their habitat in the local thought of the time.[2]

An effect of the Jesuit invasion was to give record to episodes growing out of alien contact with the Seri. One of the earliest of these records recounts nocturnal raids by the "Seris Salineros" for robbery and murder in the pueblos of Tuape, Cucurpe, and Magdalena (de Tepoca).[3] In January, 1700, Sergeant Juan Bautista de Escalante set out with fifteen soldiers to this mission of Santa Magdalena de Tepoca on an expedition of protection and reprisal; and here he learned that the "Seris Salineros" had killed with arrows three persons. Taking their trail, he reached Nuestra Señora del Populo only to find that ten families of converts had deserted to steal cattle, whereupon he started in search of them; he overtook them 20 leagues away, and, despite armed resistance on their part, arrested and whipped them and returned them to the pueblo. Among the captives were two "Seris Salineros" concerned in the murders at Tepoca, and three others guilty of similar outrages at the Pueblo de los Angeles de Pimas Cocomacaglies; these he executed as a warning to the others, after taking their depositions and confessions, and after they were shrived by Padre Adano Gilo (or Adan Gilg), the priest of Populo. This duty performed, he resumed the trail of the Seri, accompanied by the padre; and, approaching the sea, he found a port, as well as an island to which most of the Seri had escaped in balsas, leaving eight of their number, who were arrested and turned over to the priest.[4]

This is the first record of actual invasion of Seriland by Caucasians. According to Bancroft, it "may be deemed the beginning of the Seri wars which so long desolated the province".[5]

The next noteworthy episode occurred when Sergeant Escalante, who had returned to Tuape and Santa Magdalena (de Tepoca), again set out for the coast on February 28, 1700, taking a new route (probably down Rio Bacuache). He traveled 30 leagues, passing four watering places, and on March 6 arrived at the Paraje de Aguas Frias (probably

[1] Identified by Alexandre de Humboldt in his Carte Générale du Royaume de la Nouvelle Espagne, of 1804 (in Atlas Géographique et Physique, Paris, 1811). So late as 1850 the old name was sometimes retained, e. g., on Robert Greenhow's map accompanying his History of California and Oregon.

[2] In one of the last letters from his pen, dated November 25, 1890, the late Dr Elliott Coues wrote, "I find you trailing Kino and Mange in 1694 precisely as I had them, and I make no doubt of the substantial accuracy of your typewritten MS. I accept your position that the large island they sighted and named San Agustin was not Tiburon, but Angel de la Guarda Isl."

[3] A mission founded in 1680 by Padre Melchor Bartiromo (Historia de la Compañia de Jesus en Nueva España, que esta escribiendo el P. Francisco Javier Alegre, 1842, tome iii, p. 117), of which the location has long been lost.

[4] Rousseau de Noticias, op. cit., tome i, p. 221.

[5] Op. cit., p. 278 (the year is misprinted 1880 on this page and in the index).

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Puso Escalante or Agua Amarilla of recent maps); there, three nights later, he was attacked by archers, who discharged arrows into the soldiers' camp and immediately fled. Subsequently, seeking their enemies close to the sea 20 leagues away (probably on the eastern shore of El Infiernillo), Escalante and his men were joined by 120 Tepoka people; and, failing to find their assailants, they gave these allies a supply of provisions and turned them over to Padre Melchor Bartirome, who allotted to them, in conjunction with 300 deserters from the missions who had been captured by the soldiers, not only lands but corn for sowing and eating. Having thus disposed of the Indians, Escalante and his soldiers returned to the coast on March 28, 1700, to punish the boldness and pride of the Indians in their stronghold ("los indios seris de la ranchería del medio"). Passing by balsas to the island, "they overtook those who caught up bows and arrows to fight, of whom they slew nine as an example to the others"; and these others they captured and sent to the priest at Populo—after which the party returned to Cucurpe in time to celebrate Holy Thursday on April 8.[1]

This contemporary recital, written by Escalante's acquaintance and rival in exploration and subjugation, Juan Mateo Mange, bears both internal and external evidence of falling well within the truth. It is corroborated and extended by Alegre's version, written forty or fifty years later on data at least partially independent: according to Alegre, Escalante and his soldiers went on balsas to the "Isla de los Seris, which is called San Agustin by some, but more commonly Tiburon". He added that the retreats of the Seri after the murders and robberies committed at the pueblos of Pimeria, as well as the abundant pearl-fisheries, have made this place highly noted ("muy famosa"); and he correctly described the strait and the projecting sand-banks opposite the center of the island, which reduce the open water to a width of barely half a league: "At this constriction the Seri cross in balsas composed of many slender reeds, disposed in three bundles, thick in the middle and narrowing toward the ends, 5 and 6 varas in length. These balsas sustain the weight of four or five persons, and with light two-bladed paddles 2 varas in length cut the water easily." He remarked also that while a part of the Seri seen on the island by Escalante were captured the major portion escaped, "fleeing with great swiftness".[2]

The early record is also corroborated, in a manner hardly credible in regions of more rapid social and physiographic development, by local tradition and by the survival of the well excavated by the party and still bearing Escalante's name.

On the whole it may be considered established that Sergeant Escalante crossed El Infiernillo and visited Tiburon in 1700; and, although it may be possible that pearl fishers or others preceded him, he must be credited with the first recorded exploration of strait and island by white men.

[1] Ramusen de Noticias, op. cit., tomo i, pp. 321-322. [2] Op. cit., tomo iii, pp. 117-119.

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The specific references to the Seri and their insular habitat by Ribas, by Kino and his chronicler, and by the various recorders of Escalante's expeditions, establish the extent of the lore concerning people and place, even before the end of the seventeenth century. This lore found measurable expression in maps prepared in Europe, even by those cartographers who purposely or otherwise ignored the surveys of Ulloa and Alarcon. In his "newest and most accurate" map of America, 1662, Fredericus de Witt depicted the Gulf of California ("Mare Vermio olim Mare Rvbrvm") as extending northward to connect with the mythic Strait of Anian ("Fretum Aniani"), yet he located Rio Colorado ("R. de Tecon") and Rio Gila ("R. de Coral") approximately, placing the largest island in the gulf, named "I. Gigante", just off their (common) embouchure;[1] and an anonymous map of the Pacific ocean, apparently by the same author and of closely corresponding date, is essentially similar.[2] The map of the northern part of America by Peter van der Aa, about 1690, is also similar, though on smaller scale;[3] and the same may be said of that cartographer's new map of America, issued about the same time, in which the island is designated "I. de Gigante".[4] A somewhat later map by Van der Aa (although supposed to have been issued in 1690) is greatly improved; the "Mer de Californie" is brought to rather indefinite end a little above the mouth of Rio Colorado ("R. de bona guia"); the "Pimasses" are placed in proper position with respect to the Gila ("R. de Coral"), and the "Herises" are located a third of the way and the "Ahomeses" half way down the gulf; while a greatly elongated island stretches from the one to the other off the province of "Sonora".[5] The origin of the name "Gigante" is uncertain; it may be borrowed from a land feature. As used in some cases it apparently connotes the size of the island, while the use in other cases evidently connotes gigantic inhabitants.

Naturally, in view of the slow and imperfect diffusion of knowledge characteristic of early times, cartographers were dilatory in introducing the observations of Kino and Escalante. The map of America by Herman Moll, about 1708,[6] represents the "Gulf of California or Red Sea", connecting the "South Sea" with the "Straits of Annian", and depicts Rio Colorado ("Tison R.") and a composite river apparently designed to represent Rio Gila (made up of "R. Sonaca", "R. Azul", and "R. Colorado", with two other long tributaries from the south) embouching separately a little below midlength of the gulf. Somewhat above these are three islands, one of which is designated "Gigate

[1] Novissima et Accuratissima Septentrionalis ac Meridionalis Americæ, Amsterdam. (In American Maps, 1670–1796, Library U. S. Geological Survey, 135.)

[2] Mar del Zvr, Hispanis, Mare Pacificum. (Ibid., 139.)

[3] 't Noorder Deel van America, Leyden. (Ibid., 178.)

[4] Nouvelle Carte de l'Amerique, Leyden. (Ibid., 136.)

[5] L'Amerique Septentrionale Suivant les Nouvelles Observations, etc., Leyden. (Ibid., 181.) This island is not named, but is undoubtedly the Santa Inez of several other maps—the Angel de la Guarda of the present.

[6] North America, according to ye Newest and most Exact Observations, etc., London. (Ibid., 88.)

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Isle", while "Pimeria" is located correctly with respect to Rio Gila, though too close to the sea, and "R. Sonora" is located too far southward, with a province of the same name just north of it. There is no reference to the Seri, but a locality in Lower California opposite Sonora is named "Gigante".[1] Quite similar is the map of North America drawn and engraved by R. W. Seale about 1722, though the provinces of Pimeria and Sonora are brought closer together, while the magnified Gila is named Colorado ("Tison R." also being retained).[2] The map of North America presented to the Duc de Bourgogne by H. Iaillot about 1720 is much the same; the "Isle de Californie" is separated from the continent by "Mar Vermejo ou Mer Rouge" with four islands, of which the southernmost, "I. de Gigante", lies somewhat below the separate mouths of "R. de Tecon" and "R. de Coral", while the extravagantly magnified Gila of previous maps is partially replaced by a still more extravagant "R. del Norte", rising in a mythical lake above the fortieth parallel and falling into the gulf under the thirtieth.[3] The map of Mexico and Florida by Guillaume "De Pisle", published in Amsterdam by Covens and Mortier, 1722, patently begs the question as to the northern extension of "Mer de Californie" by cutting off the cartography at the critical point. "R. del Tison" is retained as a subordinate river, while the separate and greatly magnified Gila corresponds with that of the Iaillot map, the upper tributary being "R. Sonaca ou de Hila"; "R. di Sonora" is depicted in approximate position, with the province of the same name extending northward and "Seris" located a little above the mouth of the river. No islands are shown in the vicinity, but the name "Gigante" appears on the western coast of the gulf, about latitude 26°.[4] The map of North America by the same author, supposed to date about 1740 though probably earlier, recalls the Van der Aa map of 1690 (f); "Mer de Californie ou Mer Vermeille" ends doubtfully about latitude 34°, where "R. de bona guia" and "R. de Coral" bound the "Campagne de bona guia", and fall separately into the gulf near its head; the "Pimases", "Herises", "Sumases", "Aibinoses", and "Ahomeses" are distributed thence southward along the coast to about the twenty-eighth parallel, while a nameless island stretches parallel with the coast of "Sonora" from about 28° to 32°.[5]

With one or two exceptions, these maps demonstrate the prevailing neglect or ignorance of the classic explorations along the western coast of America early in the sixteenth century; yet they introduce features representing vague knowledge of the Seri Indians and their insular habitat, undoubtedly derived (like that of Padre Kino and Sergeant Escalante anterior to their expeditions) from native sources.

[1] Doubtless the mountain "La Giganta", named by Admiral Otondo toward the end of the seventeenth century (Documentos para la Historia de Mexico, cuarta série, 1857, tomo v, p. 172), and noted by Hardy in 1828 (Travels in Interior of Mexico in 1825, 1826, 1827, and 1828, London, 1829, p. 243).

[2] A map of North America, with the European Settlements and whatever else is Remarkable in ye West Indies, from the latest and best Observations. (American maps, loc. cit., 116.)

[3] Amerique Septentrionale Divisée en ses Principales Parties. (Ibid., 168.)

[4] Carte du Mexique et de la Floride, des Terres Angloises et des Isles Antilles, etc. (Ibid., 136.)

[5] L'Amerique Septentrionale . . . par G. de l'Isle: Amsterdam, Chez Pierre Mortier. (Ibid., 172.) The island is, of course, Santa Inez, i. e., Angel de la Guarda.

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The Kino map of 1702 gradually came to be recognized as trustworthy in important particulars, and brought to an end the baseless extension northward of the gulf; yet it was seriously inaccurate in details, particularly those affected by the erroneous identification of the second-largest island in the gulf with the largest. Accordingly Isla Santa Ines (the modern Isla Angel de la Guarda) is omitted from its proper position, and replaced by "I. S. August" close to the eastern coast; yet the land-mass of Tiburon is roughly defined as a peninsula bounded on the north by "Portas S. Sabina" (Bahia Topopa) and on the south by "Baya S. los. Bapt." (Bahias Kunkaak and Kino). Two other considerable islands are represented as dividing the width of the bay west-southwest of "I. S. August", and are named "2. Salts-Insel"; although evidently traditional, their positions correspond roughly with those of San Esteban and San Lorenzo. The map locates the "Topokis" between Rio San Ignacio and Rio Sonora, with the "Guaimas" immediately below the latter.[1] Kino's three pier-like islands bridging the gulf were adopted in Delisle's map of America, published in Amsterdam by Jean Covens and Corneille Mortier about 1722, in greatly reduced size, though larger islands are shown farther northward; and an ill-defined peninsula corresponding to Tiburon is retained.[2] The D'Anville map of 1746 embodies Kino's discoveries about the head of the gulf and retains his pier-like islands, yet not only corrects his error in omitting the second greatest island of the gulf, but perpetuates equal error in the opposite direction: "I. de S. Vicente" is made the largest of the islands and located near the western coast a little below the mouth of Rio San Ignacio, while "I. de Sta. Inés" is made second largest and is located southeast of it and near the eastern coast. The third island in size is named "Seris", while the fourth and fifth, completing the Kino trio, are called "Is. de Sal", and the mainland projection remains defined on the south by "B. de S. Juan".[3] The Vaugondy map of 1750 locates the transverse trio of islands in greatly reduced size, and omits the larger islands of the gulf.[4] The islands, etc., of the Covens and Mortier map of 1757 correspond closely with D'Anville's map of 1746, and a nameless bay defines a peninsula in the position of Tiburon.[5] The Pownall map of 1783 also follows that of D'Anville so far as the islands are concerned, though the position of that corresponding to the present Angel de la Guarda lies beyond the limit of the sheet; "I. de Inez" lies some distance below the mouth of "Sta. Madalena" river, off the territory of the "Sobas" and "Seris"; "Seris I." is smaller, the two "Sall Is." are smaller still, and there is an ill-defined projection of the mainland, bounded on the south by "B. de S. Juan".[6]

While the makers of the later of these maps were engaged in perpet-

[1] Map in Stockholm, op. cit.

[2] Carte d'Amerique, etc. (American maps, loc. cit., 28.)

[3] Amérique Septentrionale . . . par le Sr. d'Anville, Paris. (Ibid., 29 and 31.)

[4] Amérique Septentrionale . . . par le Sr. Robert de Vaugondy, Paris. (Ibid., 27.)

[5] L'Amerique Septentrionale, etc., Amsterdam. (Ibid., 105.)

[6] A new map of North America, with the West India Islands. . . . Laid down according to the Latest Surveys, and Corrected from the Original Materials of Gever, Pownall, London. (Ibid., 32.)

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nating the vestigial features, erroneous and otherwise, of the Kino map, the Jesuits of peninsular California employed themselves in reexploration of the western coast of the gulf, a particularly productive expedition being that of Padre Ferdinando Consag, in 1747. The padre's map represents the western coast in considerable though much distorted detail, and depicts "I. del Angel de la Guarda" as a greatly elongated body, a third of the way across the gulf from the western coast; next in size is "I. d S. Lorenzo"; then come "I. d S. esteban" in the middle of the gulf, and in the same transverse line, but quite near the eastern coast, "I. d S. Agustin", the two being approximately equal in size, while above and about equidistant from them is "I. de S. Pedro", about half so large as either. These, with four smaller islands near the western coast, bear the general designation "Islas de Sal, si puedes", which in this case may be translated "Salt (possibly) Islands," though later forms of the name imply a quite different meaning, i. e., "Islands of Get-out-if-(you-) can", or "Get-out-if-canst".[1] The eastern coast shows two deep indentations named "Tepoca" and "Bahia d S. Juan Bautista" bounding a peninsula corresponding in position to insular Seriland.[2] It is evident that the cartography of the eastern coast is based on that of Kino, that the island of San Agustin is hypothetic, and that the land-mass of Tiburon proper is not separated from the mainland, while San Pedro island is apparently the Isla Patos of the present. The more general map by Venegas combines details of the Consag, Kino, and other maps; "I. del Angel de la Guarda" is greatly magnified and placed somewhat too far northward, while both San Lorenzo and San Esteban are made much larger than "I. San Agustin", which is represented as scarcely larger than "I. de S. Pedro"; the mainland is indented to

[1] It seems probable that various early cartographers were misled by the traditional lore of "saline-ros", or salt-making Indians, in combination with the unusual designation of these islands. In his text Padre Consag rendered the term "Sal-si-puedes", and strongly emphasized the violent tidal currents and consequent dangers to vessels which suggested the vigorously idiomatic designation to early navigators (Venegas, Noticia de la California, III, p. 143); in the Venegas map (ibid., tome I, p. I) the name is used without the qualifying comma, and in the text it is hyphenated "Sal-si-puedes", the author observing concerning the local currents, "These currents run with astonishing rapidity, and their noise is equal to that of a large rapid river among rocks; nor do they run only in one direction, but set in many intersected directions" (A Natural and Civil History of California, p. 82). And the "Sacerdote Religioso", whose letters place him among the authorities on Lower California, wrote: "In the narrows of the gulf are a multitude of islets, for the passage being so dangerous to vessels they are called *Sal si puedes*" (Noticias de la Provincia de California, Valencia, 1794, p. 11); while Hardy, who navigated this portion of the gulf early in the present century (Travels in the Interior of Mexico, London, 1829, p. 270), mentioned a passage "between the islands called 'Sal si Puedes' (get back if you can)". So, too Duflot de Mofras wrote of "les îles de Sal si puedes (Sors si tu peux)" in his Exploration du Territoire de l'Orégon, Paris, 1844, p. 210. Bancroft properly reduced the obscure connective phrase to the single denotive term "Salsipuedes," and noted the signification as "Get out if thou canst" (North Mexican States, vol. I, p. 444). In 1873-1875 Dewey restricted the name to a single island and a channel, and emphasized the currents in the latter "against which sailing vessels found it almost impossible to make any headway" (The West Coast of Mexico, Publication 38, U. S. Hydrographic Office, Bureau of Navigation, 1880, p. 113), and rendered the name "Sal-si-puedes" in the text, "Sal si puedes" on the charts. Hittell's reference to "the group of islands then known as Salsipuedes, the largest of which is now called Tiburon" (History of California, vol. I, p. 225), doubtless expresses the early use of the term precisely, save that the present Tiburon was long treated as a part of the mainland, while its names were applied to Isla Tiburon or some other islet. Vide postea, p. 66.

[2] Sono de California, etc., in Venegas, Noticia de la California, tome III, p. 196.

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great depth by Kino's "Pto. de Sta. Sabina" and "Bahia de Sn. Juan Baptista", in such wise as to define a decided peninsula, while the "Seris" are located 2° farther southward and below Rio Sonora, and the "Guaimas" still farther down the coast.[1] Another illustration of the chaotic notions of the time is afforded by the Baegert map, published in 1773, and credited largely to Consag.[2] The sheet locates the author's routes of arrival (1751) and departure (1768), the former overland from far down the coast to the mouth of "Torrens Hiaqui," and thence directly across "Mare Californiae", via "Tiburon" (lying just off the mouth of the river, in latitude 29°), with the usual congeries of islands, headed by "I. S. Ang. Gart" (Angel de la Guarda), in latitude 30°–31°, and the usual shore configuration above the debouchure of Rio Sonora; "Los Seris" are located in the interior between Rio Sonora and "Torrens Hiaqui", while just above the mouth of the latter lies "Guaymas M.[ission] destr. per Apostatas Seris". The Pownall map of 1786 incorporates Padre Consag's results on reduced scale, but omits the islands toward the eastern shore of the gulf.[3]

On the whole the cartography of a century indicates that the striking explorations of Ulloa, Alarcon, and Diaz were utterly neglected; it indicates, too, that Kino's observations were promptly adopted, but that his erroneous identification of the island seen from Nazareno occasioned confusion; yet there is nothing to indicate definite knowledge of Escalante's discoveries. Apparently the cartographic tangle began with the failure to discover the narrow strait traversing Seriland, coupled with hearsay notions of an insular Seri stronghold; it was complicated by Kino's erroneous identification of the hearsay island; and it grew into the mapping of a traditional islet about the position of Tiburon, and the extension of the mainland into a peninsula embracing the actual land-mass of that island[4]—the islet lying about the site of the modern Isla Tasajue, and often appearing under the name San Agustin.[5] Accordingly, so far as maps are concerned, Escalante's discoveries were no less completely lost than those of Ulloa.

The recorded history of the Seri Indians during the earlier two-thirds of the eighteenth century is largely one of zealous effort at conversion on the part of the Jesuit missionaries, who repeatedly approached the territory by both land and sea; yet the records touch also on events of exploration and on the characteristics of the tribe.

One of the earliest chroniclers was Padre Juan Maria de Salvatierra, who in 1699–1701 inspected many of the missions of Lower California and

[1] Noticia de la California, tomo i, p. 1.

[2] California, per P. Ferdinandum Consag, S. J., et alios, in Nachrichten von der amerikanischen Halbinsel Californien. . . . Geschrieben von einem Priester der Gesellschaft Jesu (identified as Jacob Baegert by Rau, Smithsonian Report, 1863, p. 322); Mannheim, 1772.

[3] A New Map of the Whole Continent of America, London. (American maps, loc. cit., 4.)

[4] This cartography reappeared occasionally up to about the middle of the nineteenth century, as illustrated by the Greenhow map accompanying the edition of his history issued in 1845.

[5] This condition is revealed in Mühlenpfordt, Versuch einer getreuen Schilderung der Republik Mexico, etc.; Hannover, 1844.

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with an invocation "for the complete reduction of these unhappy savages, now involved in the shadow of death".[1] So, also, the talented author of "Rudo Ensayo", writing in 1763, says of the Seri:

> They have always been wild, resisting the law of God, even those who had removed from among them to Pupulo, Nacameri, and Angeles, and who constituted the smallest part of the nation. And even these few, in order to have constant communication with and give information to their heathen relatives, used to go, as if they could not arouse suspicion, to spy out in other villages what they wanted to know for their plans, and immediately giving the intelligence they obtained to the runaway Indians, these would act accordingly and nobody could guess how they acquired the necessary information.[2]

Again, in summarizing the relations with the tribe, this anonymous author naively remarked:

> And at the present day, notwithstanding that in different encounters during the campaign of November, 1761, and before and since then, more than forty men have been killed by our arms and over seventy women and children have been captured, still they are as fierce as ever and will not lend an ear to any word of reconciliation.[3]

In general, the Jesuit history of the Seri is clear enough with respect to the small extruded fraction, but nearly blind to the normal tribe; there is nothing to indicate clear recognition of Serilland as a hereditary habitat and stronghold; yet the records are such as to define the salient episodes in Seri history as seen from a distantly external view-point. Nor can it be forgotten that the erudite evangelists made a deep and indelible impression on the intellectual side of Sonora, and drew the strong historical outline on which their own relations to the civil authorities on the one hand and to the Seri Indians on the other hand are cast by the light of later knowledge.

The discordance between the civil and military authorities and the dominant ecclesiastical order of Sonora sounded to Ciudad Mexico, and eventually echoed to Madrid, and was doubtless one of a series of factors which led to the needlessly harsh expulsion of the scholarly Jesuits in 1767—and hence to a hiatus in the history of the province and its tribes.

Although the padres knew little of the habits and customs of the "wild" Seri save through hearsay, some of their notes are of ethnologic value: Villa-Señor located them on the deserts extending from Pitic and Angeles to Tepopa bay, and added:

> They hold and occupy various rancherias, and subsist by the chase of deer, lora [mule-deer], rabbits, hares, and other animals, and also on the cattle they are able to steal from the Spaniards, and on fish which they harpoon with darts in the sea, and on the roots in which the land abounds.[4]

Villa-Señor distinguished the "Tepocas", whom he combined with the

[1] Ibid., p. 211. It is improbable that the Seri had anything to do with this particular butchery. According to Cosme, the latter padre was killed at Sonoita; and he renders the name "Ruiz or Ruben" (On the Trail of a Spanish Pioneer: the Diary and Itinerary of Francisco Garcés, etc., 1900, vol. i, p. 98).

[2] Op. cit., p. 233.

[3] Op. cit., pp. 196-198.

[4] Theatro Americano, p. 491.

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"Guaimas" and "Jupanguaimas". Alegre located the Seri on the coast of the gulf from a few leagues north of the mouth of Rio Yaqui to Bahia San Juan de Bautista (Bahia Kino), adding, "with them may be classed the Guaimas, few in number and of the same language".[1] Writing about the same time, José Gallardo observed: "The distinction is slight between the Seri and Upanguaima, the one and the other having the same idiom" ("Poco es la distincion que hay entre seri y upanguaima, . . . y unos y otros casi hablan un mismo idioma").[2] The author of "Rudo Ensayo" wrote: "The Guaimas speak the same language, with but little difference, as the Seris."[3] He mistook Cerro Prieto as their principal retreat; mentioned the mountains of Bacoatzi Grande, Las Espuelas, and others as other haunts; noted Tiburon and San Juan Bautista (San Esteban ?) islands as less-known shelters, and gave extended attention to "the poison they use for their arrows" as "the most virulent known in these parts"; for "even in cases where the skin only is wounded, the injured part begins to swell, and the swelling extends all over the body to such a size that the flesh bursts and falls to pieces, causing death in twenty-four hours." To test this poison, the Seri "bandage tightly the thigh or arm of one of their robust young men; then make an incision with a flint and let the blood flow away from the wound. When the blood is some distance from the incision, they apply the point of an arrow to it, steeped in the deadly poison. If at the approach of the point of the arrow the blood begins to boil and recedes, the poison is of the right strength, and the man who lends his blood for the experiment brushes it out with his hand to prevent the poison from being introduced into his veins." He was unable "to find out with certainty of what deadly materials the deadly poison is composed. Many a thing is spoken of, such as heads of irritated vipers cut at the very moment of biting into a piece of lung; also half putrefied human flesh and other filth with which I am unwilling to provoke the nausea of the reader." He added the opinion that "the main ingredient is some root."[4] Padre Joseph Och, who, with other German evangels including padres Mittendorf, Pfefferkorn, and Ruen (or Rohen), was stationed in northwestern Sonora shortly before the eviction of the Jesuits, was one of the recorders of aboriginal traits and features, though his record (like that of most of his confrères) is impoverished by his failure to discriminate tribes; but one of his notes is specific:

> As an extraordinary trapping [Zierde] the Seris pierce the nasal septum and hang small colored stones, which swing in front of the mouth, thereto by strings. A few carry, suspended from the nose, little blue-green pebbles, in which they repose great faith. They prize these very highly, and one must give them at least a horse or a cow in exchange for one.[5]

[1] Historia de la Compañia de Jesus, p. 218.
[2] The Works of Hubert Howe Bancroft, vol. III (The Native Races, vol. III, 1883, p. 704.
[3] Op. cit., p. 166.
[4] Ibid., pp. 197, 198.
[5] Nachrichten von verschiedenen Ländern des Spanischen Amerika, aus eigenhändigen Aufsätzen einiger Missionare der Gesellschaft Jesu, herausgegeben von Christoph Gottlieb von Murr, erster Theil; Halle, 1809, p. 255.

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It is significant fact, and one attesting the physical and intellectual distance of the padres from the normal Seri, that so few notes of ethnologic value were made during the Jesuits' régime. With a single exception, so far as is known,[1] they recorded not a word of the Seri tongue, not a distinctive custom beyond those evidently of common knowledge, none of the primitive ceremonies and ideas such as attracted their coadjutors in Canada and elsewhere. They made no reference to the alleged cannibalism so conspicuous in later lore; but their silence on this point cannot be regarded as evidential, since they were equally silent concerning nearly all the characteristic customs and traits. The neighboring Papago tribe met the invaders frankly as man to man, displaying a notable combination of receptivity and self-containment which enabled them to assimilate just so much of the Caucasian culture as they deemed desirable, yet to maintain their purity of blood and distinctiveness of culture for centuries; the Seri, on the other hand, met the invaders as enemies, to be first feared, then blinded, baited, and bled by surreptitious and sinister devices, and finally to be assassinated through ambuscade or remorseless treachery; and it is manifest that they surpassed the gentle padres in shrewdness and strategy, using them as playthings and tools, and carefully concealing their own characters and motives the while.

With the passing of the Jesuits, the publication of Sonoran records received a check from which the province has never completely recovered. True, the place of the order was partly taken by the Colegio Apostólico de Querétaro, which promptly dispatched fourteen Franciscan friars to Sonora, early in 1768, to take possession of the old missions and to found others;[2] it is also true that civil enactments and commissions, as well as military orders and reports, increased with the growth of population; but comparatively few of the events and actions found their way to the press. Seri episodes continued to recur with irregular frequency; according to Dávila, the Seri outbreaks and wars "exceed fifty in number since the conquest of Sonora",[3] and there are decisive indications that the Franciscan régime was not without its due quota of strife. Moreover, the period was one of somewhat exceptionally vigorous pioneering, of the initiation of mining and agriculture, and of conquest over the "despoblado" formerly ranged and inhabited by the Seri. It was during this period that the Seri were permanently dislodged from their outlying haunts and watering-places in Cerro Prieto; and it was during this period, too, that exploration and settlement were extended to Río Bacuache with such energy as to displace the Seri from their other outlying refuge in the barrancas of this stream. But, as the events and lines of progress multiplied, the burden for the contemporary chronicler

[1] The Noticia de las Personas que han escrito ó publicado algunas obras sobre Idiomas ó sus habitan en la República of Mexico, by Dr José Guadalupe Romero, includes a MS. "Vocabulario de las Lenguas Rodeva, Pima y Seria", written by Padre Adamo Gilg (Bol. Soc. Mex. Geog. y Estad., 1869, tomo VIII, p. 378).

[2] Dávila, Sonora Histórico y Descriptivo, p. 10; Bancroft, op. cit., p. 672.

[3] Ibid., p. 319.

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when exhumed six months later, attests the dry and saline soil in this vicinity. None of these conditions exist about Aguaje Parilla at the southeastern base of Sierra Seri. The present absence of living carrizal at Pozo Escalante is of little significance, since the extinction of the plant might easily have been wrought either by the stock of later expeditions or by the rise of the salt-water horizon accompanying the local subsidence of the land; certainly dried roots and much-weathered fragments of cane still remain about the margin of the playa extending southward from the well.

The episode culminating in the assassination of Fray Crisóstomo was characteristic: beset at all points and rankling under the invasion of their range, the Seri sought anew to delude the governor with fair words, using their own reprobates and apostates at Pitic and elsewhere to point their asseverations; and remembering the facility with which the earlier ecclesiastics were duped into unwitting allies, they made the kindly and long-suffering friars the immediate object of their petitions. But some of the tribe galled under the lengthy and still lengthening blood-feud too deeply to tolerate the alien presence; and one of these, either alone or supported by the alleged accomplices or others, tried a typical ruse, suggested less by need than inherited habit; for the friar was helpless in their hands, and might have been slain in his jacal as easily as in the open. Typically, too, the assassination initiated or deepened factional dissension and further bloodshed.

[114] The Franciscan records are of even less ethnologic use than those of the Jesuits. Beyond his incidental expressions concerning Seri character and custom in connection with the founding and abandonment of Carrizal, it need only be noted that Arricivita makes hardly a reference to the Tepoka, but habitually combines the "Seris y Piatos"—the latter perhaps representing the "confederate Pima" of "Rudo Ensayo", or the Soba occupying the lower reaches of Rio San Ignacio about that time.

Among the meager and scattered Franciscan records is a letter from Fray Francisco Troncoso, dated September 18, 1824, which is of note as containing an estimate of the Seri population at the time:

> This island [Tiburon] has more than a thousand savage inhabitants, enemies of those of California, and it has frequently occurred that, on balsas of reeds, . . . they have crossed over to invade the mission [of Loreto], killing and robbing some of those they found there.[1]

The record is of value also as indicating that the Seri traversed the gulf freely, and raided settlements and tribes of the peninsula ruthlessly as those of the mainland.

The Carrizal episode was followed by a half century of comparative silence concerning the Seri, though various contemporary records and later compilations indicate customary continuance of the Seri wars.

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[1] Incorporated in Escudero, Noticias Estadísticas de Sonora y Sinaloa: Mexico, 1849, p. 16.

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Among the more useful compilations is that of Velasco; and among the more important episodes noted by him was the Cimarrones-Migueletes war of 1790.[1] The Cimarrones included the greater part of the Seri of Tiburon and the Tepoka (then estimated at 2,000 of both sexes),[2] together with the "Pimas called *Pintos*, of the pueblos of Caborca, Tubutama, Oquitoa, etc", and supposedly certain other representatives of the Pima and Apache, who had shortly before marauded Magdalena and sacked Saric, killing a dozen persons;[3] the Migueletes were national troops assigned to Sonora under the command of Colonel Domingo Elizondo. The forces met in several bloody battles in Cerro Prieto, at Jupangualmas, and at Presidio Viejo; and the former, or at any rate the Seri, were once more "annihilated" ("reducidos a nulidad"). Nevertheless, the hydra-headed tribe retained enough vitality in 1807 to induce Governor Alejo Garcia Conde to send an army of a thousand men to Guaymas, en route to Tiburon, to repeat the extirpation—though the expedition came to naught for international reasons.

Among the more useful contemporary records is an unpublished manuscript report by Don José Cortez, dated 1799, found in the Force library, translated by Buckingham Smith, and abstracted by Lieutenant A. W. Whipple for the Report of the Pacific Railway Survey. A subsection of this report is devoted to "the Serris, Tiburones, and Tepocas". It runs:

> The *Seri* Indians live towards the coast of Sonora, on the famous Cerro Prieto, and in its immediate neighborhood. They are cruel and sanguinary, and at one time formed a numerous band, which committed many excesses in that rich province. With their poisoned shafts they took the lives of many thousand inhabitants, and rendered unavailing the expedition that was set on foot against them from Mexico. At this time they are reduced to a small number; have, on many occasions, been successfully encountered by our troops; and are kept within bounds by the vigilance of the three posts (*presidios*) established for the purpose. None of their customs approach, at all, to those of civilization; and their notions of religion and marriage exist under barbarous forms, such as have before been described in treating of the most savage nations. The *Tiburon* and *Tepocs* Indians are a more numerous tribe, and worthy of greater consideration than the Seris, but their bloodthirsty disposition and their customs are the same. They ordinarily live on the island of Tiburon, which is connected with the coast of Sonora by a narrow inundated isthmus, over which they pass by swimming when the tide is up, and when it is down, by wading, as the water then only reaches to the waist, or not so high. They come into the continent, over which they make their incursions, and, after the commission of robberies, they return to the island; on which account no punishment usually follows their temerity. It is now twenty-three or twenty-four years since the plan was approved by His Majesty, and ordered to be carried out, of destroying them on their island; but, until the present season, no movement has been made to

[1] Noticias Estadisticas del Estado de Sonora: Mexico, 1850, p. 124 et seq.

[2] Ibid., p. 132.

[3] Bancroft, op. cit., vol. ii, p. 662. It is incredible that such a confederation of so incongruous elements could ever have been effected; it is incomparably more probable that there was a succession of outbreaks of the Seri, Pinto, and Apache, each stimulated by the removal of soldiers for defense against the other enemies, just as Seri outrages follow Yaqui outbreaks today; but it was undoubtedly a custom of the times (a custom still existing) to connect the several enemies in current thought and speech.

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1795 put it into execution. To this end the troops of Sonora are being equipped; a corvette of the department of San Blas aids in the expedition and two or three vessels of troops from the companies stationed at the port of that name on the South sea.[1]

[114] The record is significant as voicing an ill-founded discrimination of the wandering Seri from the inhabitants of Tiburon, as echoing persistent conception of Tiburon as a peninsula, and as summarizing the characteristics of the tribe recognized at the end of the last century.

Meantime population and industries increased, while civil and military development pursued its course; the Presidio of Pitic expanded into a pueblo, and later into the city which gradually adopted the cognomen of General José María Gonzalez Hermosillo, a hero of Sonora in the stirring times of 1810–1812; Pueblo Seri became Mexicanized, retaining only a few Seri families in 1811, according to Manuel Cabrera;[2] Guaymas grew into a port of some commercial note; pearl fishing progressed along the coast and prospecting in the interior; despite constant harrying by Seri raids, the rancho of Bacuachito (probably the Bacoachizo of Escudero[3]) became a flourishing pueblo; and plans for ports in the northern gulf were broached and even tested. Moreover, the dawn of the nineteenth century stirred scientific interest in the native tribes, including the obstinate owners of Tiburon—an interest stimulated by Humboldt's American journeys of 1803.

Combining earlier cartography (originating with Kino) and persistent tradition up to the beginning of the nineteenth century, Humboldt 114 mapped "Isla de Tiburon" nearly a degree too far northward, and 1795 separated from the mainland by a greatly exaggerated strait. The land portion of the map is strikingly defective, revealing in numerous imaginary mesas the author's penchant for Mexican plateaus, while "Rio Hiaqui" ("de Yaqui ou de Sonora" in the text) is combined with Rio Sonora and given an intermediate position, and "Rio de la Asencion" (Rio San Ignacio) is represented as passing through an estuary into the gulf just off the northern end of Tiburon; the "Indiens Seris" being located on a figmentary mesa north of the latter river and due west of Cabores, Pitic (apparently a composite of San Diego de Pitic, or modern Pitiquito, with San Pedro de Pitic, or modern Hermosillo), and Altar.[4] His text corresponds:

1775 On the right bank of Rio de la Asuncion live some very bellicose Indians, the Seris, to whom many Mexican savants ascribe an Asiatic origin by reason of the analogy offered by their name with that of the Seri located by the ancient geographers at the base of the Otherocerras mountains.[5]

113 [1] Reports of Explorations and Surveys to ascertain the most practicable and economical Route for a Railroad from the Mississippi River to the Pacific Ocean, vol. III, part 3: Report upon the Indian Tribes, 1855, pp. 125–128. The original Corbet manuscript is now in the Library of Congress.

[2] In Velasco, op. cit., p. 127.

[3] Noticias Estadísticas de Sonora y Sinaloa. Compiladas y Ampliadas para la Comision de Estadística Militar, por el Lic. D. José Agustin de Escudero; Mexico, 1849, p. 88.

[4] Atlas Géographique et Physique du Royaume de la Nouvelle-Espagne, par Al. de Humboldt; Paris, 1811, carte générale.

[5] Voyage de Humboldt et Bonpland, troisième partie: Essai Politique sur le Royaume de la Nouvelle-Espagne, tome I; Paris, 1811, pp. 286–287.

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Naturally most of the scientific inquiries of the time were, like those of Humboldt, based on tradition rather than on direct observation.

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Toward the end of the first third of the century an important contribution to actual knowledge of Serriland and the Seri at last grew out of the pearl industry. In May, 1825, Lieutenant R. W. H. Hardy, R. N., was commissioned by the "General Pearl and Coral Fishery Association of London" to investigate the pearl fisheries of the Californian gulf; and his task was performed with promptness and energy. On February 13, 1826, he visited Pitic (under Hermosillo):

> Half a league short [south] of it is another small place, called the Pueblo de los Cèros, inhabited by a squalid race of Indians who are said to indulge in constant habits of intemperance and to have lost the fire of the warrior. In its stead they manifest the sullen stupidity peculiar to those who, feeling themselves unfitted for companionship, strive to vent their pusillanimous rage upon objects the most helpless and unoffending, such as women, children, and dogs, who appear to be the chief victims of their revenge.[1]

His chief object in visiting Pitic was to obtain information concerning Tiburon, its natives, and its pearl-oyster beds; and he was rewarded with characteristic accounts of the ferocity of the tribesmen and their use of poisoned arrows, which he received with some incredulity.[2]

After examining the principal pearl fisheries of the western coast, Lieutenant Hardy reached the "Sal si Puedes" in the throat of the gulf, and, on August 9, "got aslant of wind, which carried us up to the northwest end of Tiburow island"[3]—i. e., apparently over the precise route sailed by Padre Ugarte in 1721. Anchoring on the island, he had the good fortune first to meet a native able to speak Spanish, and later to successfully treat the sick wife of the principal chief, after which he was treated with great consideration, and—unwittingly on his part—adopted into the tribe as a member of the chief clan by the ceremony of face painting, the symbol being that of the turtle totem, to judge from the superficial description. Taking slightly brackish water, just as Ugarte had done one hundred and five years before, and arming his crew, he spent the night near the rancheria (evidently in Bahia Agua Dulce). Next morning he "traveled over the greater part of the island" (!) in fruitless search for pearls and gold, and in the afternoon "got under weigh, and stood into a bay of the continent to the northeast of the island," discovering and naming "Sargent's Point", together with "Cockle Harbour", and "Bruja's bay" in the lee of the point, and also "Arnold's Island"; this island being apparently the present prominent cusp of Punta Sargent, now connected with the mainland by a continuous wave-built bar rising a little way above reach of tide. Anchoring in the bay named from his vessel (*La Bruja*), he examined the adjacent shore, ascertaining that "there is no fresh water near the spot, except

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[1] Travels in the Interior of Mexico in 1825, 1826, 1827, and 1828; London, 1829, p. 96.
[2] Ibid., p. 107.
[3] Ibid., p. 288.

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†175 during the rainy season, which only lasts about a month or six weeks", nor "any vestige of Indians to be seen except a solitary hut erected by the Tiburons to serve them when they go there to fish"; and, noting the report that Padre Kino had visited this point, he quite appositely questioned the truth of the tradition, partly on the ground of the absence of fresh water, partly because "the Tepocs Indian establishment" mentioned in the tradition "is many leagues farther to the northward." Awakened by an approaching storm, he was under way next morning at daylight, and, getting out of the "bad holding ground", was caught by a gale and carried back to his "old anchorage in Freshwater Bay", where he found the Indians rejoicing over the success of a ceremonial incantation to which they ascribed his return. The reconnaissance map [114] is ill-drawn, locating "Fresh Water B." on the mainland side and apparently combining "Sargent's Point" and "Arnold's Island" as "Sargents I."; "San Miguel Pt." is properly located, and idealized route lines traverse the "Canal peligroso de San Miguel" (El Infiernillo), which is of greatly exaggerated width. The careful itinerary shows, however, that Hardy scarcely entered this strait, and made but three or four anchorages in the vicinity—i. e., in Bahia Agua Dulce, in Bahia Bruja, probably in Cockle harbor (or "Cochla Inlet"), and finally off Isla Patos.

[114] Hardy's notes on the Indians are first hand, and hence of exceptional value. He says:

105 †175 The Indians on the island of Tiburon are very stout, tall, and well-built fellows, exceedingly like the Twalchii tribe of Indians in Patagonia, and with a language so like theirs that I imagined I was transported back into those wild regions. They by no means look so ferocious as they are represented, and there is something peculiarly mild in the countenances of the females. Their dress is a sort of blanket, extending from the hips to the knees. But most of the old women have this part of the body covered with the skins of the eagle, having the feathers turned *towards the flesh*. The upper part of the body is entirely exposed, and their hair is dressed on the top of the head in a knot which greatly sets off the effect of their painted faces. The men use bows and stone-pointed arrows; but whether they are poisoned I do not know. They use likewise a sort of wooden mallet called Macána, for close quarters in war. They have a curious weapon which they employ for catching fish. It is a spear with a double point, forming an angle of about 5 degrees. The insides of these two points, which are 6 inches long, are jagged; so that when the body of a fish is forced between them it can not get away on account of the teeth.[1]

He saw "about fifteen or twenty canoes made of three long bamboo bundles fastened together", and observed that, when engaged in turtle fishing, the Indian "paddles himself from the shore on one of these by means of a long elastic pole of about 12 or 14 feet in length, the wood of which is the root of a thorn called mesquite, growing near the coast", this pole serving also as a harpoon shaft, provided with a harpoon head and cord, such as those still in use. Respecting the invocatory appurtenances, he says:

My attention was directed by the old women to a pile of bushes outside the hut, which had a staff of about 5 feet in length sticking up through the center. From

[1] *Op. cit.*, p. 249-250.

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traversed the Californias and entered Sonora, and while he failed to see Seriland, he made a note on the tribe, valuable as a current estimate of the population:

> At the gates of the city of Hermosillo is established a Mission which contains 500 Seri Indians; 1,000 of them inhabit the coast to the north of Guaymas and Ile de Esquin (Isla del Tiburon).[1]

The next noteworthy episode in the external history of the Seri chronicled in the civil records of Sonora culminated in 1844. "The above-named Seris, although their number never became important, did not abandon their propensity to revolt, and, while they never rose en masse, made many factional uprisings. Ultimately . . . they displayed such boldness, robbing ranchos, assassinating all they encountered, assaulting on the roads arrieros and other travelers", that a considerable force was sent against them from Hermosillo under the direction of Captain Victor Araiza. It was planned to support this land force by a sea party from Guaymas, but delays and misunderstandings caused the practical abandonment of the plan. Tiring of the delay, Araiza "declared war on the Indians, surprising them on Punta del Carrizal, killing 11, including several innocent women and children", and taking 4 captives of from 1 to 11 years in age; whereupon the army returned to Hermosillo.[2]

Disapproving of this undignified and inhuman crusade, the acting governor, General Francisco Ponce de Leon, planned a still more vigorous campaign by land and sea for the purpose of capturing the entire tribe and transporting them to Pueblo Seri, where a few of their kin were still harbored.[3] The command was intrusted to Colonel Francisco Andrade, who took personal charge of the land force, including 160 infantry from Guaymas, 60 infantry and 30 cavalry from Hermosillo, and considerable corps from Horcasitas and Altar. The naval auxiliary, in charge of Don Tomás Espence,[4] pilot, comprised a schooner of 12 tons; two launches, one carrying a 4-pound cannon and the other a 2-pound falconet; and one rowboat. On August 11, 1844, Espence sailed from Guaymas, and six days later cast anchor at the embarcadero (apparently a convenient place on the coast of Bahia Kino due west of Pozo Escalante—the Embarcadero Andrade of figure 1) opposite Tiburon. Andrade marched from Hermosillo August 13,

[1] Exploration du Territoire de l'Orégon, des Californies et de la Mer Vermeille, exécutée pendant les années 1840, 1841 et 1842, tome 1; Paris, 1844, p. 214.

[2] Velasco, Noticias Estadísticas, pp. 124, 125. This chronicle is rendered peculiarly valuable by supplements in the form of Andrade's and Espence's journals, the latter incorporated (p. 125) after Velasco's own writing was completed. The whole was revised, extended, and republished in the several volumes of the first series of Bol. Soc. Mex. Geog. y Estad., 1851–1888.

[3] On August 14, 1844, Secretary Manuel Cabrera reported that "there are in this pueblo not more than fifteen families of Caris located within its borders, maintaining themselves by the manufacture of earthen ollas and by the garbage of their neighbors, i. e., in time of harvest they glean the wheat and corn left scattered, and the bones, entrails, and heads of the stock slaughtered for consumption by the inhabitants." (Incorporated in Velasco, op. cit., p. 126.)

[4] Thomas Spence, of Guaymas; apparently the "Mr. Spence" mentioned favorably by Hardy (Travels, p. 96).

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X-175 immediately burned), as well as bones and other remains of horses.[1] On August 28 and 29 Espence skirted the abrupt and rocky coasts of Tiburon, west and south of the northern bay, without seeing trace of natives; on the 30th he reached the western bay, where he found huts and fresh tracks, and captured a woman disabled by snake-bite. Farther down the bay he encountered a considerable party, who first prepared to attack, and then, overawed by his bold front, sued for peace; whereupon he accepted their submission, and sent them with a letter to Colonel Andrade. This affair concluded, and escaping currents so contrary that he was nearly locoed ("por las corrientes encontradas que me volvian loco"),[2] he coasted southward; and on September 1, at the southwestern point of the island, he found another rancheria, and made peaceful conquest of the occupants, whom he also sent with a letter to Andrade. Thence he coasted eastward, and, on September 3, returned to his starting point, "having navigated the island in the period of nine days, having in this time burned 64 huts and 97 balsas, and reduced to peace 104 Indians with their families." The next day he transported the captives to the mainland, "their number, comprising men, women, and children, reaching 384, besides about 37 remaining at large on the island."[3] On September 5 the remaining troops were transferred to the mainland, with the exception of a small detachment, which remained for an unspecified, but evidently short period, in the vain hope of corraling the warriors, with the families to which they belonged, supposed (on grounds not given) to remain on the island. The troops and their captives immediately moved to Laguna de los Cercaditos (probably Laguna la Cruz) to rejoin the cavalry guard; thence, suffering much from thirst, they marched toward Hermosillo, arriving at that place September 12,[4] where the troops and captives formed a triumphal procession, met on the highroad by the merchants and the civil and military authorities, and greeted by the ringing of bells and the firing of rockets, and with music and refreshments.

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[1] The expressions of the journal indicate that Espence was not familiar with the Seri custom of eviscerating and quartering stolen stock, consuming the entrails at once, and transporting the more substantial pieces across the circuit on their balsas. Velasco fell into still further error in assuming that the expressions relate to tracks and other indications of the presence of living stock on the island.

[2] Velasco, op. cit., p. 168.

[3] Ibid., p. 169. On the same page Espence classifies the captives as 6 old men ("viejos de sesenta años arriba"), 12 boldanos ("viejos de cincuenta arriba"), 1 blind, 1 idiotic boy, 5 cripples male, 1 cripple female, 120 women, 140 children, and 144 men—510 in all. Andrade's report enumerates the captives as 120 in each of two lots, with 30 or more in a third, making 280 odd (Ibid., p. 180); while Velasco put the number at 300 and odd ("doscientas y tantas personas"), men, women, and children, including only 30 odd old men and warriors combined. The discrepancies are characteristic, and of a piece with those prevailing in the same latitude and longitude today: e. g., Velasco says there are but four waters on the island, Espence says there are eight or ten, and Andrade implies that there are many; Velasco says there were 140 troops from Guaymas, while Andrade mentions only 80; Espence says that in transporting the stock (as noted above) but one mule was drowned by the strength of the current, while Andrade says that a mule and a steer were lost on account of the bad storm which prevailed during the day; yet there is such agreement between dates and facts in the independent journals of Andrade and Espence as to establish general verity despite the provincial weakness concerning details.

[4] According to Andrade (Ibid., p. 182); Velasco says September 16 (Ibid., p. 170).

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Leon and executed by Colonel Andrade. Yet it is not uncharacteristic of Sonoran history that the wave of anti-Seri activity culminating in 1844 hardly outlasted its own breaking; certainly Escudero, writing less than five years later, declared of "la nacion *Seri*": "During thirty-three years they have committed not a single act of hostility and live in peace and perfect harmony with the Sonorenses." He added that they occupied the islands of Tiburon and Tepoca (sic) and the coasts of the gulf contiguous to Sonora and California, and from the most remote antiquity had been known by the names of "*tiburones*" or "*seris*". Describing Pueblo Seri, he observed: "It now contains hardly a dozen aged Seris of both sexes"; and he forecast the early extinction of the tribe, since the people were incapable of abandoning their independent and solitary existence.[1]

Here ends, practically, the history of Pueblo Seri as a Seri settlement, for, although one of the tribe survived for half a century and a few others may have survived for a decade, the "aged Seris of both sexes" melted away so rapidly as to leave no later record, and were apparently never replaced by others. Briefly, the history of the pueblo began with the establishment of a presidio or military post in 1741 in the natural gateway and watering-place leading into the settled valleys of the Opodepe and upper Sonora, for the sole purpose of protecting the settlements against the wandering Seri, who used this typical Sonora watergap as a way-station on forays but never as a place of residence. The history grew definite when the Jesuits obtained the allotment of lands for the Seri and established for them a mission, which was at the same time a place of catechizing for Seri neophytes, a place of detention for Seri captives, a place of refuge for Seri weaklings, and a place of resort for Seri sneaks and spies. The history proceeded with many vicissitudes, as the presidio was alternately abandoned under Seri attacks and reoccupied when the attacks were repulsed, and as the neophytes alternately escaped and suffered recapture; the formal history waned in relative importance as the population and interests of Pitic and afterward of Hermosillo waxed, and as the lands originally allotted to the Seri were gradually taken and held by Mexican settlers, and ended when the Seri tenure was formally extinguished in 1844, as described by Cabrera and Velasco; and the general history dropped into unimportance with the escape of Andrade's captives, after temporary quartering on the legally established landholders and householders of the Mexicanized pueblo. For a century and a half the name of the pueblo has continually raised and renewed the assumption that it marks a site of aboriginal Seri habitation or has played some other leading rôle in Seri history, and this assumption has shaped opinion past and present; yet its error is clearly shown by scrutiny of the historical records, as well as by collateral ethnologic and archeologic evidence.

[1] Noticias Estadísticas, pp. 141-142.

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114 175 Here may be said to end, too, the local chronicles of the Seri; for although the state archives are crowded with charges, petitions, commissions, reports, and other papers pertaining to the irrepressible Seri; although these materials have overflowed to Ciudad, Mexico, and even to Washington, in official documents both numerous and voluminous; although Dávila in 1894 increased Velasco's forty Seri wars to fifty; and although the weightiest events in the internal history of the Seri have occurred since 1844, little attempt has latterly been made to reduce the abundant data to print.

The Mexican geographic knowledge of the time was surprisingly vague, as is shown by the current maps, for example, the Tanner maps which appeared in several editions: the 1846 edition recalls and evidently reflects the Humboldt map of the beginning of the century; "R. Ascencion" is represented as embouching through an estuary about 30° 29′, with the "Seris Indians" north of its lower half-length and west of "Pitic" and "Ft. del Alter"; Ures is located 3 or 4 miles southeast of this fort, and "Racuach" (the Bacuachito of the present) is 20 miles farther southeastward. Neither Rio Sonora nor any of its important branches are indicated, while "Pitic" is placed several times too far from the coast and from Guaymas, in a featureless expanse of paper; "Rio Hiaqui" is shown as a branchless and conventional stream of a single crescentic curvature, embouching in about the right latitude. The coast of the gulf is distorted, and "Tiburon" is shown as an island much too large and nearly a degree too far north, separated from the mainland by a greatly exaggerated strait, with an elongated mesa ("Mt. del Pico") skirting the mainland coast—in short, the cartography is largely traditional if not fanciful.[1]

The career of the Seri during the half century 1844–1894 is traceable by aid of (1) unpublished documents, (2) published results of scientific inquiries and surveys, and (3) personal reminiscences of men living on the Seri frontier; but in a summary touching only salient points the first-named source may be passed over.

One of the first foreign visitors to follow Baron Humboldt in systematic inquiries concerning the aborigines of northwestern Mexico was Henri Ternaux-Compans; his information, too, was secondhand and remote, yet he correctly recognized Isla Tiburon as "inhabited by the Seris, who have some huts also on the mainland".[2]

Later came Eduard Mühlenpfordt, an attaché of a German commercial company and later a Mexican state official, who traveled extensively and wrote partly at first hand, though there is little indication of personal acquaintance with Seriland or the Seri: he described "Bahia de San

[113]

[1] A Map of the United States of Mexico, as organized and defined by the several Acts of the Congress of that Republic, constructed from a great variety of Printed and Manuscript Documents, by H. S. Tanner. Third edition, 1846. The map in De Mofras (op. cit., atlas) is little better.

[2] Nouvelles Annales des Voyages, tome III, 1827, p. 329 (cited by Buschmann, Die Spuren der aztekischen Sprache im nördlichen Mexico und höheren amerikanischen Norden, in Abhandlungen der Königlichen Akademie der Wissenschaften zu Berlin, aus dem Jahre 1854, zweiter Supplement-Band: Berlin, 1859, p. 339).

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Juan Bautista", with "the small island San Augustin" lying before it (in such manner as to identify this islet with Isla Tasne), and located "the large island Tiburon farther northward, opposite a mountainous coast".[1] He added:

> The waterless but cattle-stocked plains between the place Pitic and the coast, and thence up to the river Ascension, are inhabited by a meager remnant of the Seri tribe, while on Tiburon island, opposite this coast, the Tiburones dwell. The Seris were formerly very numerous, by far the fiercest of all the Indian tribes of northern Mexico, and very warlike. Through ceaseless war with the Tiburones and the troops from the Spanish presidios they are now nearly extinct.[2]

Elsewhere the Tiburones were characterized as enemies of the Seri,[3] while the "Heris" tribe was enumerated as a branch of the "Pimas Bajas" people. Herr Mühlenpfordt's characterization of the Seri and the Tiburon islanders as enemies would appear to be groundless, yet not wholly incomprehensible; in the first place, the earlier literature indicates that the term Seri (Seris, Ceris, Heris, etc.) was an alien designation of lax application,[4] doubtless extended occasionally or habitually to marauding nomads, regardless of affinity; again there is conclusive evidence that in many instances Seri convert-captives attached to the missions and pueblos were often regarded as tribal apostates and outlaws whose lives were forfeit; and, moreover, the region in which Herr Mühlenpfordt gained his information was and still is one of abounding tale, whose frequent exaggeration and not infrequent invention conceal and distort the simple facts.

In 1850, Don Diego Lavandera transmitted to the Mexican Society of Geography and Statistics, through the hands of Señor José F. Ramirez, certain documents, accompanied by a note to the effect that "The tribe of the Seris speak Arabic, and it is understood by the Moors at the first interview"—this note merely expressing a prevailing current opinion. Undertaking to test the opinion, Señor Ramirez sent to Lavandera, in Sonora, a number of words in three Arabic dialects, at the same time asking for the Seri equivalents; and the inquiry yielded a Seri vocabulary (probably the first ever printed) of eleven words. Of these none show the slightest affinity with the Arabic dialects; at least four (horse, chamber, population, wine) express concepts alien to the Seri; and only three or four can be identified with Seri terms recorded in later vocabularies. No reference is made to Señor Lavandera's aboriginal informant; but there is a strong presumption that it was the official interpreter at Hermosillo and Pueblo Seri—a presumption

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[1] Versuch einer getreuen Schilderung der Republik Mejico besonders in Beziehung auf Geographie, Ethnographie und Statistik: Hannover, 1844, Band I, p. 441; Band II, p. 415.

[2] Ibid., Band II, pp. 419–420.

[3] Ibid., Band, I p. 230.

[4] Peñafiel defines "Seris" as the "name of a tribe of Sonora, originating probably in the Opata language" (Nomenclatura Geográfica de México—Etimologías de los Nombres de Lugar . . . per el Dr. Antonio Peñafiel, primera parte, 1897, p. 225); while Pimentel defines two suggestively similar Opata words, "*Seraraí*, paso mesurado y bueno", and "*Sirerái*, velocidad de la persona que corre" (Vocabulario Manual de la Lengua Opata, Bol. Soc. Mex. Geog. y Estad., tomo x, 1863, p. 368), i. e., a good and direct pace, and the speed of a person running, respectively (cf. postea, p. 125).

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warranted by coincident historical records and statements of contemporaries still living, to the effect (1) that an official interpreter was there then and for a long time later, (2) that neither then nor later were there other Seri representatives able to furnish vocabularies at Hermosillo, Pueblo Seri, or other towns, and (3) that at that time (as at most others) the relations between the Seri and the whites were such as to prevent amicable communication through casual meeting or otherwise.

Proceeding with his discussion, Señor Ramirez sought to correct the allegation of Abbé Hervas that "in the mission of Belen live three nations, called Hiaqui, Seri, and Guaima, who speak *three different languages*." After quoting a Jesuit manuscript of July, 1730, reporting that "the language of the Seris is the same as that of the Guaimas", he added a significant statement contained in a manuscript report from the Bishop of Sonora, directed to Don José de Galvez, under date of September 20, 1784, concerning the mission of Belen: "Two nations of Indians, Pimas Bajos and Guaimas, live united, the latter having abandoned their pueblo under the continuous assaults of the Seris. The Pimas use their own language. . . . The Guaimas use their ancient language." Summarizing the evidence (of course secondhand and derived from the observations and reports of the missionaries), Señor Ramirez held as proved, first, "the existence of two diverse languages at the mission of Belen—that of the Guaimas and that of the Pimas Bajos"; and second, that "the Guaimas and the Seri are the same".[1] It would appear that Señor Ramirez hardly appreciated the significance of the statement of sixty-four years before that the Guayma were still using their "ancient" language, with the implication that they were acquiring familiarity with the Piman tongue—a familiarity that may well have misled later inquirers.

It is just to say that scientific knowledge of the Seri began with the visit to Hermosillo of United States Boundary Commissioner John Russell Bartlett, on December 31, 1851. True, Commissioner Bartlett approached no nearer Seriland than Hermosillo and Guaymas, and saw but a single Seri; yet he obtained an excellent vocabulary and considerable collateral information from this Indian. According to this information—

The Seris tribe of Indians, with the exception of those which are christianized and reside in the village near Hermosillo, occupy the island of Tiburon in the Gulf of California, north of Guaymas. Although believed not to number over 100 warriors, they have long been the dread of the Mexicans between Guaymas and Hermosillo, as well as the country to the north, on account of their continual depredations and murders. Their practice is to lie in wait near the traveled roads, and there surprise small and unprotected parties. Their place of abode being on an island or the shores adjacent, and their subsistence being chiefly gained by fishing, they have no desire to steal animals, which would be of no use to them; nor do they take any prisoners. To murder and plunder small parties of Mexicans seems

[1] Lenguas Primitivas, in Boletin del Instituto Nacional de Geografia y Estadistica de la República Mexicana, third edition, tome ii; Mexico, 1881, pp. 140-149.

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to be their only aim, and every arrow or lance thrown by the Ceris that pierces the skin causes death, as all are poisoned. Many expeditions, fitted out at a great expense, have been sent against them; but, though commanded by competent officers, all have failed. The number being so small, they manage when pressed to conceal themselves where they can not be found. The island of Tiburon, as well as the mainland adjacent, is exceedingly barren and destitute of water; hence parties have suffered greatly in the campaigns against them, without accomplishing anything. I was told that the Government had already expended more than $1,000 for every male of the tribe. The last serious attack of these people was made upon a gentleman traveling to Guaymas in his carriage with his family and attendants, embracing 18 persons. They were surprised in an unfrequented place and every soul put to death.[1]

175 X

Commissioner Bartlett quoted Hardy's description of the arrow poison, and, speaking of the Seri tongue, added:

> I found it an extremely harsh language, very difficult to express with our letters, and totally different from any aboriginal tongue I had heard spoken; . . . but it was impossible for me, without a close philological comparison with other Indian languages, to arrive at any correct conclusion as to whether this people are allied or not to other aboriginal tribes.

He also referred to a prevalent notion that "the Ceris were of Asiatic origin, in proof of which some statements were made too improbable to repeat. This idea seems to have originated from the resemblance between their name and that given by the ancients to the Chinese."

In order to obtain a Seri vocabulary, Commissioner Bartlett had a messenger dispatched "to a pueblo or village of these Indians near Hermosillo. The person sent for made his appearance in a few hours"; he was "a good-looking man, about 30 years of age. His complexion was fair, and resembled that of an Asiatic rather than an American Indian. His cheek bones were high, and his head round and well formed, though the anterior portion was somewhat angular and prominent. His hair was short, straight, and black. He was a full-blooded Ceris, and came originally from the island of Tiburon. In about three hours I completed the vocabulary quite satisfactorily to myself."[2] The vocabulary was not printed with the narrative; nor were references made to the Seri population, either in the pueblo or in Seriland.

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While the vocabulary was not published by Commissioner Bartlett, it was preserved and passed into the hands of George Gibbs, who made a systematic transcript;[3] this came into possession of Dr Albert S. Gatschet, and a copy is preserved in the archives of the Bureau of American Ethnology. The name of the native informant is not recorded, but fortunately he was found still living, and was fully identified, during the expeditions of 1894 and 1895—especially toward the end of the

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[1] Personal Narrative of Explorations and Incidents in Texas, New Mexico, California, Sonora, and Chihuahua, Connected with the United States and Mexican Boundary Commission, during the years 1850, '51, '52, and '53; New York, 1854, vol. i, p. 403 et seq.

[2] Ibid., pp. 433–434.

[3] This transcript is entered in a blank schedule Vocabulary of 100 Words, printed by the Smithsonian Institution for Gibbs, with a supplementary sheet; it is dated January 1, 1852; and while the published "Narrative" implies that it was recorded December 31, 1851, the manuscript date is one framed by the Seri interpreter, Kolusio.

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115 latter, when, on January 4, 1896, he was employed as an informant. He was then a fine-looking man of noble stature and figure, and of notably dignified air and manner, dressed in conventional attire; his hair was luxuriant, iron-gray in color, and trimmed in Mexican fashion. His looks indicated an age of about 70, but in his own opinion (which was corroborated by that of Señor Pascual Encinas and other old acquaintances) he was at least 75. His movements were vigorous, his eyes clear and bright, his vision good, and, except for hardly perceptible imperfection of hearing, he was in full possession of normal faculties. He was in the employ of the state as a trustworthy attaché of the governor's palacio, where his services were nominal; his real function was that of a Seri interpreter in case of need; and on the day specified he was temporarily assigned to the service of the expedition by His Excellency Governor Corral. By Mexican acquaintances he was commonly called Fernando, though he called himself Kolusio, sometimes using the former designation as a forename; he was also known as "El General" (= Chief), or "El General de los Seris". He had a vague memory of Tiburon island, which he left in childhood (at about 6 years of age, according to his estimate) and had never revisited, though he had been on the Seri border so late as 1870. Except when temporarily at Rancho San Francisco de Costa Rica, he had lived in Pueblo Seri, usually reporting in Hermosillo daily for such duty as might be assigned to him at the palacio. He was aware that he was regarded as a tribal outlaw, and admitted that no consideration could induce him to approach Seriland, since he would be slain by his tribesmen more eagerly than any alien; indeed, he hardly dared venture so far westward as Molino del Encinas, in the outskirts of Hermosillo, and only did so in daylight or in company of others. His few kinsfolk in Pueblo Seri had died or deserted so long before that he had forgotten names and dates; and, as he remarked with half-realized pathos, he had been alone amid aliens for very many years ("muy muchos años"). The linguistic inquiries put to him reminded him of previous interrogations of the 114 sort, and he voluntarily described the visit of a distinguished American 115 who, a long time ago (more than 40 years, he thought), came down from 175 Ures, with many books and papers, and spent New Year's day in interrogating him about his language and his people. He was much impressed with the ability displayed by the "Gringo muy grande" in writing the terms and afterward reproducing them properly; and he described the visitor as appearing very pale and sick ("muy palido y malo"), and under the necessity of frequently resting and taking medicine, and also as having wavy hair, worn so long as to hang down over the neck and shoulders. He could not recall that he had ever heard the American's name; but his description pointed clearly to Commissioner Bartlett, who had risen from a sick-bed at Ures and was on his way to Guaymas to get the benefit of a sea voyage, and who wore his hair long during a part or all of his expedition (as was subsequently

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ascertained by extended inquiry). Kolusio also remembered "giving his language" (a bold if not sacrilegious act, according to his view) to two or three other persons, (one "not a Mexicano" though speaking Spanish, none "Americano"[1]); but the first-mentioned instance was the one most deeply impressed on his mind. At this time (1800) he retained a working knowledge of the Seri tongue, and was able to serve satisfactorily as a Spanish-Seri interpreter; yet careful test showed that he had forgotten numerous native terms, and sometimes inadvertently substituted other Indian (Yaqui, Papago, and probably Opata) and Spanish words; while he knew so little of the tribal customs and beliefs that inquiries pertaining to them were too nearly fruitless to be long pursued. Undoubtedly his knowledge of the Seri tongue was fresher and fuller in 1833; but since he was practically isolated from his tribe in early childhood, he probably never possessed much information concerning the esoteric characters of his people.

The next noteworthy scientific student of the Seri was Johann Carl Eduard Buschmann, who visited various Mexican tribes, but whose knowledge of the Seri was wholly secondhand. Quoting Villa-Señor and Arrecivita and other early writers, noting unfortunate passages from Bartlett, and magnifying Mühlenpfordt's misapprehensions into positive error, he reduced knowledge of this and neighboring tribes to chaos. The "Guaymas" were separated from the "Seris (oder Seres)", and these (at least by implication) from the "Tiburones", while the "Piatos" were combined with the Seri, the traditional alliance with the Apache was greatly overdrawn, and the "Heri oder Heris" and the "Tepocas" were treated as distinct.[2] No new facts were adduced, no use was made of local sources of information, and no notice was taken of other than literary data.

In 1857 the gigantic surveying enterprise of Jecker & Co. was undertaken, under a concession from the Government of Mexico, and the scientific surveys were intrusted to a commission headed by El Capitan Carlos Stone (General Charles Pomeroy Stone, U.S.A.). The commission headquartered at Guaymas, purchased vessels for the survey of the coast, and began operations also in the interior; Bahia Pinacati and George island (named by Hardy in 1826) were surveyed, as well as the entire Sonoran coast south of Guaymas, and "one hundred miles of coast near Tiburon", besides many hundred square miles of valuable lands. At this stage friction developed between the progressive commission and the conservative Sonorenses, which ended in the expulsion of the scientific commission by the State government.[3] By reason of the

[1] At the time of inquiry the importance of the other vocabularies was not suspected, and the interrogation was not pushed far enough to permit identification of the persons to whom they were given.

[2] Die Spuren der aztekischen Sprache im nördlichen Mexico und höheren amerikanischen Norden. Zugleich eine Musterung der Völker und Sprachen des nördlichen Mexicos und der Westseite Nordamerikas von Guadalaxara an bis zum Eismeer. Von Joh. Carl Ed. Buschmann (in Abhandlungen der Königlichen Akademie der Wissenschaften zu Berlin, aus dem Jahre 1854, zweiter Supplement-Band); Berlin, 1859, pp. 218-221 and elsewhere.

[3] Arizona and Sonora, etc., by Sylvester Mowry; New York, 1864 pp. 98-102.

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†175 premature termination of the work, few of the observations and other results were ever published. General Stone himself traveled extensively in Sonora, and delved deeply in the historical records of northern [114] Mexico; and, while there is no indication that he ever came in personal contact with the Seri, he collected and sifted current local information relating to the tribe with notable acumen. In certain "Notes" prepared in Washington in December, 1880, he wrote:

105 †175 The Curis are a peculiar tribe of Indians occupying the island of Tiburon and the neighboring coast. They are yet in a perfectly savage state, and live solely by fishing and hunting. Having been at war with the whites from the time of the first missions, they have become reduced in numbers to about 200, counting some 60 warriors. They are of large stature, well made, and athletic. In war and in the chase they make use of poisoned arrows, the wounds from which are almost always fatal. In preparing the poison, it is said they procure the liver of a deer or cow, and by irritating rattlesnakes and scorpions with it, cause it to be struck by a great many of these reptiles. They then hang up the mass to putrefy in a bag, and in the drippings of this bag they soak their arrowheads. I can not vouch for the truth of this statement, but it is current in Sonora. I was informed by a gentleman in Hermosillo that one of his servants, who was slightly shot by a Curi's arrow, died quickly from the effect of the wound (which mortified almost immediately) in spite of the best medical treatment. Their language is guttural, and very different from any other Indian idiom in Sonora. It is said that on one occasion some of these Indians passed by a shop in Guaymas, where some Welsh sailors were talking, and on hearing the Welsh language spoken, stopped, listened, and appeared much interested, declaring that those white men were their brothers, for they had a tongue like their own. They are very filthy in their habits, and are said to be worshipers of the moon.[1]

†175 Another Mexican traveler of note who collected local and contemporary information concerning the Seri, though enjoying no more than slight inimical contact with them, was Herr Clemens A. Pajeken, of Bremen (for some time a resident of California). He classed as wild Indians ("Wilde Indianer, Indios broncos") the Seri and Apache tribes. Of the former he wrote:

105 †175 Ceris. This is a small tribe, their number not exceeding 400 souls, or rather head [dessen Seelenzahl oder besser Kopfzahl]; yet the government of the State could not restrain this little band of robbers and marauders that for more than twenty years have perpetrated their atrocities on travelers between the port of Guaymas and the city of Hermosillo, the metropolis of the State. . . . The Ceris appear not to grasp the idea that they are human. Like the prey-beasts of the wilderness, they go out to slay men and animals, sparing only their own kind. In many respects they are viler than the beasts, since they slay without need merely to satisfy a lust for slaughter. They are not only the stupidest and laziest of the Indians of Sonora, but also the most treacherous and deceitful. During the Spanish rule, from the time the first visit was made to lead them toward social life, they have rebelled more than forty times. Only a couple of families [ein paar Familien] still reside in the village [Pueblo Seri], where they make ollas and subsist on the offal of the shambles. The proper home of these barbarians is the island of Tiburon and the adjacent coasts, whither they return after their outbreaks, although it is an incredibly desert region. Thence they repair to the highways to kill travelers and arri-

[113] [1] "Notes on the State of Sonora, by Charles P. Stone, 1880; Washington, 1881, p. 18. Reprinted in Historical Magazine, vol. v, 1886, pp. 161-169.

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orus, or to the ridges to steal cattle. They confine themselves to the bow and arrow, and the latter are poisoned, so that every wound made by them is deadly, or at least highly dangerous. On my second journey into the interior of the country my horse received an arrow in the hip; the arrow, which entered 4 inches, could not be withdrawn until the following day; and for seven months the wound suppurated. . . . Their chief food consists of oysters, mussels, snakes, with fish and other sea food, which they consume entirely raw and which surrounds them with an intolerable stench; though this may be partly due to their exceeding uncleanliness, since the process of washing is wholly unknown to them. Their clothing consists of a kilt of pelican skin. They tattoo their faces, and some pierce their noses to insert a certain green stone [obsidian]. They are of dark copper color, large and strongly built. Although in their faces no human sentiments can be discerned, yet they can not be called ugly. Their limbs are so beautifully proportioned that the Spanish ladies in Hermosillo view with envy the slender shapes and the comely hands and feet of the young Ceris maidens. They wear no headdresses, and as their coarse, shaggy hair is neither combed nor cleaned, it sticks out in tangled tufts in all directions like spines on a hedgehog; this alone gives them a forbidding appearance. Their speech is quite like their character; it is guttural, discordant, and meager, resembling more the howling of wild animals than human speech, wherefore it is difficult for a human to learn. They have no religion—at least, I do not deem the gambols and amusing capers in which they indulge at the new moon to be religious customs. The tribe is constantly diminishing in numbers, and it is hoped they may soon disappear from the earth by natural decrease—unless the State government sooner undertakes a war of extermination.[1]

105 175?

Herr Pajeken's record bears inherent evidence (at least to one familiar with the region) of reflecting the current local knowledge and opinion concerning the Seri with unsurpassed—indeed unequaled—fidelity; and it is also of value in that it indicates the approximate number of the tribe then surviving in Pueblo Seri, and in that it gives the contemporary estimate of the tribal population.

114 175?

Among the more careful students of the Seri at second hand should be mentioned Buckingham Smith, an enthusiastic collector, translator, and publisher of rare Americana. In the introduction to an anonymous and dateless grammar of the Heve language he wrote in 1861:

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The lower Pima are in the west of the province [of Sonora], having many towns extending to the frontier of the indomitable Seri, who live some 30 leagues to the north of the mouth of the Hiaqui, and have their farthest limit inland some dozen leagues from the sea, finding shelter among the ridges and in the neighboring island of Tiburon.

He added in a note:

The Guaima speak nearly the same language as the Seri, are few in number, and live among the Hiaqui in Belen and elsewhere, having retreated before the sanguinary fury of their conquerors.[2]

114 175?

While the scientific knowledge of the Seri began with Bartlett's visit, it assumed definite shape only through the classic researches of Don Francisco Pimentel (Count Herrse) in the early sixties. His analysis and classification of the Seri tongue rest on a short vocabulary

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[1] Reise-Erinnerungen und Abenteuer aus der neuen Welt in ethnographischen Bildern, von C. A. Pajeken; Bremen, 1861, pp. 97-99.

[2] A Grammatical Sketch of the Heve Language, translated from an unpublished Spanish manuscript in Library of American Linguistics, vol. iii, New York, 1861, p. 7.

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collected by Señor D. A. Tenochio and transmitted to the Mexican Society of Geography and Statistics. Noting the condition of the tribe at the time, Señor Pimentel wrote:

> The Seris are now reduced to a few families only, inhabiting Sonora, especially the island of Tiburon, for which reason they are also known sometimes by the name Tiburones. The Indians called Salineros, who live on the borders of Pimeria Alta, and the Tepocas, who live toward the south, belong to the Seri nation. The Seris have always been notable for their ferocity and barbarism, preferring death in war against the whites to the adoption of civilization. They are dreaded and notorious for their arrows, poisoned with a most virulent venom [empozoñadas con activísimo veneno]. They are tall and well formed, and their women are good-looking. By reason of their distrust of the whites, it has not been possible to ascertain their traditions, further than that their ancestors came from distant lands of unknown direction. Of their religion it is known that they adore daily the rising sun.[1]

After brief discussion of the grammar, and extended comparison of some sixty out of the seventy vocables selected by Señor Tenochio, he concluded:

> Although in the list of Seri words consulted the foregoing reveal analogies with those of the Mexicani group, there are, without doubt, other terms belonging exclusively to the Seri or some other branch extraneous to the Mexican group; for this reason it would appear that the idiom represents a distinct family.[2]

The list of these distinct words was appended. Referring to the dialects, Señor Pimentel expressed the opinion, based on literary references, that the "Guayma" or "Guyama", "Upanguaima", and "Cocomaques" may be considered as belonging to the Seri family.[3]

While Señor Pimentel gave credit to his informant, Señor Tenochio, he did not indicate the original source of the vocabulary; but the source may be defined approximately by a process of elimination: there is hardly a possibility that the terms were obtained from any tribesmen in Seriland, since they were all inimical to the whites, and since very few of them have ever known enough of the Spanish tongue to permit communication with the Mexicans; accordingly, it is practically certain that the Seri interpreter must have been either (1) a resident of Pueblo Seri or (2) an attaché of rancho San Francisco de Costa Rica (of which more anon); and in either case it would seem certain that the native informant could have been none other than the standard Seri-Spanish interpreter of the last half century—Kolusio. Indeed, Kolusio was, at the time, the only Seri habitué of Pueblo Seri possessing sufficient knowledge of the Spanish and enough intelligence and independence to "give his language", and was one of the two frequenters of the rancho similarly equipped.

Pimentel's contemporary, Licenciate Manuel Orozco y Berra, contributed in important measure to systematic knowledge of the Seri, which

[1] Cuadro Descriptivo y Comparativo de las Lenguas Indígenas de México, ó Tratado de Filología Mexicana, por Francisco Pimentel, segunda edición mas completa, tomo II; Mexico, 1875, p. 320. The first edition of the work was published in two volumes, dated, respectively, 1862 and 1865.

[2] Ibid., p. 321.

[3] Ibid., p. 322.

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he defined (apparently on the basis of the Tenochlo vocabulary systematized and published by Pimentel) as a distinct linguistic family with two dialectic branches,[1] viz:

IX FAMILIA.—SERI.

XXXIII. *Séri*, por los séris, séris, tiburones, tepocas, salineros, en Sonora.
01. i. *Tyaquaima*, por los upanguaimas, en Sonora.
02. ii. *Guaima*, por los guaimas, guaymas, guaymas, cocomaqueses, en Sonora.

Orozco's map assigns to the Seri family an immense area (recalling Villa-Señor's "despoblado") extending from just above the mouth of the Yaqui, northward to the thirtieth parallel on the coast, stretching inland nearly to Cucurpe, Opodepe, and Ures, and including Tiburon; the "Salineros" lying adjacent to the coast in the north, the "Tepocas" medially, and the "Guaymas" in the south, within this area. In elucidating the map he wrote, under the title "El séri.—El upanguaima.—El guaima":

The *Séris*, a tribe inhabiting Sonora, forms, with its subtribes, a separate family. By their language, by their customs, and by their physiognomy, they are completely set apart from affiliation with the surrounding nations; and apparently they have lived in the district which they now occupy from times anterior to the establishment of the Pima race and its affines; their use of poisoned arrows recalls the Caribs of the islands, as well as of the continent, and it seems not unlikely, although very curious, that they are related to them. The Séris, known also as Tiburones, a name derived from the island of Tiburon in the Mar de Cortés, which serves them as a shelter, considered as parts of their tribe the Tepocas and the Salineros.

The "Upanguaima" (a very small tribe occupying the Seri border) and the "Guaimas", as well as the "Cocomaques" were combined chiefly on the authority of Jesuit writers.[2] In describing the State of Sonora he further wrote:

The Séris, bounded by the sea on the west, the Pimas Altos on the north, the Opatas and the Pimas Bajos on the east, and the pueblos of Rio Yaqui on the south, form the smallest nation of Sonora, but at the same time the most cruel and deceitful and the least capable of reduction to political organization. Hardly uniting with the smaller pueblos as at Populo and Belen, the rest of the nation engaged so constantly in cruel warfare that it was necessary to persecute and exterminate them. . . . Small as was the tribe, three divisions are known: the Salineros, extending to the confines of Pimeria Alta; south of them the Tepocas, nearest to the island of Tiburon; the Guaymas and Upanguaymas occupying the territory adjacent to the harbor of the same name, afterward added to the pueblo at Belen and blended with the Indians of Rio Yaqui. Ferocious and savage, they preferred to die in war against the whites rather than adopt their usages and customs; lazy and indolent, they so surrendered themselves to the passion of intoxication that mothers conveyed aguardiente from their mouths to the smallest babes. They are tall and well formed, the women not lacking in beauty. The poison with which they envenom their arrows is proverbial for deadly effect; they compound the venomous juice from a multitude of ingredients and fortify the compound by superstitious practices.[3]

[1] Geografía de las Lenguas y Carta Etnográfica de México, Precedidas de un Ensayo de Clasificación de las Mismas Lenguas y de Apuntes para las Investigaciones de las Tribus, por el Lic. Manuel Orozco y Berra; Mexico, 1864, p. 39.

[2] Ibid., p. 42.

[3] Ibid., pp. 259–264.

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The classifications by Pimentel and Orozco were widely accepted, and were given still wider currency by republication in standard works, such as the classic dictionary of the Nahuatl tongue by Rémi Siméon, in which is defined "La famille *Seri*, dans la Sonora, avec 3 idiomes: le *Seri*, le *Guaima* et l'*Upanguaima*."[1] In his ethnographic tableau of the nations and languages of Mexico, M V. A. Malte-Brun followed Orozco almost literally, save that he emphasized the suggested Caribbean affiliation of the Seri, saying:

> They make use of poisoned arrows, and when one studies their manners, their habits, their modes of life, one is tempted to find in them a strong affinity [grande affinité] with the Caribs of the continent and the islands.[2]

During the seventies Hubert Howe Bancroft was engaged in collecting material for his monumental series of works, and in arranging the ethnologic data for publication. Of the Seri he wrote:

> East of the Opata and Pima bajo, on the shores of the Gulf of California, and thence for some distance inland, and also on the island of Tiburon, the Cori language with its dialects, the Guaymi and Tepoca, is spoken. Few of the words are known, and the excuse given by travelers for not taking vocabularies is, that it was too difficult to catch the sound.' It is represented as extremely harsh and gutteral in its pronunciation and well suited to the people who speak it, who are described as wild and fierce. It is, so far as known, not related to any of the Mexican linguistic families.[3]

The only vocabulary of this language which Bancroft was able to find was added (without reference to the aboriginal source); it comprised the eleven words collected by Lavandera and discussed by Ramirez in 1850.[4]

The Seri, with their affines, the Tepoka, Salinero, Guayma, and Upanguayma, were included by Bancroft in his arbitrarily defined "Northern Mexican family".[5] The accompanying map (which is highly inaccurate) located the "Salineros" on the gulf coast, considerably north of the common embouchure of "R. de Horcasitas" and "Rio de Sonora", while the "Seris" were more conspicuously represented about the broad estuary into which the rivers embouch, and the "Tepocas" were located still farther southward on both Tiburon and the mainland, the island being placed too far southward and the river much too far northward.[6] Numerous data relating to the Seri were incorporated in his text; all were second-hand, though many were taken from unique or rare manuscripts. The coastwise natives of Sonora were said to "live on pulverized rush and straw, with fish caught at sea or in artificial enclosures"; mention was made of the allegation that "the Sali-

[1] Dictionnaire de la Langue Nahuatl ou Mexicaine, rédigé d'après les Documents Imprimés et Manuscrits les plus authentiques et précédé d'une Introduction. Paris, 1885, p. xviii.

[2] Tableau de la Distribution ethnographique des Nations et des Langues au Mexique: Congrès International des Américanistes, Compte-rendu de la deuxième session, tome II, 1878, p. 37.

[3] The Works of Hubert Howe Bancroft, vol. III (The Native Races, vol. III, 1883, p. 702). The "east" in this quotation is obviously a misprint for west.

[4] Ibid., p. 703.

[5] Op. cit., vol. I, pp. 551-555.

[6] Ibid., p. 673.

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nerve sometimes eat their own excrement"; anthropophagy was noted, but as pertaining rather to the interior than to the coastwise tribes;[1] and prominence was given to the Seri arrow poison, of which an early author wrote:

> The poison with which they envenom the points of their arrows is the most active that has ever been known here. . . . It has not been possible to ascertain with certainty the deadly materials of which this pestilential compound is brewed. Many things are alleged, e. g., that it is made from the heads of vipers, irritated and decapitated at the moment of striking their teeth into a piece of lung or of half putrefied human flesh.

Reference was made also to the "magot" (probably the yerba mala of the modern Mexicans) as a source of arrow poison.[2] The girls' puberty feast was said to be kept up for several days among the Seri and Tepoka, and the former were said to "superstitiously celebrate the new moon, and bow reverentially to the rising and setting sun", and also to "employ charms in their medical practice".[3] Finally, the constituent tribes were discriminated in a manner recalling the persistent assumption that the parasite-converts at the missions fairly represented the Seri:

> The Tepocas and Tiburones are fierce, cruel, and treacherous, more warlike and courageous than the Ceris of the mainland, who are singularly devoid of good qualities, being solitarily stupid, lazy, inconstant, revengeful, depredating, and much given to intemperance. Their country even has become a refuge for evil doers. In former times they were warlike and brave, but even this quality they have lost, and have become as cowardly as they are cruel.[4]

It is evident that this characterization of "the Ceris of the mainland" was based on the degraded scavengers outlawed by the tribe and attached to the missions and pueblos during much of the historical period.

It was also during the seventies that the errors and uncertainties of three and a half centuries concerning the coasts of the Californian gulf were finally brought to an end through the surveys of Commander (now Admiral) George Dewey, U. S. N., and the officers of the United States ship *Narragansett*, under the direction of the Hydrographic Office of the United States. These surveys resulted in trustworthy and complete geodetic location of all coastwise features, in geographic placement of the entire coast-line, in soundings of such extent as to determine the bottom configuration, in tidal determinations, in recognition of the currents, in definition of harbors and anchorages, and eventually in a series of elegant and accurate charts (dated 1873–75) available for the cartographers and navigators of the world. As the largest island in the gulf, Tiburon received especial attention; its coast was accurately surveyed and mapped, while the interior was sketched in considerable detail, and the adjacent channels were carefully defined and sounded.

[1] The Works of Hubert Howe Bancroft, vol. III (The Native Races, vol. III, 1882), p. 576.
[2] Ibid., p. 578.
[3] Ibid., pp. 581, 597, 598.
[4] Ibid., p. 598.

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Naturally the surveyors came into contact with the Seri tribesmen. Of them Commander Dewey wrote:

> During the greater part of the year Tiburon Island is resorted to by the Seris (or Coras) tribe of Indians, who inhabit the adjacent mainland, and their huts and encampments may be seen in many places along the shore, principally on the eastern side of the island. They are reputed to be exceedingly hostile and to use poisoned arrows in opposing the landing of strangers on what they consider their domain, but during the stay of the *Narragansett* in the vicinity they were very friendly. At first they were shy and made threatening gestures, but soon finding that our intentions were peaceable, became friendly and returned our visits to the ships by frequent and lengthy calls on board ship. They are very expert in hunting with the bow and arrow and in catching fish and turtles, which abound in the surrounding waters. The canoes of these Indians deserve especial mention. They are made of long reeds, which are bound together with strings after the manner of fascines, three of which when fastened together . . . have sufficient buoyancy to support one or two persons. They kneel in these canoes when paddling, the water being at the same level in the canoe as outside of it.[1]

Illustrations of the "Tiburon canoe" (or balsa), drawn by H. Von Bayer, were also introduced.[2] In addition Mr Von Bayer succeeded in obtaining two photographs of Seri Indians, taken on shipboard; one of these is of special interest in that it illustrates the peculiar attitude of the Seri archer in the act of using his weapon.[3]

Unfortunately the surveys were confined to the coast, and the interior remained unmeasured and unmapped save on the basis of tradition and travelers' tales, supplemented by a few vague itineraries and traverses. Except along the international boundary and the railway (Ferrocarril de Sonora), the locations of pueblos and ranchos remained guesses, the delineation of mountains remained a work of imagination, and even the best cartographers continued to run in rivers at random or in such wise as to afford artistic effect.[4]

In 1879 M Alphonse L. Pinart traveled extensively in northern Mexico and southwestern United States, and made considerable linguistic collections among various tribes. Desiring to obtain a Seri vocabulary, he planned a visit to the tribal territory; but on reaching Caborca in March he was met by the information that the Seri were on the warpath, and had recently devastated a hacienda on their frontier and slain more than a dozen white settlers.[5] Thence he repaired

[1] Publication No. 56, U. S. Hydrographic Office, Bureau of Navigation. The West Coast of Mexico, from the Boundary Line between the United States and Mexico to Cape Corrientes, including the Gulf of California (revised edition), 1889, p. 145.

[2] Ibid., pl. xv, p. 136 (one of these illustrations is reproduced in figure 28).

[3] The negatives of these pictures were retained by Mr Von Bayer, and have been kindly turned over to the Bureau of American Ethnology. Unfortunately the archery negative had been shattered, but enough of the fragments were preserved to show all essential details and to afford a basis for the drawing reproduced in plate xxxii.

[4] The imposing official map of 1890, titled Carta General de la Republica Mexicana, formada en el Ministerio de Fomento con los datos mas recientes, por disposicion del Secretario del Ramo, General Carlos Pacheco, engraved and printed by Erhard Hermanos, Paris, on a scale of about 32 miles to the inch, represents Rio Bacuachi as about the right length and with its course in about the right location, but as running at almost exactly right angles to its actual course; and it contains divers other equally startling errors.

[5] Recorded by Gatschet, Zeitschrift für Ethnologie, Berlin, Band xv, 1883, p. 136. The location of the hacienda was not specified, but there are local traditions of Seri raids about that time, both at Hacienda Seras (between Caborca and Libertad anchorage) and at Bacuachito.

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to Pueblo Seri, and early in April obtained there a Seri-Spanish vocabulary of several hundred words, with a number of short phrases throwing some light on the grammatic construction. This record was transmitted to Dr Albert S. Gatschet. It comprises a title page inscribed "Vocabulario de la lengua Séri | Interprete el Gl. de los Seris | y otro Indio. | Pueblo de Seris | 4 Abril 1879"; four foolscap sheets (written on both sides, thus making 16 pages) of vocabulary; and a final page bearing two short phrases and inscribed "Los Séris, me dice el general de ellos, son como doscientos hombres de llevar armas—viven todavia parte en la isla de Tiburon, parte en la costa.[1] Pueblo de Seris, 4 Abril, 1879, Alph. Pinart." A transcript of this invaluable vocabulary is preserved in the Bureau of American Ethnology. There is nothing either in the original vocabulary or in the known correspondence relating to it to identify the aboriginal informant, but the identification is made easy through the coincident testimony of living witnesses and the unmistakable implication of the historical records to the effect that there was at that time but a single Seri Indian[2] resident at Pueblo Seri—i. e., the official interpreter, "El General" Kolusio. This identification is strengthened by the remarkable similarity between this vocabulary and that of Bartlett, a similarity made the more striking by the fact that one was recorded in English, the other in Spanish; the identification is supported, too, by Kolusio's memory of "giving his language" to a stranger "not a Mexicano" yet familiar with the Spanish; and the identification is practically established by the considerable number of terms expressing concepts alien to the Seri (e. g., ax, adobe, house, horse, hog, field, irrigate, pigeon, thresh, tobacco, shirt, the names of the months, etc), evidently acquired through long and intimate acquaintance with Mexican customs and domiciles and modes of thought—for all these concepts were familiar enough to Kolusio, yet to no other known Seri Indian of recent decades. Accordingly it may be deemed practically certain that M Pinart's vocabulary, like that of Commissioner Bartlett, was obtained from Kolusio; and it is at least strongly probable that both the Lavandera-Ramirez and the Tenochio-Pimentel vocabularies were derived from the same aboriginal source—an indubitably excellent source, save for the occasional interjection of alien notions, and the infrequent substitution of foreign equivalents for forgotten terms.

Barred from Seriland by the current war craze, M Pinart was prevented from obtaining much collateral information concerning the Seri; but he concluded (on grounds not stated) that "the Tepoca spoken on

[1] "The Seris, the chief tells me, comprise about 200 men fit to bear arms—they still live part on the island of Tiburon, part on the coast."

[2] M Pinart's reference to his interpreter is not only impersonal but ambiguous. "Interpreter by the chief of the Seri and another Indian" might be considered to imply two Seri Indians, though it may, with equal linguistic probability, be interpreted to mean the specified Seri and another Indian; and while the temporary presence of a second Seri at the pueblo seems possible, the sum of probabilities points so clearly the other way as to demand the latter interpretation.

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the south of Rio del Altar is identical with the Seri",[1] and also that "the Guaymas were of the stock of the southern Pimas, or Nebomes".[2]

While M Pinart failed to publish, his linguistic collections were compared, systemized, and made public by Dr Albert S. Gatschet in a notable memoir on "Der Yuma-Sprachstamm", 1883. Comparing the Seri, as represented by the Pinart and Bartlett and Pimentel vocabularies, with the Yavapai, M'Mat, and incidentally with the Kouino, Tonto, Cochimi, and other tongues, Dr Gatschet was led to adopt the suggestion of Professor Wilhelm Herzog[3] that the Seri is a dialect of the Yuman stock. In the comparative vocabulary, which comprises about a hundred and forty Seri words (selected from the 611 terms in the Pinart collection), there are perhaps a dozen terms presenting some similarity to those of one or more Yuman dialects; among these are terms for ax, tree, split, tobacco, heaven, pigeon, dog, and others of presumptively or certainly alien character.[4]

Herzog's suggested classification, with Gatschet's indorsement, was accepted even more promptly and widely than the earlier classifications of Pimentel and Orozco. It was tacitly adopted by Director J. W. Powell in his classic arrangement of Indian linguistic families of America north of Mexico;[5] it was explicitly approved by Adolph F. Bandelier in his "Final Report of Investigations";[6] and it was implicitly accepted and fortified by Dr Daniel G. Brinton in his work on "The American Race".[7] Brinton's Seri words were "chiefly from the satisfactory vocabulary obtained by the late John Russell Bartlett"; of the 21 terms, about 8 (including that for the alien concept "house") suggest affinity with the Yuman, chiefly in the Mohave dialect; the others are either wholly distinct or only superficially similar, e. g., in the concurrence of a consonant or two, or merely in the correspondence in number of syllables.[8]

Stated briefly, the scientific researches relating to Seriland and the Seri during the fifty years from the fourth decade of the century to the middle of the last decade resulted in (1) a satisfactory survey of the coast, (2) the collection of two excellent Seri vocabularies, with a few others of less extent, and (3) two discrepant linguistic classifications of the tribe, both widely quoted and accepted.

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[1] Gatschet, op. cit., p. 122.

[2] Bandelier, Final Report of Investigations among the Indians of the Southwestern United States, part I, in Papers of the Archæological Institute of America, American series, III, Cambridge, 1890, p. 78. As already noted, it is probable that the Guaymas lost their "antigua lengua" (Ramirez, op. cit. p. 148) long before M Pinart's visit; and pending definite statement of the facts on which his conclusion rests it is necessary to retain the classification based on specific and repeated, albeit unskilled, observations of the identity of the Guaymas speech with that of the Seri.

[3] In correspondence with Dr Gatschet, op. cit., p. 122.

[4] Dr. Gatschet has recently revised the data and recognized the distinctness of the Seri tongue (Science, new series, vol. XII, 1900, p. 936-940).

[5] Seventh Annual Report of the Bureau of Ethnology, 1885-'86; Washington, 1891, p. 127.

[6] Op. cit., p. 74.

[7] The American Race: A Linguistic Classification and Ethnographic Description of the Native Tribes of North and South America; New York, 1891, p. 238.

[8] Mr. Hewitt's discussion (preface, pp. 246-248) gives fuller details of this short vocabulary.

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The Papago, of the same region and linguistic stock, have a racing game in which a ball of wood or stone caught on the foot is thrown, followed, and thrown again until the two or more rival racers have covered 30 to 40 miles in the course of a few hours; and their feats as couriers and trailers are quite up to those of the Opata. Yet among all these tribes, and among the Mexicans as well, the Seri are known as *the* runners par excellence of the Sonoran province; and it is but natural that their astounding swiftness and lightness of foot should have brought them an appellation among contemporaries to whom these qualities peculiarly appeal.

Accordingly, both derivation and connotation give meaning to the name, and warrant the rendering (much weakened by linguistic infelicities) of "spry" or "spry-moving", used in substantive sense and with an intensive implication.

The chronicles of the tribe, especially those written during the seventeenth and eighteenth centuries, indicate that the alien designation was applied loosely and with little appreciation of the tribal organization, just as was the case elsewhere throughout the continent. Gradually the chroniclers took cognizance of intertribal and intratribal relations, and introduced various distinctions in nomenclature expressing tribal or subtribal distinctions of greater or less importance. One of the earliest distinctions was that between the Seri and the Tepoka, and this distinction has been consistently maintained by nearly all later authorities, despite the commonly accepted fact (brought out most authoritatively by Hardy) that the tongues of the tribes are substantially alike. Another early distinction was that made between the Seri and the Guayma; it was based primarily on diversity of habitat and persistent enmity, though all the earlier authorities agreed, as well shown by Ramirez, that the tongues were essentially identical. The distinction has been maintained by most authorities and strongly emphasized by one (Pimart, as quoted by Bandelier), and since the Guayma are extinct, and hence beyond reach of direct inquiry, the early interpretation of tribal relation must be perpetuated.[1] Still another distinction was that made between the Upanguayma and the Guayma, and inferentially the Seri also; although the grounds for this distinction were not specifically stated, it seems to have grown out of diversity in habitat merely; but there were clear implications that the tribe or subtribe was affiliated linguistically with the Guayma, and hence with the Seri, and this assignment has been adopted by leading authorities, including Pimentel and Orozco. Among the earlier distinctions based on indus-

[1] In view of the clear indications, both a priori and a posteriori, that the latest Guayma survivors must have taken the language of the Pimas (Yaqui) tribesmen with whom they found refuge, and in view of his failure thus far to present his data for public consideration, M Pinart's inference that the Guayma belonged linguistically to the Pima stock can hardly be admitted to hold against the specific statements of the Jesuit missionaries and such accomplished inquirers as Ramirez and Pimentel.

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trial factors was the setting apart of the Salineros, or Seri Salineros; yet this distinction, fortuitous and variable at the best, expressed no essential character and has not been maintained. A much later distinction was that between the Seri and Tiburones, emphasized by Mühlenpfordt and exaggerated by Buschmann; but there seem to have been no better grounds for it than misapprehensions naturally attending a slowly crystallizing nomenclature. In any event it has not been maintained.

At several stages the chroniclers coupled the Seri with other tribes, on various grounds: in the eighteenth century they were thus combined with the Pima, the Piato, and especially the Apache tribes. In the earlier half of the nineteenth century they were frequently coupled in similar fashion with the Pima and Apache tribes, and in the later half of the nineteenth century, and even in its last lustrum, they have been similarly combined with the Yaqui. The later combinations seem to explain the earlier: the Yaqui outbreaks withdraw portions of the arm-bearing population from the Seri frontier, and the marauders take advantage of the withdrawal so regularly that a Yaqui scare is invariably followed by a Seri scare, and hence the two warlike tribes are constantly associated in the minds of the Sonorenses as synchronous insurrectionists; and scrutiny of the earlier chronicles indicates that most of the so-called combinations of former times were of similar sort.

On putting the chronicles together, it seems clear that the term "Seri" was originally of lax application, but was gradually restricted to the tribe inhabiting Tiburon and ranging adjacent territory, including the collingual but inimical Guayma and Upanguayma, and also the collingual and cotolerant Tepoka; and that the various Piman tribes, as well as the Apache, were always distinct, and commonly if not invariably inimical.

The ethnic relations of the Seri people attracted early and repeated attention. Humboldt gave currency, albeit not unquestioningly, to a supposed Chinese or related Oriental affiliation; Hardy noted the similarity of the Seri tongue to that of the Patagonians; Lavandera classed the language as Arabic; Stone and Bancroft circulated a supposed identification of the speech with the Welsh; Ramirez, and more especially Pimentel, narrowed the field of affiliation to Mexico and defined the tongue as distinct; Orozco y Berra, and more especially Malte-Brun, slightly reextended the field and suggested affiliation with the Caribs; while Herzog, Gatschet, and Brinton reextended the field in another direction and saw, in a vocabulary obtained from a Seri scion but alien thinker, similarities between the Serian and Yuman tongues. The recent researches tend strongly to corroborate the evidence collected and the conclusions reached by Ramirez and Pimentel; for the somewhat extended comparisons between the Serian and neighboring languages (introduced and discussed in other paragraphs) indicate that the

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Seri tongue is distinct save for two or three Cochimi or other Yuman elements, which may be loan words such as might readily have been obtained through the largely inimical interchange of earlier centuries described by Padre Juan Maria de Sonora and other pioneer observers—certainly the slight and superficial similarities with other tongues of the region seem insufficient to meet the classific requirement of supposititious descent from "a common ancestral speech".[1] Accordingly the group may be defined (at least provisionally) as a linguistic family or stock, and may be distinguished by the family name long ago applied by Pimentel and Orozco, with the termination prescribed in Powell's fifth rule,[2] viz, *Serian*. Conformably, the classification of the group would become—

Serian stock, comprising—
- Seri tribe, including Tiburones and (certain) Salineros;
- Tepoka tribe;
- Guaymas tribe;
- Upanguaymas tribe.

Naturally this classification is provisional in certain respects. It is little more than tentative in so far as the Tepoka are concerned, since no word of the Tepoka tongue has ever been recorded, so far as is known, and since the tribe is still extant and within reach of research; it must be held provisional also in respect to the separateness of the stock, which may be found in the future to be affiliated with neighboring stocks, though the effect of the more recent and more critical researches in eliminating supposed evidences of affiliation points in the opposite direction. The arrangement is in some measure provisional also with respect to the relations between the long-extinct Guaymas and Upanguaymas and the type tribe, especially since contrary suggestion has been offered in terms implying the existence of unpublished data; yet the presumption in favor of the critical work by Ramirez, Pimentel, and Orozco is so strong that practically this feature of the classification may be deemed final.

No attempt has been made to render the tribal synonymy exhaustive, though search of the records has incidentally brought out the more important synonyms, as follows:

Seri Tribe

CERIS—1826; Hardy, Travels, p. 26.
CERI—1875; Pimentel, Lenguas Indígenas, tomo II, p. 229.
CERIS—1745; Villa-Señor, Theatro Americano, p. 391.
CERIS TEPOCAS—1850; Velasco, Noticias Estadísticas, p. 132.
HERI—1851; Buschmann, Die Spuren der aztekischen Sprache, p. 271.
HERIS—1645; Ribas, Triumphos de Nuestra Santa Fee, p. 558.
HYRISES—1620 (?); Van der Aa, map.

[1] Indian linguistic families, by J. W. Powell, in Seventh Annual Report, Bureau of Ethnology, 1885, p. 11 (1891), p. 11.
[2] Ibid., p. 98.

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the Seri are absolutely without extratribal affiliations, or even sympathy. When the chronicles of three centuries are scanned in the light of recent knowledge, it seems practically certain that they have been equally isolated since the dawn of Caucasian history in Mexico; and both recent data and the chronicles combine with the principles of demotic development to indicate that the Seri have stood alone from the beginning of their tribal career, and have never foregathered with the neighboring tribes of distinct blood, distinct arts and industries, distinct organization, distinct language, and distinct thought and feeling.

The present isolation of the Seri throws light on their early history and reveals the extent of the misapprehension of the pioneer missionaries, who half deluded themselves and wholly deluded distant readers into the notion that the Seri were really proselyted and actually collected in the mission adjuncts of military posts established to protect settlers against forays of the tribe; for, as illumined by later and fuller knowledge of the tribal characteristics, the chronicles are seen to indicate merely that a few captives, malingerers, cripples, spies, and tribal outcasts were harbored at the missions until death and occasional escapes brought the colonies to a natural end, with no real assimilation of blood or culture on either side. So, too, the persistent tribal antipathy reveals the error of confounding the independent or even inimically related outbreaks of the Seri and of the Pima or Apache with the concerted action of confederated tribes. Doubtless the ever-watchful spies from Tiburon habitually gave notice of the disturbance due to outbreaks of contemporary tribes, just as they do today when the local soldiery are withdrawn for duty on the Yaqui frontier; naturally the civil and military authorities were thereby led to provide for protection against the Seri and Pima, against the Seri and Pima, or against the Seri and Apache at each period of disturbance, just as they provided against the Seri between periods; and it would appear that this association in thought and speech led to the unconscious magnification, in the minds of the chroniclers, of a supposed alliance.

In brief, the tribal relations of the Seri seem always to have been antipathetic, especially toward the aboriginal tribes of alien blood, in somewhat less measure toward Caucasians, and in least—yet still considerable—degree toward their own collinguals and (presumptive) consanguineals.

POPULATION

So far as could be ascertained by inquiries of and through Mashém in 1894, the Seri tribe then comprised about 60 or 70 warriors, with between three and four times as many women and children—i. e., the population was apparently between 250 and 350. The group of about 60 (including 17 warriors) seen at Costa Rica was evidently growing rapidly, to judge from the proportion of youths of both sexes, infants in arms, and pregnant women; and there are other indications that

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301 [304] The second mutilation was the only corporeal modification noted by early missionaries and explorers—it was the perforation of the nasal septum for the insertion of a skewer, perhaps of polished stone (though doubtless more commonly of bone), to which swinging objects were attached. One of the most useful records is that of the Jesuit, Padre Joseph Och, who described the nasal attachment as a small, colored stone suspended by cords from the perforated septum, and guarded with such jealous veneration that "one must give them at least a horse or a cow for one" (ante, p. 78); while according to Hardy's record, the nasal fetish is "a small, round, white bone, 5 inches in length, tapering off at both ends, and rigged something like a cross-jack yard."[1]

● [114]

[237] [291]

FIG. 7.—Snake-skin belt.

The custom is apparently obsolete, and nothing is known directly of details or motives.

301 304 Excepting these mutilations the corporeal decoration of the Seri is apparently limited to the face-painting: among the 60 individuals at Costa Rica in 1894 there was no trace of tattooing or scarification of face, limbs, or body; there were no labrets or earrings, and neither lips nor ears were pierced, nor were nasal septa observed to be perforated in accordance with the reputed ancient custom; the teeth were neither filed nor drilled; no indications of amputation or other maiming (save the removal of the incisors) were observed—indeed, the instinct for physical markings of symbolic or decorative character, which seems to be normal to primitive men, was apparently satisfied by the prevalent and persistent face-painting among the females.

291 The extra-corporeal decorative devices are of a meagerness and pov-

[1] Travels, p. 286.

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the turtle is either drowned or driven ashore, or else lifted on the craft.[1] Immediately on landing the quarry, the plastron is broken loose by blows of the hupf[2] and torn off by vigorous wrenches of the warriors and their strong-taloned spouses in the impetuous fury of a fierce blood-craze like that of carnivorous beasts; the blood and entrails and all soft parts are at once devoured, and the firmer flesh follows at a rate depending on the antecedent hunger, both men and women crushing integument and tendon and bone with the hupf, tearing other tissues with teeth and nails, mouthing shreds from the shells, and gorging the whole ravenously if well ahungered, but stopping to singe and smoke or even half roast the larger pieces if nearer satiety. If the quarry is too large for immediate consumption and not too far from a rancheria the remnants (including head and flippers and shells) are hoisted to the top of the jacal immediately over the open end—the conventional Seri larder—to soften in the sun for hours or days; and on these tough and gamey tidbits the home-stayers, especially the youths, chew luxuriously whenever other occupations fail. In times of plenty, such sun-ripened fragments of reeking feasts are rather generally appropriated first to the children and afterward to the coyote-dogs; and it is a favorite pastime of the toddlers to gather about an inverted carapace on hands and knees, crowding their heads into its noisome depths, displacing the rare scavenger beetles and blowflies of this arid province, mumbling at the cartilaginous processes, and sucking and swallowing again and again the tendonous strings from the muscular attachments, until, overcome by fulness and rank effluvia, they fall asleep with their heads in the trough—to be stealthily nudged aside by the cringing curs attached to the rancheria. Com-

[1] A lively and explicit account of Seri turtle-fishing appears in Hardy's Travels in the Interior of Mexico, 1829, pp. 396-397: "Bruja's bay is of considerable extent, and there are from five to three fathoms water close to Arnold's island, in the neighborhood of which the Indians catch abundance of turtle in a singular manner. I have already described their canoes, which in Spanish are called 'balsas'. An Indian paddles himself from the shore on one of these by means of a long, elastic pole of about 12 or 14 feet in length, the wood of which is the root of a thorn (*Mimosa*) bush, growing near the coast; and although the branches of this tree are extremely brittle, the underground roots are as pliable as whip-cord and nearly as dark in color. At one end of this pole there is a hole an inch deep, into which is inserted another bit of wood, in shape like an acorn, having a square bit of iron 6 inches long fastened to it, the other end of the iron being pointed. Both the bolt and cup are first moistened and then tightly inserted one within the other. Fastened to the iron is a cord of very considerable length, which is brought up along the pole, and both are held in the left hand of the Indian. So securely is the nail thus fixed in the pole that although the latter is used as a paddle it does not fall out.

"A turtle is a very lethargic animal, and may frequently be surprised in its watery slumbers. The balsa is placed nearly perpendicularly over one of these unsuspecting sleepers, when the fisherman, softly sliding the pole through the water in the direction of the animal till within a foot or two of it, he suddenly plunges the iron into its back. No sooner does the creature feel itself transfixed than it swims hastily forward and endeavors to liberate itself. The slightest motion of the turtle displaces the iron point from the long pole, which would otherwise be inevitably broken and the turtle would as certainly be lost; but in the manner here described it is held by the cord fastened on to the iron which has penetrated its back till, after it has sufficiently exhausted its strength, it is hoisted on board the canoe by the fisherman, who proceeds to the shore in order to dispose of his prize."

[2] The universal stone implement of the Seri, improvised from a cobblestone and used in nearly every industrial occupation (see pocket, p. 23b); the designation is mimetic, or onomatopoetic, from the sound of the stroke, particularly on animal tissue.

1: McGee E-5 (1894-1895)1898 NU31 Ser1 NU31

monly the carapace and the longer bones from the flippers of the larger specimens are preserved entire for other uses, and are cleaned only by teeth and talons and tongues, aided by time but not by fire; but the plastron, unless broken up and consumed immediately, is subjected to a cooking process in which it serves at once as skillet and cutlet—it is laid on the fire, flesh side up, and at intervals the shriveling tissues are clawed off and devoured, while at last the scorched or charred scutes themselves are carried away to be eaten at leisure.[1]

Perhaps the most significant fact connected with the Seri turtle-fishing is the excellent adaptation of means to ends. The graceful and effective balsa is in large measure an appurtenance of the industry; the harpoon is hardly heavier and is much simpler than a trout-fishing tackle, yet serves for the certain capture of a 200-pound turtle; and the art of fishing for a quarry so shy and elusive that Caucasians may spend weeks on the shores without seeing a specimen is reduced to a perfection even transcending that of such artifacts as the light harpoon and fragile olla. Hardly less significant is the nonuse of that nearly universal implement, the knife, in every stage of the taking and consumption of the characteristic tribal prey; for it may fairly be inferred that the comparative inutility of the knife in dissevering the hard and horny chelonian derm, and the comparative effectiveness of the shell-breaking and bone-crushing hupf, have reacted cumulatively on the instincts of the tribe to retard the adoption of cutting devices. Of much significance, too, is the limited cooking process; for the habitual consumption of raw flesh betokens a fireless ancestry at no remote stage, while the crude cooking of (and in) that portion of the shell not consecrated to other uses might well form the germ of broiling or boiling on the one hand and of culinary utensils on the other hand. On the whole, the Seri turtle industry indicates a delicate adjustment of both vital and activital processes to a distinctive environment, in which the abundant chelonian fauna ranks as a prime factor.

Analogy with other primitive peoples would indicate that the flesh of the turtle is probably tabu to the Turtle clan, that the consumption of the quarry is preceded by an oblation, and that there are seasonal or other ceremonial rites connected with turtle-fishing; but no information has been obtained on any of these points save a few vague and unwilling suggestions from Mashém tending to establish the analogy.

Flotsam and stolen metal have played a rôle in the industries of Seriland so long that it is difficult to learn much of the turtle-fishing

[1] These details were furnished largely by Mashem and Sohor Encinas, but were verified in essentials by personal observation of dietetic customs at Costa Rica in 1894, and they were corroborated by observations on both shores of El Infiernillo and Bahía Kanknak in 1895. Especially significant were the remnants of a turtle feast on the southern beach of Punta Miguel interrupted by the approach of the exploring party. The indications were clear that the turtle had been landed and largely consumed before the fire was kindled, and that the cooking of the firmer portions had hardly been commenced before the camp was abandoned so hurriedly that not only the nearly eaten turtle and the glowing embers, but the harpoon (the specimen illustrated in figure 39), the still bloody and greasy hupf (that represented in plate LVI), and the fire-sticks were left behind. Gnawed fragments of charred plastrons are common relics about hastily abandoned camps generally.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

those so fully described by Hough,[1] and serves to explain the otherwise obscure genesis of the fire-sense, which must have accompanied and shaped that most significant of all steps in human progress, the conquest of fire.

The modern coordinate of the Seri arrow is the bow, made preferably from a straight and slender branch of the palo blanco. A typical specimen is illustrated in plate XXX; it is 4 feet 9½ inches long, with the outer face convex and the inner face flat; greatest width 1⅞ inches, narrowed to 1¼ inches at the hand-hold; thickness at the hand-hold 1 inch, thinning to five-eighths inch at 8 inches from this point; tapering gradually in both dimensions toward the extremities, which are rudely notched to receive the cord (of mesquite-root fiber). The specimen illustrated has been cracked and repaired in two places; in one place the repair was effected by a rough wrapping of sinew, and in the other by slipping over the wood a natural sheath of rawhide from the leg of a deer. The specimen is of added interest in that it combines bow and nether fire-stick ("Strong-Kind-Mother"), one of the friction holes being worn out to the notched margin, and the other remaining in usable condition, as shown in the enlarged marginal drawing.[2]

Compared with the delicately finished and graceful arrow, the typical bow is a rude and clumsy device; it displays little skill in the selection and shaping of material, and evidently involves little labor in manufacture—indeed, the indications are that more actual labor is spent in the construction of a single arrow than in the making of a bow, while the arrow-making is expert work, betokening craft of a high order, and the bow-making little more than simple handiwork of the lowest order. The comparison affords some indication of the genesis of Seri archery, and at the same time corroborates the independent suggestion that the arrow is of so much greater antiquity than the bow as to represent a distinct stage in cultural development—though the precise cultural significance of the bow is not easily ascertained.

Efforts were made to have different Seri warriors at Costa Rica in 1894 assume the normal archery attitude, with but moderate success, the best pose obtained (illustrated in plate XXVIII) being manifestly unnatural and a mere reflection of the attitude in the mind of the Caucasian poser; while the results of inquiries served only to indicate that the normal archery attitude was purposely avoided for reasons not ascertained. Fortunately another observer was more successful: in the course of the United States hydrographic surveys in 1873, Commander (now Admiral) Dewey received several visits from Seri warriors on board the *Narragansett*; and on the occasion of one of these visits, Mr Hector von Hayer, of the hydrographic party, caught a photograph of an archer in the act of drawing his bow. The negative was accident-

[1] Fire-making apparatus in the U. S. National Museum; Smithsonian Report for 1888, pt II, 1890, pp. 531-587, and elsewhere.

[2] Ordinarily the nether fire-stick is of soft and porous wood, datum palm-wood and water-logged pine being preferred.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

ally shattered, and no prints are known to have been made from it; but the fragments were carefully joined, and were kindly transferred to the Bureau by Mr Von Bayer in 1897, and from them plate XXIX was carefully drawn. The posture (partly concealed by the drapery) is extraordinary, being quite beyond the reach of the average human, and impossible of maintenance for any considerable interval even by the well-wonted Seri. The posture itself partly explains the difficulty of inducing the warriors at Costa Rica to assume it, since it is essentially a fleeting one, and indeed but a part of a continuous and stressful action—it is no less difficult to assume, or to catch in the camera, than the typical attitude of a baseball pitcher in action. The posture thus fortunately caught is quite in accord with the accounts of Seri archery from the esoteric side given by Mashém, and with the exoteric observations of Señor Encinas, Don Andrés, and others; for all accounts agree in indicating that the archer commonly rests inert and moveless as the watching feline up to a critical instant, then springs into movement as swiftly as the leaping jaguar, and hurls, rather than shoots, one, two, or three arrows before rushing in to the death or skulking to cover as the issue may require.

The Seri archery habit is in every way consistent with the general habits of the tribe, alike in the chase and in warfare, in which the tribesmen, actuated by the fierce blood-craze common to carnivores, either leap on their prey with purpling eyes and gnashing teeth, or beat quick and stealthy retreat; and it is especially significant in the light thrown on the bow as a device for swift and vigorous rather than accurate offense, an apparatus for lengthening the arm still more than does the harpoon, and at the same time strengthening and intensifying its stroke. The quick-changing attitudes of half hurling are equally suggestive of the use of the atlatl, and support Cushing's hypothesis[1] that the bow was derived from the corded throwing-stick. While the critical posture of Seri archery is unique in degree if not in kind in the western hemisphere, so far as is known, an approximation to it (illustrated in fig. 22) has been observed in Central Africa.[2] On the whole the Seri mode of using the bow, like its crude form and rude finish, indicates that it is a relatively new and ill-developed artifact, possibly accultural though more probably joined indigenously with the archaic arrow to beget a highly effective device for food-getting as well as for warfare; while the genetic stages are still displayed not only in the homologies between arrow and harpoon, but by the common functions of both arrow and bow with the fire-sticks.

Concordantly, as indicated by the use of the archery apparatus, the individual taking of large game is effected either by stealthy stalking or by patient ambuscade ended by a sudden rush; when, if the chase is successful, the quarry is rent and consumed as at the finish of the

[1] The Arrow: Proceedings Am. Ass. Adv. Sci., vol. XLIV, 1-05, pp. 242-246.
[2] Glave's Journey to the Livingstone Tree. The Century Magazine, vol. LX, 1900, p. 766.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

412 bles utilized in emergency, and commonly discarded after a single use, are too numerous and too various for convenient or useful grouping.

411 There is a distinctive type of Seri stone artifacts represented by a single category of objects, viz, chipped arrowpoints. Several of the literary descriptions of the folk—particularly those based on second-hand information and far-traveled rumor—credit the Seri with habitual use of stone-tipped arrows,[1] and it is the current fashion among both Mexican and Indian residents of Sonora to ascribe to the Seri any shapely arrowpoint picked up from plain or valley; yet the observations among the tribesmen and in their haunts disclose but slight basis for classing the Seri with the aboriginal arrow-makers of America.

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Among the 60 Seri (including 17 or 18 warriors) at Costa Rica in 1894, three bows and four quivers of arrows were observed, besides a number of stray arrows, chiefly in the hands of striplings. The arrows seen numbered some 60 or 70, including perhaps 20 "poisoned" specimens; nearly half of them were tipped with hoop-iron, as illustrated in plate XXX, while about as many more were fitted only with the customary foreshafts (usually sharpened and hardened by charring), and the small remainder had evidently lost iron tips in use; there was not a single stone-tipped arrow in the rancheria. Moreover, when the usually incisive and confident Mashém was asked for the Seri term for stone arrowpoint he was taken aback, and was unable to answer until after lengthy conference with other members of the tribe—his manner and that of his mates clearly indicating ignorance of such a term rather than the desire to conceal information so frequently manifested in connection with esoteric matters; and the term finally obtained (*ahst-ahk*, connoting stone and arrow) is the same as that used to denote the arrowpoint of hoop-iron. The most reasonable inference from the various facts is that whatsoever might have been the customs of their ancestors, the modern Seri are not accustomed to stone arrow-making.

FIG. 37.—Seri arrowpoints.

172 411 The 1895 expedition was slightly more successful in the search for Seri arrows. About midway between the abandoned Rancho Libertad and Barranca Salina, an ancient Seri site was found to yield hundreds of typical potsherds, half a dozen shells such as those used for utensils, the fragments of a hupf evidently shattered by use as a fire-stone, and the small rudely chipped arrowpoint shown in figure 37*a*; and among the numerous relics found on a knoll overlooking Pozo Escalante (including two jacal frames, two or three graves, an abst, several shells

[1] The most specific reference is that of Hardy: "The men use bows and stone-pointed arrows; but whether they are poisoned, I do not know." Travels, p. 266.

1: McGee E-5 (1894-1895)1898 NU31 Ser1 NU31

in which the breath is life, and the lungs at once the seat and the symbol of vitality. Naturally the fleshly symbol is from a dead body; and just as the lung denotes vitality in life, so (in primitive thought) it denotes an emphasized, as it were an incarnated, antithesis of vitality in death. Next, as the recipes continue, this death-symbol is exposed to the most potent agencies of death—to the bites of maddened rattlesnakes, to the stings of irritated scorpions, to the venomed trailings of harried centipedes. Then the deadly creatures are themselves killed, and the fanged heads of the serpents, the stinging tails of the scorpions, and the fiery feet of the centipedes, together with portions of redolent ordure from the grave-cairns, and other symbols of death and decay are crushed and macerated with the mass in a wizard's brew, grewsome beyond the emasculated and degraded witch's broth of medieval times. Finally, the grisly mess is allowed to simmer in a stinkpot[1] shell under the fierce desert sun until its ripeness and putrid potency are attested by the rank fetor of death; when it is ready for its ruthless use. Thus the entire recipe is thaumaturgic in concept, necromantic in detail; it represents merely the malevolent machinations of the medicine man seeking success by spells and enchantments; it stands for no rational system of thought or practice, but pertains wholly to the plane of shamanism and sorcery. So interpreted the recipe is readily understood; the several witnesses who have independently obtained it are justified, and Mashém's details and unwilling intimations are made clear—especially if the sacrificed flesh about the wound in deer or lion be deemed an oblation, such as primitive folk are given to making. 278

While thus the motive of the medicine-man in compounding his loathsome mess is wholly necromantic, serious consequences of its use must occasionally supervene; and though these may be incidental so far as the philosophy is concerned, they may tend redexly toward the perpetuation of the custom. In the course of the preparation of the charm-poison, and especially in the final ripening process, morbific germs and ptomaines must be developed; these may retain their virulence up to the time of use, particularly when a batch of poison is prepared for a special occasion and the arrows are used while the application is still fresh; and in such cases the wound might initiate septicemia of the sort described in Castañeda's early narrative and still more clearly displayed by Señor Encinas' saddle-horse (ante, p. 112). Naturally the incidentally zymotic varnish frequently fails of effect, and can hardly be expected to remain morbific long enough to be detected in laboratory experiments; yet it is probable, as attested by Mashém's guarded expressions, that the occasionally terrible results of such poisoning are within the ken of the Seri shamans.

It is noteworthy that the various early accounts of the Seri arrow-poisoning are strikingly consistent, though sufficiently diverse to 279

[1] Cleodora cuspidata (?).

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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attest independence in origin; it is also noteworthy that several of the accounts are given hesitatingly and half qualifiedly, with alternative references (obviously hypothetical) to vegetal sources of poison. Thus the author of "Rudo Ensayo" qualified a characteristic (though brief) account of the preparation of the poison by adding: "But this is mere guesswork, and no doubt the main ingredient is some root."[1] So, too, Hardy described the compounding of the brew in much detail, adding the significant statement that "when the whole mass is in a high state of corruption the old women take the arrows and pass their points through it"; yet he could not resist the alternative hypothesis, and added: "Others again say that the poison is obtained from the juice of the yerba de la flécha (arrow-wort)."[2] Bartlett "was told that the Ceris tip their arrows with poison; but how it was effected I [he] could not learn," and so he contented himself with quoting Hardy's account.[3] Stone gave the recipe in fairly similar terms, adding that the morbific mass is hung up "to putrefy in a bag, and in the drippings of this bag they soak their arrowheads"; and he gave a characteristic account of the effect of a wound from a poisoned arrow on a human subject (ante, p. 100). Pajeken independently attested the virulence of the poison, and described the consequences of a slight wound suffered by his horse (ante, p. 101), while Pimentel gave independent corroboration, and Orozco y Berra added the further information that the proverbially deadly poison is fortified "by superstitious practices" (ante, p. 103). Bancroft gave currency to the customary recipe, and also to the complementary hypothesis that the "magot" may be the source of the poison; while Dewey merely mentioned the reputed use of poisoned arrows. Like their predecessors, the vaqueros of today are familiar with the tradition of a necromantic brew; but many of them—like Don Jesus Omada, of Bacuachito, and Don Ramon Noriega, of Pozo Noriega—display a much more lively interest in the local yerba mala, or yerba de flecha, of which they stand in such mortal dread that they can hardly be induced to approach a clump of it, and which they conceive must add the final crux to the brew. This plant was described in "Rudo Ensayo": "Magŭ, in the Opata language, is a small tree, very green, luxuriant, and beautiful to the eye; but it contains a deadly juice which flows upon making a slight incision in the bark. The natives rub their arrows with it, and for this reason they call it arrow-grass; but at present they use very little."[4] Elsewhere the anonymous author mentions the use of (presumably) this poison by the Jova, and describes it as "so deadly that it kills not only the wounded person, but also him who undertakes the cure by sucking the wound, as is customary with all the Indians"; the description implying that the infection is irremediable.[5] Yet he apparently discriminated this poison from that of the Seri, for which another plant known as caramatraca

[1] Op. cit., p. 188; cf. ante, p. 72.
[2] Personal Narrative, p. 502.
[3] Op. cit., pp. 127, 128.
[4] Translation, p. 209; cf. ante, p. 67.
[5] Op. cit., p. 191.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

the character of the man; in very fact, it at the same time both measures and makes the character of the woman. Among other privileges bestowed on the bride during the probationary period are those of receiving the most intimate attentions from the clanfellows of the groom; and these are noteworthy as suggestions of a vestigial polyandry or adelphogamy. At the close of the year the probation ends in a feast provided by the probationer, who thereupon enters the bride's jacal as a perpetual guest of unlimited personal privileges (subject to tribal custom); while the bride passes from a half-wanton heyday into the duller routine of matronly existence.

These details were elicited at Costa Rica in 1894 through methodical inquiries made in connection with the linguistic collection. This collection was made with the cooperation of Señor Alvemar-Leon as Spanish-English interpreter, together with Mashém and (commonly) the clanmother known as Juana María. Usually quite a group of Seri matrons with two or three warriors were gathered about, and to these Mashém frequently appealed for advice and verification, while they constantly expressed approval or disapproval of questions and replies, as gathered through Mashém's words and mien, in such manner as to afford a fair index of their habitual thought—e. g., when the Seri vernacular for "twins" was obtained and the inquiry was extended (by normal association of ideas) to the term for "triplets", Mashém collapsed into moody silence while the rest of the group decamped incontinently with horror-stricken countenances—thereby suggesting cautious subsequent inquiry, and the discovery that triplets are deemed evil monsters and their production a capital crime. It was in one of the earlier conferences that the first intimations concerning the unusual marital customs were incidentally brought out; the Caucasian interpreter and bystanders were diverted by the naive reference to the moral test, but their expressions were hastily checked lest the native informants might be startled and rendered secretive; then, during two later conferences, when Mashém and several matrons were freely participating in the proceedings, the line of inquiry was so turned as to touch on various aspects of the marriage custom and bring out all essential features; so that much confidence is reposed in the accuracy of the details.[1] The confidence in the verity of the customs was such as not to be impaired seriously by the fact that no records of coincident moral tests were known in the voluminous literature of marriage and its concomitants; nor was it shaken by the still weightier fact that none of the experienced ethnologists to whom inquiries were addressed during ensuing months were acquainted with parallel customs—indeed the only shadow of corroboration thus obtained came in the form of references to the widespread requirement of continence in war and ceremonies.

[1] It may be observed that Kolonia, when visited in January, 1895, failed to corroborate the descriptions of Mashém and the matrons; but his failure occasioned little surprise for the reason that he has not lived with his tribe since early boyhood, and is equally uninformed (or uncommunicative) concerning the myths, ceremonies, and even the idioms of the tribe.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

and to an affectation of self-restraint for a moon on the part of Zuñi grooms noted by Frank Hamilton Cushing. Accordingly the facts were announced in a preliminary paper,[1] and were shown to stand in such relation to the marital customs of other aboriginal tribes as practically to demonstrate their validity, and at the same time to locate the Seri customs on a lower plane of cultural development than any hitherto definitely recognized.

Happily, subsequent researches have resulted in the discovery of records corroborative of the primitive customs observed by the Seri, and also of the assignment of serial place to these customs. The most specific record is that of John Giles (or Gyles), who spent his youth as a captive among the northeastern Algonquian Indians (probably the Maliseet or some closely related Abnaki tribe), from August 2, 1689, to June 28, 1698. Referring to the marital customs of the tribe, he observed:

> If parents have a daughter marriageable, they seek a husband for her who is a good hunter. If she has been educated to make *mocoodah* (Indian bags), birch dishes, to lace snowshoes, make Indian shoes, string wampum belts, sew birch canoes, and boil the kettle, she is esteemed a lady of fine accomplishments. If the man sought out for her husband have a gun and ammunition, a canoe, a spear, a hatchet, a mocoodah, a crooked knife, looking-glass and paint, a pipe, tobacco, and knot-bowl to toss a kind of dice in, he is accounted a gentleman of a plentiful fortune. Whatever the new married man procures the first year belongs to his wife's parents. If the young pair have a child within a year and nine months, they are thought to be very forward and libidinous persons.[2]

This record is of peculiar interest in that it definitely specifies a custom corresponding with the material test of the Seri, and unmistakably implies the existence, at least in vestigial or sentimental form, of a custom corresponding with the moral test of Seriland; and it is particularly noteworthy as coming from a remote tribe occupying a distant part of the continent.

A somewhat less specific corroboration is found in Lawson's account of the Carolina tribes. He observes:

> When any young Indian has a mind for such a girl to his wife, he, or some one for him, goes to the young woman's parents, if living; if not, to her nearest relations, where they make offers of the match betwixt the couple. The relations reply, they will consider of it; which serves for a sufficient answer, till there be a second meeting about the marriage, which is generally brought into debate before all the relations, that are old people, on both sides, and sometimes the king, with all his great men, give their opinions therein. If it be agreed on, and the young woman approve thereof, for those savages never give their children in marriage without their own consent, the man pays so much for his wife; and the handsomer she is the greater price she bears. Now, it often happens that the man has not so much of their money ready as he is to pay for his wife; but if they know him to be a good hunter, and that he can raise the sum agreed for, in some few moons, or any little

[1] The Beginning of Marriage. American Anthropologist, vol. IX, 1896, pp. 371-380.

[2] Memoirs | of | Odd Adventures, | Strange Deliverances, etc. | in the | Captivity of John Giles, Esq., | Commander of the Garrison on Saint George-river, in the | District of Maine. | Written by Himself. | Originally published at Boston, 1736. | Printed for William Dodge. | Cincinnati: | Spiller & Gates, printers, 188 Vine street. | 1868.—P. 45.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

condition characterized by absence of property and thrift-sense; while its most essential concomitant is extratribal antipathy too bitter to permit toleration of alien blood, or even of alien presence save under the constraint of superior force.

MORTUARY CUSTOMS

The prevailing opinion among the better informed Caucasian neighbors of the Seri is that the tribesmen display an inhuman indifference to their dead; and this opinion is one of the factors—combining with current notions as to cannibalism and arrow-poisoning and beastlike toothing in battle—involved in the widespread feeling that the tribesmen are to be accounted as mongrel and uncanny monsters rather than human beings.

The opinion that the Seri neglect their dead on occasion would seem to rest on a considerable body of evidence; Mendoza's record of the numberless neglected corpses of warriors polluting the air and poisoning the streams of Cerro Prieto in 1737 would seem to be unusual only in its fulness; and Señor Encinas, albeit so conservative as to repudiate the reputed anthropophagy and to recognize better qualities among the folk than any contemporary, declares that they are utterly negligent of their dead, save that when the bodies lie near rancherías heaps of brambles are thrown over them to bar—and thus to lessen the disturbance from—prowling coyotes. Quite indubitable, too, is the specific testimony of vaqueros to the effect that Seri raiders overtaken by the Draconian penalty of the frontier merely lie where they fall, even when this is well within reach of the tribesmen, Don Andrés Noriega's verification of his boast (ante, p. 113) being an instance in point. On the other hand stands the conspicuous fact (unknown to the frontiersman) that well-marked cemeteries adjoin some of the rancherías of interior Seriland. The sum of the somewhat discrepant evidence accords with a characteristically unsatisfactory statement by Mashém, to the effect that the mourning ceremonies are important only in connection with women—i. e., matrons—because "the woman is just like the family" ("la muger es como la familia"); and this intimation, in turn, is corroborated by the single known instance of inhumation in Seriland, as well as by certain indirect indications connected with the scatophagic customs (ante, p. 213). On the whole it seems certain that the mortuary ceremonies attain their highest development in connection with females, the recognized blood-bearers and legislators of the tribe.

The special dignification of females in respect to funerary rites is without precise parallel among other American aborigines, so far as is known, but is not without analogues in the shape of (presumptive) vestiges of a former magnification of matrons in the mortuary customs of certain tribes. The vestiges are especially clear among the Iroquoian Indians, whose aboriginal socialry coincided with that of the

2: Kroeber E-5 (1930) 1931 NU31 Seri NU31

[p.3]

THE SERI

By A. L. KROEBER, *University of California*

INTRODUCTION

The present paper is the first product of field studies made between January and March, 1930, in Arizona, Sonora, and Sinaloa, under a joint expedition of the Southwest Museum, Los Angeles, and the University of California. The financial contribution of the University was the gift of Mrs. Ethel W. Crocker. While the purpose of the trip was to define rather than solve problems, the following pages contain part of the positive observations obtained.

The Seri, who live on Tiburon Island, Sonora, in the Gulf of California, are often considered the wildest and most primitive tribe surviving in North America. They owe this repute partly to McGee's monograph about them, in the Seventeenth Annual Report of the Bureau of American Ethnology. It is easy to read between the lines of this description that McGee leaned toward a romantic and imaginative interpretation of the Seri. Also, his actual contacts with the people themselves were brief, and hampered by imperfect communication. Moreover, the Seri have been for three hundred years in contact with Spaniards and Mexicans, part of the time even under direct mission control. It therefore seems doubtful whether their backwardness could be the result wholly of preserved primitiveness, and may not rather be attributable to a recalcitrant degeneration. In order to answer this question, and to place Seri culture at least tentatively among the other tribal cultures of the Southwest instead of leaving it as an unexplained and lurid abnormality, a brief visit to them was undertaken.

The success of this visit was due wholly to Sr. Roberto Thomson of Hermosillo and Rancho San Rafael, who is now the Mexican Government's *Jefe de Vigilancia* for the Seris, and in effect what in the United States would be known as Indian Agent for the tribe. He has protected and befriended them, kept them in turn in bounds, and secured some governmental assistance for them, under which they are making a beginning of adaptation to the modern world. At any rate, the mutual raidings and killings have stopped, and the Seri, though still very suspicious of most of the neighboring settlers and of strangers, look upon Sr. Thomson as their protector and friend. Without his introduction and experience, many less data could have been collected in a longer stay.

The Seri now live wholly on Tiburon Island. I was with them six days, half of them on the island. This is about as long a time as McGee spent with them—all of it at the cattle ranch of Costa Rica. McGee also explored the island and its camps at some length, but without encountering any Seri, who eluded his party.

Inasmuch as Mr. Edward H. Davis of Mesa Grande, California, has three times visited Tiburon to form an ethnological collection for the Museum of the American Indian, Heye Foundation, I attempted no examination of Seri material or economic culture, which Mr.

2: Kroeber E-5 (1930)1931 NU31 Seri NU31

114 Davis has had fuller opportunity to investigate, but confined my
121 attention to the social and religious sides of their life. There was the more reason for this since it is in dealing with these latter aspects, where verbal communications are as important as observation, that McGee's monograph is most tenuous and dubious. I also secured linguistic notes for the preliminary placing of the curious tonal speech of the Seri.

178 Seri culture in its present form is a fragmentary thing such as
182 could hardly have existed under purely native conditions. Religion especially has suffered, no doubt under Christian influence, without many elements of Christianity having been taken over in exchange. Of mythology, only tatters seem to remain; of ritual, little more; only shamanism seems to be fairly well preserved. Nor, beyond the Spanish names for God and the cross, do the Seri give evidence of being or having been Catholics. The result is that they seem remarkably religionless. I do not know of a native people that appears so free from superstition and so unspiritual in its attitudes. Possibly I conferred with the wrong informants; but those I talked with seemed unsecretive. Social culture is better preserved, as is evident from a set of kinship terms that are numerous, precise, and untouched by Spanish concepts. On the other hand, there is little formal social organization. Whether this is also the result of a loss, is hard to say. The Seri may never have had sibs or clans; but the fact that they appear to lack them now is no positive evidence that they were without them three centuries ago. Shifts of residence, contraction of territory, shrinkage of numbers, amalgamation of distinct bands, may well have obliterated much of such social fabric as they once possessed. Games and the calendar are wholly native and intact, but taboos connected with sex, age, food, and the like seem fewer than among the backward tribes of the southwestern United States. It seems reasonable to construe this condition as the result of varyingly hostile, parasitic, and missionizing Spanish-Mexican contacts; especially when one realizes how overwhelmingly, though also spottily, this influence has affected the other tribes of Sonora—the Yaqui, Mayo, Pima, and Opata.

101 Historically the Seri are not a tribe but the consolidated rem-
131 nant of a series of dialectically distinct tribes that once held the barren coast of Sonora from Guaymas to Puerto Libertad. Tiburon
174 Island is the stronghold in which the mixed survivors, probably now numbering less than 200, have taken refuge, and, owing to its inaccessibility, drought, and poverty, have succeeded in maintaining themselves and their blended and reduced culture. Toward the interior, it is doubtful if they ranged beyond the present line of the Southern Pacific railroad, if that far. Orozco y Berra indeed assigns them territory up the Sonora River to Ures, on his famous map, which is still basic to all other ethnic maps of Mexico. But from Hermosillo

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are inconclusive. Some of the outstanding speech similarities and differences are given in a section of the present paper; a fuller presentation will be made in a subsequent classification of the Yuman languages.

The Yuman tribes of the United States are better known, and there are published or collected accounts of the Diegueño, Kamia, Cocopa, Yuma, Mohave, Maricopa-Halchidhoma, Yavapai, Walapai, and Havasupai. These fall into two groups, culturally: the farming tribes of the Colorado (and Gila) bottomlands, and the gathering tribes of the desert and semi-desert of Arizona and southern California, the latter again affiliating with those of northern Baja California, such as the Kiliwa and Akwa'ala-Paipai. As might be expected, it is the desert Yumans of Arizona who show the greater number of resemblances to the Seri and fewest differences.

The Pima as the immediate neighbors of the Seri, and the Opata and Cahita tribes beyond, ought to show many similarities with the Seri, plus differences due to their agriculture and activities like weaving which are normally encouraged by sedentary habits.

Such are some of the indications as to the history of the Seri and their culture, as discussed more in detail below so far as the preliminary data available allow. Further and intensive investigation is obviously needed. On the side of material life, Mr. Davis' studies ought largely to fill the need. For social and spiritual culture, the work will be difficult. It is not that the Seri are unwilling, but that they are inaccessible and hard to communicate with. The obvious procedure would be a study of their speech until it served as a medium. In that way both their language and their culture could be recorded hand in hand. But the obstacles are numerous. The island is thirty miles long by twenty wide. There is not a roof on it. The six summer months are extremely hot, and, along the coast, said to be almost insufferable from gnats and mosquitoes. Most of the few water holes are inland; the Seri live, except during the cactus and mesquite harvest, scattered in small settlements along the shore, often several miles from water. There is no communication across the strait, except by open boat, subject to weather conditions; and then it is twenty miles to the nearest house and a hundred to a town. Life on the island would be both harsh and monotonous to an unusual degree. Nor can the Seri as yet be studied by taking one or two of them to civilization for a prolonged stay. They soon become restless and homesick. Added to all this is the fact that their Spanish, though reasonably fluent in some cases, is ungrammatical, and would hardly serve for securing paradigms or accurate translations of texts; and while able to endure hardships, the people are not accustomed to steady work or mental concentration. The difficulties would not be insuperable, when the destined linguist-ethnologist undertakes the task; but he should not under-rate them.

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McGEE ON THE SERI

114 [128] The pages that follow deal with McGee's well-known monograph on the Seri,[1] discussing first points on which his data are fuller or mine confirm or modify his, and then points on which I believe him to have been in error or to have misconstrued his observations. McGee spent little more time in actual contact with the Seri than I did.[2] His work impresses me as that of an extraordinarily good observer, keen in seeing significant evidence, but of uncontrolled imagination and unconscious of his preconceptions. It is only fair to state that where he founds an interpretation on slender or uncertain data, he generally indicates the fact to a careful reader.

Data and Discussion

114 415 The ratio of kilogram weight to liter capacity of water jars is given by McGee (p. 183) as follows: 2 Seri, .126-.147; 2 Papago, .239-.279; 4 modern Pueblo, .252-.295. There is no doubt that the Seri olla is unusually thin-walled. Sherds seen at a campsite near San Rafael, on the dry course of the Bacuachi, 20 or more miles from the coast, ran from 2 to 5.5 millimeters in thickness, averaging 3.8; their curvature was slight, indicating large vessels. McGee remarks (p. 184) that the purpose of nearly all Seri pottery is to hold or transport water, other uses being secondary, generally after breakage. My observations on the island confirm this.

114 Head loads are carried on a ring of "yucca" fiber (p. 184).

482 The carrying stick or yoke, with nets to hold ollas, is considered aecultural by McGee (p. 184), although he mentions (p. 68) that Ugarte in 1721 saw the device in use by men, the women carrying single ollas, presumably on their heads. Nordenskiöld has recently shown the "coolie yoke" to be ancient in the area.[3] It is used today in Sinaloa and Sonora.

114 773 McGee (pp. 11, 191, 292) thought that he understood that the "Ancient of Pelicans" was the chief creative deity and brought up the islands and earth with the help of the Turtle or Shark. This

[1] W J McGee, The Seri Indians, BAE-R 17, part 1, pp. 1-128, 129*-344*, 1898. (In citations of the higher page numbers, the asterisk is omitted.)

[2] McGee (pp. 13, 98, 281) in 1894 spent "about a week" at Costa Rica west of Hermosillo where some 60 Seri were temporarily congregated, his principal informants being subchief Mashém who spoke Spanish, and Juana María. A Spanish-English interpreter is referred to. In 1895 the coast and Tiburon Island were visited, camps examined, but not a single Seri encountered. The vocabulary was obtained chiefly at Hermosillo from Kolusio, an old Seri official interpreter who had left the island in childhood, never revisited it, considered himself an outlaw in Seri eyes, and had long had no dealings with them except under Mexican protection. I spent six days or parts of days with Seri, sleeping two nights on Punta San Miguel and three in the *ranchería* on the island opposite. Two Seri accompanied us back to Hermosillo to draw their government stipends, and were available for some supplementary questioning and revision of notes on the two following days.

[3] Comparative Ethnographical Studies, No. 8, 234, 1930.

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sounds like an expectable enough mythic idea, but seems involved with McGee's dubious conceptions as to totemism, discussed below. 114 193

The two-pointed fish-spear, with serrated points 6 inches long and spreading 5°, seen by Hardy (McGee, p. 193), is interesting because seemingly unreported in or near the area. 114 227

"Fishing" with staked pelicans who are then fed by free birds, is authenticated by the statement of Venegas for lower California, (McGee, p. 193). [226 231]

No fish nets, hooks, or lines were seen by McGee among the abandoned effects on Tiburon (p. 194). This is in accord with my observation. The abundance of sharks may interfere with net or deep water fishing.

The bow (p. 200) is of *palo blanco;* the release (pls. 28, 29), Mediterranean; the archer's position (pl. 29), with elbow above head, suggests a quick downward shot at a target or game lying on the ground not far away. 114 411

Mesquite, according to McGee (p. 207), is ground on the metate. Sr. Thomson told me of its being pounded in a hole in the ground. The Seri gave me the name a'kaia for what I understood to be this earth mortar. According to Sr. Thomson's description, the flour from the first beans cakes and lines the cavity firmly, so that the bulk of the material is secured quite cleanly. In general, mesquite is mortar-pounded rather than metate-ground by the tribes from whom we have records, as is expectable from the woody nature of the beans. 114 252

McGee (p. 207) noted the viznaga cactus, Echinocistus, as rare in the Seri habitat, presumably owing to its use for water by the natives. I made the same observation on the mainland, but Sr. Thomson stated that along the roads the plant is being gathered for candying. 114 137

The one basket described by McGee (p. 208, fig. 24) is bundle-coiled and plain. The only one I saw in use among the Seri was ornamented with a plain reddish band. Sr. Thomson presented me with two which bear patterns (fig. 13), and showed me a photograph of a collection made by Mr. Davis for the Museum of the American Indian, Heye Foundation, nearly all of which were decorated, some fairly elaborately. Several of these are shown by courtesy of that institution in figure 12. As McGee observes, there is obvious resemblance to Southwestern baskets; especially of the Papago, Pima, and Apache. Southern California basketry is less similar. That of Baja California is unknown from specimens, though the mention of water-tight vessels used for winnowing and parching suggests a coiled tray of Seri type. The surviving tribes of Sonora other than the Seri use few baskets distinguishable from those of the non-Indian population. 114 285 [171]

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114 262 171 514

The Seri "second harvest" of cactus seeds (p. 209), which Baegert and Clavigero also describe from Lower California (p. 211) is found also among the American Pima,[4] and is therefore likely to have prevailed as far as Cereus fruits were a principal food supply.

The ground-squirrel is not eaten by the Seri, the badger not by the Baja Californieños (p. 212).

McGee gives a valuable percentage estimate of Seri food composition: land game, large and small (including 6% of stolen stock), 21%; pelicans, other waterfowl, and eggs, 13; sea turtles, 25; fish, 15; shellfish, 10; cactus fruit, 9; other plants, 6; miscellaneous, 2; total animal, 84; maritime, nearly two-thirds. My impression is that clams, other mollusks, and crabs constitute more than a tenth of the total consumption. Clams especially can usually be obtained at low tide when wind and water prevent other food taking. I should also be inclined to raise the proportion of plant food, especially mesquite. The use of agave was almost certainly limited chiefly by the supply. Sealions, porpoises, and occasional whales could perhaps hardly be accounted for under the two percent of miscellaneous. On the other hand, deer are evidently taken only occasionally, and the figure for turtles seems too high, these animals being absent from Seri waters for months in the year and always free-swimming. McGee appears to have over-emphasized the importance of the turtle in Seri thought as well as life. I would incline to estimate the proportion of animal food in native times, before domestic animals could be preyed on, as rather under three-fourths of the total; of maritime, as perhaps three-fifths. Even these figures might be high for the bands primarily resident on the mainland, with free access to the mesquite thickets of the lower Sonora and Bacuachi (Bacavachi) courses, and the countless cactuses.

114 171 501

A double-bladed paddle pictured by the Dewey-Narragansett expedition of 1873 is reproduced by McGee (p. 219, fig. 28) without comment. This type of paddle is established for the Seri, Santa Barbara islanders, and San Francisco Bay Indians; then apparently is lacking until the Eskimo-Aleutian area. Among the Chumash it is native and associated with a plank-built canoe. On San Francisco Bay it was used with the rush balsa, and may or may not be due to Aleutian sea-otter hunters introduced by the Russians. It seems possible that the Seri and Chumash occurrences would prove connected by occasional use in Baja California, if we had fuller data, since some of the natives there went several leagues out into the open sea. We are so accustomed to think of the two-bladed paddle as an adjunct of the specialized kayak, that it too impresses as a complicated device, inappropriate with a simple raft. As a matter of fact, wherever scarcity of wood, or lack of skill and usage in working it,[5] resulted

[4] Russell, BAE-R 26:171, 1908.
[5] Cf. The Valley Nisenan, UC-PAAE, 24:253-290, 1929.

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in a paddle blade being cut separately from the shaft, the inventive step from attaching one blade to attaching two blades would have been insignificant—in fact, would be an improvement or variation rather than an invention. The determining factor as to its adoption would probably be the type of navigation as set by water conditions. This is borne out by the distribution of the double paddle, which clings to areas of open salt-water navigation or large bays approximating open water conditions. On rivers and lakes the double paddle would rarely help and often be in the way. In this way the varying association with skin boat, wooden boat, and raft boat seems accounted for. Another factor must be size of the vessel navigated. A broad or high canoe would scarcely allow of alternate paddling on both sides. This may be the cause of the absence of the implement on the Northwest Coast. Whether the Arctic and the California-Seri occurrences are to be historically connected, must probably be left an open question for the present. An answer in favor of connection will evidently depend on the establishment of sufficient other connections to set up a favorable presumption. Until then, the considerations just mentioned make the possibility of independent origin equally plausible.

The single-bladed paddles seen by McGee (p. 219) and myself were two-piece and hafted with nails. McGee is more interested in balsa propulsion by recumbent women with hands, shells, or unhandled blades. That such crude devices were used along shore or in bays often enough to be mentioned, is wholly in line with the conspicuous Seri indifference, slovenliness, and lack of standards; but it is also obvious that real paddles being known and made, these would be the ones taken on open sea voyages of a dozen miles in a region of notably variable winds and currents. The Seri are never fools in practical matters within their compass; and they could not have acquired their indubitable navigating skill by letting their women do most of their paddling with bare hands. The one woman I saw aboard was carried as a passenger across the Infiernillo.

What is typical of Seri habits is that the harpoon shaft is also used for poling, and the harpoon cord as anchor rope, tow-line along shore, sheet rope, and for tying a blanket to a mast and pole to serve as sail; just as the bailer of a leaky skiff is an enamel-ware plate or pot employed at other times for food. The whole harpoon, including the rod-iron point, but dismounted, seems regularly to be taken along on a transport voyage.

The Seri houses I saw opposite Punta San Miguel were like those described by McGee (pp. 221-223): long, narrow, low, and open at least at one end; but they were unroofed. There was also one of double length, and another "joined obliquely"—that is, annexes occupied by younger kin and their families. The lengthwise double house was open through, though constricted at both ends and the

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114 342 middle. Two imperfect wind-breaks of brush, less than a quarter of a circumference in curvature, stood near the camp..

On the subject of textiles and textile clothing (pp. 171, 225-232), 114 McGee is necessarily vague on account of lack of specimens. He 281 says that native kilts, from waist to knee, were either of birdskin or "a rectangle of coarse textile fabric," "woven probably on some prim- 286 itive device"; that it is practically certain that a long-sleeved, short- 291 bodied shirt or wammus is "of local aboriginal design" and was "made primitively of haircloth or native textiles"; that the probable genetic series of Seri garments was: 1, the pelican-skin robe used as a kilt, 2, the textile shirt, 3, the textile kilt; and that Seri fabrics, according to a Mexican informant, "resemble coarse bagging, and are woven or netted quite plainly."

Human hair cord could be netted, or twined in double weft into 114 basket-like bags or mats; it could hardly be woven into cloth without 171 a loom. The same holds of *ixtle*, agave fiber. Bast of willow, cotton- 286 wood, beanstalk, such as was spun and twined, and perhaps woven on a limited scale, by the Colorado river Yuman tribes, was not available to the Seri, though they may have had nearly equally soft substitutes, even in their desert. Cotton they did not have. *Ixtle* is a strong, harsh fiber, excellent for cordage, nets, open-mesh bags, and the like, and still largely used in Mexico for such purposes. It would also serve well for fringe-aprons, for which the Lower Californians used it. A fabric from it would be rough and stiff, giving little warmth, not very satisfactory for a kilt, and quite unserviceable for a fitted garment like a sleeved shirt. Cotton was the prevailing garment material found along the coast by the first Spaniards, north up to the Cahita (Ka'ita, namely Tehueco, Mayo, Yaqui); here *ixtle* became more prevalent though cotton persisted; but the type of garment is not clear.

As to looms, *ixtle* is today woven into carrying bags on a heddled belt-loom by the Nahua-speaking Indians of Sinaloa. The Mayo weave woolen girdles on a similar loom. They also weave woolen blankets on a demountable horizontal loom, the warp passing continuously around the two heavy yarn beams. It is not clear whether this is a hybrid Spanish or a purely native apparatus. The Opata and Pima Bajo loom is not known. The American Pima weave cotton both on a belt-loom and on a staked horizontal loom, but with warps in a single plane.[6] It is difficult to imagine these looms existing among the Seri, except the first mentioned; and this would not yield them much in the way of garments. There is no reason why they 114 should have worn more than the Lower Californian women's fringe- 291 aprons, supplemented perhaps by birdskin blankets and loin covers. They no doubt secured occasional garments from neighboring tribes, 431 as they gladly but irregularly wear those of whites today; and this

[6] Russell, BAE-R, 26:148-153, 1908.

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is what their "shirt" (McGee, pl. 29) probably was. The fabrics of McGee's Mexican informant may refer to gunny-sacks made over into improvised imitations of civilized garments; or to single-element carrying bags. It is entirely possible that contact with the cloth-weaving tribes of Sonora long ago induced the Seri to shrink from habitual complete nudity; but it is difficult to imagine them producing even a coarse wearable cloth. McGee's interpretation of the historic sequence of Seri garments is of course wholly speculative.

The cradle shown by McGee (p. 226, fig. 30) consists of a kite-shaped hoop with eight sticks tied across it and a lashing thong passed back and forth across it half-a-dozen times. Even allowing for some slip of the parts in transport to Washington, this specimen is quite typical in Seri disregard of evenness, neatness, order, or finish. The Yaqui cradle illustrated by Hrdlička[1] consists of eight or nine lengthwise sticks or canes twined close together. The Lower Californians used a basket or a turtleshell. The Gila Pima and river Yuman cradle is of "ladder" type, and therefore similar in structure to the Seri except that it lacks the point at the bottom and has the sides parallel; it also carries a hood of wickered or twilled splints. As regards basic structure, one form of Maidu cradle is most similar to the Seri; just as the plan of the Yaqui one reappears among Miwok, Yokuts, and Mono a little further south in California.[2] It appears from this irregular distribution that so simple an apparatus as the open or flat baby-carrier, which can be just as serviceable without a definite technique or style entering into it, is likely to vary locally without much significance, and that its forms will indicate historic connection only when they are parallel in a number of details. In these respects it resembles house types. In both these objects, new "inventions," certainly of detail elements and perhaps of basic structure, seem to be readily made and adopted.

McGee's finding (p. 247) that the Seri are "not habitual stone arrow-makers" has a parallel among the river Yumans, and, at least partially, among the remaining Sonoran tribes. His conclusion (p. 259) that the *yerba de la flecha* (magot, Sebastiano bilocularis?) was an Opata but probably not a Seri arrow poison, seems sound. The plant was shown me on the island, and the Seri knew it as venomous, but volunteered nothing as to using it on arrows.

That the question of Seri cannibalism must be left open, with a preponderance of evidence against the practice (p. 263), also seems a conservative judgment.

As to shields, McGee learned of loose pelican pelts and turtle-shells (p. 264), I of armor and a large upright shield of hide. Both accounts may be right, one referring to emergency pick-ups, the other ——— to prepared defence or attack.

[1] AA 6, pl. 9, 1904.
[2] BAE-B 78:138, fig. 48, pls. 39, 48.

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to prepared defence or attack. The Seri mode of life and induced temperament must have led to many instabilities, with make-shifts often actually more in use, but finished or efficient types of artifact seemingly latent and sporadically emerging in the stream of their culture. Thus, the shell alongside the double-bladed paddle; plain baskets seen in use, but a series patterned in a definite style being produced as soon as their manufacture was profitable; unroofed and roofed houses. Similarly, the two-pointed fish-spear and olla carrying-net, which neither McGee nor I saw, but which may persist in memory in the culture ready for revival on occasion.

Somewhat similar, perhaps, is the status of polygyny, which prevailed in McGee's day (p. 279) a half generation after a disastrous war, but was not the rule, or was successfully disavowed, in earlier times and to-day.

Errors and Misconstructions

McGee dwells at length (pp. 152-156) on three strong trends of Seri life and culture: the pedestrian habit, accompanied by quite exceptional fleetness; a hand and tooth sense with corresponding absence of tool sense; and a race sense unalterably opposed to mixture with alien blood.

All the Sonora and Southwestern Indians were and largely still are fast and sustained long-distance travelers on foot. There is nothing to show that the Seri were superior to the others. The one time they remember having met the Papago in a foot-ball race, they were beaten. Yaqui warfare is a record of at least equal endurance and ability to evade superior civilized forces. In fact the faculties of the Yaqui are the more remarkable in that they have always been settled farmers and often moved in larger bodies. The incredible fleetness of the Seri was probably most manifest in mesquite thickets and on rocky ground. That they should outrun a horseman on an open plain is the sort of tale that one hears on every frontier and which the more intelligent frontiersman does not take seriously.

Hand and tooth sense was undoubtedly strong among the Seri. The same thing, especially as regards food, is reported for the Lower Californians. But the inference of lack of tool sense is erroneous. Knives are prized by the Seri, and, along with nails, axes, and the like, are handled with a direct, crude effectiveness. The crudity is due to the lack of standard, order, and interest in finish which pervades all Seri cultural manifestations and which rests ultimately on their essential isolation and self-sufficiency in an unusually forbidding environment. What a Seri is interested in is not a neat job but one that will substantially meet his immediate need. Their modern plank boats are weak in plan, badly joined, and always leaky; but they serve. A structurally stronger boat would probably profit noth-

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ing, because it would be swamped in a sea which it could resist. The joining and calking are always carried far enough that the boat can be bailed faster than it leaks. That the Seri prefer to bail rather than to finick over joints, is a matter of preference. Most of our real frontier life runs on much the same plan, though sprung from a tradition of intrinsic standard and provided with a superior tool equipment. Tribes like the Walapai and Papago, who live in nearly the same desert, show much of the Seri combination of technological crudeness and effectiveness. They do make an exception in basketry, which is what has chiefly reached our museum cases from their culture; but the Davis-Heye collection shows that the Seri too can make baskets of unsuspected quality. My impression, based on the way the Seri handle their knives, boats, bows, and the like, is that they have excellent practical mechanical sense, but that their standards are astonishingly different from our own. Most people that depended so much on sailing their boats as the modern Seri do, would not be content with two sticks, a blanket, and a harpoon line. But, given the willingness to operate with this equipment, very few would be as successful in quickly rigging and skilfully handling the sail. And sailing is something the Seri have recently learned or evolved. They are the frontiersmen of native culture: hardy, rude, unorganized, practical, efficient; but, like our own frontiersmen, in no sense only half emerged from the tool-less animal. McGee was so inspired by the desire to find ultimate "primitiveness" among the Seri that he often ignored the tremendous effect of their habitat which he so well observed and described. After all, in his day cultural evolutionism was still in vogue.

As to race sense, McGee seems partly but only partly right. Chico Romero of his own accord asked me if other Indians had venereal diseases, and on the return question replied that the Seri were entirely free from them. I also saw and heard of no half-breeds. On the other hand, Chico's historical tradition told of the violation and keeping of captive Tepoca women, and since his own son was descended from one of them, in the second generation, Chico's mother-in-law must have been a Tepoca. McGee's "alien conjugal union" as the "blackest crime" (p. 11) is therefore an exaggeration, and his informant's statement that a Papago woman captive among the Seri never could have had children because she was an alien slave (p. 278), must rest upon a misunderstanding.

The groom's continence for a year after marriage as a moral test before admission to full husbandly status (pp. 280-3), is probably a matriarchally colored fantasy based on another misunderstanding. As already mentioned, Chico was interested, but mildly ribaldly amused, at the idea when it was put before him as a foreign Indian custom. He reacted like the average white man under the circumstances, not in the least like an actor skilfully feigning ignorance.

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114 583 As to the "total absence" (p. 285) of marriage purchase, whereas I found it, such purchase can hardly be believed to have originated wholly within the last 35 years, in view of its wide distribution in native America.

114 614 The whole matter of maternal lineages crystallized into totemic clans with matron rule (pp. 10-11, 167-8, 269 seq.) seems a fantasy. A careful reading of the passages in questions reveals how much McGee has built up on statements which he conscientiously admits to have been slender, probable only, and subject to possible misunderstanding. It must be remembered that in 1894 the matriarchate as original and primitive was still standard anthropological doctrine. At any rate, I got nothing suggesting even matrilineal reckoning in my indirect approaches to the subject, and explicit denials when it was directly presented.

114 342 That house-building may now and then be "accompanied by a chant" (p. 223) is possible, though it seems out of accord with the haphazard and shiftless methods of Seri work and the flimsy irregularity of their homes; but that the chant was "usually led by the eldest matron" seems more matriarchate.

114 174 That the Upanguayma, Guayma, and Tepoka were successively "extruded" (p. 75) would be correct if there were anything to show that the Seri were the parent stock of superior virtue, conservatism, and faithful attachment to their original habitat.

114 601 The statement (p. 11) that "kinship terms are strikingly scanty," made in the face of round-about and imperfect speech communications with the Seri, I cite only as an indication of the degree of McGee's readiness to fall back upon his preconceptions when facts became thin.

114 304 I did not note the absence of superior medial incisor teeth observed by McGee (p. 169) in married women. If a regular practise, its connection with the puberty rite would be a natural inference. But knocking out of teeth is a rare custom in America.

114 224 McGee's statements (pp. 196-7) that it is "undignified, if not wrong" to kill deer other than with the hands, and that jackrabbits are "customarily taken alive to camp," seem over-emphases. That a sense of sport or passing pride, or lack of weapons, now and then leads to such happenings, I do not doubt; but the Seri seem too practical and unromantic to exact rules on the point. I suspect that a youth who insisted on living up to them would soon be considered a vain bore. I may add that I saw a crippled wild duck hobble about the camp on Tiburon for two days, being played with occasionally by the children—without unusual roughness or unkindliness—and that finally it wandered to the water and gradually drifted off without notice being taken.

114 302 614 Face painting is construed by McGee as sematic of totemic line-

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ages (pp. 164-167), and Hardy's story of his being painted is interpreted as ceremonial adoption (pp. 277-8). My conviction is that the Seri paint primarily for adornment, and that further significance is either secondary or absent. When I reached the island and about thirty people, including visitors from other settlements, were gathered to receive and inspect me, all the younger women and one or two adolescent boys were freshly and very neatly painted. After all, their ragged cast-off civilized garments were nothing to make a show with on a state occasion. In former times, the everyday-wear pelican robes would not have served much better. The ocher red, dumortierite blue, and gypsum white pigments however gave a chance for decoration and display. Three days later, when our party was an old story, some of the faces still carried paint, but it was worn, defaced, and bedraggled. It seems unlikely that people should greet strangers by decorating themselves with representations of lineage totems which they at the same time denied or tried to conceal from their knowledge. The construal of Hardy's painting as an adoption-rite rests on the same blood-kin interpretation. It was probably nothing more than an act of friendliness tinged with the simple humor of which the Seri have a strong sense.

Face painting in fact seems to be the chief if not only purely aesthetic expression of Seri culture, their mode of life and psycho-physiological habits being such as almost to prohibit any other form of art. In this painting, on the other hand, they have achieved a high degree of stylization and taste. The designs I saw were throughout in the manner illustrated by McGee in his plates 13-16, 18, 20, 22, 24-26.

Ethnographically, the interest of this style lies in its similarity to the river Yuman face paintings. The Seri first of all specialize on a horizontal bar across the nose and cheeks, immediately below the eyes; in addition to this, there may be vertical elements dependent over the cheeks. The design deliberately breaks across the natural lines of the face in such a way as to orient itself with reference to the eyes without touching them. Bordering or enclosing of the eyes is avoided; neither are planes like the cheeks, forehead, or chin felt as fields to be filled in with decoration. The fundamental plan attacks the face at once drastically and subtly. That the style has both feeling and rigor is shown by the fact that none of the endless variations of color and design detail depart much from the basic scheme. That this scheme is old is shown by Hardy's description of a century ago. It is a true art of high order within its narrow compass.

The Mohave paintings[9] are somewhat freer and more variable, but also less classical or chaste stylistically. The transverse element

[9] Kroeber, Handbook, BAE-B 78, figs. 90-92, 1925. With the Mohave, contrary to the Seri, the vertical elements predominate over the horizontal. The Gila Pima style (Russell, pl. 59), and the Havasupai (Spier, AMNH-AP 29:196, 1928), are also related.

2: Kroeber E-5 (1930)1931 NU31 Seri NU31

PHYSICAL TYPE

123 I had a calipers and rule with me on Tiburon Island, but no
141 stature rod. The Seri proved not to object to being measured, but in order to avoid the possibility of arousing prejudice, I had left the matter to the last; but for this, my series would have been longer. The results are given in the adjoining table. The somewhat unconventional finger and foot measurements were taken because of the seeming length (more probably only unusual slenderness) of these members, but may give an approximate indication of the bodily height.

114 McGee is undoubtedly in error (p. 136) in estimating the average
141 height of Seri men at 1825 mm., of women between 1727 and 1750. I would deduct 100 mm. from these figures.[17] The Seri impressed me as less tall than the Mohave and Maricopa, who run about 1720 to 1740.[18] Hrdlička[19] found the following for the region: 53 American Pima, 1718; 50 Papago, 1709; 50 Yaqui, 1696; 30 Opata, 1670; 53 Mayo, 1673; 1 Seri, 1707. The Seri look taller than they are on account of their slenderness. This in turn might be due to preponderant animal diet, general malnutrition, or congenital type. Certainly their calves, arms, and wrists are notably thin. The forearm bones in particular look long and exceptionally thin. The muscles are generally firm.

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Head form, and nose index for adults, run close to those of other Sonoran tribes. Thus:

Cephalic index, 13 Seri men, women, and children, 80.4; Hrdlička,[20] 1 Seri, 81.3; 50 Mayo, 80.3; 31 Opata, 79.3; 49 Yaqui, 78.5. The Pima in the United States are longer headed, 78.1. Eleven Yaqui skulls averaged 75.7, equivalent to 77+ in the head by the usual estimate.

Nasal index, Seri, 4 men of 28 and up, 79.3, 4 women of 20 and up, 74.7, mean of total 8 adults, 77; Hrdlička, 1 Seri, 71.9; 53 Mayo, 80.2; 31 Opata, 81.1; 52 Yaqui, 78.9; 50 Papago, 79.8; 53 American Pima, 78.1; ten Kato, 38 Mohave, 82.

The Seri are slightly broader headed and narrower nosed than the others, but the difference does not seem significant, especially in view of the smallness of the Seri series.

141 Physiognomically the Seri are quite different both from the
142 Yaqui and Mayo and the American Pima and Papago; in fact con-

[Text continues on page 38]

[17] Hrdlička, in McGee, 142-147, gives the following on the skeleton of a Seri woman of age 26-24: Stature (computed by Manouvrier method), about 1620 mm.; indicated musculature, ample; cranial index (occipital deformation, probably unintentional), 88.3; nasal index, 49; skull capacity (Broca) 1545, (Flower) 1490 cc.

[18] Mohave, 1716; Yuma, 1722; Maricopa, 1749 (Hrdlička, in Putnam Anniversary Volume, 405-426, 1909); Maricopa, 1722 (ten Kate, Journ. Am. Ethnol. and Archaeol., 3:117-144, 1892).

[19] Putnam volume, as just cited; the Seri, in AA, 6:88, 1904.

[20] AA, 6:86-88, 1904. The nasal index means are given by Hrdlička. Neither means nor individual measurements are given for cephalic index, but the percentage distribution in index ranges of one point allows the calculation of an approximate mean.

2: Kroeber E-5 (1930)1931 NU31 Seri NU31

SUMMARY AND CONCLUSIONS

121 Knowledge of the Seri is still in its infancy. McGee's actual observations are excellent but slender in range. He has interwoven
● 114 them with conjectures, some of which are erroneous and others unproved and doubtful. Intensive study of the Seri will be difficult, chiefly for physical and practical reasons, but, to judge from such explicit data as are in hand, should prove them to be a tribe unusually interesting indeed, yet fundamentally similar to others in the same region. So many of their known traits are shared with one or another of these tribes, that it is practically precluded that complete investigation will leave the Seri as a unique people or even as one set widely apart, except in their historical fortunes.

13 The most distinctive thing about the Seri is their environment.
182 This is extremely arid and lacking in water supply, but not desert in the ordinary, untechnical sense. Botanists describe it as a succulent vegetation desert. It is fairly well stocked with food inland and rich in food along shore. This territory is able to support a fair sized population, but scatters it and keeps it from settling down. The land is also inhospitable and difficult to strangers who are not ready to adopt the Seri mode of life. This fact has helped preserve Seri ethnic integrity and culture to an unusual degree. A considerable fraction of original Serian territory is wholly unoccupied by civilization today, a full three centuries after its frontier was settled. The Indian neighbors of the Seri, all being farmers in fertile valleys, had no more incentive or ability than Caucasians to penetrate Seri territory sustainedly.

171 Across the Gulf, the peninsula of California presents a very similar environment, and was inhabited by tribes of very similar
174 subsistence and residential habits, culture level, and temperament. But the Baja Californians differed from the Seri in being so situated, with reference to the rest of the world, that the length of the peninsula cut them off, except in the northern portion, from nearly all outside relations. Each group in the peninsula thus had contacts and stimuli only from others of similar culture. The Seri, on the contrary, having long been surrounded on the landward side by peoples of higher cultural level, were able to exploit this difference, in part by adopting cultural traits from their neighbors; and perhaps still more largely by preying upon them economically; while their habitat afforded them a refuge from destructive reprisals. Such may have been the condition in pre-Columbian days. At any rate it has been such since the coming of the Spaniards, and has made the "history" of the Seri different from that of the Baja Californians.

174 Three islands, Tiburon, San Estelan, and San Lorenzo, form stepping stones from Seri mainland to the peninsula. The water gaps between them are navigable to native craft and have been navigated

3:Davis & Dawson E-5 (1922-1940) 1945
NU31 Seri NU31

648 726 [161] The Encinas war reduced the tribe to some 350 people, and temporarily discouraged their bloodthirsty raids. By 1893, however, new killings were being reported. In one instance the Seri Chief, Juan Tomas (Fig. 14), watched as the men of a large rancho left for a rodeo and then, worming up through the brush, led his warriors into the buildings and with clubs and arrows massacred every woman and child within. Two Yaqui women who had managed to escape into the brush watched as the warriors seized [727] the infants by their feet and dashed their brains out against a large rock near the corral.

In 1904 a number of wilder Seri, led by several Yaquis, went on the warpath and killed every soul in a Papago village. The war with the Papagos that ensued aroused the Governor of Sonora into action. Nearly 250 armed men were sent out to kill or capture the Yaqui leaders and to administer a severe lesson to the Seris. The desert water holes were all placed under guard until the Seri chief, Juan Tomas, was forced to surrender for his thirsting tribesmen. Peace was conditional on the delivery of the Yaqui leaders with their hands tied together. Two days later a couple of gaunt, wild-looking Seri women, clothed in rags and with painted faces, walked into the camp to keep the conditions of the peace as they had understood them. They carried a palanca between them from which were suspended bundles of severed hands of the Yaquis who had been clubbed to death as they slept.

114 648 Twenty years after the delivery of the Yaqui hands (1922) the senior author, under arrangement with the Museum of the American Indian in New York, carried out his first expedition into the heart of Seriland. Although still intolerant of aliens and at times dangerous if aggravated, their depredations had been reduced to the occasional killing of a stray cow. The Seris had come to live a comparatively peaceful life under the supervision of Roberto Thomson of Hermosillo. It was through his efforts that the Seris were saved from complete extermination by the vaqueros of Sonora, and after having treated them for many years as a friend and adviser, he had made it feasible for a visitor to enter

[p.263(A)]

3:Davis & Dawson E-5 (1922-1940) 1945
NU31 Seri NU31

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their midst and to live among them without undue fear of losing his life. Through the kindness of Señor Thomson the senior author succeeded in making himself a friend of the Seri and, enlarging upon this friendship through long periods of living and traveling among them, has acquired an intimate knowledge of these strange people.

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In 1922 the fishing industry of the Gulf of California was not yet well developed, and it was to be ten years before the village of Kino should appear on the maps of the Sonora coast. The Seris were still isolated in their desert domain and their numbers, then about

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250, were maintaining themselves out of reach of the infectious diseases of the white man. The clan life had disappeared, and the people lived as a single tribe with their old chief, Juan Tomas, 90 years old at that time

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[482]
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FIG. 15. MOVING DAY AMONG THE SERIS
THESE BURDENS, BORNE FOR MANY MILES OVER ROCKS, THROUGH CACTUS AND DEEP SAND, CONTAIN UTENSILS FOR HOUSEKEEPING WHEREVER THE SERIS MAY STOP.

[p.263(B)]

S:Davis & Dawson E-8 (1923-1940) 1965
NU31 Seri NU31

178 of sea lion oil and powdered cactus skeleton,
396 was launched. It was the largest craft they had ever possessed and came to be called the "battleship," for its size.

● 114 After having established firm friendship with the tribe in 1922, it was possible two
221 years later to carry out an extensive plan to learn the habits of the Seris by living among them, sharing their comradeship along with their privations. At this time they still had no homes that could even be called semi-permanent. Moving here and there in response to fluctuations of their precarious food supply, household things were not ac-

cumulated, and life continued to be reduced to its very simplest elements and absolute necessities. Baskets made of fiber from the torote tree, some tin cooking and water ves-
[415] sels (the handmade ollas was seldom any longer made), some patched and filthy rags which served as blankets to the fortunate few, constituted the family possessions (Fig. 15). Starved, bony family dogs were abun-
231 dant, as always, every Indian having one or two (Fig. 16). Each day they could be seen gnawing on some old fish head long since

[p. 264 (B)]
[Text continues on p. 265(N)]

171 the latter are largely unconcerned with by far the greater majority of them.
825 If there is any magical importance attached to any of the species, it has not been discovered in the course of this field work and this fact has been corroborated by other recent observers.3

Summary

182 Extensive field work of this sort has many ramifications. One of the main
825 items investigated has been the acuteness of the native observation of animals. In the case of the Seris, this knowledge progressively increases both in volume and in accuracy with the increasing economic importance of the group. The mammals and large fish are the best known followed in order by birds, reptiles, smaller fish, insects and marine invertebrates. It is also obvious that local ecology, habits and anatomy of the various species of animals set definite limitations upon observation. Lack of understanding of the hibernation of reptiles through the winter is a case in point. Another example is in the Seris' inability to distinguish between the sexes of birds. Purely cultural factors are also potent as can be seen in the standardized responses to the questions about the age of animals and the development of birds. Seri knowledge of animals is remarkably free from mythology, although a number of animals are known to have had mythological significance in the past.

825 There is little fear of animals except of those which are actually dangerous.

An interesting fact emerges from the comparison of the particular aspects of the knowledge of natural history. Namely, that this knowledge is not always symmetrical in that some facets of natural history are far better known by the Seris than others. An excellent illustration is provided here in the complicated ways of sexing animals, in their extensive knowledge of the food habits of some of the animals and their ecological environment, and by their very limited ability to guess correctly the age of animals.

Not all of these differences can be accounted for in natural terms and it is suggested that the answer to this asymmetry lies, perhaps, in the cultural factors unaccounted for in this study. In spite of their dependence upon a relatively few economically important species of animals, the Seris do make use of much of their animal environment in their diet, as would be expected of a marginal people who still live today in a fishing and gathering economy.

FOOTNOTES

1727 1. This field work was made possible by research grants from the Department
114 of Anthropology, University of Washington. Most of the work was done in Desemboque, Sonora, during the summer of 1953 with some additional work there in May 1955.

For much help in carrying out this field work I am indebted to my friend, Leo Sandoval, a school teacher in Desemboque.

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Seri Social Structure (1)

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1. The material presented here was collected on a three-week visit to the Seri zone, the costs of which were defrayed by the I.N.A.H. [Instituto Nacional de Antropología e Historia], for the purpose of planning later investigations. It took place in January, 1952, in the company of Mr. Paul Finninger of M.C.M. [Mexico City College].

121 The permanent system of interacting influences that is presented among the Seri is of great scientific interest for its extreme characteristics of geographic isolation, environmental hostility, poverty, and the small size of the community.

131 The Seri occupy coastal territory in Sonora on the Gulf of California; formerly they covered a territory that toward the end of the 18th century, along the coast extended from Guaymas Bay, including it, to Punta Peñasco and, on the mainland, included the area in the vicinity of the present city of Hermosillo. They have been reduced little by little, now occupying only some isolated points on Cape Tepoca, Desemboque, and Tiburón Island, places from which, in spite of their inclemency, they are also being displaced.

648 Until some 30 years ago, most of the contacts of the Seri with Western culture had been warlike, ferociously defending their skins from the attacks of the yori (Mexican) invaders. Their contacts with the natives have been with the Yaqui, Papago, and those of Santa Rosalía (crossing the gulf). It was not until about 20 years ago, when the establishment of fishing camps was initiated with mestizo capital, that a new orientation in the treatment of the Seri came into being. Existing side by side with them at present are various Mexicans who exploit the products of Seri fishing, and some scientific investigators, principally from the United States.

13 They form enclaves in the heart of Aridamerica, with its cactus, shrubs and grasses, without flowing water, and with abundant flying and, especially, marine fauna.

7: Marroquin E-5 (1955) 1957 NU31 Seri NU31

Indian Improvement Brigades

During this period 12 Indian Improvement Brigades were in operation. These brigades concentrated economic and social efforts in order to improve the environment and the conditions of agriculture and animal husbandry of their respective zones of influence. 000

The 26 legal offices, whose purpose is the promotion, consultation, and defense of the economic and legal interests of the aboriginal groups, are functioning effectively.

In collaboration with the government of the state of Veracruz, an experimental Educational Unit was established in the zone of Chicontepec (Ixhuatlán, a congregation of Colatlán). This Unit consisted of an Indian Training Center, the rural schools of the zone, two Indian Improvement Brigades, two legal offices and a delegation which, in cooperation with the Departments of Health and Agriculture, the National Cofee Commission and the National Corn Commission, attacked the problems of the region.

The goal sought is one of multiple social benefits which will be attained through the collaboration of the Indian pupil.

The administrative personnel of the Office was improved by the establishment of posts with equal opportunities for promotion and salary increases. The domestic help were substantially benefited by salary increases of 50%.

Budget Increase

Considering the recognized importance of the Indian class, the budget has been increased by 4 million 675 thousand 671 pesos from 1953 to 1957. In 1953 the budget was 4 million 667 thousand 820 pesos, while in 1957 it is 9 million 340 thousand 495 pesos.

In regard to 1956, the increase was 698 thousand pesos, since the total budget for this year was 6 million 642 thousand 555 pesos. In addition, the sum of 566 thousand 100 pesos has been assigned as a fund for Indian promotion.

In the future we hope to be able to continue working on an increasingly broader basis in collaboration with the other Indianist organisms, both national and international, which operate within the country.

THE SITUATION OF THE SERI INDIANS OF SONORA

Following is data, taken from a report by Prof. Alejandro D. Marroquín, on the Seri population and some of its principal problems. The data gathered by Prof. Marroquín, synthesized here, first appeared in *Acción Indigenista*, N° 36, the information bulletin of the National Indian Institute. 114

8: Ascher E-5 (1960) 1962 NU31 Seri NU31

McGee (1898:214)

262 estimated that maritime resources provided two-thirds of the Seri diet. Kroeber (1931: 20), approximately 30 years later, estimated the proportion at about three-fifths. In the winter of 1960, 30 years after Kroeber's visit, the Seri were obtaining at least three-fifths of their food from the sea.

226 In pursuit of their main source of subsistence, the Seri travel up
[221] and down the narrow coastal band. In the winter of 1960 they were
[361] occupying one temporary camp toward the southern end of the band
[462] and a permanent camp at the northern extreme. Seri women and
[857] children gather molluska; fishing is a male occupation. In addition to gathering and fishing for their own needs, the Seri dispose of a
226 portion of their catch on the commercial market. This enterprise
439 began about 1930, and was encouraged by the establishment, in 1958,
474 of the Sociedad Cooperative de Produccion Pesquera Seri with the cooperation of the Mexican government.

225 The Pacific green turtle constitutes the largest single item in the
262 Seri diet for at least six months of the year—from January to June—and it is also caught occasionally at other seasons. In 1896 McGee estimated that it provided 25 per cent of the total food supply. Emphasizing the intimate ecological relationship between the Seri and the turtle, McGee (1898: 186-187) wrote:

> ... perhaps half of the aggregate life of the tribe is spent within easy reach of its [the turtle's] feeding and breeding grounds, and tribesman and turtle have entered into an inimical communality something like that of the Siouan Indian and buffalo in olden time. ...

[114] Kroeber (1931: 20) believed that McGee stressed the Seri-turtle relationship too strongly and overestimated its contribution to the diet.
237 McGee (1898: 187), in support of the importance of the turtle to the Seri, points to the fact that the turtle carapace is used for, among other things, a house covering and buckler, a cradle, a coffin, and footgear. The carapace is currently used for supporting and roofing
262 houses and as a starvation food. The contribution of the turtle to the diet varies from year to year, but observations made in 1960 suggest a range of from 15 to 20 per cent as a reasonable estimate.

225 Seri men fish for turtle from boats, which are manned by two or three men and are propelled by oars, sails, outboard engines, or any
[501] combination of the three. The boats operate either individually or in groups. The men fish by night or day, depending on the weather
[416] and sea conditions. When they fish at night, they use a kerosene lamp to attract turtles to the surface. The principal implement is the harpoon.

411 The harpoon tackle of the Seri is illustrated in Figure 1. It consists of a foreshaft (c-h), a mainshaft (j-k), and an extension cord (i). The component parts of the foreshaft are a projectile point (c), a gasket (d), a wrapping cord (f), a hafting base (g), and a lead cord (e and h). In preparation for turtle fishing, the hafting base (g) is plugged into the socket (j) on the main shaft (k), and the extension cord (i) is looped through the lead cord (h).

9rMalkin E-5 (1953-1956)1962 NU31 Seri NU31

121 tive behaviour, migrations, predation, distribution and the like. Existing ethnographic sources
114 on the Seri barely touched on these matters and such information as is available concerns only
121 a few economically important species and even then concern only the economy and fragments of myths in which animals are involved. This is not surprising. To my knowledge, there is not a single publication in existence dealing with the aboriginal knowledge of natural history as such, certainly not in the North American literature. Much less, yet such an approach had been followed in the standard ethnographies under the heading of "ethnozoology." It has been left to the ethnobotanists (Whiting on the Hopi, Chamberlin on the Gosiute, Robbins *et al.* on the Tewa are the best examples) to attempt something along these lines, but even this is on a limited scale.

121 Since the material for the present study has been obtained with this in mind, it inevitably suffers from the limitations imposed by the outline of the problem. The Seri material has been gathered as one of the series of studies undertaken among the selected Indian tribes (Sumu, Cora and Karajá are others) in order to have comparative material from cultures different in their basic economy and occupying different ecological niches. Thus, an analysis of the Seri material alone further limits the application of it and the conclusion one may draw from it.

The main intent then is to form an orderly and analytical presentation of the material which later may serve for comparison with the analogous material gathered among other tribes.

What then can be done with this type of material and what is the purpose of such work? For this, several different answers can be offered. To begin with, the factual data on the aboriginal knowledge of natural history of animals is sadly neglected. What there is, is fragmentary. Ethnobotanies outnumber ethnozoologies in the North American literature by better than six to one. Thus the present work and also other work I have done along these lines will fill in a gap in our knowledge.

Secondly and more importantly, this work, I believe, suggests a very novel approach toward ethnozoology, the sort of approach so far untried. This sort of systematization of the zoological knowledge among the primitives, makes a comparative approach possible, much as we have comparative studies, for example, of the social organization or of the political systems. In other ways such systematization also makes easier the internal analysis of the material.

Another important angle in this work is an attempt to relate aboriginal natural history knowledge to the general economy and to the natural environment. This is phrased as a question: how does the general economy of the people influence their knowledge of the natural history of animals? Specifically: what is the extent of their knowledge of various animal groups and how does this knowledge increase or decrease relative to their general economic preoccupations? Also: how does the general natural environment, climate espec-

[P. 3A]

documentary data and second, also the archaeological data. The subject matter unfortunately is absent from the first. As for the archaeological data, there is none as yet to date for the area except Giffor's unpublished manuscript. Nor have we the kind of ethnography that would be of help—not until ethnographers will pay greater attention to the naturalistic knowledge of the people. Nor can the matter of the Seris' cultural connections be undertaken with the present material with any degree of reliability, simply because no such material exists for the neighboring group.

However, few suggestions outside the limitations and the main object of the present analysis can be made. From the fragmentary data available I shall try to show the change in utilization of animals by the Seris. I think I can also indicate a few points in support or denial of this or that idea of the Seris' cultural connections. I can also suggest the direction of the attitudes toward animals in the Seri culture, in a sphere which normally we assign variously within the domain of religion or world view. I can also indicate some of the major changes in the Seris' exploitation of general environment. All these can be suggested only fragmentarily, as only small bricks toward a generalized structure of our knowledge of the Seri culture. To this extent the present analysis should be helpful to the future student of the Seri culture and to our general understanding of it.

Procedure

The field work on which this material is based has been done during the summer of 1953, June-September and again for one week in May, 1955. The second visit took place at a most inopportune time, amidst bad measles, dysentery and a flu epidemic which completely disorganized the tribe and persuaded most of them to flee Desemboque into the coastal desert.

The work was accomplished mostly in Desemboque, the Seris' largest and most permanent settlement after 1940 where most of them lived. Occasional side trips were undertaken later to Hermosillo, Estero Sargente, Campo Vivora, Tiburon and some of the other places mostly with the view of evaluating their ecological nature and for the observation and acquisition of the zoological materials not available in Desemboque. These trips had been undertaken in the company of the Seris who then also doubled up as informants.

During the first two weeks of my stay in Desemboque, I did no interviewing but concentrated on the collections of zoological material, occasionally and informally asking for the name of this or that animal. After two weeks regular interviewing work was commenced, first with an aid of Mr. Leo Sandoval, Mexican, U.S.—educated school teacher, but later on entirely without an interpreter. There are sound reasons for this practice. Direct questioning allows the interrogator to evaluate the replies in their less obvious nuances, the reactions of the informant to the question, his hesitations, uncertainties and the like.

In the event of well-known animals with those colloquial Spanish name everybody, Mexican and

9:Malkin E-5 (1953-1955)1962 NU31 Seri NU31

II

OUTLINE OF SERI CULTURE

161 At the moment their number should have increased again, after a disastrous epidemic in the 164 spring of 1955.

Biological Background

142 The Seris are somewhat atypical among the peoples of the general area in that they represent a very slender, sinewy, tall type. This is true of both men and women. This physical type in general is apt to be associated with the desert habitat and the Seris answer the requirements very well. As shall be seen, their economy also repre- 433 sents characteristic adaptation to the desert conditions of pre-agricultural people.

Economy

The Seris readily fell into the category of the pre-agricultural hunters and gatherers with one variant, dependence on the produce of the sea, whether marine turtles, fish or littoral invertebrates.

[241] Here the Seri provide another exception for the region. They are the only group that never had any agriculture. McGee has pointed out their lack of agricultural sense and this has also been mentioned by Kroeber and by incidental Mexican visitors. Of late years, some efforts have been made by the Mexican government and the American Friends' Service Committee to persuade them [648] toward agriculture, but to no avail. The Seris [464] occasionally hire out to the surrounding Mexican or American rancher-farmers but grow restless after a few days of cotton picking and retire, with their advanced pay lost to the employer. On the other hand, efforts to teach them related practices, well digging for example, also failed to interest them. To this day they remain much in the original pattern of economy.

262 McGee (1898:214) who had a chance to observe ●114 them from the first hand and who also had access to valuable information from the outsiders gives the following figures for their diet:

land game, large and small (incl. stolen stock)	21%
waterfowl and eggs, incl. pelican	13
sea-turtles	25
fish	15
shellfish	10
cactus fruit	9
other plants	6
miscellaneous	2

total animal 84% marine 65%

Kroeber (1930:20) questions these figures and thinks that shellfish represents greater percentage than McGee indicated. He also thinks the use of turtles had been exaggerated. He figures the dependence on the animal diet as 75% and on marine 60% but he suspects that these figures are too high for a band with ready access to countless cacti and mesquite.

[P.68]

226 411 177 commercial origin are their main instruments of fishing. To this they added dynamite, sometimes with disastrous results to themselves, mostly as a way of securing bait. Single-pointed fish-spears which loomed so importantly in McGee's account have gone the way of the Dodo for its original purpose and transformed into iron bar lances, now used largely as weapons against rattlesnakes that men encounter in their desert roamings. However, in the forties, when the Seris spent a great deal of time getting sharks and huge rays, they killed them with these weapons.

226 411 What retain some importance are the harpoon and the two-pronged spear called "puiero." The two-pronged spear is one of their oldest weapons. The construction is much the same as when McGee visited them. The spear is used mainly to stab large-size fish, the giant *bais* or *mero* for example, after it has been brought up on the line. The [225] harpoon is now exclusively a weapon for the turtle hunt.

226 177 [157] An interesting fate met an effort to teach these Indians net fishing in 1947. They tried, ruined the nets and never took it up since. The instigators were Mexicans, the fish traders. I suspect that Seri individualism had a great deal to do with their lack of interest in net fishing which after all demands a certain amount of cooperation. With the hook and line fishing, men can have much more their own way.

501 177 648 An added "tool" of the Seris is the plank boat. The balsa which McGee still observed during his visit, had already vanished by the time Kroeber came to the Seriland and had been replaced by these boats. The boats are flat bottomed but good sized. The material was provided by the Mexican government. Boats are usually propelled by 5 hp. motors leased from the Mexicans (no Seri is rich enough to purchase [439] one) who also sell them gasoline and oil at exorbitant prices and in return buy Seris' catch of fish and sea turtle for low prices. At the time of my visits these amounted roughly to less than a peso [435] per kilo of the flayed, degutted and cleaned fish (less than 8 cents) with fluctuation up and down the scale depending on the kind of the fish, and to about 30-50 pesos for medium to large size "cahuama," the live marine turtle.

501 648 The Seri boats are also propelled by paddles and sail—this is always the case with the families who wish to stay away on Tiburon for some time. The Mexicans will not lease them their motors for such trips even if the Seri, some of them at least, have enough knowledge of the motors to repair minor stoppages—a demonstration of the fallacy ●[114] of McGee's idea that they are genetically unable to handle tools. In this respect, Kroeber's (1930: 25) estimate of them is closer to the truth.

462 [439] Sexual division of labor in procuring food goes on, much the same as it had 70 and 30 years ago, with the sole exception of the imported goods. Here purchases are made either by men or women or by children, depending on who at the time has the cash and what one wishes to buy.

Fishing is still done by men and so is hunting. Women still concentrate on gathering, whether of

9:Malkin E-5 (1953-1956)1982 NU31 Seri NU31

III

MAMMALS

262 water for a week until it escaped. There was
[231] no intent to do away with it and serve it up for dinner later on.

The 3 species reported as eaten in the past are kangaroo rat, sea lion and the ringtail cat or
[252] cácomistle. Of these the little rodent had been supposedly "boiled in hot water with salt" which
[261] method of preparation may indicate that it happens quite recently yet. It is quite possible that in times of famine this animal is still used. The sea
[432] lion has been reported as "eaten once a long time ago. All of it. But not now. Its hide was once sold also but now it isn't used at all." This conflicts
● [114] with McGee's statement (McGee, 189:202) that there was a taboo on eating sea lions among the Seris and there is no way to reconcile the information.

[114] McGee's report may be as truthful as are the uncertain and hazy comments of the present day Indians.

224 On the other hand, the cougar belongs to a very dubious category, unless we can rely on Miguel Barnett's memory. All 4 of the younger informants emphatically deny that the cougar has ever been hunted for meat. But Miguel Barnett claimed that this has been done in the past, although he could not tell how long ago. Kroeber says nothing about this animal and this makes it difficult to date the events. At the time of Kroeber's visit, Miguel was at least 25 years old and the cougar could have been hunted either
[262] then or earlier. But today the Seris do not eat the flesh of the big cat and their abhorrence of it has been confirmed by the Mexicans to whom I talked about the subject, and who relish cougars' meat. This apparent distaste for the *el tigre's* flesh may
[178] well be a recent development quite unconnected with the lack of weapons. McGee (1894: *loc. cit.*) casually mentions that the Seris hunt both cougars
[411] and the jaguars but cites no evidence for it. Yet in his time Seris' almost only weapons were the
[177] bow and arrow and a lance which today has been replaced by firearms. I am unable to explain this contradictory behaviour.

262 Finally, there is the Ringtail cat or cácomistle. Although this beast has been reported as part of the diet, the information isn't too reliable. I had
[124] no way of checking whether this was the animal the Indians had in mind. Their description of it seemed to answer some other unspecified animal and their answers were confused. The fact is that the Ringtail cat does occur in the Seri territory and they are surely familiar with it.

Of the remaining 11 species none were ever mentioned by any of the informants as having been ever eaten. Their denial of eating the coyotes were most vehement. Coyote figures out probably

[P.98]

9:Malkin E-5 (1953-1955)1962 NU31 Seri NU31

V

REPTILES AND AMPHIBIANS

fore it was impossible to check the Seris' ability to distinguish between these.

As for the marine turtles, there are several possible species in the area. There is no mistake about the loggerhead. I have seen one carapace and bones taken at Campo Vivora, while with the Seris. The others could be any two of the several species common in the Gulf.

Economic Uses

In 1956 I published data concerning economic exploitation of the reptiles by the Seris which need correction. Eleven species out of 25 had been reported as used economically. Additional work done in 1955 and after the completion of the MS. indicated a much higher percentage: 17 species out of 26 are used. Thus the percentage increases from 44% to 65%. The percentage of the species actually used will probably rise with additional field work because some of the informants are disinclined to admit eating certain animals or will simply say, "these had been eaten in the past but not now." However, close inspection and observation often contradict these statements.

The list of species reported as eaten is as follows:

Turtles and tortoises: all species
Snakes: both racers, patch nosed snake and both rattlesnakes
Lizards: both chuckawallas, Gila monster, race runner, northern crested lizard

This listing shows how much dependent are the Seris on the desert habitat for food. Even today, with all the available ready-made manufactured food or imported food from the *tienda*, they gather evidently most of the common reptiles to increase their menu.

Of the species in the list, only two, both smaller species of sea turtles, figure as really important items. McGee believed that here was by far the most important part of the Seri menu, with the marine birds running second.* Now, the importance of the sea turtles has declined, no doubt through a variety of outside influences. I doubt (on the basis of my observation) if altogether it comes to more than 10% of their total diet. The turtles had been replaced as number one food by the fish (with the introduction of hook and line fishing). But anther factor evidently is the depletion of the turtle population. The third species, the huge loggerhead, is so rare that during the entire summer of 1953, only one of them had been harpooned and that at Camp Vivora away from Desemboque. The two smaller species have also become very rare and hardly ever show up near the village. They can be taken on more distant expedi-

*Eggs of the turtles are considered a delicacy, especially of the smaller of the two. The Seris say that the loggerhead has been eaten once but now almost never, because it became so rare.

[P 22 B]

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MOLLUSCA

VII

Species	Food Prev.	Food Past	Decoration Prev.	Decoration Past	Trade Prev.	Trade Past	Bait
Octopus bimaculatus	x	x				x	x
Codakia distinguaenda		x					
Laviocardium elatum		x			x[1]		
Carditamera affinis	x	x					
Acmaea dalliana			x	x	x		
Crucibulum spinosum		x	x	x	x		
Chione undatella	x	x					
Chione californiensis	x	x					
Pteria peruviana	x	?	x	?	x		
Volsella capax	x	x					
Olivella dama			x	x	x		
Cyprea annettae				x[2]			
Tegula rugosa		x		x		x	
Conus regularis		x[3]		x	x	?	
Phyllonotus erythrostomus		x				x	
Turritella bradeifiana		x[3]			x	?	
Polinices recluziana	x	x					
Chlamys subnudosa	x	?					
Atrina maura	x	?			x[4]		
Navicula pacifica		x					
Turbo fluctuosa	x	?			x		
Solenostira pallida			x	?	x		
Ceritium stercusmuscarum			x				
Trivia radians			x				
Ficus ventricosus	x						
Nioche bistrinoca	x	x					

[1]Occasionally used as dip spoon
[2]Supposedly used in the past for money
[3]In the past "giants of 300-400 maybe years ago have eaten it."
[4]Only pearls

These figures show then 26 out of 37 species exploited economically in some way, that is 70%. These figures show increase over the figures I have published previously (1956) which were 21 out of 36 species and 58% respectively. The corrected figures are the result of brief additional field work in 1955.

Food

A good part of the molluscan forms are used as food. Altogether 19 species are listed as such, although out of these, only 11 were reported as being part of the diet today while the remainder only in the past. It is obvious that there has been progressive decrease in the Seris' dependence on the molluscan diet within the past few generations.

Four of the species reported as part of the Seri diet at various times had been collected from the kitchen-middens. There are: *Pteria peruviana*, *Chlamys subdudosa*, *Volsella capax*, and *Navicula pacifica*. Of these four, *Navicula* has been reported as eaten in the past "maybe 100 years ago, but not

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XI

SUMMARY

In 1956 (Malkin 1956:74) I published tables indicating the degree of economic exploitation of the animal world by the Seris. These tables were incomplete and also need corrections. Therefore below I am reproducing the revised version.

Class	Species Reported	Species Exploited	Percentage
Mammalia	21	9	40
Birds	24	6	25
Reptiles and Amphibia	25	17	68
Fishes	44	23	52
Molluscs	37	27	70
Crustaceas	10	2	20
Insects	92	—	—
Miscellaneous	9	—	—
Totals	262	82	30

These figures show as yet remarkable degree of exploitation of the products of the sea and also of the reptiles with correspondingly lesser interest in the terrestrial animals in general. Of course, mere listing of animals does not tell the whole story. In the first place, it does not indicate the changes that took place nor does it suggest the relative importance of any group or species. Historically, the situation is different now. Out of nine species of mammals reported as eaten only six still figure out in the diet. The reduction is even more striking in birds where only three are admittedly eaten and two of these only furtively. More yet, only 12 species of marine molluscs out of 27 are eaten while the rest get discarded. All this is tied up then with the changes in the economy, with the importation and increase of the trade foods and goods and also with increasing preoccupation with the commercial fishing at the expense of hunting and gathering.

Individually, by far the most important in the Seri diet and economy are the fishes with half a dozen large commercially lucrative species leading the list. Next come the marine turtles and following these for the third place tie the molluscs, the mammals (lagomorphs, bighorn and peccary) and probably the rest of the reptiles of which the rattlers are probably most important by volume. Insects do not figure any longer in the Seri economy in any way, although at one time they probably had some significance. On the other hand, while the food importance of the molluscs decreased immensely, their trade importance is on the upswing owing to the demand from the outside. Thus the basic changes in the Seri patterns of exploitation of animals has been a result largely of an outside stimulus.

Fishing and Hunting

Fishing is practiced mostly to satisfy the immediate needs, of petty cash and food. Once these are satisfied, there is no incentive to fish until the need arises again.

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X

INSECTS AND ARACHNOIDS

●114 Altogether information has been collected concerning 92 species of insects, scorpions, ticks, myriapods and arachnoids.

Economic uses

262 [114] McGee says that "good many insects" are part of the Seri diet, although he does not specify just which they were nor how significant. There is no doubt that in his days, the insects played some role in the Seris' food and that they were probably far more important in the distant past, in the [177] XVIII and early XIX centuries, before large flocks of livestock, horses and cattle of the Spanish rancheros offered excellent opportunities to supplement the usual diet.

Of all this but minor traces remain today. The Seris even have forgotten which insects had been eaten by their ancestors. Apart from the bees, only the Sphingid caterpillar has been indicated as "eaten in the past, but not now." As for the bees, [263] their honey still is part of the Seri diet. But with the availability of sugar, even this addiction dwindles.

* 825 857 Other than this I have been unable to discover any uses whatever, except perhaps as playthings of little boys, with the usual torture in view. The *Cicada* is most significant of these, of which more later.

Pets

231 [171] The only insect pet is a *Cicada*. This insect is usually tied to a long thread, its forewings partly clipped off and then released into the air like a kite. Local Mexicans also provide their own boys with a similar kind of toy.

Hunting

222 Only bees are hunted. They are usually flushed out of the cave shelters in the mountains. The operation is accomplished without the use of smoke. The honey is cut out with a knife.

Taxonomy

* 825 Seris' ideas of association of various insects are very loose. Few insects are recognized to form natural groupings; bees, butterflies, wasps, spiders are most distinct. However, there are all sorts of gradations blending confusedly with each other, often dependent on the knowledge and interest of particular informants.

Simple recognition is not always present. Out of 92 forms, 13 the informants could not identify, simply saying that they didn't know them. *Cicindela lemniscata*, *Melanotus cribricollis*, *Horistonotus*, *Meloid*, *Oxacis*, both species of *Cymatodera*, *Photopis*, *Scolopsella*, tiny Scarab, *Leptoremus*, *Homolocorus*, and *Reduviid*—all these were in the

[P. 47 B]

*825 or toxic contrary to their genuine nature. When such contrasts exist, the beliefs cannot always be explained as a matter of the influence from the Mexican folklore. The reasons for this I discussed in the chapter on the reptiles and amphibians. The explanation for such beliefs depends mostly on additional field work. It is also interesting that in some of these instances (bat for example) there is a suggestion that the belief in the toxicity or other unpleasant traits not only is not associated with the Mexican folklore but is basically aboriginal, and it is on the way out among the younger men.

[178]

Attitudes

*825 182 With rare exceptions Seri attitudes toward animals are remarkably sober, pragmatic and matter of fact. This is evident in how little folklore or irrational fear is connected with the animals. It all runs pretty much along the line of their generalized attitudes, world view and religion as suggested by other investigators (Kroeber 1930:4; This is also the opinion of Spicer, personal communication). Elements of mystery are almost completely absent and this is probably not entirely due to the disintegration of their religion and culture as Kroeber (*Ibid*) thinks.

[114]

*825 171 In other ways, their attitude toward animals ranges from indifference (adults) to downright deliberate cruelty (little boys). In this, the Seri boys differ markedly from the boys of some of the other groups I studied (Malkin 1958:89).

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10:Davis E-5 (1922-ca. 1939) 1965 NU31 Seri NU31

Section V

The Seri Indian

Unfinished Book Manuscript

War Chief of the Seris

The Pelican Skin Robe

175 131 Three centuries ago they were a friendly people living along the banks of the Sonora River from Hermosillo to where the flow of water sinks into the marshy banks along the coast of the Gulf of California.

175 117 The great Padre of the Pimas, Eusebio Francisco Kino, first visited the Seris in 1685, and found them "a very gentle people." After a short preachment to them he noted that "With very great insistency they begged me to remain with them and baptize them saying they would give me horses, fish and many products of the country, and that they would build me a house and a church. On three different days I said Mass in their country."

The Padre could not remain but two years later (1687), he sent Father Adam Lily to them. Lily established a mission---Santa Maria del Populo---on the banks of the River near what is now Hermosillo. The Seris remained faithful to the Padres when the whole country rose in revolt some years later.

175 [131] The withering hand of time worked against them, however. They were pushed farther and farther down onto the barren lands along the gulf coast until, finally, in a fierce and desperate retreat out into the sea and onto the desert Island of Tiburon. The swift and deadly channel between the Island and the Sonoran mainland gave them protection. They retrogressed through the centuries into a fierce and, perhaps, cannibalistic tribe.

• 114 [123] As late as 1922, when Edward Davis first visited Tiburon Island, a man was putting his life on the line when he stepped on the Island. But perhaps the quality of the man had something to do with it. As did Father Kino, Edward Davis was able to make friends of them.

The following manuscript is an incompleted book on the Seris which was found among his papers.

[pp. 6-138 not processed]

Unfinished Book Manuscript

114 At the Museum of the American Indian, Heye Foundation in New York City where I was staying temporarily _____, I was asked by Mr. Heye where I would like to go on my next collecting trip for the Museum. I had already covered the whole of southern half of Arizona and had made thorough collections from Pima, Papago, Maricopa, Apache, Hualapai and other tribes, and had also covered Southern California and its deserts.

For many years I had read every scrap of information about the treacherous Seri Indians of the Island of Tiburon---off Mexico, and was greatly intrigued with these wild primitive natives. My theory has always been that the farther away from civilization a tribe is located, the better chance to secure original or aboriginal material, so I asked Mr. Heye if he had anything from the Seri Indians of Tiburon Island, and he said: "Not a thing, nor any other museum."

"Well, I think I'll go to Tiburon in March," I said.

He said, "I wouldn't advise it. You know their reputation. No white man landing on that mysterious Island has ever returned. They are the most treacherous Indians in North America, and Tiburon Island is a good place to stay away from."

114 Nevertheless, I went to Hermosillo, capital of the State of Sonora,
123 Mexico, and there I met and engaged Roberto Thomson, whose father had
[115] treated with kindness some of the Seris who had reached his ranch, and he, Roberto, thought we could land on the Island and, by considerate treatment, make friends with these wild *Tiburones*. It seemed as if we were flying into the face of certain death from their reputation, but we met these people, and by gifts and fair treatment, we became good friends, and from that time in 1922 to the present, that friendship has endured unbroken.

I have the absolute freedom of the Island, and have visited there at least six times. I have been through the Island on all its coasts and am familiar with its wild inhabitants.

175 Indians. Dr. McGee, confirming Bill Fain's story of the disappearance
648 of Robinson and Logan, the San Francisco newspapermen, secured the
266 facts from a Seri who spoke Spanish, as follows:

> On reaching the Island, Robinson and Logan asked the natives if there were any deer to be shot and receiving an affirmative reply, they started for the interior toward the mountain with several Seris as escort, leaving the two other men with the boats. On the face of it, this was a most foolhardy performance and Robinson actually loaned his rifle to one of the Seris, who accompanied him. The Seri shot Logan in the back and wounded Robinson who called for help. In trying to escape he stumbled and fell and the Indians beat his brains out with rocks.

On the Gulf Coast, this list of killed and of course eaten, could be greatly enlarged and leads to the fact that, up to recent years, no stranger---American, Mexican or Indian---could land on Tiburon and live. Ever since Sonora was settled, two or three hundred years ago, the Island has borne a sinister reputation and up to recent years, it has lived up to its reputation. Even now, no one is allowed to land on the Island without permission of the Governor or the Superintendent.

[181] The Island of Tiburon is isolated, its approaches guarded by deserts and sea, and its people the wildest and most primitive race in North America---every man's hand against them, and they against every body.

175 Dr. McGee's investigations in 1895 failed to convict the Seris of
648 cannibalism or of eating any part of either whites or Indians, killed
266 on the Island or killed in battle. This reputation of cannibalism is
114 prevalent in Mexico as well as in the United States, but the charge has never been proven.

It is true, they eat the flesh of animals raw as well as partially cooked, and that may have given rise to this gruesome reputation, but my own investigations covering several visits on the Island and on the Sonoran coast, failed to convince me that they had eaten human flesh. They told me themselves they had not, and if all reports of cannibalism by the Seris were traced back to their source, they would end in surmise or guesswork. No one, so far as I have been able to find, has actually seen a Seri eat human flesh. Until such a witness can be produced, the Seri remains unconvicted.

Let us examine the so-called evidence of the mining men, as quoted by Bill Fain: the finding of a white man's hands spiked to a cross, and the schoolmaster's papers scattered on the Gulf Coast of Sonora. This evidence is too circumstantial. The discs of leather even fitted the holes in the bag.

In the first place, nails are scarce in Sonora, and no Seri at that time would risk his life to procure nails or spikes at any ranch. Nearly all woods in that region are hard and would almost certainly turn a nail. The Seris had no axes to chop trees to make crosses, and

if they were as hungry then as they are today, they would not stop to spike a man up preparatory to serving him. Their only tools then were rocks to use as hammers and hoop iron for knives, and these are in universal use today.

There is no doubt that the men were killed, but I think these mining men purposely exaggerated their findings, if any.

There is no doubt that the Seris were brave fighters, treacherous murderers, sparing neither men, women or children on their raids, killing ruthlessly. But there is one charge which cannot be brought against them, which cannot be said of many tribes north of the border. So far as I could find out, they never tortured nor scalped.

The Seris never took prisoners and they never inter-married with other tribes, so their strain is pure.

There was one exception. Sixty or seventy years ago, the Seri Chief Coyote Iguana and his band of warriors held up the stage between Hermosillo and Guaymas, and killed all except a handsome Spanish girl of the better class. This girl, Coyote Iguana made his wife and by her raised a family. One granddaughter still survived in 1924, and while more attractive than the general run of Seri, her complexion was fully as dark.

The Seris, Ishmaelites among the native tribes of Mexico---the most fascinating Indians in North America!

Reception Committee, Tiburon Island - 1936

On the twenty-fifth of April, nineteen twenty-two, I engaged the services of Roberto Thompson, who with his father and grandfather

[text continues on p. 149]

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Nine Thomson, Pancho Olivarria and Roberto Thomson at Tecomate, on north coast, upending whale ribs cast up on the beach. Although thoroughly dried and bleached for years by a semitropic sun, it took their united efforts to elevate these ribs.—E.H.D.

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Roberto Thomson, Santo Blanco and Edward H. Davis

10: Davis E-5 (1922-ca.1939) 1965 NU31 Seri NU31

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Edward H. Davis with a rattlesnake around his neck - 1922

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Santo Blanco and Edward H. Davis - this hombre gambled away his only Mary - Sonora - 1929

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Seri method of carrying infant

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Edward H. Davis and Pelican skin robe made for him by Seri Indians - 1934

SERI BANDS

EDWARD MOSER

•114

Mr. Moser, of the Summer Institute of Linguistics, holds a Master's degree in Linguistics from the University of Pennsylvania. He has been doing research on the Seri language during trips to Sonora since 1952.

ABSTRACT

105 In previous publications on the Seri, frequent reference to distinct
621 Seri groups points to historical tribal divisions at some level.
642 Recent research among the Seri has determined the former exist-
614 ence of six bands which included three dialect groups. Three of
the bands were subdivided into clans. These six bands, whose
[178] formation may have been caused largely by internal struggles,
were eventually crushed and reduced to a single group by the
devastation brought about by external conflict.

INTRODUCTION

10 The Seri tribe is located in Mexico along the coast of Sonora
13 between Bahia Kino and Puerto Libertad, and on Tiburon Island
[61] (Fig. 1). Today it consists of approximately two hundred and
178 eighty persons who call themselves *kongkaak*[1] "the people." Al-
621 though at one time it was comprised of six distinct bands (Fig. 2),
642 the tribe has now lost its band organization. However, much of
the late history of these now-defunct tribal units remains vivid
121 in the minds of the Seri. The purpose of this paper is to present
621 some of the salient features of these former bands, to discuss
642 certain interrelations between them, and to recount the Seri ver-
sion of the disintegration of the band system.[2]

114 Three published studies on the Seri should be mentioned.[3]
Of these, the reports by Kroeber and by Griffen are the more
reliable. All three investigators mention tribal divisions which
Griffen rightly designates as bands.

BANDS

642 BAND I *xika ʔai kkoii* "they who live toward the true wind"
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131 This group is commonly referred to in the literature as the
Tepoca or Salinero. As shown on Fig. 1, they inhabited an area
which extended from a point slightly north of Puerto Lobos to
Punta Tepopa on the south. The territory extended inland, encom-
passing the general area delimited by the San Ignacio River.

11: Moser L-5 (1956-1961) 1963
NU31 Seri NU31

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FIG. 5. Subdivisions of Band VI

BAND SOCIAL STRUCTURE

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The social structure of the bands can be properly understood only in relation to the social structure of their smaller units, the *i?isiitang*. The kin group which resided in and dominated each such subdivision constituted a clan.[5] This group conforms to Murdock's three major specifications for clan designation.[6]

Murdock's first specification states that a kin group, to constitute a clan, must be based explicitly on a unilinear rule of descent. The kin group of each Seri band subdivision was based on patrilineal descent. An individual was closely associated with the group of kinsmen of his subdivision, all of whom were related to him through males only. The father was the head of his household. For example, he assumed leadership in marriage negotiations. Upon his death, the eldest son took his place.

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The second specification states that such a kin group must have residential unity. Seri marriages were exogamous with respect to the subdivision,[7] and the rule of residence was patrilocal. The domicile was set up near the home of the groom's parents.

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642 621 618 714 [186] [976]

The third specification states that a kin group, to constitute a clan, must exhibit actual social integration. Murdock stresses the necessity of observing a positive group sentiment, such as would be manifested by organized collective activities or group functions, before the group can be characterized as a clan. An essential feature of this group sentiment is the inclusion of the wife as an integral member of her husband's kin group.

621 618 [628] [622] [701] [583] [476]

This sort of social integration was indeed exhibited by the Seri kin group of each subdivision. It was, in fact, fostered by the isolation brought about by the inhabitants' reservation of hunting and fishing rights for themselves. Tension existed between certain subdivisions and, since there was no chief, the oldest capable male organized and led the fighting force of the clan. In times of need, the members of the group united to give mutual assistance. The groom-to-be could expect material aid from his fellow clan members in the payment of the bride price. Mutual assistance was given in the fulfillment of puberty ceremony and burial obligations. The men cooperated in their hunting and fishing expeditions. The women of the clan, including the in-married spouses, cooperated in the gathering and sharing of food. Everyone could attend the various fiestas. It is said that in the performance of these collective activities, close harmony generally prevailed.

BAND INTERNAL AND EXTERNAL RELATIONS

642 619 578 [648]

The division of the Seri tribe into bands was likely brought about through internal strife. During the period of band history known to the present-day Seri,* however, serious skirmishes seem to have been fought predominantly with non-Seri groups.*

Band I

642 621 628 578 [721] [648]

Band I internal relations appear to have been relatively peaceful. The inhabitants of subdivisions 1, 2, 3, 4, and 5 were fishermen as well as hunters and gatherers, whereas the people of subdivision 6 preferred to subsist on gathered food and wild game. Also, the members of Band I robbed cattle and horses, which pursuit brought reprisals from the Mexican ranchers. There was apparently considerable social intercourse among the six subdivisions, even to the extent that hunting rights of one were sometimes granted to inhabitants of a neighboring section.

Trouble developed when some members of Band I speared fish within the domain of Band V. Here also bitter fighting broke out, and any semblance of peaceful co-existence between the two groups was destroyed.

so named must be of the same sex as the first. The significance of land ownership needs further investigation.

Many of the Seri still prefer, when possible, to live in their chosen band area. Sometimes a person, when he is approaching death, will ask to be taken to his own i?iziiting, where he can die and be buried in the area of his choice.

NOTES

1. Due to printing limitations, stress on Seri words has been omitted, and several orthographic symbol changes have been made for this paper. The phonetic values of the symbols used are the following: p is voiceless labial stop; t is vl. dental stop; k is vl. velar stop; ? is glottal stop; f is vl. labial flat spirant; w is vl. labial grooved-rounded spirant; s is vl. alveolar spirant; x is vl. alveo-palatal spirant; l is vl. lateral spirant; h is vl. velar spirant; x is vl. back velar spirant; m is labial nasal; n is dental nasal; ng is velar nasal; y is palatal semivowel; i is a high close front vowel; e is a low close front vowel; a is a low open central vowel; o is a mid close back vowel.

2. These data were compiled during field trips to the Seri camps during the years 1956-61, the studies being carried out under the auspices of the Summer Institute of Linguistics. The principal informant was R. Herrera T. whose information was checked with and supplemented by nine of the older members of the tribe. I am indebted to my colleague, David Thomas, who read an earlier draft of this paper and made helpful suggestions.

3. 1) W. J. McGee, "The Seri Indians," *Bureau of American Ethnology, Annual Report*, No. 17, Part 1. Washington, 1898. 2) A. L. Kroeber, "The Seri," *Southwest Museum Papers*, No. 6. Los Angeles, 1931. 3) W. B. Griffen, "Notes on Seri Indian Culture, Sonora, Mexico," *Latin American Monograph Series*, No. 10, Gainesville, 1959.

4. It will be noted that between subdivision 3 and 4 on Fig. 3 there is an unnumbered area, the status of which is uncertain.

5. Kroeber states that McGee's concept of Seri maternal lineages crystallized into totemic clans with matron rule seem a fantasy. In Kroeber's opinion, "The Seri may never have had sibs or clans; but the fact that they appear to lack them now is no positive evidence that they were without them three centuries ago. Shifts of residence, contraction of territory, shrinkage of numbers, amalgamation of distinct bands, may well have obliterated much of such social fabric as they once possessed."

Griffen discusses the nature of the former Seri bands and states, "they may have been patrilineal and exogamous. The criteria . . . that Julian Steward has exposited for the formation of exogamous, patrilineal bands . . . are and presumably would have been met formerly in the Seri habitat." Griffen lists other aspects of this type of band which are also verified to some extent by his data. From reading his material, it is obvious that he suspects the existence of clans at some earlier period. He emphasizes the need for further investigation.

6. G. P. Murdock, *Social Structure*, Macmillan Co., New York, 1949.

7. Marriages were usually contracted within the band.

8. As Kroeber points out, their memory likely covers only the latter part of the period of Spanish contacts.

9. The Seri recall nothing of Seri-Pima contacts and little of Seri-Apache relations.

10. The story is related that one day some Seri entered a cave where they found several Papago jugs filled with seeds. Being hungry, the people ate the seeds and left some arrows as token payment. The Seri say that the Papago apparently believed the arrows were intended as an insult. Fighting broke out soon afterward.

11. The Seri concept of the band annihilations is seen to be in contradiction to McGee's statement (p. 132): "Concordantly with their primary characteristic, the Seri have avoided ethnic and demotic union beyond the narrow limits of their own kindred; and even of these they seem to have cast out parts, annihilating the Guayma and Upanguayma, displacing and nearly destroying the Tepoka, and outlawing individuals and (apparently) small groups."

12: Moser L-5 (no date) 1964
(ca. 1960) NU31 Seri NU31

SERI BLUE

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ABSTRACT

The blue which the Seri Indians of Sonora, Mexico, use in face painting is not the mineral dumortierite, as previously believed, but is a prepared pigment. This paper is a description of the process in which three elements are combined to produce this pigment.

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McGee and Kroeber reported the mineral dumortierite as the source of the blue pigment used in Seri face painting (McGee 1898: 165-6; Kroeber 1931: 27). Coolidge described two blues, one a mixture of gypsum and a boiled root, the other a blue stone found on Tiburon Island (Coolidge 1939: 200). Xavier mentioned dumortierite and commercial bluing. She also referred to a third blue obtained from a plant on Tiburon (Xavier 1946). Present investigation has shown that as far as the Seri know, the only blues they have ever used are *ika?óil* "to cause to be blue" (commercial bluing) and the highly prized *?antezj kóil* "blue clay" of their own manufacture.[1]

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The components and the method of manufacture of *?antezj kóil* are said to have been taught to the women long ago by *?ant i?akímxoj* "they who tell the things about the earth." The actual color transformation is veiled in mystery to the Seri who say that if the process of making the clay is observed by any girl who has not passed the menarche, the blue will not appear. Its appearance is not attributed to shaman power, however.

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?antezj kóil has been in less demand during the last few decades since commercial bluing has been readily available. Nevertheless, *?antezj kóil* is the blue preferred by those women who continue to adorn their faces in the traditional manner.

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The three ingredients used in making the blue clay are the root bark of *xkoktz (Franseria dumosa)*, *iki kóizj* "to grind with" (a mixed clay in which montmorillonitic layers predominate), and *mokni óoxW* "excrement (sap) of *mókni (Guaiacum coulteri)*." The Seri say that the *iki kóizj* and the *mókni* are found only on Tiburon Island. The root bark of *tinkl (Franseria ambrosioides* Cav.) or of *xneejan siiktoj (Stegnospermum halimifoliam)* can be used instead of *xkoktz*. *tinkl* gives a distinct aroma to the clay. The plants mentioned are fairly common along the Sonoran coast.*

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*EDITOR'S NOTE: It is interesting to note that none of the ingredients is blue in its unaltered state.

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ACKNOWLEDGMENTS

I am indebted to Richard Felger, Department of Zoology, University of Arizona, for information concerning plants referred to in this article. H. Wesley Peirce of the Arizona Bureau of Mines identified the mineral material used in the pigment.

NOTES

1. The phonetic values of the symbols used are the following: t is voiceless dental stop; k is vl. velar stop; ? is glottal stop; W is vl. labial grooved-rounded spirant; s is vl. alveolar spirant; z is vl. alveo-palatal spirant; l is vl. lateral spirant; j is vl. velar spirant; x is vl. back velar spirant; m is labial nasal; n is dental nasal; i is a high close front vowel; e is a low close front vowel; a is a low open central vowel; o is a mid close back vowel.

2. The restriction as stated to me by various women pertains only to young girls below the age of menarche. Actually, however, none of the above-mentioned young men and women, most of them in their twenties, was allowed to observe.

3. Plant specimens are deposited in the Herbarium of The University of Arizona.

4. The blue "pencil" which McGee describes (McGee 1898: 166) and pictures (McGee 1898: Plate XXVII facing p. 170) is apparently the *?entezj kóil*.

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1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

where a temporary Seri rancheria was found occupied by about sixty of the tribe, including subchief Mashém, who speaks Spanish. In this part of the work the expedition was accompanied by Señor Pascual Encinas, the owner of the rancho visited, and doubtless the best informed white man concerning the habits, customs, personnel, and habitat of the tribe. About a week was spent in intercourse with the occupants of the rancheria, when the studies were brought to an end through the illness of Señor Encinas, and the consequent necessity for return to Hermosillo. The expedition then proceeded northwestward and northward along a route so laid as to define the western limits of Papagueria proper, and reached Tucson near the end of the year. In addition to the leader, the party comprised Mr William Dinwiddie, photographer; José Lewis, Papago interpreter, and E. P. Cunningham, teamster. The outfit was furnished chiefly by Mr J. M. Berger, of San Xavier (near Tucson). On the visit to the Seri frontier the party was accompanied by Señor Encinas, Don Arturo Alvemar-Leon (who acted as Spanish interpreter), and two or three attachés of Molino del Encinas.[1]

The second expedition was directed primarily toward investigation of the Seri, and only incidentally to continuation of the researches among the Papago. Outfitting at Tucson in October (again with the aid of Mr Berger), the expedition proceeded southward by a route different from those previously traversed, and carried forward a plane-table route survey covering a considerable zone from the international boundary at Sasabe to Rio Sonóra. Descending the previously unmapped course of Rio Bacuache, the expedition reached the Rancho de San Francisco de Costa Rica on December 1, 1895, and, although conditions were found unfavorable in that the Seri were on the warpath, immediately prepared for the extension of the work into Seriland.

A preliminary trip was made into the mainland portion of the Seri habitat, terminating at the crest of Johnson peak, the highest point in Sierra Seri. The triangulation and topographic surveys were carried over the territory traversed, and several points were fixed on Isla Tiburon; but the natives, agitated by a skirmish with vaqueros on the frontier a day or two earlier, had withdrawn to remoter parts of the territory, and were not encountered. The party returned to Costa Rica, a rude boat was completed, transported across the desert via Pozo Escalante to Embarcadero Andrade, and launched in Bahia Kunkaak. The surveys were extended to the southern portion of Sierra Seri and Isla Tasnne, and, after various difficulties and delays due to dearth of fresh water, to gales, and to other causes, the party (enlarged for the purpose) finally landed on Tiburon. Many Seri rancherias were found on

[1] The more noteworthy details of the organization and work of the two expeditions are set forth in the administrative reports of the Bureau for the fiscal years 1894-95 and 1895-96. Certain members of this party are shown in the accompanying half tone, forming plate II: Señor Encinas seated at the end of the table, his son, Don Manuel (mentioned), and Don Ygnacio Lonzain at his right; a grandson behind him, and Señor Alvemar-Leon seated at his left, with Mashém kneeling over the table in the foreground.

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114 both sides of Bahia Kanksak and El Infiernillo. Some of these had been occupied almost to the hour of the visit, but the occupants [123] had taken flight, leaving most of their unattached possessions behind, and were not seen, though it was evident that, like wary birds and game animals, they kept the invaders in sight from points of vantage and hidden lairs. The eastern scarps and foot-slopes of Sierra Kanksak were traversed extensively and repeatedly; its crest was crossed by Mr Johnson with a small party at a point west of Punta Narraganett, [126] and the triangulation and topographic sketching were connected with the work on the mainland and carried over practically the entire surface of the island, being tied to the work of the Hydrographic Office about the coasts. Then, despairing of finding the wary natives, and having exhausted food supplies, the party returned to the mainland and thence to Costa Rica, arriving in the evening of December 31.

The original party comprised, in addition to the leader, Mr Willard D. Johnson, topographer; Mr J. W. Mitchell, photographer; Hugh Norris, Papago interpreter, and José Contrares, teamster. The party engaged in the expedition to Sierra Seri comprised the leader, Messrs Johnson and Mitchell, Mr L. K. Thompson of Hermosillo, Don Andrés Noriega of Costa Rica, José Contrares, and two Papago Indian guards, Miguel and Anton, of Costa Rica. The Tiburon party was made up of the leader, Messrs Johnson and Mitchell, S. C. Millard of Los Angeles, and Señores Andrés Noriega and Ygnacio Lozania, together with Ruperto Alvarez, a Yaqui Indian guard, and Miguel, Anton, Mariana, Anton Ortiz, and Anton Castillo, Papago guards; while Hugh Norris and José Contrares, with half a dozen Papago guards and other attachés of the rancho at Costa Rica, maintained an intermittent supply station at Embarcadero Andrade. Señor Encinas cooperated in the work of the expedition, part of the time at Costa Rica and part at Molino del Encinas, his principal hacienda in the outskirts of Hermosillo; while Mr Thompson and Dr W. J. Lyons aided in the work, the former at both Hermosillo and Costa Rica and the latter at Hermosillo.

The return trip from Costa Rica lay via Hermosillo, and permitted the extension of the plane-table surveys to this longitude. While at the city advantage was taken of the opportunity to obtain linguistic [115] and other data from "El General" Kolusio, a full-blood Seri retained at the capital by the State for occasional duty as a Seri interpreter, who was obligingly assigned to the service of the party by Señor Don Ramón Corral, then governor of Sonora. At Hermosillo the leader of the expedition left the main party, which then proceeded northwestward and northward along the route followed by the 1894 expedition on the return journey, the party comprising Mr Johnson, in charge, with Messrs Mitchell and Millard, Hugh Norris, and José Contrares; and the plane-table surveys were continued and combined with the route surveys made on the outward journey.

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to be their only aim, and every arrow or lance thrown by the Ceris that pierces the skin causes death, as all are poisoned. Many expeditions, fitted out at a great expense, have been sent against them; but, though commanded by competent officers, all have failed. The number being so small, they manage when pursued to conceal themselves where they can not be found. The island of Tiburon, as well as the mainland adjacent, is exceedingly barren and destitute of water; hence parties have suffered greatly in the campaigns against them, without accomplishing anything. I was told that the Government had already expended more than $1,000 for every male of the tribe. The last serious attack of these people was made upon a gentleman traveling to Guaymas in his carriage with his family and attendants, embracing 18 persons. They were surprised in an unfrequented place and every soul put to death.[1]

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Commissioner Bartlett quoted Hardy's description of the arrow poison, and, speaking of the Seri tongue, added:

I found it an extremely harsh language, very difficult to express with our letters, and totally different from any aboriginal tongue I had heard spoken; . . . but it was impossible for me, without a close philological comparison with other Indian languages, to arrive at any correct conclusion as to whether this people are allied or not to other aboriginal tribes.

He also referred to a prevalent notion that "the Ceris were of Asiatic origin, in proof of which some statements were made too improbable to repeat. This idea seems to have originated from the resemblance between their name and that given by the ancients to the Chinese."

In order to obtain a Seri vocabulary, Commissioner Bartlett had a messenger dispatched "to a pueblo or village of these Indians near Hermosillo. The person sent for made his appearance in a few hours"; he was "a good-looking man, about 30 years of age. His complexion was fair, and resembled that of an Asiatic rather than an American Indian. His cheek bones were high, and his head round and well formed, though the anterior portion was somewhat angular and prominent. His hair was short, straight, and black. He was a full-blooded Ceris, and came originally from the island of Tiburon. In about three hours I completed the vocabulary quite satisfactorily to myself."[2] The vocabulary was not printed with the narrative; nor were references made to the Seri population, either in the pueblo or in Seriland.

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While the vocabulary was not published by Commissioner Bartlett, it was preserved and passed into the hands of George Gibbs, who made a systematic transcript;[3] this came into possession of Dr Albert S. Gatschet, and a copy is preserved in the archives of the Bureau of American Ethnology. The name of the native informant is not recorded, but fortunately he was found still living, and was fully identified, during the expeditions of 1894 and 1895—especially toward the end of the

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[1] Personal Narrative of Explorations and Incidents in Texas, New Mexico, California, Sonora, and Chihuahua, Connected with the United States and Mexican Boundary Commission, during the years 1850, '51, '52, and '53; New York, 1854, vol. i, p. 403 et seq.

[2] Ibid., pp. 405–406.

[3] This transcript is entered in a blank schedule Vocabulary of 100 Words, printed by the Smithsonian Institution for Gibbs, with a supplementary sheet; it is dated January 1, 1852; and while the published "Narrative" implies that it was recorded December 31, 1851, the manuscript date is confirmed by the Seri interpreter, Kolasio.

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115 latter, when, on January 4, 1896, he was employed as an informant. He was then a fine-looking man of noble stature and figure, and of notably dignified air and manner, dressed in conventional attire; his hair was luxuriant, iron-gray in color, and trimmed in Mexican fashion. His looks indicated an age of about 70, but in his own opinion (which was corroborated by that of Señor Pascual Encinas and other old acquaintances) he was at least 75. His movements were vigorous, his eyes clear and bright, his vision good, and, except for hardly perceptible imperfection of hearing, he was in full possession of normal faculties. He was in the employ of the state as a trustworthy attaché of the governor's palacio, where his services were nominal; his real function was that of a Seri interpreter in case of need; and on the day specified he was temporarily assigned to the service of the expedition by His Excellency Governor Corral. By Mexican acquaintances he was commonly called Fernando, though he called himself Kolusio, sometimes using the former designation as a forename; he was also known as "El General" (= Chief), or "El General de los Seris". He had a vague memory of Tiburon island, which he left in childhood (at about 6 years of age, according to his estimate) and had never revisited, though he had been on the Seri border so late as 1870. Except when temporarily at Rancho San Francisco de Costa Rica, he had lived in Pueblo Seri, usually reporting in Hermosillo daily for such duty as might be assigned to him at the palacio. He was aware that he was regarded as a tribal outlaw, and admitted that no consideration could induce him to approach Seriland, since he would be slain by his tribesmen more eagerly than any alien; indeed, he hardly dared venture so far westward as Molino del Encinas, in the outskirts of Hermosillo, and only did so in daylight or in company of others. His few kinsfolk in Pueblo Seri had died or deserted so long before that he had forgotten names and dates; and, as he remarked with half-realized pathos, he had been alone amid aliens for very many years ("muy muchos años"). The linguistic inquiries put to him reminded him of previous interrogations of the sort, and he voluntarily described the visit of a distinguished American who, a long time ago (more than 40 years, he thought), came down from Ures, with many books and papers, and spent New Year's day in interrogating him about his language and his people. He was much impressed with the ability displayed by the "Gringo muy grande" in writing the terms and afterward repronouncing them properly; and he described the visitor as appearing very pale and sick ("muy palido y malo"), and under the necessity of frequently resting and taking medicine, and also as having wavy hair, worn so long as to hang down over the neck and shoulders. He could not recall that he had ever heard the American's name; but his description pointed clearly to Commissioner Bartlett, who had risen from a sick-bed at Ures and was on his way to Guaymas to get the benefit of a sea voyage, and who wore his hair long during a part or all of his expedition (as was subsequently

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ascertained by extended inquiry). Kolusio also remembered "giving his language" (a bold if not sacrilegious act, according to his view) to two or three other persons, (one "not a Mexicano" though speaking Spanish, none "Americanos"[1]); but the first-mentioned instance was the one most deeply impressed on his mind. At this time (1826) he retained a working knowledge of the Seri tongue, and was able to serve satisfactorily as a Spanish-Seri interpreter; yet careful test showed that he had forgotten numerous native terms, and sometimes inadvertently substituted other Indian (Yaqui, Papago, and probably Opata) and Spanish words; while he knew so little of the tribal customs and beliefs that inquiries pertaining to them were too nearly fruitless to be long pursued. Undoubtedly his knowledge of the Seri tongue was fresher and fuller in 1833; but since he was practically isolated from his tribe in early childhood, he probably never possessed much information concerning the esoteric characters of his people.

The next noteworthy scientific student of the Seri was Johann Carl Eduard Buschmann, who visited various Mexican tribes, but whose knowledge of the Seri was wholly secondhand. Quoting Villa-Señor and Arrecivita and other early writers, noting unfortunate passages from Bartlett, and magnifying Mühlenpfordt's misapprehensions into positive error, he reduced knowledge of this and neighboring tribes to chaos. The "Guaymas" were separated from the "Seris (oder Seres)", and these (at least by implication) from the "Tiburones", while the "Piatos" were combined with the Seri, the traditional alliance with the Apache was greatly overdrawn, and the "Heri oder Heris" and the "Tepocas" were treated as distinct.[2] No new facts were adduced, no use was made of local sources of information, and no notice was taken of other than literary data.

In 1857 the gigantic surveying enterprise of Jecker & Co. was undertaken, under a concession from the Government of Mexico, and the scientific surveys were intrusted to a commission headed by El Capitan Carlos Stone (General Charles Pomeroy Stone, U.S.A.). The commission headquartered at Guaymas, purchased vessels for the survey of the coast, and began operations also in the interior; Bahia Pinacati and George island (named by Hardy in 1826) were surveyed, as well as the entire Sonoran coast south of Guaymas, and "one hundred miles of coast near Tiburon", besides many hundred square miles of valuable lands. At this stage friction developed between the progressive commission and the conservative Sonorenses, which ended in the expulsion of the scientific commission by the State government.[3] By reason of the

[1] At the time of inquiry the importance of the other vocabularies was not suspected, and the interrogation was not pushed far enough to permit identification of the persons to whom they were given.

[2] Die Spuren der aztekischen Sprache im nördlichen Mexiko und höheren amerikanischen Norden. Zugleich eine Musterung der Völker und Sprachen des nördlichen Mexiko und der Westseite Nordamerikas von Grodekiaaren an bis zum Eismeer. Von Joh. Carl Ed. Buschmann (in Abhandlungen der Königlichen Akademie der Wissenschaften zu Berlin, aus dem Jahre 1854, zweiter Supplement-Band); Berlin, 1859, pp. 512-521 and elsewhere.

[3] Arizona and Sonora, etc., by Sylvester Mowry; New York, 1864 pp. 99-102.

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collected by Señor D. A. Tenochio and transmitted to the Mexican Society of Geography and Statistics. Noting the condition of the tribe at the time, Señor Pimentel wrote:

The Seris are now reduced to a few families only, inhabiting Tiburon, especially the island of Tiburon, for which reason they are also known sometimes by the name Tiburones. The Indians called Salineros, who live on the borders of Pimeria Alta, and the Tepocas, who live toward the south, belong to the Seri nation. The Seris have always been notable for their ferocity and barbarism, preferring death in war against the whites to the adoption of civilization. They are dreaded and notorious for their arrows, poisoned with a most virulent venom [ponzoñosísimo con activísimo veneno]. They are tall and well formed, and their women are good-looking. By reason of their distrust of the whites, it has not been possible to ascertain their traditions, further than that their ancestors came from distant lands of unknown direction. Of their religion it is known that they adore daily the rising sun.[1]

After brief discussion of the grammar, and extended comparison of some sixty out of the seventy vocables selected by Señor Tenochio, he concluded:

Although in the list of Seri words consulted the foregoing reveal analogies with those of the Mexicani group, there are, without doubt, other terms belonging exclusively to the Seri or some other branch extraneous to the Mexican group; for this reason it would appear that the idiom represents a distinct family.[2]

The list of these distinct words was appended. Referring to the dialects, Señor Pimentel expressed the opinion, based on literary references, that the "Guaymas" or "Gayamas", "Upangualmas", and "Conomaques" may be considered as belonging to the Seri family.[3]

While Señor Pimentel gave credit to his informant, Señor Tenochio, he did not indicate the original source of the vocabulary; but the source may be defined approximately by a process of elimination: there is hardly a possibility that the terms were obtained from any tribesmen in Seriland, since they were all inimical to the whites, and since very few of them have ever known enough of the Spanish tongue to permit communication with the Mexicans; accordingly, it is practically certain that the Seri interpreter must have been either (1) a resident of Pueblo Seri or (2) an attaché of rancho San Francisco de Costa Rica (of which more anon); and in either case it would seem certain that the native informant could have been none other than the standard Seri-Spanish interpreter of the last half century—Kolusio. Indeed, Kolusio was, at the time, the only Seri habitué of Pueblo Seri possessing sufficient knowledge of the Spanish and enough intelligence and independence to "give his language", and was one of the two frequenters of the rancho similarly equipped.

Pimentel's contemporary, Licenciate Manuel Orozco y Berra, contributed in important measure to systematic knowledge of the Seri, which

[1] Cuadro Descriptivo y Comparativo de las Lenguas Indígenas de México, ó Tratado de Filología Mexicana, por Francisco Pimentel, segunda edicion mucho completa, tomo II; Mexico, 1875, p. 330. The first edition of the work was published in two volumes, dated, respectively, 1862 and 1865.

[2] Ibid., p. 331.

[3] Ibid., p. 330.

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to Pueblo Seri, and early in April obtained there a Seri-Spanish vocabulary of several hundred words, with a number of short phrases throwing some light on the grammatic construction. This record was transmitted to Dr Albert S. Gatschet. It comprises a title page inscribed "Vocabulario de la lengua Séri | Interprete el Gl. de los Seris | y otro Indio. | Pueblo de Seris | 4 Abril 1879"; four foolscap sheets (written on both sides, thus making 16 pages) of vocabulary; and a final page bearing two short phrases and inscribed "Los Séris, me dice el general de ellos, son como doscientos hombres de llevar armas—viven todavia parte en la isla de Tiburon, parte en la costa.' Pueblo de Seris, 4 Abril, 1879, Alph. Pinart." A transcript of this invaluable vocabulary is preserved in the Bureau of American Ethnology. There is nothing either in the original vocabulary or in the known correspondence relating to it to identify the aboriginal informant, but the identification is made easy through the coincident testimony of living witnesses and the unmistakable implication of the historical records to the effect that there was at that time but a single Seri Indian[1] resident at Pueblo Seri—i. e., the official interpreter, "El General" Kolusio. This identification is strengthened by the remarkable similarity between this vocabulary and that of Bartlett, a similarity made the more striking by the fact that one was recorded in English, the other in Spanish; the identification is supported, too, by Kolusio's memory of "giving his language" to a stranger "not a Mexicano" yet familiar with the Spanish; and the identification is practically established by the considerable number of terms expressing concepts alien to the Seri (e. g., ax, adobe, house, horse, hog, field, irrigate, pigeon, thrush, tobacco, shirt, the names of the months, etc), evidently acquired through long and intimate acquaintance with Mexican customs and domiciles and modes of thought—for all these concepts were familiar enough to Kolusio, yet to no other known Seri Indian of recent decades. Accordingly it may be deemed practically certain that M Pinart's vocabulary, like that of Commissioner Bartlett, was obtained from Kolusio; and it is at least strongly probable that both the Lavanders-Ramirez and the Tenochio-Pimentel vocabularies were derived from the same aboriginal source—an indubitably excellent source, save for the occasional interjection of alien notions, and the infrequent substitution of foreign equivalents for forgotten terms.

Barred from Seriland by the current war craze, M Pinart was prevented from obtaining much collateral information concerning the Seri; but he concluded (on grounds not stated) that "the Tepocs spoken on

[1] "The Seris, the chief tells me, comprise about 200 men fit to bear arms—they still live part on the island of Tiburon, part on the coast."

[2] M Pinart's reference to his interpreter is not only improvised but ambiguous. "Interpreter by the chief of the Seri and another Indian" might be considered to imply two Seri Indians, though it may, with equal linguistic probability, be interpreted to mean the specified Seri and another Indian; and while the temporary presence of a second Seri at the pueblo seems possible, the sum of probabilities points so clearly the other way as to demand the latter interpretation.

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gradually the condition of mutual tolerance was restored, to rest on a firmer basis than before.

Don Pascual estimates that during the dozen years of strife between his men and the Seri forces about half of the tribe were slain. The horror of the history of this period may be passed over; it may merely be noted as a casual fact that one of the two Mexicans accompanying the 1895 expedition was credited with 17 Seri heads. When he pointed out the site of his last exploit, a mile or two south of Rancho Libertad, and some incredulity was expressed, he immediately galloped to the spot and brought back a silent witness in the form of a bleached Seri skull.[1]

At the close of the war Don Pascual continued the industrial development of the plains lying east of the desert border of Seriland, received new concessions in recognition of his conquest, and developed the ranchos of Santa Ana and Libertad; but the evangelical arm of his vigorous mission gradually withered. For a dozen years the Seri looked up to "El Patron" as a quasi ruler, whose approval was requisite for the ratification of chieftainship, and through him ran a slender thread of nominal fealty to the state and the republic; yet few parasites gathered about the rancho. Mashém had gone back to his clan; and when depredations were committed at Bacuachito or elsewhere and the criminals were caught, usually through Don Pascual's instrumentality, they were sometimes haled to Hermosillo for trial, and Kolusio was kept there as the official interpreter of charges and evidence and findings. Sometime during the sixties a few Seri youths were coaxed to Pueblo Seri for education, but when they were instructed to cut their hair they slunk dejectedly to their temporary domicile, only to decamp during the ensuing night; again, in 1870, Kolusio was commissioned to bring in a few young people and a matron or two of the tribe, and succeeded in doing so just in time to encounter an epidemic of measles, from which some died, while the others shook the dust of the pueblo from their feet forever; and this last straw, added to his alien residence and his presence at the dreaded trials, broke down the tribal toleration of Kolusio and made him an outlaw forever.

In the later seventies Don Pascual's energies began to wane, while the Seri population was waxing again; and, although the Encinas frontier was protected, raids began to recur toward Bacuachito, on the ranchos southwest of Caborca, and sometimes toward Guaymas; and the hostilities then engendered have never terminated. In the eighties Don Pascual suffered from cataract, gradually losing his sight, and his rule relaxed still further; Rancho Libertad was abandoned, and a condition of armed neutrality supervened at San Francisco de Costa Rica and Santa Ana; and this condition still persists, save as occasionally modified by a crude sort of diplomacy on the part of the Seri: when blood-feud is not burning (and it is usually extinguished by the killing of an alien on the coast or some remote part of the frontier), and when no stock have

[1] The specimen described by Dr Hrdlicka, supra, p. 141.

1: McGee E-5 (1894-1895)1898 NU3: Seri NU31

teeth (such as that of Jesus Omada) passed from mouth to mouth until—incredible as it may seem—the more timid Sonorenses stood in greater dread of these natural weapons of the Seri than of their brutal clubs and swift-thrown missiles, or even of their poisoned arrows; while traditions of cannibalism came up and received such general credence that the current items of Seri outrages, both in local gossip and in the Mexican and American press, customarily recounted savage butcheries ending with gruesome feastings on the raw or slightly cooked flesh of the victims. The shuddering antipathy felt for the perpetrators of these inhumanities even a thousand miles away increased toward their frontier, as light toward its source; the dread was deepened by the failure of punitive expeditions sent out again and again only to be balked by waterless sand-wastes or wrecking tideripe; and in 1894 and 1895, at least, the horror of the Seri was a daily and nightly incubus on half the citizens of Hermosillo and the tributary pueblos and ranchos, and a thorn in the flesh of the state officials.

The external history of the Seri since the spring of 1894 is fairly known, both through the direct researches and through press reports, and would seem to be typical. This era may be assumed to open with the arrival on Tiburon's shores of the sloop *Examiner*, carrying two San Francisco newspaper writers, Robinson and Logan, with two assistants, Clark and Cowell. The to-have-been-expected happened duly, save that two of the party escaped, and on reaching Guaymas advertised the disaster through correspondence and the press. Several of the accounts indicated that the two victims were not only slain but eaten, and various plans were laid in California, Arizona, and Sonora for the recovery of the bones[1]—as if, forsooth, the omniverous and strong-toothed Seri spared anything save scattered teeth and split sections of the longer shafts of skeletons the size of those of *Homo sapiens*. While in Guaymas the two survivors set up claims for indemnity, which initiated international correspondence and inquiry into the details of the affair. These details are indicated, in sufficient fulness for present purposes, in a formal communication incorporated in the international correspondence, viz:

SMITHSONIAN INSTITUTION,
BUREAU OF AMERICAN ETHNOLOGY,
Washington, December 14, 1894.

SIR: Early in November I visited the Seri tribe of Indians, inhabiting Tiburon island in the Gulf of California and an area of several thousand square miles of the adjacent mainland in Sonora, Mexico. The visit was for the purpose of making collections under your authority as Secretary of the Smithsonian Institution; but I availed myself of the opportunity for obtaining additional information relating to the customs, habits, and history of the tribe. In addition to my own party I was accompanied by Señor Pascual Encinas, a prominent citizen of Hermosillo, and

[1] A number of Californians and Arizonians, especially H. M. Rice, of Phœnix, intimated a strong desire to join the 1895 expedition of the Bureau of American Ethnology for the express purpose of personally ascertaining the fate and seeking the remains of Robinson, who was extensively known in southern California and southwestern Arizona.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

owner of several ranches adjacent to, and one within, the territory claimed by the Seri Indians; also by Señor A. Alvemar-Leon of Hermosillo, a young Mexican gentleman educated in the United States. For Señor Encinas the Seri Indians have the highest regard, and his kindly motive in accompanying the party was to facilitate friendly intercourse with the Indians; Señor Alvemar-Leon acted as Spanish-English interpreter, and one of the tribe who speaks Spanish [Mush'm] acted as the Seri interpreter.

One of the subjects of inquiry of the Indians related to the alleged killing of two Americans by the Seri Indians on Tiburon island during last spring at a date not definitely known either to the Indians or to myself. At first the Indians were indisposed to convey information on the subject, but after receiving presents from Señor Encinas and myself, and friendly assurances from the former, the interpreter for the tribe confessed the crime and detailed the circumstances, denying, however, that any of the Indians present at the place of conference (Rancho de San Francisco de Costa Rica, 17 leagues west-southwest of Hermosillo and near the coast) participated.

According to the first account given through the Indian interpreter, the Indians on the island saw a small vessel approach the shore of the island, and saw four men land therefrom in a small boat. The spokesman among the strangers made inquiry, chiefly by signs, as to whether game was abundant in the interior of the island, and was by signs answered in the affirmative by the chief of the tribe, who displayed a letter of authority from the state officials at Hermosillo. Then the strangers divided, two remaining on the shore by the small boat, while the spokesman and another, accompanied by several Indians, started toward the interior of the island. When they were some distance away—the account continues—some of the Indians remaining on shore indicated by signs a desire to borrow the rifle of one of the two men on the beach, and after some parley the rifle was turned over to them; then the Indians desired also to borrow the small boat in which the party of white men had landed, and after one of the two men remaining on the shore was put aboard the vessel, this, too, was placed in the hands of the Indians. Thereupon several of the Indians entered the small boat, carrying the white man's rifle, and rowed around a headland a short distance away. Passing this point they landed and a part of them ran quickly into the interior in such direction as to intercept the course of the white men. There they lay in wait until the strangers appeared, when they shot the spokesman, killing him almost instantly. On this the second white man cried out for help, whereupon he too was shot and wounded, and then (according to the first account) ran away and concealed himself in the bushes and was seen no more. The Indians who had borrowed the boat then went back to the shore, and reentered the boat with the intention of returning and capturing the fine vessel of the strangers; but as they approached the vessel, being at the time quite near the shore, the man on board arose suddenly with a gun pointed toward them and shouted, whereupon they dropped the borrowed gun and, leaping from the boat, ran away among the mesquite bushes, all escaping unhurt. The white man on the beach then, as the account ran, leaped into the boat, and, recovering his gun, rowed to the vessel and got aboard, when the two men at once made sail and escaped down the bay.

The foregoing account was given to Señor Encinas alone by the Indians through their interpreter, and was afterward conveyed to me through Señor Alvemar-Leon. Both of us recognized the incongruity with the character of the Seri Indians of that part of the narrative relating to the wounding and escape of the second man, and Señors Encinas and Leon and myself sought to impress the improbability of the account on the interpreter. Subsequently the Indians, through their interpreter, conveyed to Señor Encinas a modification of the account (after adhering to the first version for twenty-four hours), which agreed in all essential respects with the first, excepting the supplementary statement that some of the Indians (but neither the party who accompanied the white men nor those who followed in the boat) ran after the wounded man, caught him, shot him again—whereupon he again cried out—and

h McGee E-5 (1894-1895)1898 NU31 Seri NU31

them killed him with stones. This modified account, also, Señor Encinas duly conveyed to me. 124

Still later, in collecting linguistic material through the Seri interpreter with the assistance of Señor Alvarez-Lobo, I recurred to the subject incidentally (or at least ostensibly so) on two or three occasions, partly with the view of verifying or disproving the current report that the men were eaten by the Indians; and since the first distrust on the part of the interpreter and the companions (by whom he was commonly surrounded) had worn off, the questions were answered freely and with apparent truth. In brief, the information gained in this way was a repetition in general terms of the statement of the killing of both men; but the responses indicated (1) that the Indians are not cannibals, (2) that they do not eat any portion or portions of the body of an enemy slain in war, (3) that they do not eat human flesh in a sacrificial way, and (4), specifically, that they did not eat the flesh of the two white men killed last spring. I am disposed to give credence to all of these statements. 648 [266]

Señor Encinas informed me that for a long time after the reputed killing of the two Americans on the island the Seri were exceptionally shy and were seldom seen on the mainland; that the first representatives of the tribe to appear were one or two old women who came to his rancho with much trepidation; that these representatives being not ill-treated, a man appeared, who was also well treated, and that still later other members of the tribe appeared, though it was only a few days before our visit that any considerable body of the Seri Indians showed themselves at their favorite mainland haunt on his rancho. It was his first communication with the Indians since the killing, and, both he and they agreed, the first confession of the crime outside of their own tribe. 648

While in Sonora various conflicting accounts of the affair were given me. One, to which I was disposed to attach credence by reason of the character of my informant and his explanation of the circumstances under which the information was gained, was given me (just before the visit referred to above) by ex-Consul Forbes, of Guaymas. This account corresponds in all essential details with that conveyed to my party by the Indians, except that, according to Mr Forbes' account, the survivors were altogether unarmed after the borrowing of the rifle by the Indians, and that when the man in the boat arose suddenly and shouted he pointed at the Indians not a gun but a stick, in the hope of deceiving them thereby, as he was fortunate enough to do. 115 124 648

It may be added that the Seri Indians are at the same time the most primitive and the most bloodthirsty and treacherous of the Indians of North America, so far as my knowledge extends; also that their character is well known throughout Sonora, and indeed generally throughout Mexico, Arizona, and the southern part of California. I was assured by the acting governor of Sonora and by the prefect of Hermosillo that it would be little short of suicide for even a Mexican official to visit these Indians or land on their island without an armed guard. Through conference with the Indians, also, I learned that any white man, Mexican, or Indian of another tribe coming in contact with them is killed without the slightest compunction, unless they are restrained by fear. Accordingly I am satisfied that the character of the Seri Indians is quite as bad as the unsavory reputation they have acquired throughout the Southwest. 181 648

It should be observed that while the Indians were unable to give the names of the men killed, their description of men and vessel agreed exactly with those of the newspaper correspondent Robinson and his companion, and with the sloop *Evanieve*; and Mr Forbes' information was obtained direct from the survivors of the expedition of which Mr Robinson had charge. There can thus be no doubt that it was Mr Robinson and his companion who were killed by these Indians, and whose killing was confirmed by them, as set forth above. 124 648

With great respect, your obedient servant,

W J McGee,
Ethnologist in charge.

Honorable S. P. Langley,
Secretary of the Smithsonian Institution.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

TRIBAL FEATURES

DEFINITION AND NOMENCLATURE

According to Mashém and the clanmother known as Juana María, the proper name of the tribe known as Seri is *K'ahóak* (the first vowel obscure and the succeeding consonant nasalized; perhaps *K'ᵊ-hóak* or *K'ᵊ-hóak* would better express the sound). According to Kolusio, as rendered by M. l'Pinart, the Seri term for people or nation is *kwa-kak*, while the Seri people are designated specifically as *Kmike*, this designation being practically equivalent phonetically (and doubtless somatically) to Sr Tenochio's general term for women, *kmyéi*. Mashém was unable or unwilling to give the precise signification of the tribal appellation used by him, merely indicating Juana María and one or two other elderwomen squatting near as examples or types; but comparison of the elements of the term with those used in other vocables affords a fairly clear inkling as to its meaning. The syllable *kwa* (or *kᵊ*, *kwa*, *kaa*, etc.) certainly connotes age and woman, and apparently connotes also life or living (*kwa-kaiz*=an old woman, McGee; *kwa ma* wife, *ekwa*=alive, Hartlett; *kikhama* wife, *kmam kikhamama* married woman, *Yak kwa*=Yaqui tribe, l'Pinart; *kwa-kabre*=an old woman, Tenochio), the forms being distinct from the word for woman (*kmaam*, McGee; *ik-maam*, Hartlett; *kmam*, l'Pinart and Tenochio) and widely different from the term for man (*ka-tham*, McGee; *ik-tam*, Hartlett; *ktam*, l'Pinart; *tam*, Tenochio) with its several combining variants; there are also indications in numerous vocables that it connotes person or personality. On the whole, the syllable appears to be an ill-formulated or uncrystallized expression, denoting at once and associatively (1) the state of living or being, (2) personality, (3) age or ancientness (or both), and (4) either femininity or maternity (much more probably the latter), this inchoate condition of the term being quite in accord with other characters of the Seri tongue, and frequently paralleled among other primitive languages. The syllable *koak* (or *kak*, and probably *kok*, *koj*, *kokh*, etc.) would seem to be a still more vague and colloidal term, despite the fact that it is used separately to designate the fire-drill. There are fairly decisive indications that it is composite, the initial portion denoting place and the final portion perhaps more vaguely connoting class or kind with an implication of excellence, both elements appearing in various vocables (too numerous to quote). On the whole, *koak* would appear to be a typical egocentric or ethnocentric term, designating and dignifying Person, Place, Time,

I: McGee E-5 (1894-1895)1898 NU31 Seri NU31

UPAN GUAIMAS—1905; [Kantwig?], Noticias Ensayo, p. 238.
UPANGUAIMA—1861; Orozco y Berra, Geografía de las Lenguas, p. 42.
UPANGUAIMAS—1879; Malte-Brun, Congrès International des Américanistes, tome II, p. 38.
UPANGUAYMA—Synthetic form.
UPANGUAYMAS—1882; Bancroft, Works (Native Races, vol. I, p. 603).
UPAN-GUAYMAS—1890; Bandelier, Investigations in the Southwest, p. 73.

Possibly the name *Cocomaques* (1864, Orozco y Berra, Geografía de las Lenguas, p. 42), or *Cocomaques* (1727, Rivera, Diario y Derrotero, I, 1514–1519) should be introduced among the synonyms of the Seri, but in the absence of definite information it may perhaps better be left unassigned.[1]

Of the four tribes assigned to the stack, the Upanguayma have been extinct probably for more than a century; the Guayma may survive in a few representatives probably of mixed blood and adopted language; the Tepoka have never received systematic investigation, but appear to survive in limited numbers on the eastern coast of Gulf of California about the embouchure of the Rio Ignacio sand-wash; while the Seri alone continue to form a prominent factor in Sonoran thought.

External Relations

The most conspicuous characteristic of the Seri tribe as a whole is isolation. The geographic position and physical features of their habitat favor, and indeed measurably compel, isolation: their little principality is protected on one side by stormy seas and on the other by still more forbidding deserts; their home is too hard and poor to tempt conquest, and their possessions too meager to invite spoliation; hence, under customary conditions, they never see neighbors save in chance encounters on their frontier or in their own predatory forays—and in either case the encounters are commonly inimical. The natural isolation of the habitat is reflected in modes of life and habits of thought; and during the ages the physical isolation has come to be reflected in a bitter and implacable hereditary enmity toward aliens—an enmity apparently forming the strongest motive in their life and thought, and indeed grown into a persistent instinct. Thus the Seri stand alone in every respect; they are isolated in habitat and still more intensely isolated in habits of thought and life from all contemporaries; they far out-Ishmael the Ishmael of old on Araby's deserts.

The isolation of the Seri in thought and feeling is well illustrated by the relations with their nearest neighbors (activitally as well as geographically), the Papago Indians. The Papago are much esteemed in Sonora as fearless fighters, always ready to join or even to lead a forlorn hope; yet when the expedition of 1895 was projected it was found no easy matter to induce the picked Papago guards quartered at Costa Rica to enter Seriland. They were ready, indeed mildly eager, for fray, provided it were on the frontier; but they held back in dread

[1] By no means should refer to be Yumas, cf. Cocopa, Cocomaricopa, Kohon, etc.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

from actual invasion of the territory of the hereditary enemy. Like representatives of the faith-dominated culture-grades generally, they spoke weightily of inherent rights descended from the ancient time, even back unto the creation; they repeatedly declared the right of the Seri to protect their territory because it was *theirs;* yet their converse but served to show the depth and persistence of their abhorrence of the Seri and of everything pertaining to them. And when gales arose to delay the work, when the frail craft of the party was storm buffeted and lost for days, when they were seized with the strange sickness of the sea, when the salt and sugar mysteriously disappeared (having been secretly sacrificed to diminish suffering from thirst), when all of the earth-powers and air-powers seemed to be arrayed against the expedition, they stoically held it to be but just punishment for a sacrilegious infraction of the ancient law—and their steady adherence to duty, despite tradition and physical difficulty and constant danger, revealed a real heroism. The strain was no slight one; it may have been felt more by the stay-at-homes than by the men in action; certainly a sister of one of the party (Anton Castillo) and spouse of a supporter at the supply station broke under the strain, and died of her terrors—and the return of the party was, to the Papago women and children at least, as the rising of the dead. The dread inspired by the personal presence of the alien is stronger still; when the Seri rancheria at Costa Rica was visited in 1894 it was found needful to keep the Papago interpreter and others of the tribe at a distance, since the mere sight of the inimical tribesmen threw even the women and children into watchful irritation, like that of range-bred horses at scent of bear or timber-wolf, or that of oft-harried cats and swine at sight of passing dog—they instinctively huddled into circles facing outward, and ceased to think connectedly under the stress of nervous tension. The irritation was so far mutual that it was days before the usually placid interpreter, Jose Lewis, recovered his normal spirits; while the 1895 interpreter, Hugh Norris, was actually rendered ill by the mere entrance into Seriland at Pozo Escalante. And the antipathy between Seri and Yaqui is nearly as great as that between the common-boundary neighbors.

The instinctive antagonism, or race antipathy, between the Seri and the widely distinct Caucasian is less trenchant and intense than the local antipathy; yet even between Seri and Caucasian there would seem to be hardly a germ of sympathy. In the days of his prime, the Tiburon islanders flocked around Don Pascual, first as a provider of easy provender and later as a superpotent shaman whose wrath bore destruction; yet their allegiance was never more than that of the cowed and beaten brute to a hated trainer, and his coming never brought a smile to their stolid features—indeed, his passage among their jacales was met with the same stolid yet sinister indifference accorded the solitary visitor to a menagerie of caged carnivores. And no sooner did his vision become

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1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

142 Mashém (aged about 50 years), who had a few gray strands about the
145 temples; but it may be significant that the hair of the tribal outlaw Kolusio, who has lived with white men for full three score years, is iron-gray. Kolusio's pelage is trimmed in Caucasian fashion; that of Mashém
[115] is cut off mid-length in a manner exciting comment, if not derision, on the part of his fellows and others, and resulting in his (Spanish)
[302] sobriquet, Pelado (literally, Peeled, or idiomatically, Shorn); but with few exceptions the hair is kept long as it can be made to grow, and receives careful attention to this end. Naturally the length is somewhat variable; in many cases it depends to or slightly below the waist, while in other cases it merely sweeps the shoulders; and in general it appears to increase in both length and luxuriance not only throughout adolescence, but up to late maturity, for the best pelages are presented by moderately aged persons, while none of the youths are so luxuriantly tressed as their elders. Not the slightest trace of baldness appears. The infantile pelage is short, brownish in color, soft or even silky, and inclined to curl toward the tips. It is not until the age of several months that the hair begins to acquire the adult character, and at least some children retain traces of the infantile pilary character up to 5 or even 10 years; and none of the children display such jet-black shock-heads as are frequently found among other tribes, whose adult pelage may nevertheless be much less luxuriant than that of the Seri. On the whole, it may be said that the Seri hair is luxuriant and vigorous beyond the aboriginal average, and that it, like various other somatic features, indicates a relatively late maturation in the life-history of the individual.

Both sexes are beardless. The female faces seen were entirely free of
142 strong pilary growth; one or two of the warrior faces showed scattering hairs, and Mashém sported a feeble and downy but jet-black mustache with an exceptional number of scattered hairs about the chin; while Kolusio shaved regularly, and might, apparently, have grown moderately stiff but straggling mustaches and beard. Axillary hair seems to be wanting; pubic hair is said to be scanty; otherwise the bodies are practically hairless (more nearly so than those of average Caucasians).

The teeth are solid, close-set, and even, and impress the observer as large; they close with the upper incisors projecting slightly beyond the lower denture in the usual manner.

The skeletal characteristics of the Seri are known only from a single
128 specimen obtained in the course of the 1895 expedition in such manner
141 as to establish the identification beyond shadow of question. This skeleton was submitted to Dr Aleš Hrdlička for measurement and discussion.[1]

In making his examination, Dr Hrdlička compared the unquestion-

[1] A separate cranium was obtained by the 1895 expedition, having been sought and picked up by a Mexican member of the party in corroboration of his account of the killing of one of the Seri; but, in view of the possibility of erroneous identification, this skull was not submitted in connection with

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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MASHEM, SERI INTERPRETER

[p. 146 A]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

186 pitiful case of Fray Crisóstomo Gil, and otherwise rising explosively
648 beyond the feeble control of the untrained mind; for the impulse of enmity toward aliens is an ever-present possession—or obsession—of the tribe, and a reflection of that race-sense which is their most distinctive attribute.

726 Of open warfare and face-to-face fighting there is hardly a germ among the Seri. When themselves ambushed or surrounded, some of their stouter warriors have in a few instances faced the foe for a few minutes at a time, as is shown by the annals of Cerro Prieto; yet this accidental attitude but betokens the play of chance rather than the plan of choice. Concordantly, the folk avoid the method of warfare (so common among other Amerind tribes as to be properly considered characteristic) involving open duel between chiefs and other warriors; they seem to be devoid of that sense of fairness in fighting which finds expression in the duel; and despite the individual advantages growing out of gigantic stature, immense strength, and superior swiftness, they habitually seek to combine in numbers against panicked or baffled enemies, just as their hunters throw themselves mercilessly on surrounded quarry. Of open boldness or confident prowess no trace appears; and the body of facts seems to justify the prevailing Sonoran opinion that the warfare of the Seri is treacherous and cowardly in design, craven and cruel in execution.

Once begun, the conduct of the fray by the Seri fighters is fairly uniform; the warriors either discharge clouds of arrows from their coigns of vantage, or rush to brain their victims with stones, or to break their necks and limbs and crush in their chests, as in the slaughtering of quarry; and according to the tale of the occasional survivors—Señor Pascual Encinas and his son Manuel, Don Ygnacio
[115] Lozania, Don Andrés Noriega, Don Jesus Omada of Bacuachito, and Don Ramon Noriega of Pozo Noriega, are among the survivors and informants; also the stardy Papago fighters, Mariano, Anton, Miguel, and Anton Castillo (whose sister died of dread while he was on the 1895 expedition)—the rushing warriors are transfigured with frenzy; their eyes blaze purple and green, their teeth glisten through snarling lips, their hair half rises in bristling mane, while their huge chests swell and their lithe limbs quiver in a fury sudden and blind and overpowering as that of springing puma or charging peccary. Of the successful assaults the ghastly end is rarely recorded, though whispered large in the lore of Sonora; in the unsuccessful assaults recounted by survivors the blood-frenzy burned but briefly and died swiftly as the disappointed warriors skulked silently behind rocks and shrubs, or fled across the sands with inconceivable fleetness. These details of battle precisely parallel the details of butchery of beastly quarry, as recounted by local observers and corroborated by Mashém's recitals.

266 So far as can be ascertained the parallelism between frenzied battling
727 and furious butchery in the chase affords the chief basis for the firm

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

the character of the man; in very fact, it at the same time both measures and makes the character of the woman. Among other privileges bestowed on the bride during the probationary period are those of receiving the most intimate attentions from the clanfellows of the groom; and these are noteworthy as suggestions of a vestigial polyandry or adelphogamy. At the close of the year the probation ends in a feast provided by the probationer, who thereupon enters the bride's jacal as a perpetual guest of unlimited personal privileges (subject to tribal custom); while the bride passes from a half-wanton heyday into the duller routine of matronly existence.

These details were elicited at Costa Rica in 1894 through methodical inquiries made in connection with the linguistic collection. This collection was made with the cooperation of Señor Alvemar-Léon as Spanish-English interpreter, together with Mashém and (commonly) the clanmother known as Juana María. Usually quite a group of Seri matrons with two or three warriors were gathered about, and to these Mashém frequently appealed for advice and verification, while they constantly expressed approval or disapproval of questions and replies, as gathered through Mashém's words and mien, in such manner as to afford a fair index of their habitual thought—e. g., when the Seri vernacular for "twins" was obtained and the inquiry was extended (by normal association of ideas) to the term for "triplets", Mashém collapsed into moody silence while the rest of the group decamped incontinently with horror-stricken countenances—thereby suggesting cautious subsequent inquiry, and the discovery that triplets are deemed evil monsters and their production a capital crime. It was in one of the earlier conferences that the first intimations concerning the unusual marital customs were incidentally brought out; the Caucasian interpreter and bystanders were diverted by the naive reference to the moral test, but their expressions were hastily checked lest the native informants might be startled and rendered secretive; then, during two later conferences, when Mashém and several matrons were freely participating in the proceedings, the line of inquiry was so turned as to touch on various aspects of the marriage custom and bring out all essential features; so that much confidence is reposed in the accuracy of the details.[1] The confidence in the verity of the customs was such as not to be impaired seriously by the fact that no records of coincident moral tests were known in the voluminous literature of marriage and its concomitants; nor was it shaken by the still weightier fact that none of the experienced ethnologists to whom inquiries were addressed during ensuing months were acquainted with parallel customs—indeed the only shadow of corroboration thus obtained came in the form of references to the widespread requirement of continence in war and ceremonies.

[1] It may be observed that Kolonia, when visited in January, 1895, failed to corroborate the descriptions of Mashém and the matrons, but his failure occasioned little surprise for the reason that he had not lived with his tribe since early boyhood, and is equally uninformed (or uncommunicative) concerning the myths, ceremonies, and even the history of the tribe.

2: Kroeber E-5 (1930) 1931 NU31 Seri NU31

NEW DATA

Informants' Attitude

Most of my information was obtained from Chico Romero, the present official chief, a man of about 38. Santo Blanco and one or two other men contributed occasionally. Sr. Thomson was present most of the time and aided materially, both in encouraging the Seri and in helping to formulate questions suitably to their experience and comprehension. For instance, he repeatedly cleared up points in the kinship system by applying his knowledge of the actual relationship of Seri individuals, or their acquaintance with his relatives, to frame concrete cases, real or hypothetical, for which a denomination was then readily given. Without this aid, the system could not have been obtained with either reasonable surety or correctness. So far as possible, direct questions were replaced by giving to the Seri accounts of customs attributed to the Cocopa, of whose existence they know, and suggesting comparisons, in which they proved interested. On the whole, their attitude was friendly, coöperative, and appeared unsecretive. Concealment may be so automatic a habit with them that they practice it without giving a sign; but I had the constant impression that they told little about their religion because they knew little, and not from any skilfully concealed reluctance. Still, all negative statements must be regarded as only tentative when secured in a brief time through an imperfect medium of communication from informants not accustomed to mental exertion.

Historical Tradition

There were formerly four tribes, according to the informant: to the East, the Seris, at Pueblo de los Seris (the ex-mission, across the river from Hermosillo); to the West, the Tiburones, on the island; to the North, at Tepoca, the Xeka'aikô'ye; to the South, at Tastiota, the Antepkê'itaX or Tastioteños. Too many died at Pueblo Seris, so they joined the Tiburones. They fought the northern and southern groups. Sixty (or 68) Seri-Tiburones once went to Tepoca to kill a man and his two sons. They made marks and stuck a knife in the trail to cause them to stop. Then they shot them. The women and children were captured, taken to the island and kept, the women first being abused by the whole party. The informant's son José Manuel (13) had a Tepoca maternal grandmother; that is, the informant, now about 38, married the daughter of a Tepoca woman. (This would put the incident hardly earlier than 1860 or later than 1890.) Similarly, there is Tastioteño blood among the present Seri. The dialects of the several tribes are said to have been distinct, though allied.

It is evident that these memories cover only the last part of the period of Spanish contacts.

2: Kroeber E-5 (1930) 1931 NU31 Seri NU31

ing, because it would be swamped in a sea which it could resist. The joining and calking are always carried far enough that the boat can be bailed faster than it leaks. That the Seri prefer to bail rather than to finick over joints, is a matter of preference. Most of our real frontier life runs on much the same plan, though sprung from a tradition of intrinsic standard and provided with a superior tool equipment. Tribes like the Walapai and Papago, who live in nearly the same desert, show much of the Seri combination of technological crudeness and effectiveness. They do make an exception in basketry, which is what has chiefly reached our museum cases from their culture; but the Davis-Heye collection shows that the Seri too can make baskets of unsuspected quality. My impression, based on the way the Seri handle their knives, boats, bows, and the like, is that they have excellent practical mechanical sense, but that their standards are astonishingly different from our own. Most people that depended so much on sailing their boats as the modern Seri do, would not be content with two sticks, a blanket, and a harpoon line. But, given the willingness to operate with this equipment, very few would be as successful in quickly rigging and skilfully handling the sail. And sailing is something the Seri have recently learned or evolved. They are the frontiersmen of native culture: hardy, rude, unorganized, practical, efficient; but, like our own frontiersmen, in no sense only half emerged from the tool-less animal. McGee was so inspired by the desire to find ultimate "primitiveness" among the Seri that he often ignored the tremendous effect of their habitat which he so well observed and described. After all, in his day cultural evolutionism was still in vogue.

As to race sense, McGee seems partly but only partly right. Chico Romero of his own accord asked me if other Indians had venereal diseases, and on the return question replied that the Seri were entirely free from them. I also saw and heard of no half-breeds. On the other hand, Chico's historical tradition told of the violation and keeping of captive Tepoca women, and since his own son was descended from one of them, in the second generation, Chico's mother-in-law must have been a Tepoca. McGee's "alien conjugal union" as the "blackest crime" (p. 11) is therefore an exaggeration, and his informant's statement that a Papago woman captive among the Seri never could have had children because she was an alien slave (p. 278), must rest upon a misunderstanding.

The groom's continence for a year after marriage as a moral test before admission to full husbandly status (pp. 280-3), is probably a matriarchally colored fantasy based on another misunderstanding. As already mentioned, Chico was interested, but mildly ribaldly amused, at the idea when it was put before him as a foreign Indian custom. He reacted like the average white man under the circumstances, not in the least like an actor skilfully feigning ignorance.

2: Kroeber E-5 (1930)1931 NU31 Seri NU31

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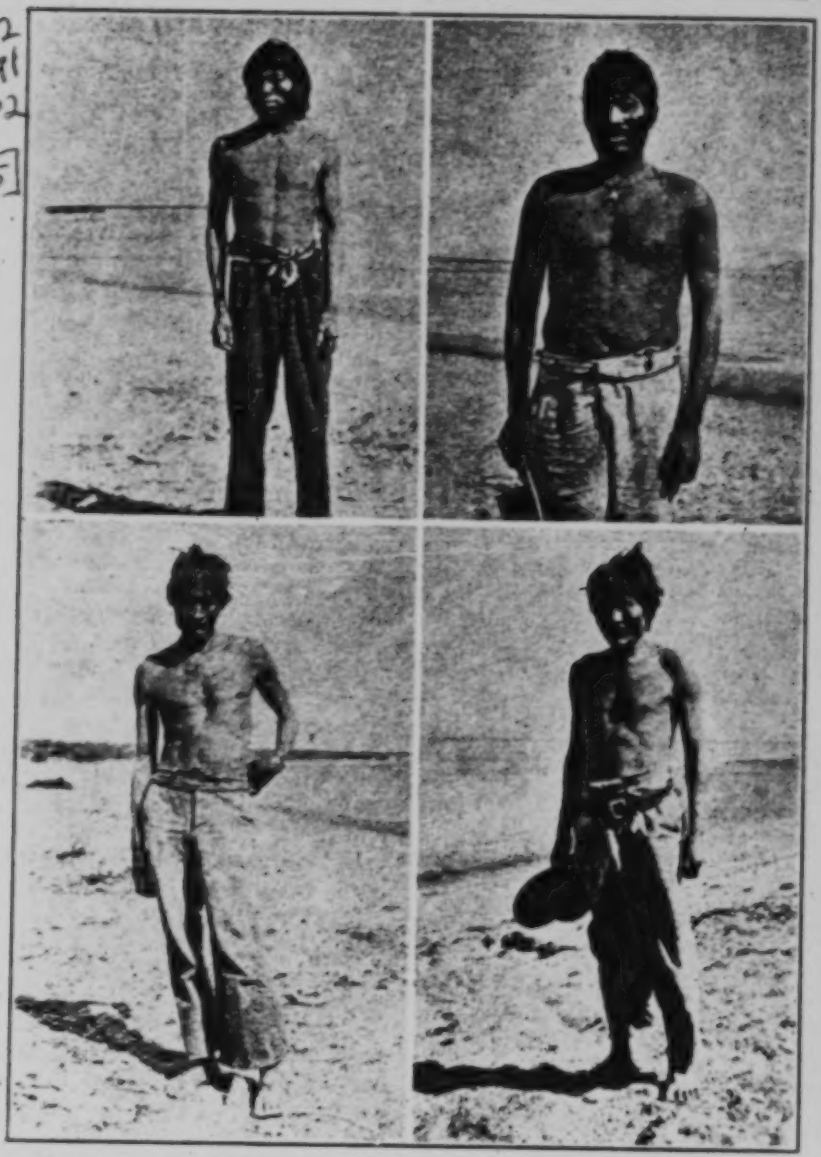


FIG. 1 (upper left). *Young man with long hair.*

FIG. 2 (upper right). *Chico Romero, official Seri chief and principal informant. The largest individual seen.*

FIG. 3 (lower left). *Elderly man of the spare Seri type.*

FIG. 4 (lower right). *Native policeman for the Mexican government.*

Spicer E-5 (1963-1965)1982 MU31 Seri MU31

Seri alike, is acquainted (Cougar, Jaguar, Whale, etc.) questioning had been done by referring to such and such beast without the use of pictures or actual specimens. This procedure had been followed for the majority of mammals, which are well enough known in the area. But otherwise, questioning had been done with actual specimens in hand, alive where possible. This was owing to the fact that response may be different to the dead specimens than to the live ones and grew out of a conviction (entirely substantiated in the course of work) that many animals, of a small variety especially, are recognized more by their distinctive behaviour pattern, flight, selection of habitat, voice, running posture, etc., than by the shape and form alone. All invertebrates, all reptiles and all but the best known and largest fish had produced the data from actual specimens, dead or alive. Finally, where neither common colloquial name nor specimens were available, I resorted to pictures. That way I obtained data for a small number of animals and for a good many birds. This method has its weakness. The line drawings in the excellent guide to the *Birds of Mexico* by Blake I used are somewhat on the "dead" side and may be good aid in bird identification to someone who also will read the text, but they often fail to be of much use to someone who rarely has seen the drawings in any book, let alone a bird guide. From the replies it was obvious that a certain amount of misidentification took place in the naming of the birds or mammals from the sketches. I took account of this and eliminated from consideration all those forms where misidentification on the part of the informant was obvious. This in itself may be a worthwhile object of study but it was not my concern at the moment.

In working with the informants I studiously avoided giving them any suggestion that I already knew what the animal was or that I had a fair idea about the general features of its natural history. This is especially important in considering the Seris' knowledge of the animal distribution, ecology and other salient features. When available, I often brought along specimens of species I knew did not occur in Desemboque which had been captured elsewhere, in the absence of the Seris. This was in order to test better their recognition of animal forms.

Altogether 10 informants had been used. Of these the bulk were questioned in 1953, some again in 1955 and that year Chico Romero, now an old man of over 70, had been also added to the roster. Chico was Kroeber's star informant in 1930 and from him came the bulk of Kroeber's original information.

The two main informants were Miguel Barnett, then aged about 45 and one of the Seris' best hunters, and Jose Juan Moreno, a fellow about 25, recognized as their best fisherman. As expected, their preoccupations and interests slanted their replies. Accordingly, Jose Juan had the best knowledge of the marine animals and Miguel of the terrestrial animals. Jose Juan aided me again with some information in 1955.

Other informants were as follows: Juan Torres, aged 40 or so; Ramon Montayo, one of the

[P.48]

Sinaloa F-5 (1953-1955)1962 MU31 Seri MU31

115 [165] oldest Seris then alive of over 70; Ramon Corrales, claiming to be 37 and on the dim-witted side; Jesus Montanyo, a quiet, cooperative man of 21; Natcheo Molina, aged 35 or so, whose interest in the protestant hymnals was unfortunately far greater than in giving me the information I wanted; Jose Manuel Romero, about 37 years old on his own claim; and Jose Barnett, Miguel's son, 825 aged 14. Inclusion of young Barnett was a lucky strike because it indicated clearly differences in the natural history knowledge between the older men and the young men, later confirmed also in the incidental questioning of several young boys. [868] Young men start out with general interest in animals of all sorts, including the small invertebrates, but as they grow up they end up with solid knowledge of economically important species and slim, forgotten knowledge of the insignficant invertebrates.

124 I made an endeavor to obtain the same sort of information from several informants in order to eliminate as far as possible aberrant answers or peculiarities. The most solid information is available for the mammals, which are, of course, well-known. Here in some cases the same kind of information had been obtained from five individuals. In other instances only two to three were available and sometimes only one. What was surprising about the information given were not the differences, which I often indicated in the text, but the amount if identical agreement on almost every single item of data between different individuals.

Since it was impossible to obtain information on all animals from the same individuals, the questioning proceeded in "blocks." By this I mean, I would question for example two individuals about the entire order of mammals (every species of them) and another two on the birds. Two other individuals then would be questioned on half of the birds and half of the mammals, while the other two on half of the reptiles and half of the fishes; still another two on half of the insects and half of the marine invertebrates, while others would yet cover all of the insects or reptiles or fishes independently. This I believe is a useful procedure. It allows to test generalized concepts of natural history for several individuals for diverse groups. It is motivated by the question of no little importance. What does so-and-so know about mammals and what does he know about birds? What are his generalized ideas of each group? It [825] had been soon discovered that when it concerns special points, the informants were apt to have standardized notions of what the animals did, regardless of the actual situation. The less actual observational knowledge they actually had, the more frequent were pat replies. Obvious demonstration of this helped a great deal to eliminate such pat answers or to recognize them for what they were and to account for them in the final analysis.

000 Another point in the procedure is of par-
[P.5A]

9:Malkin E-5 (1953-1955)1962 NU31 Seri NU31

III

MAMMALS

Scientific	Common Name
Antrozous pallidus	Pallid bat
Bassariscus astutus	Ringtail cat (Cacomistle)
Spilogale gracilis	Spotted skunk
Taxidea taxus	Badger
Urocyon cinereoargenteus or *Vulpes macrotis*	Grey fox or kit fox
Canis latrans	Coyote
Felis concolor	Mountain Lion.
Felis onca	Jaguar
Felis eyra	Juguarundi
Zalophus californianus	California sea lion
Dipodomys sp.?	Kangaroo rat
Erethizon dorsatum	Porcupine
Lepus californicus	Blacktailed rabbit
Sylvilagus audubonii	Desert cottontail
Pecari angulatus	Peccary
Odocoileus hemionus	Mule Deer
Ovis canadensis	Bighorn
Eschrichtius glaucus	California grey whale
Orcinus rectipinna	Killer whale
Tursiops gillii	Bottlenosed dolphin

Identification here has been obtained largely with an aid of field guides or by mentioning a colloquial local name of the mammal in Spanish. All these were later checked by Dr. Robert T. Orr of the California Academy of Sciences. While there is no doubt of the identity of the most common forms, such as peccary or sea-lion, there are also several of the identifications which can't be certain either because of inadequate line drawings or lack of specimens, either alive at a distance or even parts of them. In this somewhat dubious category are Ringtail cat, Jaguarundi and the Killer whale.

On the other hand, there is no doubt as to the identity of the following: Pacific pale bat, badger, bighorn, coyote, kangaroo rat, blacktail rabbit, cottontail jackrabbit, deer and dolphin. Live, free or captive individuals, or part of them, such as horns, hide or skulls were available.

Economic Uses

Food: Only 6 out of 21 species for which information is available are used today as food. Three more were mentioned as "eaten in the past" and one more as "possibly eaten in the past." Since the oldest of the informants who provided this data, Miguel Barnett, is a man in his fifties (and it is he who talked most often about the animals "eaten in the past but not now") we may surmise that these were part of the Seri diet 25-45 years ago, that is between 1910-1930.

Five species are important as a supplementary source of food: the bighorn, the deer, peccary and both species of rabbits. Some, the deer especially, are considered to be delicacies. The sixth species is the badger but it appears neither important nor frequently killed. I saw one badger captured by José Juan Moreno. The animal was tied to the pole, and kept as a pet, fed on fish, snake and

9:Malkin E-S (1963-1969)1962 MU31 Seri MU31

Daily Rhythm

*825 Here again data are most fragmentary and available only for seven species. But what information the Seris gave overwhelmingly suggests good orientation in such matters. Six of the species were correctly described as diurnal and only one, the barn owl, as nocturnal. This is with a qualification for the brown pelican. Of it Moreno, who [115] provided the bulk of the ornithological information, said "it flies and feeds in daytime, but when it is hungry and when food is short it'll then feed at night as well."

Moreno's explanation is somewhat difficult to understand. How does he know that the pelican is hungrier at certain times than at others? But it is true that the brown pelicans occasionally float and fish at night.

But one must consider the limitations of the data. Out of numerous species of owls present in the region, we have information only for one. Nor is there any for the nightjars.

The usual explanation for the birds' inactivity at night is sleep. In few instances the place of rest has been specified. Accordingly, the dove sleeps on trees and the duck ashore.

Habitat Ecology

Some of birds' preferences for particular spots have already been indicated in discussing the nesting habits.

Habitat preferences had been indicated for the vast majority of the species under discussion, in connection with various activities. Almost all shore or marine birds were thus indicated. This knowledge included the curlew and the willet and the sand-piper, all of which were described as "walking along the shore," although nothing else had been said about them. The bittern, the ibis and the egret on the other hand, the Seris think, have a distinct liking for muddy locations and the mangroves—all of which the informants pointedly explained. This is why, they said, they favored [137] Estero Sargente, an area of evil smelling muddy mangroves where they find food and nesting GROUNDS

[P 71A]

Unfinished Book Manuscript

114 At the Museum of the American Indian, Heye Foundation in New York City where I was staying temporarily _____, I was asked by Mr. Heye where I would like to go on my next collecting trip for the Museum. I had already covered the whole of southern half of Arizona and had made thorough collections from Pima, Papago, Maricopa, Apache, Hualapai and other tribes, and had also covered Southern California and its deserts.

For many years I had read every scrap of information about the treacherous Seri Indians of the Island of Tiburon---off Mexico, and was greatly intrigued with these wild primitive natives. My theory has always been that the farther away from civilization a tribe is located, the better chance to secure original or aboriginal material, so I asked Mr. Heye if he had anything from the Seri Indians of Tiburon Island, and he said: "Not a thing, nor any other museum."

"Well, I think I'll go to Tiburon in March," I said.

He said, "I wouldn't advise it. You know their reputation. No white man landing on that mysterious Island has ever returned. They are the most treacherous Indians in North America, and Tiburon Island is a good place to stay away from."

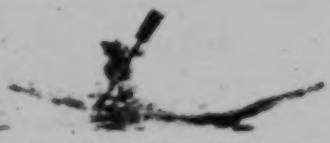
114 123 [115] Nevertheless, I went to Hermosillo, capital of the State of Sonora, Mexico, and there I met and engaged Roberto Thomson, whose father had treated with kindness some of the Seris who had reached his ranch, and he, Roberto, thought we could land on the Island and, by considerate treatment, make friends with these wild *Tiburones*. It seemed as if we were flying into the face of certain death from their reputation, but we met these people, and by gifts and fair treatment, we became good friends, and from that time in 1922 to the present, that friendship has endured unbroken.

I have the absolute freedom of the Island, and have visited there at least six times. I have been through the Island on all its coasts and am familiar with its wild inhabitants.

123 As a concrete result of that first trip to Tiburon, I secured a
• 115 *balsa* (boat) made of *carrizo* canes lashed together with native fibre,
581 which *balsa* Mr. Heye said it was the finest one in North America.

[226] This *balsa* was given to me without hesitation, although it furnished one or two families with sea food.

115 I wish to pay tribute to Senor Roberto Thomson who has been my constant companion, friend, guide and interpreter during the past twenty years, on all my trips to Tiburon and various parts of Mexico. I found him absolutely dependable, using excellent judgment in critical situations. He was honest, fair, intelligent, looking out constantly for my safety and comfort always, enduring hardships cheerfully. A better all-round out-door man I have never seen equaled. In short, he is a *real hombre*, and *muy simpatico*.



13 Tiburon, or *Shark Island*, long noted for its evil reputation as
181 the home of the most savage and treacherous Indians of North America,
193 lies in latitude 29° north and 112°30' west longitude, in the Gulf of California. It is shaped like a parallelogram about thirty-five miles long and eighteen to twenty miles wide, and lies parallel to the coast of Sonora, Mexico, of which, no doubt, at some remote period, it once formed a part.

It is separated from the mainland, for the most part, by a strait called *El Infernillo*, or The Little Hell, through which the rising
[127] tides pour a resistless flood. It is a desert island and supports a desert arboreal vegetation which includes several varieties of the cactus family and the *mesquite, palo verde, palo fierro, torote, palo blanco, ocotillo* and others. The giant *saguaro, sarbueso* and *pitahalla (pit-o-haya)* cactus are found here also.

Two desert ranges run lengthwise of the Island, which, on its westward or windward side, terminate in sea-worn cliffs against whose ramparts dash the heavy breakers of the Gulf, and on its eastern side, by long alluvial aprons from the foot of the mountains, sloping gently down to the lovely shell-strewn beaches. From this side the foot of the mountains lies from two to five miles distant. On this, the leeward side of Tiburon, the sea is much calmer, and often, in the early morning, it is as smooth and placid as a lake, reflecting each rosy, lavender and purple tint of the rugged Sierra Seri along the Sonoran coast, as in a mirror. The exquisite loveliness of marvelous sunrises over the pure limpid waters of the *Estrecho Infernillo* is mystical.

134 The soil is loose and sandy, unsuitable for cultivation, and im-
241 possible for producing domestic crops of any
142 kind.

175 if they were as hungry then as they are today, they would not stop to
648 spike a man up preparatory to serving him. Their only tools then were
266 rocks to use as hammers and hoop iron for knives, and these are in
114 universal use today.

[412] There is no doubt that the men were killed, but I think these mining men purposely exaggerated their findings, if any.

648 There is no doubt that the Seris were brave fighters, treacherous
721 murderers, sparing neither men, women or children on their raids,
727 killing ruthlessly. But there is one charge which cannot be brought against them, which cannot be said of many tribes north of the border. So far as I could find out, they never tortured nor scalped.

648 The Seris never took prisoners and they never inter-married with
721 other tribes, so their strain is pure.

727 There was one exception. Sixty or seventy years ago, the Seri
583 Chief Coyote Iguana and his band of warriors held up the stage between Hermosillo and Guaymas, and killed all except a handsome Spanish girl of the better class. This girl, Coyote Iguana made his wife and by her raised a family. One granddaughter still survived in 1924, and while more attractive than the general run of Seri, her complexion was fully as dark.

604 The Seris, Ishmaelites among the native tribes of Mexico---the most fascinating Indians in North America!

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123 *Reception Committee, Tiburon Island - 1938*

115 On the twenty-fifth of April, nineteen twenty-two, I engaged the services of Roberto Thompson, who with his father and grandfather

[text continues on p. 149]

[23 before him, has been a friend of the Seris for years. It was his father
• [15] who brought McGee to Tiburon in 1895, and in many ways they have shown kindness to the Seris.

[22] I hired an auto-truck for fifty dollars to take the necessary people and supplies. These supplies consisted of some fine-tooth combs, needles, thread, one bolt of white muslin, 150-pounds of flour, panoche, saws, nails, harmonicas, little round mirrors, fish twine, hooks, 2-bits and other things.

We left at 6:30 a.m. With us was the driver Ricardo, his friend Rafael Ysabel, son of an ex-governor of Sonora. When we reached Bob's ranch, *El Providencia*, five or more miles out, we added a one-eyed Mexican and Bob's brother.

After a simple dinner at the ranch house we drove across the mouth of the Sonora river, a broad, flat alluvial plain probably four or five miles across. We circled about and turned north, stopping at the edge of a broad shallow bay. The tide was down and the shore was slimy mud and filled at places with sharp-edged clam and oyster shells. There were oyster flats at the edge of the mud, so Roberto and the Mexican waded out and secured enough of them for supper.

[3] During the day we ran close to a Gila monster, a horrid looking black and orange mottled fat lizard who waddled along. Rafael held his head with a rifle, reached down and caught him in back of the head, and held him up. He hissed like a snake and bears a bad reputation.

[33] The country was flat and the road pretty good. Detached mountains we passed during the day and one range called *Siete Cerros*, Seven Mountains, with peaks all in one row, reached for fifteen or twenty miles. We passed a few ranches where the people were pumping water from wells or hauling in the old turn-table way with a mule and rawhide buckets. Then we made camp, got everything ready for an early start the next day and turned in.

At dawn three men took the boat with all our traps and groceries and fifteen gallons of fresh water, and Rafael and I walked up to the point to meet it. Louis and the driver and truck returned to the ranch. The weeds and ground were very wet and we came to some sloughs filled with soft ooze. These were impossible to cross, so we went around them and then decided to strike for the ocean side and go along a sand bank. This we did, and when we reached the end we saw the boat waiting for us half a mile or more across a great flat.

[33] The ocean view was grand. A great rock, *Alcatraz Island*, protruded from the sea a short distance out, on which countless cormorants roost and raise their young. Bob often gathers their eggs.

We reached the boat and climbed in and pushed off into deep water. There was no wind and the tide was part way against us, but we rowed, three of us, for many many miles. We landed in a small cove, drew up

[text continues on p.15]

Roberto Thomson waving white bandera as signal of peace. In the Gulf - Sonora. April 26, 1922

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Pulling the boat up the beach above high tide - Kino Bay and Alcatraz Island - 1936

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10: Davis E-5 (1922-ca. 1939) 1966 NU31 Seri NU31

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Irene Thomson, Pancha Olivarria and Roberto Thomson at Tecomate, on north coast, spending whole ribs cast up on the beach. Although thoroughly dried and bleached for years by a semitropic sun, it took their united efforts to elevate these ribs.---E.H.D.

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Roberto Thomson, Santo Blanco and Edward H. Davis

123 but nothing happened.

123 622 [115] We reached Hermosillo at three in the afternoon, and as we landed Roberto and Sara met us, and Roberto embraced me. Then the Seri Indian Chief rushed up and fairly hugged me in his joy at seeing me again. A timid wild-looking Seri boy, of fifteen years of age, shyly shook hands with the *Americano*, while all the Mexican men and women, fully one hundred in number, looked on open-mouthed and wide-eyed, to see the Chief of the wildest and lowest of savage Indians in North America, rush up and embrace a white man.

We all climbed into Roberto's auto-truck, and my things were brought to Hotel Cohen, and then we all went to Roberto's home and stayed all the afternoon. He had just returned from the coast the day before, and Juan Tomas was determined to come also and greet me, and the boy---a nephew---hung on to the Chief, and finally Roberto said he would have to return on foot if he brought him. Juan Tomas said that made no difference. He would walk to the coast eighty or ninety miles, if only he could come.

[291] [302] He was probably seventy-five years old. He wore a hat, but his hair was straggly and he had a slight moustache. He wore shirt and trousers and a dirty kilt---remanent of the Pelican-skin-kilt---around his waist, and he was barefooted. The boy had a not unpleasant face, long wild hair, shirt, pants, and a cotton kilt reached to his knees. He, too, was barefooted.

I gave the Chief a knife, and the boy a red crayon and fifty cents. With the crayon he made a V on his kilt. He was very shy and always kept in a shadow, or in the background, and he spoke no Spanish although he knew the Spanish alphabet.

Sara showed some photographs and postcards in a baloptican in a dark room, and among them were pictures of some Seris and myself. These created much excitement with the Chief and the boy, and they jabbered together in the Seri language with animation. They recognized some of the subjects, their own people.

584 622 648 123 Juan Tomas is to be married soon to an elderly Seri dame, and we have been invited to attend the fiesta. He has been laying in the trousseau for the bride, and several gallons of mescal. A steer or burro will have to be provided, and all the fixin's and nothing will be left undone to make a very festive occasion. When asked to show us his gifts he reluctantly brought forth a package which he carefully unwrapped and disclosed eighteen yards of *manta*, two red pieces and one pink piece of Calico, some red handkerchiefs, and one box for painting the face. He carefully wrapped these up again and put them in the room set apart for him and the boy.

[609] [583] The woman he is to marry has no male relatives from whom she can be bought, so the Chief appointed a man and created him Uncle *pro-tempore*, and to him the Chief is going to give a rifle and a blanket as the purchase price. Pretty high!

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Giant Zárbueso cactus and Roberto -
Tiburon Island - March 20, 1924

so named must be of the same sex as the first. The significance of land ownership needs further investigation.

Many of the Seri still prefer, when possible, to live in their chosen band area. Sometimes a person, when he is approaching death, will ask to be taken to his own i?iziting, where he can die and be buried in the area of his choice.

NOTES

1. Due to printing limitations, stress on Seri words has been omitted, and several orthographic symbol changes have been made for this paper. The phonetic values of the symbols used are the following: p is voiceless labial stop; t is vl. dental stop; k is vl. velar stop; ? is glottal stop; f is vl. labial flat spirant; w is vl. labial grooved-rounded spirant; s is vl. alveolar spirant; x is vl. alveo-palatal spirant; l is vl. lateral spirant; h is vl. velar spirant; x is vl. back velar spirant; m is labial nasal; n is dental nasal; ng is velar nasal; y is palatal semivowel; i is a high close front vowel; e is a low close front vowel; a is a low open central vowel; o is a mid close back vowel.

2. These data were compiled during field trips to the Seri camps during the years 1956-61, the studies being carried out under the auspices of the Summer Institute of Linguistics. The principal informant was R. Herrera T. whose information was checked with and supplemented by nine of the older members of the tribe. I am indebted to my colleague, David Thomas, who read an earlier draft of this paper and made helpful suggestions.

3. 1) W. J. McGee, "The Seri Indians," *Bureau of American Ethnology, Annual Report*, No. 17, Part 1. Washington, 1898. 2) A. L. Kroeber, "The Seri," *Southwest Museum Papers*, No. 6. Los Angeles, 1931. 3) W. B. Griffen, "Notes on Seri Indian Culture, Sonora, Mexico," *Latin American Monograph Series*, No. 10, Gainesville, 1959.

4. It will be noted that between subdivision 3 and 4 on Fig. 3 there is an unnumbered area, the status of which is uncertain.

5. Kroeber states that McGee's concept of Seri maternal lineages crystallized into totemic clans with matron rule seem a fantasy. In Kroeber's opinion, "The Seri may never have had sibs or clans; but the fact that they appear to lack them now is no positive evidence that they were without them three centuries ago. Shifts of residence, contraction of territory, shrinkage of numbers, amalgamation of distinct bands, may well have obliterated much of such social fabric as they once possessed."

Griffen discusses the nature of the former Seri bands and states, "they may have been patrilineal and exogamous. The criteria . . . that Julian Steward has exposited for the formation of exogamous, patrilineal bands . . . are and presumably would have been met formerly in the Seri habitat." Griffen lists other aspects of this type of band which are also verified to some extent by his data. From reading his material, it is obvious that he suspects the existence of clans at some earlier period. He emphasizes the need for further investigation.

6. G. P. Murdock, *Social Structure*, Macmillan Co., New York, 1949.

7. Marriages were usually contracted within the band.

8. As Kroeber points out, their memory likely covers only the latter part of the period of Spanish contacts.

9. The Seri recall nothing of Seri-Pima contacts and little of Seri-Apache relations.

10. The story is related that one day some Seri entered a cave where they found several Papago jugs filled with seeds. Being hungry, the people ate the seeds and left some arrows as token payment. The Seri say that the Papago apparently believed the arrows were intended as an insult. Fighting broke out soon afterward.

11. The Seri concept of the band annihilations is seen to be in contradiction to McGee's statement (p. 132): "Concordantly with their primary characteristic, the Seri have avoided ethnic and demotic union beyond the narrow limits of their own kindred; and even of these they seem to have cast out parts, annihilating the Guayma and Upanguayma, displacing and nearly destroying the Tepoka, and outlawing individuals and (apparently) small groups."

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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SEVENTEENTH ANNUAL REPORT

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OF THE

BUREAU OF AMERICAN ETHNOLOGY

TO THE

SECRETARY OF THE SMITHSONIAN INSTITUTION

1895-96

BY

J. W. POWELL
DIRECTOR

IN TWO PARTS—PART 1

WASHINGTON
GOVERNMENT PRINTING OFFICE
1898

[TITLE PAGE]

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THE SERI INDIANS

BY

W J McGEE

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I: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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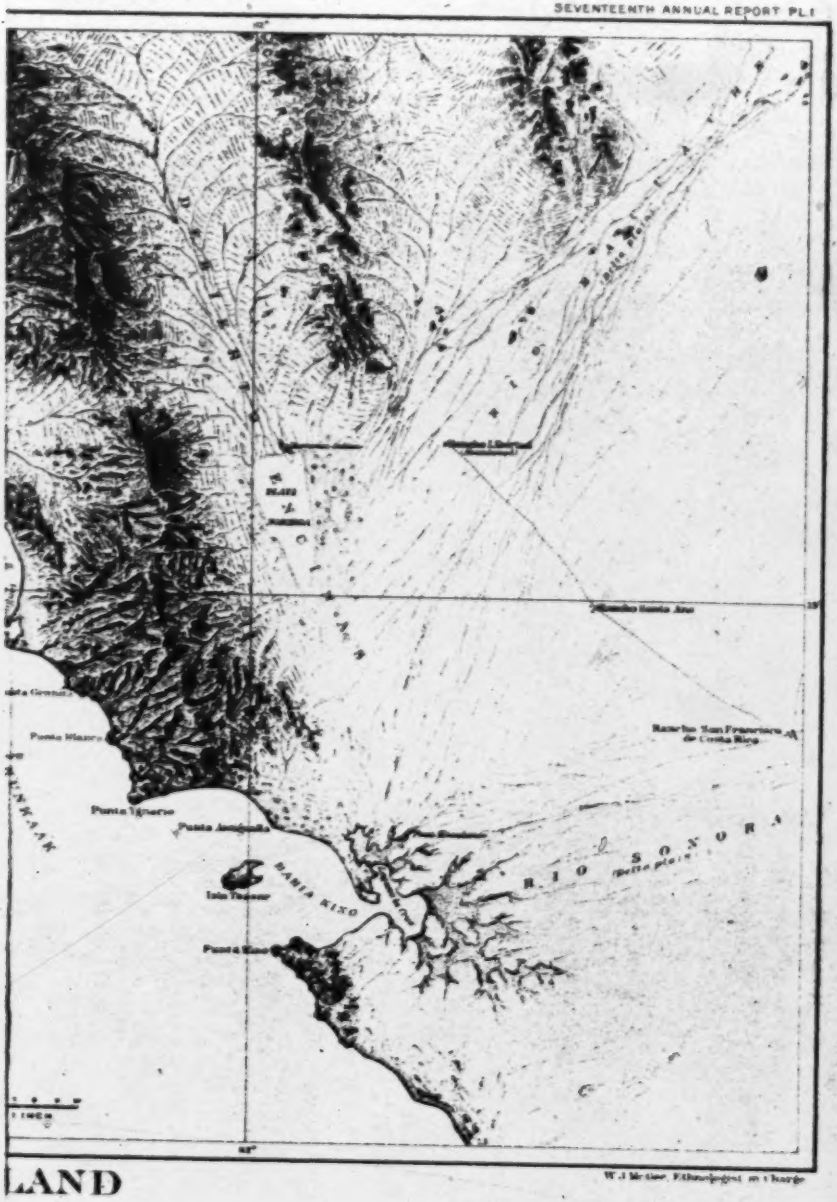

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THE SERI INDIANS

By W J McGee.

INTRODUCTION

Salient Features

Something has been known of the Seri Indians (Seris, Ceris, Ceres, Heris, Tiburones) since the time of Coronado, yet they remain one of the least-studied tribes of North America. The first systematic investigation of the tribe was made in the course of expeditions by the Bureau of American Ethnology in 1894 and 1895; it was far from complete. 114

The Seri Indians are a distinctive tribe in habits, customs, and language, inhabiting Tiburon island in Gulf of California and a limited adjacent area on the mainland of Sonora (Mexico). They call themselves *Kun-kaak* or *Kmike:* their common appellation is from the Opata, and may be translated "spry". Their habitat is arid and rugged, consisting chiefly of desert sands and naked mountain rocks, with permanent fresh water in only two or three places; it is barred from settled Sonora by a nearly impassable desert. Two centuries ago the population of the tribe was estimated at several thousands, but it has been gradually reduced by almost constant warfare to barely three hundred and fifty, of whom not more than seventy-five are adult males, or warriors. 101 [131] 133 161

The Seri men and women are of splendid physique; they have fine chests, with slender but sinewy limbs, though the hands and especially the feet are large; their heads, while small in relation to stature, approach the average in size; the hair is luxuriant and coarse, ranging from typical black to tawny in color, and is worn long. They are notably vigorous in movement, erect in carriage, and remarkable for fleetness and endurance. 142 [147]

The Seri subsist chiefly on turtles, fish, mollusks, water-fowl, and other food of the sea; they also take land game, and consume cactus fruits, mesquite beans, and a few other vegetal products of their sterile domain. Most of their food is eaten raw. They neither plant nor cultivate, and are without domestic animals, save dogs which are largely of coyote blood. 105

The habitations of the Seri are flimsy bowers of cactus and shrubbery, sometimes shingled rudely with turtle-shells and sponges; in some

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105 cases these are in clusters pertaining to matronymic family groups; in other cases they are isolated, and are then often abandoned and reoccupied repeatedly, and are apparently common property of the tribe. The habitations afford some protection from sun and wind, but not from cold and wet, which are hardly known in winterless and nearly rainless Seriland.

The Seri clothing consists essentially of a kilt or skirt extending from waist to knees; sometimes a pelican-skin robe is worn as a blanket or mantle, and used also as bedding; the head and feet, as well as the bust and arms, are habitually bare, though a loose-sleeved wammus reaching not quite to the waist is sometimes worn. These garments were formerly woven of coarse threads or cords made from native vegetal fibers; the belt is generally of twisted human hair, of horse hair, of dressed deerskin, or of snake skin; the robe consists of four, six, or eight pelican skins sewed together with sinew. The pelican-skin robes are still used, though the aboriginal fabric is commonly replaced by cotton stuffs obtained through barter or plunder. Cords of human hair and skins of serpents are used for necklaces.

The sports and games of the Seri Indians include racing and dancing, and there are ceremonial dances at the girls' puberty feasts, accompanying the rude music of improvised drums. Decoration is ordinarily limited to symbolic face-painting, which is seen especially among the females, and to crude ornamentation of the scanty apparel. A peculiar pottery is manufactured, and the pieces are sometimes decorated with simple designs in plain colors.

The bow and arrow are habitually used, especially in warfare, and turtles and fish are taken by means of harpoons, shafted with cane and usually tipped with bone, charred wood, or flotsam metal. The arrows are sometimes provided with chipped stone points, though the art of chipping seems to be accultural and shamanistic. The ordinary stone implements are used for crushing bone and severing sinew or flesh, and also for mulling seeds and other food substances; they are mere cobbles, selected for fitness, and retained only if their fitness is increased by the wear of use, after the manner of protolithic culture. Graceful balsas are made from canes, bound together with mesquite-fiber cords; and on these the people freely navigate the narrow but stormy strait separating Tiburon and the neighboring islets from the mainland. They make a distinctive pottery, which is remarkably light and fragile. Its chief use is carrying water to habitations (always located miles from the spring or tinaja) or on desultory wanderings. Shells are used for cups, and to some extent for implements. They have a few baskets, which are not greatly different from those made by neighboring tribes.

The modern Seri are loosely organized in a number of maternal groups or clans, which are notable for the prominence given to mother-right in marriage and for some other customs; and there are indications that the clan organization was more definite before the tribe was so

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greatly reduced. The leading clans are those of the Pelican, the chief tribal tutelary, and the Turtle, a minor tutelary. At present polygyny prevails, professedly and evidently because of the preponderance of females due to the decimation of warriors in battle; but both custom and tradition tell of former monogamy, with a suggestion of polyandry. The primary marriage is negotiated between the mothers of the would-be groom and the prospective bride; if the mother and daughter in the latter family look with favor on the proposal, the candidate is subjected to rigorous tests of material and moral character; and if these are successfully passed the marriage is considered complete, and the husband becomes a privileged and permanent guest in the wife's household. Family feeling, especially maternal affection, is strong; but petty dissensions are common save when internal peace is constrained by external strife. The strongest tribal characteristic is implacable animosity toward aliens, whether Indian or Caucasian; certainly for three and a half centuries, and probably for many more, the Seri have been almost constantly on the warpath against one alien group or another, and have successfully stayed Spanish, Mexican, and American invasion. In their estimation the brightest virtue is the shedding of alien blood, while the blackest crime in their calendar is alien conjugal union.

The Seri vocabulary is meager and essentially local; the kinship terms are strikingly scanty, and there are fairly full designations for food materials and other local things, while abstract terms are few. Two or three recorded vocables seem to resemble those of the Yuman languages, while the numerals and all other known terms are distinct. The grammatic construction of Seri speech appears not to differ greatly from that of other tongues of Sonora and Arizona; it is highly complex and associative. The speech is fairly euphonious, much more so than that of the neighboring Papago and Yaqui Indians.

The Seri Indians appear to recognize a wide variety of mystical potencies and a number of zoic deities, all of rather limited powers. The Pelican, Turtle, Moon, and Sun seem to lead their thearchy. Creation is ascribed to the Ancient of Pelicans—a mythical bird of marvelous wisdom and melodious song—who first raised Isla Tassne, and afterward Tiburon and the rest of the world, above the primeval waters. Individual fetishes are used, and there is some annual ceremony at the time of ripening of cactus fruits, and certain observances at the time of the new moon. The most conspicuous ceremony is the girls' puberty feast. The dead are clothed in their finest raiment, folded and fastened in small compass like Peruvian mummies, placed in shallow graves, and covered with turtle-shells, when the graves are filled with earth and heaped with stones or thorny brambles for protection against beasts of prey. Fetishes, weapons, and other personal belongings are buried with the body, as well as a dish of food and an olla of water, and there are curious customs connected with the place of

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105 sepulture. There is a weird, formal mourning for dead matrons, and suggestions of fear of or veneration for the manes.

172 Seriland is surrounded with prehistoric works, telling of a numerous population who successfully controlled the scant waters for irrigation, built villages and temples and fortresses, cultivated crops, kept domestic animals, and manufactured superior fictile and textile wares; but (save possibly in one spot) these records of aboriginal culture cease at the borders of Seriland. In their stead a few slightly worn pebbles and bits of pottery are found here and there, deeply embedded in the soil and weathered as by the suns of ages. There are also a few cairns of cobbles marking the burial places, and at least one cobble mound of striking dimensions but of unknown meaning; and there are a few shell-mounds, one so broad and high as to form a cape in the slowly transgressing shoreline (Punta Antigualla), and in which the protolithic implements and other relics are alike from the house-dotted surface to the tide level, 90 feet below.

The absence of relics of a superior culture, and the presence of Seri relics throughout deposits of high antiquity, suggest that the tribe is indigenous to Seriland; and this indication harmonizes with the peculiar isolation of the territory, the lowly culture and warlike habits of the people, the essentially distinct language, the singular marriage custom, and the local character of the beast-gods. And all these features combine to mark the Seri as children of the soil, or autochthones.

Recent Explorations and Surveys

114 Present knowledge of Seriland and its inhabitants is based primarily
121 on the work of two expeditions by the Bureau of American Ethnology,
[122] conducted in 1894 and 1895, respectively; and, secondarily, on researches into the cartography and literature (descriptive, historical, and scientific) of the region. Both of the expeditions were projected largely for the purpose of making collections among little-known native tribes in the interests of the National Museum, and the general ethnologic inquiries were ancillary to this purpose.

[122] The 1894 expedition was directed chiefly toward work among the Papago Indians in the vaguely defined territory known as Papagueria, lying south of Gila river and west of the Sierra Madre in southwestern Arizona and western Sonora (Mexico). Outfitting at Tucson early in October, the party moved southward, visiting the known Papago rancherias and seeking others, and thus defining the eastern limits of the Papago country. On the approach to the southern limits of the tribal range toward Rio Sonora, the evil repute of the Seri Indians sounded larger and larger, suggesting the desirability of scientific study of the tribe; and it was decided to attempt investigation.
114 Accordingly the party was reorganized at Hermosillo, and, with the sanction of the Secretary of State and Acting Governor, Señor Don Ramón Corral, proceeded to Rancho San Francisco de Costa Rica,

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SEVENTEENTH ANNUAL REPORT PL. II

BUREAU OF AMERICAN ETHNOLOGY

PASCUAL ENCINAS, CONQUEROR OF THE SERI

[FACING P. 13]

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where a temporary Seri rancheria was found occupied by about sixty of the tribe, including subchief Mashém, who speaks Spanish. In this part of the work the expedition was accompanied by Señor Pascual Encinas, the owner of the rancho visited, and doubtless the best informed white man concerning the habits, customs, personnel, and habitat of the tribe. About a week was spent in intercourse with the occupants of the rancheria, when the studies were brought to an end through the illness of Señor Encinas, and the consequent necessity for return to Hermosillo. The expedition then proceeded northwestward and northward along a route so laid as to define the western limits of Papagueria proper, and reached Tucson near the end of the year. In addition to the leader, the party comprised Mr William Dinwiddie, photographer; José Lewis, Papago interpreter, and E. P. Cunningham, teamster. The outfit was furnished chiefly by Mr J. M. Berger, of San Xavier (near Tucson). On the visit to the Seri frontier the party was accompanied by Señor Encinas, Don Arturo Alvemar-Leon (who acted as Spanish interpreter), and two or three attachés of Molino del Encinas.[1]

The second expedition was directed primarily toward investigation of the Seri, and only incidentally to continuation of the researches among the Papago. Outfitting at Tucson in October (again with the aid of Mr Berger), the expedition proceeded southward by a route different from those previously traversed, and carried forward a plane-table route survey covering a considerable zone from the international boundary at Susabe to Rio Sonora. Descending the previously unmapped course of Rio Bacuache, the expedition reached the Rancho de San Francisco de Costa Rica on December 1, 1895, and, although conditions were found unfavorable in that the Seri were on the warpath, immediately prepared for the extension of the work into Seriland.

A preliminary trip was made into the mainland portion of the Seri habitat, terminating at the crest of Johnson peak, the highest point in Sierra Seri. The triangulation and topographic surveys were carried over the territory traversed, and several points were fixed on Isla Tiburon; but the natives, agitated by a skirmish with vaqueros on the frontier a day or two earlier, had withdrawn to remoter parts of the territory, and were not encountered. The party returned to Costa Rica, a rude boat was completed, transported across the desert via Pozo Escalante to Embarcadero Andrade, and launched in Bahia Kunkaak. The surveys were extended to the southern portion of Sierra Seri and Isla Tasspe, and, after various difficulties and delays due to dearth of fresh water, to gales, and to other causes, the party (enlarged for the purpose) finally landed on Tiburon. Many Seri rancherias were found on

[1] The more noteworthy details of the organization and work of the two expeditions are set forth in the administrative reports of the Bureau for the fiscal years 1894-95 and 1895-96. Certain members of this party are shown in the accompanying half-tone, forming plate II: Señor Encinas seated at the end of the table; his son, Don Manuel (bareheaded), and Don Ygnacio Lozania at his right; a grandson behind him, and Señor Alvemar-Leon seated at his left, with Mashém kneeling over the table in the foreground.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

114 both sides of Bahia Kunkaak and El Infiernillo. Some of these had been occupied almost to the hour of the visit, but the occupants had taken flight, leaving most of their unattached possessions behind, [123] and were not seen, though it was evident that, like wary birds and game animals, they kept the invaders in sight from points of vantage and hidden lairs. The eastern scarps and foot-slopes of Sierra Kunkaak were traversed extensively and repeatedly; its crest was crossed by Mr Johnson with a small party at a point west of Punta Narragansett, [126] and the triangulation and topographic sketching were connected with the work on the mainland and carried over practically the entire surface of the island, being tied to the work of the Hydrographic Office about the coasts. Then, despairing of finding the wary natives, and having exhausted food supplies, the party returned to the mainland and thence to Costa Rica, arriving in the evening of December 31.

The original party comprised, in addition to the leader, Mr Willard D. Johnson, topographer; Mr J. W. Mitchell, photographer; Hugh Norris, Papago interpreter, and José Contrares, teamster. The party engaged in the expedition to Sierra Seri comprised the leader, Messrs Johnson and Mitchell, Mr L. K. Thompson of Hermosillo, Don Andrés Noriega of Costa Rica, José Contráres, and two Papago Indian guards, Miguel and Anton, of Costa Rica. The Tiburon party was made up of the leader, Messrs Johnson and Mitchell, S. C. Millard of Los Angeles, and Señores Andrés Noriega and Ygnacio Lozania, together with Ruperto Alvarez, a Yaqui Indian guard, and Miguel, Anton, Mariana, Anton Ortiz, and Anton Castillo, Papago guards; while Hugh Norris and José Contrares, with half a dozen Papago guards and other attachés of the rancho at Costa Rica, maintained an intermittent supply station at Embarcadero Andrade. Señor Encinas cooperated in the work of the expedition, part of the time at Costa Rica and part at Molino del Encinas, his principal hacienda in the outskirts of Hermosillo; while Mr Thompson and Dr W. J. Lyons aided in the work, the former at both Hermosillo and Costa Rica and the latter at Hermosillo.

The return trip from Costa Rica lay via Hermosillo, and permitted the extension of the plane-table surveys to this longitude. While at the city advantage was taken of the opportunity to obtain linguistic [115] and other data from "El General" Kolusio, a full-blood Seri retained at the capital by the State for occasional duty as a Seri interpreter, who was obligingly assigned to the service of the party by Señor Don Ramón Corral, then governor of Sonora. At Hermosillo the leader of the expedition left the main party, which then proceeded northwestward and northward along the route followed by the 1894 expedition on the return journey, the party comprising Mr Johnson, in charge, with Messrs Mitchell and Millard, Hugh Norris, and José Contrares; and the plane-table surveys were continued and combined with the route surveys made on the outward journey.

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The principal ethnologic results of both expeditions relating to the Seri Indians are incorporated in the following pages; the data concerning the Papago are reserved for further study. The topographic surveys of the 1895 expedition covered a zone averaging 50 miles in width, extending from the international boundary to somewhat beyond Rio Sonora. Mr Johnson, by whom these surveys were executed, was on furlough from the United States Geological Survey, and his resumption of survey work prevented the construction of finished maps, except that of Seriland (plate I), which forms but a small fraction of the area surveyed. The results of the remaining, and by far the greater, part of the topographic surveys are withheld pending completion of the inquiries concerning the Papago Indians.

The geographic nomenclature found requisite in the field and in writing is partly new and partly restored, yet conforms with general and local custom so far as practicable; and nearly all of the new names have been applied in commemoration of explorers or pioneers. Most of the names pertaining to Seriland proper are incorporated in the map forming plate I; the others (including a few minor corrections) appear in the outline map forming figure 1, prepared after the larger sheet was printed.[1]

The following list of place-names is designed primarily to give the meaning and raison d'être of the nomenclature; with a single exception,[2] the names are Hispanized or Mexicanized in accordance with local usage.

Nomenclature of Seriland.[3]

*SERILAND: Extra-vernacular name of tribe, with English locative.

MAR DE CORTÉS (Sea of Cortés—Gulf of California): Customary Sonoran designation, applied by Ulloa (1539) in honor of Hernando Cortés, first discoverer of the gulf.

*PASAJE ULLOA (Ulloa passage): Generic Spanish; specific applied in honor of Captain Francisco de Ulloa, first navigator of the passage and the upper gulf, 1539.

*ESTRECHO ALARCON (Alarcon strait): Named in honor of Hernando de Alarcon, second navigator of the gulf, 1540.

EL INFIERNILLO (The Little Hell): Local designation, retained by the Hydrographic Office, U. S. N. (miswritten "Estrecho Infernillo" on larger map).

†BOCA INFIERNO (Mouth of Hell): A colloquial local designation (miswritten "Puerto Infierno" on larger map).

*BAHIA KUNKAAK (Kunkaak bay): Generic Spanish; specific the vernacular name of the Seri tribe (miswritten "Tiburon bay" on plates IV and V).

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[1] The larger map was drawn early in 1896, and a preliminary edition in the form of a photolithograph of the drawing was published in the National Geographic Magazine, vol. VII, 1896. It is proper—and historically desirable—to explain that while a considerable part of the copy for this paper was prepared at about the same time, circumstances prevented the completion of the manuscript and the final rectification of the nomenclature and bibliographic references until September 1, 1900.

[2] Johnson peak. It is proper to say that this name was applied by the author (and leader of the expedition) after the drawing was completed and submitted by Mr Johnson, as a meager tribute to his excellent work in the field and on the drawings named.

[3] An asterisk indicates new names, an obelisk old names restored or colloquial names adopted.

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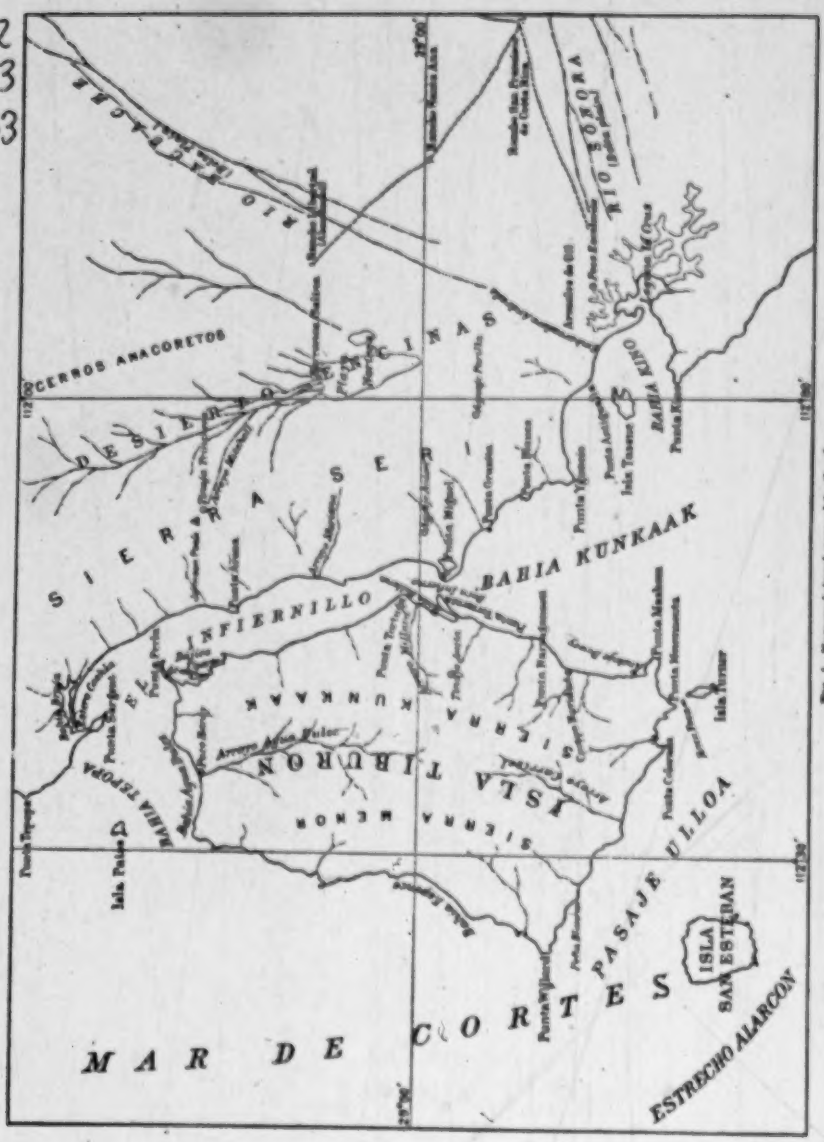

FIG. 1.—Reconnoissance map of Sonora.

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BAHIA KINO (Kino bay): Long-standing name given in honor of Padre Eusebio Francisco Kino, an early Jesuit missionary (the "Bahia San Juan Bautista" of various early maps); adopted in Anglicized form by the Hydrographic Office, U. S. N.

†BAHIA TEPOPA (Tepopa bay): Specific a corruption of Tepoka, the extra-vernacular name of a local tribe related to the Seri; applied in 1746 by Padre Consag, and used by most navigators and cartographers of later dates, though it does not appear on the charts of the Hydrographic Office, U. S. N.

BAHIA AGUA DULCE (Freshwater bay): Named by Lieutenant R. W. H. Hardy, R. N., 1826; name retained (in Anglicized form) by Hydrographic Office, U. S. N. (The name is misplaced on Hardy's map, but the bay is correctly located in his text, p. 283.)

†BAHIA BRUJA (Witch bay): Named (in honor of his vessel) by its discoverer, Lieutenant Hardy, 1826.

*BAHIA ESPENCE (Spence bay): Named in honor of Pilot Tomás Espence (Thomas Spence), second circumnavigator of the island, who landed in the bay in 1844.

†ESTERO COCHILA (Cockle inlet): Named by Lieutenant Hardy, 1826.

*BAJIOS DE UGARTE (Ugarte shoals): Named in honor of Padre Juan de Ugarte, first visitor to the shoals and circumnavigator of Tiburon, 1721.

*BADA BALLENA (Whale roadstead): Named from the stranding of a whale about 1887, an incident of much note among the Seri.

*ANCLAJE DEWEY (Dewey anchorage): Named in honor of its discoverer, Commander (now Admiral) George Dewey, in charge of the surveys by the Hydrographic Office, U. S. N., 1873.

LAGUNA LA CRUZ (Lagoon of the Cross): Name adopted (Anglicized) by Hydrographic Office, U. S. N.; the "Laguna de los Cerraditos" (Lagoon of the Little Banks) of Colonel Francisco Andrade, 1844.

ISLA TIBURON (Shark island): Name of long standing; used alternatively with "Isla San Agustin" since the seventeenth century, both names being apparently applied to Isla Tassne by several writers, and also to Isla Angel de la Guarda (the second largest island in the gulf) by Kino and others, while the present Tiburon was regarded as a peninsula.

ISLA SAN ESTEBAN (Saint Stephen island): Name of long standing; in consistent use since early in the seventeenth century.

*ISLA TASNE (Pelican island): Name recast by the use of the Seri specific in lieu of the Spanish (Alcatraz), which is too hackneyed for distinctive use.

ISLA TURNER (Turner island): Name used (and probably applied in honor of Rear-Admiral Thomas Turner, U. S. N.) by the Hydrographic Office, U. S. N.

ISLA PATOS (Duck island—i. e., Island of Ducks): Name of long standing; adopted by the Hydrographic Office, U. S. N.

ROCA FOCA (Seal rock): Name used (and probably applied) by the Hydrographic Office, U. S. N.

PEÑA BLANCA (White crag): Name used (and probably applied) by the Hydrographic Office, U. S. N.

PUNTA TEPOPA (Tepopa point): Named (probably corruptly) from a local tribe related to the Seri; used by the Hydrographic Office, U. S. N.

PUNTA SARGENT (Sargent point): Name applied by Lieutenant Hardy in 1826 to what is now known as Punta Tepopa; adopted for the minor point by the Hydrographic Office, U. S. N.

*PUNTA PERLA (Pearl point): Name applied in commemoration of the traditional pearl fisheries of the vicinity.

*PUNTA ARENA (Sand point): A descriptive designation.

*PUNTA TORTUGA (Turtle point): Name applied in recognition of the extensive turtle fisheries of the Seri in the vicinity.

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*PUNTA TORMENTA (Hurricane point): Name applied in recognition of the nearly continuous gales and tide-rips by which navigation is rendered hazardous, and by which the long sand-spit has been built.

PUNTA MIGUEL (Miguel point): Recast from "San Miguel point", partly through association with the name of a Papago guard accompanying the expedition of 1895; in the old form the name is of long standing, was probably applied by Escalante in 1700, and was adopted by the Hydrographic Office, U. S. N., 1873.

*PUNTA GRANITA (Granite point): A descriptive designation.

*PUNTA BLANCA (White point): A descriptive designation.

*PUNTA NARRAGANSETT (Narragansett point): Specific (of Algonquian Indian derivation) applied in commemoration of the vessel employed in the surveys by the Hydrographic Office, U. S. N., in 1873, the point being that at which the commander of the *Narragansett* located the principal Seri rancheria of that time and made observations on the tribe.

*PUNTA YGNACIO (Ygnacio point): Specific applied in honor of Don Ygnacio Lozania, a trusted aid in the 1895 expedition, who had visited this point in connection with the Andrade expedition of 1844; described as "Dark bluff" on charts of the Hydrographic Office, U. S. N.

*PUNTA ANTIGUALLA (Antiquity point—i. e., Point of Antiquities): Name applied in recognition of a great shell-mound which has retarded the transgression of the sea and produced the point.

PUNTA KINO (Kino point): Name of long standing; specific in honor of the early missionary; used by the Hydrographic Office, U. S. N.

*PUNTA MASHÉM (Mashém point): Specific in honor of the Seri chief Mashém (sometimes called Francisco Estorga or Juan Estorga), who speaks Spanish and acted as Seri-Spanish interpreter in 1894.

PUNTA MONUMENTA (Monument point): Named by the Hydrographic Office, U. S. N.

PUNTA COLORADA (Red point): Recast from the "Red Bluff point" of the Hydrographic Office, U. S. N.

PUNTA WILLARD (Willard point): Origin of name unknown; used by the Hydrographic Office, U. S. N.

*EMBARCADERO ANDRADE (Andrade landing): Named in memory of the embarkation for Tiburon of Colonel Francisco Andrade, 1844.

*CAMPO NAVIDAD (Christmas camp): Named in memory of a camp occupied December 24–26 by the expedition of 1895.

*SIERRA SERI (Seri range): Generic Spanish, specific the extra-vernacular tribe name.

*SIERRA KUNKAAK (Kunkaak range): Specific the vernacular tribe name.

*SIERRA MENOR (Minor range): A descriptive designation.

*CERROS ANACORETOS (Anchorite hills): A designation suggested to Topographer Johnson by the solitary series of spurs rising singly or in scattered groups from the sheetflood-carved desert plain.

*JOHNSON PEAK: Name applied in commemoration of the first and only ascent of the peak, and of its occupation as a survey station, December 7 and 8, 1895, by Willard D. Johnson, accompanied by John Walter Mitchell and Miguel (Papago Indian).

*DESIERTO ENCINAS (Encinas desert): Generic Spanish, specific in honor of the intrepid settler on the outskirts of the desert, Señor Pascual Encinas.

*PLAYA NORIEGA (Noriega playa): Generic Spanish, specific in honor of Don Andrés Noriega, kinsman of Señora Anita Encinas, a resident on the outskirts of the desert, and the leading Mexican aid in the expedition of 1895.

*ARENALES DE GIL (Gil sandbanks): Generic Spanish, specific in honor of *Fray* Juan Crisóstomo Gil de Bernabe, sole missionary to Seriland, massacred at this point in 1773.

*RIO SONORA (Sonora river): Generic Spanish, specific a long standing and originally colloquial corruption of Señora, a designation said to have been applied

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by Spanish pioneers to a hospitable native chieftainess; afterwards apparently fixed through the name of an early mining camp and garrison and perhaps by similarity to a local aboriginal (Opata) term connoting maize, i. e., *seoi*.

RIO BACUACHE (Bacuache river): Name of long standing; specific doubtless from the Opata term *bacui*, "snake", with a locative termination, i. e., "Snake place".

†ARROYO CARRIZAL (Reedy arroyo): Generic and specific Spanish; colloquial designation used by the Seri chief Mashém in describing the island; a traditional name of long standing.

†ARROYO AGUA DULCE (Freshwater arroyo): A traditional name like the former, also used by Mashém.

*ARROYO MILLARD (Millard arroyo): Named in memory of S. C. Millard, aid and interpreter in the expedition of 1895 (died 1897).

*ARROYO MARIANA (Mariana arroyo): Named in honor of Mariana (Papago Indian), a guard accompanying the 1895 expedition, who had once approached this arroyo on a hunting expedition.

*ARROYO MITCHELL (Mitchell arroyo): Named in honor of John Walter Mitchell, photographer of the 1895 expedition.

†POZO ESCALANTE (Escalante well): Generic Spanish, specific in honor of Sergeant Juan Bautista de Escalante, the first Caucasian to cross El Infiernillo (in 1700), who is reputed to have dug the shallow well still existing; the name has been retained ever since alternatively with "Agua Amarilla" (Yellow water); doubtless the "Carrizal" of certain early maps; the site of the only mission ever established in Seriland, and of the massacre of Fray Crisostomo Gil in 1773.

*POZO HARDY (Hardy well): Named in honor of Lieutenant R. W. H. Hardy, R. N., second known Caucasian visitor to the spot, 1826.

*AGUAJE ANTON (Anton water, or water-hole): Generic a common Mexican term; specific applied in memory of Anton (Papago Indian), a guard and visitor to the spot in the expedition of 1895.

*AGUAJE PARILLA (Parilla water): A traditional water (not found by the expedition of 1895) named in memory of Colonel Diego Ortiz Parilla, the vaunted destroyer of the Seri in 1749, whose imposing expedition may have reached this point.

*BARRANCA SALINA (Saline gorge): Generic colloquial Mexican, specific denoting the character of the practically permanent water; the designation applied by Mexican vaqueros and Papago hunters, who occasionally visit the locality.

*TINAJA ANITA (Anita basin): Generic a useful Mexican term for a water-pocket, or rock basin containing water supplied by storms or seepage; specific a tribute to Anita Newcomb McGee, M. D., Actg. Asst. Surg. U. S. A.; perhaps the "Aguaje de Andrade" of 1844.

*TINAJA TRINCHERA (Entrenched basin): Specific a common Mexican term for the ancient entrenchments found on many mountains of Papaguería; applied in recognition of a few low, loose-laid stone walls about the tinaja, the only structures of the kind known in Seriland.

RANCHO SAN FRANCISCO DE COSTA RICA: Name applied by the founder, Señor Pascual Encinas, about 1850.

RANCHO SANTA ANA: Name applied by the founder, Señor Encinas, about 1870.

RANCHO LIBERTAD: Name applied by the founder, Señor Encinas, about 1875.

The fairly full geographic nomenclature of Seriland merely expresses the necessity for place-names, felt in some measure by all intelligent beings, and realized especially by explorers and describers of the region. Excepting the ranchos and perhaps Pozo Escalante, they denote natural features only, and, with the same exceptions, the features are seen but rarely or from great distances by enlightened men. Despite

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Despite
137 the wealth of place-names and the strongly accentuated configuration which the nomenclature expresses, Seriland is one of the most hopeless deserts of the American hemisphere.

ACKNOWLEDGMENTS

122 Since most of the field work of the two expeditions lay in the neighboring Republic of Mexico, it became necessary to ask official sanction for the operations from the Mexican government; and it is a pleasure to say that every possible privilege and courtesy were extended by both federal and state officials. Especial acknowledgments are due to
000 the Mexican minister (and afterward ambassador) to the United States, his Excellency Don Mateo Romero (now deceased); to the Ministro de Fomento of the Mexican Republic, Excelencia Don Fernando Leal; and to the governor of the State of Sonora, Señor Don Ramón Corral. Equal acknowledgments are due to various United States officials, notably Honorable W. Woodville Rockhill, First Assistant Secretary of State when the expeditions were planned; and it is a pleasure to advert to the active interest taken in both expeditions by Honorable S. P. Langley, Secretary of the Smithsonian Institution, and to the careful attention given the 1894 expedition by the late Dr G. Brown Goode, Assistant Secretary of the Institution.

Mr Willard D. Johnson did invaluable service in connection with
114 the second expedition, particularly in the execution of surveys and the
126 construction of maps in inimitable style. Mr William Dinwiddie is to be credited with the excellent photographs made during the 1894 expedition, with the representation of the devices used in Seri face-painting, and with various other aids to the investigation; while Mr J. W. Mitchell is to be credited with the photographs made on Isla Tiburon, and with other contributions to the success of the 1895 expedition.
000 Acknowledgments are due also to all of the participants in both expeditions, whose names appear in other paragraphs. Their contributions were not primarily intellectual, yet were of a kind and amount to be forever remembered among men who have worked and hungered and thirsted and stood guard together. The deepest debt connected with the field work is to the now venerable but ever vigorous pioneer, Señor Pascual Encinas; and no small part of this debt goes over to his estimable spouse, Señora Anita Encinas, who twice traversed the long road from Hermosillo to Costa Rica in the interest of the 1895 expedition.

The scientific results of the researches have been enriched by invaluable contributions from Director Powell's store of ethnologic knowledge, and by suggestions from Messrs Frank Hamilton Cushing, F. W. Hodge, James Mooney, and other collaborators in the Bureau of
114 American Ethnology. The qualities of the colored illustrations are due largely to the artistic skill of Mr Wells M. Sawyer, by whom they were designed, and of Mr DeLancey Gill, by whom the proofs were revised. The Spanish translations are due chiefly to Colonel P. F.

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Hilder, ethnologic translator of the Bureau, partly to Mr Emanuele Fronani; though neither can be charged with errors of interpretation or of Englishing, both finally shaped by the author. The somatic determinations and discussions were by Dr Ales Hrdlička, of New York; the tests for arrow poison were made by Dr S. Weir Mitchell, of Philadelphia; while the philologic comparisons were made almost wholly (with notable thoroughness and perspicacity, and in such wise as to illustrate the wealth and utility of the linguistic collections of the Bureau) by Mr J. N. B. Hewitt. Finally, it has become due, probably for the first time in the nearly four centuries of their history, to make public acknowledgment of services by Seri Indians, viz, subchief Mashém, the real sponsor for the Bureau vocabulary and many other data, and "El General" Kolusio, the outlaw interpreter of Hermosillo and contributor to certain historical identifications.

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HABITAT

Location and Area

131 Seriland, the home from time immemorial of the Seri Indians, lies in northwestern Mexico, forming a part of the State of Sonora. It comprises Tiburon island, the largest and most elevated insular body in Gulf of California, together with a few islets and an adjacent tract of mainland; the center of the district being marked approximately by the intersection of the parallel of 29° with the meridian of 112°. The territory is divided by the narrow but turbulent strait, El Infiernillo. It is bounded on the west and south by the waters of the gulf with its eastward extensions to Kino bay, on the east by a nearly impassable desert, and on the north by a waterless stretch of sandy plains and rugged sierras 50 to 100 miles in extent.

Tiburon island is about 30 miles in length from north to south and 12 to 20 miles in width; its area, with that of the adjacent islets, is barely 500 square miles. The mainland tract held by the Seri is without definite boundary; measured to the middle of the limiting desert on the east and halfway across the waterless zone on the north, its area may be put at 1,500 square miles. To this land area of 2,000 square miles may be added the water area of the strait, with its northern and southern embouchures, and the coastwise waters habitually navigated by the Seri balsas as far as Kino bay, making half as much more of water area. Such is the district which the Seri claim and seek to control, and have practically protected against invasion for nearly four centuries of history and for uncounted generations of prehistory.

Physical Characteristics

133 Seriland forms part of a great natural province lying west of the Sierra Madre of western Mexico and south of an indefinite boundary about the latitude of Gila river, which may be designated the Sonoran province; it differs from Powell's province of the Basin ranges in that it opens toward the sea, and also in other respects; and it is allied in many of its characteristics to the arid piedmont zone lying west of the Andes in South America.

In general configuration the province may be likened to a great roof-slope stretching southwestward from a comb in the Sierra Madre to a broad eaves-trough forming Gulf of California, the slope rising steeper toward the crest and lying flatter toward the coast; but the expanse is warped by minor swells, guttered by waterways, and dormered by out-

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lying ranges and buttes. The most conspicuous inequality of the slope (partly because of its coincidence with tide-level) is offered by the rugged ranges of Seriland. These may be considered four in number, all approximately parallel with each other and with the coast; the first is a series of eroded remnants (Cerros Anacoretos) from 600 to 1,200 feet in height; the second is the exceedingly rugged Sierra Seri, culminating in Johnson peak 5,000 feet above tide; the third is Sierra Kunkaak, attaining about 4,000 feet in its highest point; the fourth is Sierra Menor, some 2,000 feet high, with the northern extremity sliced off obliquely by marine erosion. The principal arm of Desierto Encinas lies between the first two ranges, El Infiernillo separates the second and third, while a subdesert valley divides the third from the fourth. The valleys correspond more closely than the ranges; if the land level were 100 feet higher the strait and its terminal bays would become an arid valley like the others, while if the sea-level were 500 feet higher the four ranges would become separate islands similar to Angel de la Guarda and others in the gulf. 133

The Sonoran province is notably warm and dry. The vapor-laden air-currents from the Pacific drift across it and are first warmed by conduction and radiation from the sun-scorched land, to be chilled again as they roll up the steeper roof-slope to the crest; and the precipitation flows part way down the slopes, both eastward and westward from the Sierra Madre—literally the Mother (of waters) range. A climatal characteristic of the province is two relatively humid seasons, coinciding with the two principal inflections of the annual temperature-curve, i. e., in January-February and July-August, respectively. In the absence of meteorologic records the temperature and precipitation may be inferred from the observations at Yuma and Tucson,[1] which are among the warmest and driest stations in America, or indeed in the world; though it is probable that such points as Caborca, Bacuachito, and Hermosillo are decidedly warmer and perhaps slightly moister than Yuma. The ordinary midday summer temperature at these points may be estimated at about 110° in the shade (frequently rising 5° or 10° higher, but dropping 20° to 50° in case of cloudiness); the night temperature at the same season is usually 50° to 75°, though during two-thirds of the year it is liable to fall to or below the freezing point. The sun temperature is high in comparison with that measured in the shade, the exposed thermometer frequently rising to 150° or 160°, according to its construction, while black-finished metal becomes too hot to be handled, and dark sand and rocks literally scorch unprotected feet. The leading characteristic of the temperature is the wide diurnal range and the relatively narrow annual range; another characteristic is the uniformity, or periodic steadiness, of the maxima, coupled with variability and nonperiodicity of the minima. 132

[1] The following monthly and annual meteorologic summaries, compiled from United States Weather Bureau records at these stations, have been kindly furnished by Prof. Willis L. Moore, Superintend-

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132 The precipitation on the Sonoran province is chiefly in the form of rain; in the winter humid season snow falls frequently on the Sierra Madre and rarely on the outlying ranges; in both humid seasons (and in humid spots at all seasons) dew forms in greater or less abundance. Fog frequently gathers along the coast, especially during the winter and in the midsummer wet season, and sometimes drifts inland for miles. The mean annual precipitation may be estimated at 20 or 25 inches toward the crest and half as much toward the base of the high sierra; thence it diminishes coastward, probably to less than 2 inches; the mean for the extensive plains forming the greater part of the province may be estimated at 3 or 4 inches. The greater part of the precipitation is in

out of the Sonoran. The tabulated records represent the observations of twenty years at Yuma and ten years at Tucson.

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
Absolute maximum temperature, Fahr.:													
Yuma	91	91	100	105	112	117	110	115	113	105	92	93	115
Tucson	84	85	88	101	106	111	110	109	106	97	89	82	111
Absolute minimum temperature, Fahr.:													
Yuma	22	25	31	40	44	52	61	60	50	41	31	25	22
Tucson	14	20	24	27	32	39	54	60	46	31	23	11	11
Mean maximum temperature, Fahr.:													
Yuma	65.1	70.7	73.5	85.4	92.2	101.2	103.7	104.9	99.6	87.2	75.0	67.4	86.6
Tucson	63.9	67.6	74.5	81.4	91.4	100.2	99.0	94.8	92.2	82.8	71.5	63.7	81.8
Mean minimum temperature, Fahr.:													
Yuma	42.0	45.1	50.5	54.1	61.4	68.3	77.5	77.6	74.5	64.5	48.9	44.7	58.4
Tucson	35.0	41.5	44.0	48.1	56.3	63.6	70.0	73.6	67.3	52.1	43.5	35.1	52.9
Mean temperature, Fahr.:													
Yuma	54.1	58.9	61.5	69.8	77.3	84.9	91.5	91.7	86.4	75.9	61.9	56.0	72.2
Tucson	49.4	54.5	59.2	65.0	74.0	82.3	87.2	83.5	77.7	68.5	57.0	51.0	67.4
Mean precipitation (inches and hundredths):													
Yuma	0.42	0.51	0.39	0.07	0.04	T.	0.14	0.25	0.13	0.20	0.29	0.40	2.04
Tucson	0.75	0.90	0.80	0.17	0.16	0.10	2.08	2.06	1.18	0.39	0.97	0.85	12.30
Prevailing winds:													
Yuma	N.	N.	W.	W.	W.	SW.	S.	S.	NE.	NE.	N.	N.	N.
Tucson	S.	S.	S.	W.	S.	SW.	SE.	SE.	S.	S.	S.	SE.	S.
Average cloudiness (scale 0-10):													
Yuma	2.4	2.4	2.4	1.6	1.2	0.8	1.6	2.2	1.1	1.3	1.7	2.5	1.8
Tucson	3.0	3.2	3.2	1.8	1.6	1.5	4.5	4.4	1.9	1.6	1.6	2.9	2.6

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local storms, frequently accompanied by thunder-gusts or sudden tempests, though cold drizzles sometimes occur, especially at the height of the winter humid season. Except where the local configuration is such as to affect the atmospheric movements, the distribution of precipitation is erratic, in both time and space; some spots may receive half a dozen rains within a year, while other spots may remain rainless for several years; and the wet spot of one series of years may be the dry spot of the next. 132

The climatal features of Seriland are somewhat affected by the pronounced topographic features of the district. Snow sometimes falls on Sierra Seri, and probably on Sierra Kunkaak; gales gather about the rugged ranges at all seasons, and sometimes produce precipitation out of season; the extreme heat of midday and midsummer is tempered by the proximity of the tide-swept gulf; and since most of the local derangements tend to augment precipitation and reduce temperature, it would seem safe to estimate the mean annual rainfall of the tract at 4 or 5 inches, and the mean temperature at about 70°, with a mean annual range of some 30° and an extreme diurnal range of fully 80°.

The configuration and climate combine to give distinctive character to the hydrography of the Sonoran province. The melting snows and more abundant rains of the high sierras form innumerable streams flowing down the steeper slopes toward the piedmont plains, or soak into the pervious rocks to reappear as springs at lower levels; sometimes the streams unite to form considerable rivers, flowing scores of miles beyond the mountain confines; but eventually all the running waters are absorbed by the dry sands of the plains or evaporated into the drier air; and from the mouth of the Colorado to that of the Yaqui, 500 miles away, no fresh water ever flows into the sea. During the winter wet season, and to a less extent during that of summer, the mountain waterways are occupied by rushing torrents, rivaling great rivers in volume, and these floods flow far over the plains; but during the normal droughts the torrents shrink to streamlets purling among the rocks, or give place to blistering sand-wastes furlongs or even miles in width and dozens of miles in length, while beyond stretch low, radially scored alluvial fans, built by the great freshets of milleniums. Only a trifling part of the rainfall of the plains ever gathers in the waterways heading in the mountains, and only another small part gathers in local channels; the lighter rains from higher clouds are so far evaporated in the lower strata of the air as to reach the earth in feeble sprinkles or not at all; the product of moderate showers is absorbed directly by earth and air; while the water of heavy rains accumulates in mud-burdened sheets, spreading far over the plains, flowing sluggishly down the slopes, yet suffering absorption by earth and air too rapidly to permit concentration in channels. These moving mud-blankets of the plains, or sheetfloods,[1] are often supplemented by 133

[1] Defined and described in Sheetflood Erosion, Bull. Geol. Soc. Am., vol. VIII, 1897, p. 87.

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133 the discharge from the waterways of adjacent sierras and buttes; they are commonly miles and frequently dozens or scores of miles in width, and the linear flow may range from a fraction of a mile to scores of miles according to the heaviness of the rainfall and the consequent dilution of the mud. Such sheetfloods, especially those produced by considerable rains, are characteristic agents of erosion throughout most of the province; their tendency is to aggrade depressions and corrade laterally, and thus to produce smooth plains of gentle slope interrupted only by exceptionally precipitous and rugged mountain remnants. A part of the sheetflood water joins the stronger mountain-born streams, particularly toward the end of the great storm whereby earth and air are saturated; another part forms ground-water, which slowly finds its way down the slopes toward the principal valleys, perhaps to reappear as springs or to supply wells. These with certain other conditions determine the water-supply available for habitation throughout Seriland and adjacent Papagueria.

Another condition of prime importance arises in a secular tilting of the entire province southwestward. This tilting is connected with the upthrust of the Sierra Madre and the uplifting of the plateau country and the southern Rocky mountain region north of the international boundary. Its rate is measured by the erosion of the Grand Canyon of the Colorado and other gorges; and its dates, in terms of the geologic time-scale, run at least from the middle Tertiary to the present, or throughout the Neocene and Pleistocene. Throughout this vast period the effect of the tilting in the Sonoran province has been to invigorate streams flowing southward, and to paralyze streams flowing toward the northerly and easterly compass-points; accordingly the streams flowing toward the gulf have eroded their channels effectively during the ages, and have frequently retrogressed entirely through outlying ranges; so that throughout the province the divides seldom correspond with the sierra crests.

[134] A typical stream of the province is Rio Bacuache, one of the two practicable overland ways into Seriland (albeit never surveyed until traversed by the 1895 expedition). Viewed in its simple geographic aspect, this stream may be said to originate in a broad valley parallel with the gulf and the high sierra, 200 miles northeast of Kino bay; its half-dozen tributary arroyos (sun-baked sand-washes during three hundred and sixty days and mud-torrents during five days of the average year) gather in the sheetflood plain and unite at Pozo Noriega, where the ground-water gives permanent supply to a well; then the channel cleaves a rocky sierra 3,000 feet high in a narrow gorge, and within this canyon the ground-water gathered in the valley above seeps to the surface of the sand wash and flows in a practically permanent streamlet throughout the 4 or 5 miles forming the width of the sierra; then the liquid sinks, and 25 miles of blistering sand-wash (interrupted by a single lateral spring) stretch across the next valley

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133 to Pueblo Viejo, where another sierra is cleft by the channel, and where the water again exudes and flows through a sand-lined rock-bed (figure 2). In the local terminology this portion alone is Rio Bacuache, the upper stretches of the waterway bearing different names; it supplies the settlement and fields of Bacuachito, flowing above the sands 5 to 15 miles, according to season; then it returns to the sand-wash habit for 50 miles, throughout much of which distance wells may find supply at increasing depths; finally it passes into the delta phase, and enters northeastern Seriland in a zone marked by exceptionally vigorous mesquite forests. Normally the 200 miles of streamway is actual stream only in two stretches of say 5 miles each, some 25 miles apart,

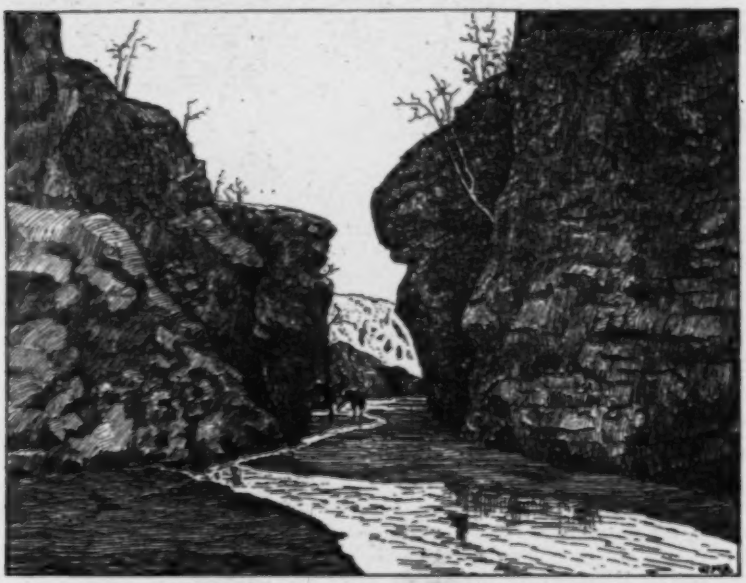

FIG. 2—Gateway to Seriland—gorge of Rio Bacuache.

and the farther of these stops midway between the head of the channel and the open sea toward which it trends and slopes; but during and after great storms it is transformed into a river approaching the Ohio or the Rhine in volume, flowing tumultuously for 150 miles, and finally sinking in the sands of Desierto Encinas, 30 to 50 miles from the coast. Viewed with respect to genesis, Rio Bacuache has responded to the stimulus of the southwestern tilting, and has retrogressed up the slope through two sierras, besides minor ranges and 100 miles of sheetflood-carved plains; while the debris thus gathered has filled the original gorge to a depth of hundreds of feet, and has overflowed the adjacent sheetflood-flattened expanses to form the great alluvial fan of eastern Seriland. The genetic conditions explain the distribution

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133 of the water: the product of the semiannual storms suffices to form a meager supply of ground water, which is diffused in the sands and softer rocks of the plains, and concentrated in the narrow channels carved through the dense granites of the sierras; and enough of the flow passes the barriers to supply deep wells in the terminal fan, as at the frontier ranchos Libertad (abandoned) and Santa Ana, just as the subterranean seepage from the Sonora more richly supplies the deep well at San Francisco de Costa Rica. In these lower reaches the mineral salts, normally present in minute quantities, are concentrated so that the water from these wells is slightly saline, while deeper in the desert the scanty water is quite salt.

133 In Seriland proper the distribution of potable water is conditioned
312 by the meager precipitation, the local configuration (shaped largely by sheetflood erosion), and the disturbance of equilibrium of the scanty ground-water due to the tilting of the province. The most abundant permanent supply of fresh water is that of Arroyo Carrizal, which is fed by drainage and seepage from the broad and lofty mass of pervious rocks forming the southern part of Sierra Kunkaak, the abundant supply being due to the fact that the eastern tributaries are energetically retrogressing into the mass in deep gorges which effectually tap the water stored during the semiannual storms. The arroyo and valley of Agua Dulce are less favorably conditioned by reason of a trend against the tilting of the province and by reason of the narrower and lower mass of tributary rock in the northern part of the range, and the flow is impermanent, as indicated by the absence of canes and other stream plants; yet four explorers (Ugarte, 1721; Hardy, 1826; Espence, 1844; Dewey, 1875) reported fresh water, apparently in a shallow well tapping the underflow, at the embouchure of the arroyo. On the eastern slope of Sierra Kunkaak there are several arroyos which carry water for weeks or even months after the winter rains, and sometimes after those of summer; but the only permanent water—Tinaja Anita—is at the base of a stupendous cliff of exceptionally pervious and easily eroded rocks, so deeply cut that ground-water is effectually tapped, while an adjacent chasm—Arroyo Millard—is so situated that the cliff-faced spur of the sierra above the tinaja absorbs an exceptional proportion of the surface flowage from the main crest. The tinaja (figure 3) is permanent, as indicated by a canebrake some 20 by 50 feet in extent, and by a native fig and a few other trees—though the dry-season water-supply ranges from mere moisture of the rocks to a few gallons caught in rock basins within the first 50 yards of the head of the arroyo. No other permanent supplies of fresh water are known on the island, though there are a few rather persistent tinajas along the western base of Sierra Menor above Willard point.

On the mainland tract there is a cliff-bound basin, much like that of Tinaja Anita, at the head of Arroyo Mitchell and base of Johnson peak, christened Tinaja Trinchera; but the range is narrow and the rocks

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granitic, and hence the supply is not quite permanent.[1] A practically permanent supply of water is found in one or more pools or barrancas at the head of Playa Noriega in Desierto Encinas. The liquid lies in pools gouged by freshets in the bottoms of arroyos coming in from the northward, just where the flow is checked by the spread of the waters over the always saline playa; and, since they are modified by each freshet, they are sometimes deep, sometimes shallow, sometimes entirely sand-filled. When the barrancas are clogged, or when their contents are evaporated, coyotes, deer, horses, and vaqueros obtain water by excavating a few feet in the sand lining the larger arroyos. Commonly the barranca water is too saline for Caucasian palates save

FIG. 3—Tinaja Anita.

in dire extremity, but the salinity diminishes as the arroyos are ascended. An apparently permanent supply of saline and nitrous water is found in a 10-foot well, known as Pozo Escalante, or Agua Amarilla (yellow water), near the southern extremity of Desierto Encinas, reputed to have been excavated by Juan Bautista de Escalante in 1700, and still remaining open; its location is such that it catches the subterranean seepage from both Bacuache and Sonora rivers. The water is potable but not palatable. Among the vaqueros of San Francisco de Costa Rica there is a vague and ancient tradition of a carrizal-marked tinaja or arroyo (Aguaje Parilla) at the eastern base of the southern portion of Sierra Seri; and both vaqueros and Indians

[1] Tinaja Trinchera was entirely dry and without trace of carrizal in December, 1894.

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133 refer to one or more saline barrancas about the western base of the same semirange, probably in Arroyo Mariana.

312 In brief, Arroyo Carrizal, Tinaja Anita, and Pozo Escalante are the only permanent waters, and Pozo Hardy, Barranca Salina, and Tinaja Trincheras the only subpermanent waters actually known to Caucasians in all Seriland, though it seems probable that permanent water may exist at Aguaje Parilla and in Arroyo Mariana, and impermanent supplies near Bahia Espence. There may be one or two additional places of practically permanent water in smaller quantity, and a few other places in which saline water might be found either at the surface or by slight excavation, and which may be approximately located by inspection of the map under guidance of the principles set forth in the preceding paragraphs; but this would seem to be the limit of trustworthy water supply. During the humid seasons the waters are naturally multiplied, yet it is improbable that any of the arroyos except Carrizal and Agua Dulce and a few minor gulches along the more precipitous shores shed water into the gulf save at times of extraordinary local flood.[1]

133 The geologic structure of the Sonoran province is complex and not well understood. So far as the meager observations indicate, the basal rocks are granites, frequently massive and sometimes schistose, sometimes intersected by veins of quartz, etc. The granitic mass is upthrust to form the nuclei of Sierra Madre and other considerable ranges; it also approaches the surface over large areas of plains. Resting unconformably on the granites lie heavy deposits of shales and limestones, commonly more or less metamorphosed; these rocks outcrop on the slopes of most of the main ranges and form the entire visible mass of some of the lower sierras and buttes, while they, too, sometimes approach the surface of the sheetflood-carved plain. The rocks, both calcareous and argillaceous, combine the characters of the vast Mesozoic limestone deposits of eastern Mexico and the immense shale accumulations of corresponding age in California, and hence probably represent the later half of the Mesozoic. This is the only sedimentary series recognized in the province. Both the granites and the sedimentary beds are occasionally overlain by volcanic deposits, chiefly in the form of much-eroded lava-sheets and associated tuff-beds, which sometimes form considerable ranges and buttes (notably Sierra Kunkaak, of Isla Tiburon); these remnantal volcanic deposits are probably late Mesozoic or early Tertiary. Newer volcanics occur locally, forming mesas, as about Agua Nueva (40 miles northwest of Hermosillo), or even coulees apparently filling barrancas of modern aspect, as in the vicinity of Bacuachito,[2] or rising into cinder cones surrounded by

113 [1] The physiographic features of the Sonoran province in general are treated in greater detail in a paper on Thornbush Erosion, Bull. Geol. Soc. Am., vol. VIII, 1897, pp. 87-112, and in a paper on Papaguería, Nat. Geog. Mag., vol. IX, 1898, pp. 345-371; while certain local features are described in a paper on Seriland, prepared jointly with Willard D. Johnson, Nat. Geog. Mag., vol. VII, 1896, pp. 128-133. The aggregate available fresh water of Seriland is estimated on p. 161.

[2] Noted by Willard D. Johnson.

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ejectamenta, as at Pico Pinacate, in northwestern Sonora. The various rocks are usually bare or meagerly mantled with talus in the mountains; over the greater part of the plains they are commonly veneered with sheetflood deposits, ranging from a few inches to a few yards in thickness; while the central portions of the larger valleys are lined with alluvial accumulations reaching many hundreds of feet in thickness. 133

The clearly interpretable geologic history began with extensive degradation and eventual baseleveling of a granitic terrane in Paleozoic or early Mesozoic time; then followed the deposition of the shales and associated limestones during the later Mesozoic; next came elevation, accompanied or followed by corrugation, chiefly in folds parallel with the present coast, whereby the granite-based sierras were produced, and accompanied also by the earlier vulcanism to which the volcanic sierras owe their existence. A vast period of degradation ensued, during which the land stood so high as to induce greater precipitation than that of today and to permit the streams to carve channels far below the present level of tide, and during which the present general configuration was developed; then came the southwestward tilting and consequent climatal desiccation, the filling of the deeper valleys, the inauguration of sheetflood erosion, some local vulcanism, and the progressive shifting of the divides.

The geologic structure affects the hydrography, especially that factor determined by subterranean circulation, or ground-water; for the superficial sheetflood and alluvial deposits are highly pervious and many of the volcanics hardly less so, while the shales and limestones are but slightly pervious and the granites nearly impervious. The 134
geologic structure also determines the character of the soil with exceptional directness, since the dryness of the air and the dearth of vegetation reduce rock decay to a negligible quantity. The characteristically precipitous sierras and cerros are of naked ledges, save where locally mantled with a mechanical débris of the same rocks (much finer than the frost product of colder and humider regions); the soil of the normal plains is but the little-oxidized upper surface of sheetflood deposits made up of the mechanical debris of local rocks and varying in coarseness with the slope; while the soil of the valleys is detrital sand and silt, derived from tributary slopes, passing into adobe where conditions are fit, and essentially mechanical in texture and structure save where cemented by ground-water solutions at the lower levels.

FLORA

The flora of the Sonoran province affords a striking example of the 137
adjustment of vegetal life to an unfavorable environment. The prevailing vegetation is perennial, of slow growth and of stunted aspect; and it is not distributed uniformly but arranged in separate tufts or clusters, gathering into a nearly continuous mantle in wetter spots, though commonly dotting the plains sparsely, to completely disappear

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137 in the driest areas. Nearly all of the plants have roots of exceptional length, and are protected from evaporation by a glazed epidermis and from animal enemies by thorns or by offensive odors and flavors; while most of the trees and shrubs are practically leafless except during the humid seasons. Grasses are not characteristic, and there is no sward, even in oases; but certain grasses grow in the shadow of the arborescent tufts and in the fields of the farmer ants, or spring up in scattered blades over the moister portions of the surface. The arborescent vegetation represents two characteristic types, viz, (1) trees and shrubs allied to those of humid lands, but modified to fit arid conditions; and (2) distinctive forms, evidently born of desert conditions and not adapted to a humid habitat, this type comprising the cacti and related forms, as well as forms apparently intermediate between the cacti and normal arborescent type. The various plants of the district, including those of the distinctive types, are communal or commensal, both among themselves and with animals, to a remarkable degree; for their common strife against the hard physical environment has forced them into cooperation for mutual support. The tufts or clusters in which the vegetation is arranged express the solidarity of life in the province; commonly each cluster is a vital colony, made up of plants of various genera and orders, and forming a home for animal life also of different genera and orders; and, although measurably inimical, these various organisms are so far interdependent that none could survive without the cooperation of the others.[1]

In Seriland proper, as in other parts of the Sonoran province, a prevailing tree is the mesquite (*Prosopis juliflora*); on the alluvial fan of Rio Sonora it grows in remarkable luxuriance, forming (with a few other trees) a practically continuous forest 20 to 40 feet in height, the gnarled trunks sometimes reaching a diameter of 2 or 3 feet; over the Rio Bacuache fan and much of the remaining plain surface it forms the dominant tree in the scattered vital colonies; and here and there it pushes well into the canyon gorges. The roots of the mesquite are of great length, and are said to penetrate to water-bearing strata at depths of 50 to 75 feet; its fruit consists of small hard beans embedded in slender woody pods. Associated with the mesquite in most stations are the still more scraggy and thorny cat-claw (*Acacia greggii*) and ironwood (*Olneya tesota*), both also yielding woody beans in limited quantity. Similarly associated, especially in the drier tracts, and characteristically abundant over the plains portions of Isla Tiburon, are the paloverdes (*Parkinsonia torreyana*, etc), forming scraggy, wide-branching, green-bark trees 5 to 15 feet high, and commonly 3 to 10 inches in diameter of trunk. Over the mountain sides, especially of Sierra Seri and Sierra Kunkaak, grow sparsely the only straight-trunk trees of the region, rooted in the rocks to the average number of a few score to the square

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[1] The vital characteristics of the region have been described in some detail in The Beginning of Agriculture, American Anthropologist, vol. VIII, 1895, pp. 350-376; The Beginning of Zoiculture, American Anthropologist, vol. X, 1897, pp. 213-230; and Expedition to Seriland, Science, vol. III, 1896, pp. 482-488.

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137 mile; this is the paloblanco (*Acacia willardiana*). Associated with it along rocky barrancas of permanent water supply is a fig tree (*Ficus palmeri*), which has a habit of springing from the walls and crests of cliffs, and sending white-bark roots down the cliff-faces to the water 50 or 100 feet below, and which yields a small, insipid, and woody fruit. Interspersed among the larger trees, and spreading over the intervening spaces, particularly in the drier and more saline spots, grow a number of thorny shrubs, much alike in external appearance and habit, though representing half a dozen distinct genera (*Cassia*, *Microrhamnus*, *Celtis*, *Krameria*, *Acacia*, *Randia*, *Stegnospherma*, *Frankenia*, etc), while considerable tracts are sparsely occupied by straggling tufts of the Sonoran

FIG. 4.—Beyond Encinas desert—the saguesa.

greasewood, or creosote bush (*Larrea tridentata*), whose minute but bright green leafage relieves that prevailing gray of the landscape in which the lighter greens of the paloverde and cactus stems are lost.

Intermingling with the woody trees and shrubs in most stations, and replacing them in some, are the conspicuous and characteristic cacti in a score of forms. East of Desierto Encinas, and sometimes west of it, these are dominated by the saguaro (*Cereus giganteus*), though throughout most of Seriland the related saguesa (*Cereus pringlei?*) prevails. The saguaro is a fluted and thorn-decked column, 1 foot to 3 feet in diameter and 10 to 60 feet in height, sometimes branching into a candelabrum, while the still more monstrous saguesa (figure 4) usually consists of from three to ten such columns springing from a

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

137 single root; both are masses of watery pulp, revived and renewed during each humid season, and both flower in a crown of fragrant and brilliant blossoms at or near the top of column or branch, and fruit in fig-like tunas (or prickly pears) during late summer or early autumn. Ordinarily the saguesa, like the saguaro, is sparsely distributed; but there is an immense tract between Desierto Encinas and the eastern base of Sierra Seri in which it forms a literal forest, the giant trunks close-set as those of trees in normal woodlands. Hardly less imposing than the giant cactus is the wide-branching species known as pitahaya (*Cereus thurberi?*), in which the trunks may be ten to fifty in number, each 4 to 8 inches in diameter and 5 to 40 feet in height; and equally conspicuous, especially in eastern Seriland, is the cina (*Cereus schotti*), which is of corresponding size, and differs chiefly in the simpler fluting of the thorn-protected columns. Both the pitahaya and the cina flower and fruit like the saguaro, the tunas yielded by the former being especially esteemed by Mexicans as well as Indians. Another important cactus is the visnaga (*Echinocactus wislizeni lecontei*), which rises in a single trunk much like the saguaro, save that it is commonly but 3 to 6 feet in height and is protected by a more effective armature of straight and curved thorns; it yields a pleasantly acid, pulpy fruit, which may be extracted from its thorny setting with some difficulty; but its chief value lies in the purity and potability of the water with which the pulpy trunk is stored. The visnaga is widely distributed throughout the Sonoran province and beyond, and extends into eastern Seriland; it is rare west of Desierto Encinas and is practically absent from Isla Tiburon, where it may easily have been exterminated by the improvident Seri during the centuries of their occupancy. Most abundant of all the cacti, and less conspicuous only by reason of comparatively small size, is the cholla (an arborescent *Opuntia*); on many of the sheetflood-carved plains it forms extensive thickets 5 to 8 feet high, the main trunks being 2 to 6 inches in diameter, while dozens or hundreds of gaunt and thorn-covered branches extend 3 to 8 feet in all directions; and it occurs here and there throughout the district from the depths of the valleys and the coast well up to the rocky slope of the sierras. It yields quantities of fruit, somewhat like tunas, but more woody and insipid; this fruit is seldom if ever used for human food, but is freely consumed by herbivores. Much less abundant than the cholla is the nopal, or prickly pear; and there are various other opuntias, often too slender to stand alone and intertwined with stiffer shrubs which lend them support, and many of these yield small berry like tunas. Another characteristic cactus, widespread as the cholla and abundant in nearly all parts of Seriland save on the rocky slopes, is the okatilla (*Fouquiera splendens*). It consists of half a dozen to a score of slender, woody, and thorn-set branches radiating from a common root, usually at angles of 30° to 45° from the vertical, and ordinarily reaching heights of 10 to 20 feet.

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The pulp masses of the larger cacti, especially the saguaro, saguesa, pitahaya, and cina, are supported by woody skeletons in the form of vertical ribs coincident with the external flutings; within a few years after the death and decay of these desert monsters the skeletons weather out, and the vertical ribs form light and strong and approximately straight bars or shafts, valuable for many industrial purposes; while the slender arms of okatilla are equally valuable, in the fresh condition after removal of the spiny armament, and in the weathered state without special preparation.

On many of the higher plain-slopes, especially in eastern Seriland, there are pulpy stemmed shrubs and bushes, sometimes reaching the dignity of trees, which present the normal aspect of exogenous perennials during life, but which are so spongy throughout as to shrink into shreds of bark-like debris shortly after death. These are the torotes of the Sonoran province—common torote (*Jatropha cardiophylla*), torote amarillo (*Jatropha spathulata*), torote blanco (*Bursera microphylla*), torote prieto (*Bursera laxiflora*), torotito (*Jatropha cuneacens*?), etc. These plants grow in the scattered and scraggy tufts characteristic of arid districts (a typical torote tuft appears in left foreground of figure 4); they are protected from evaporation by the usual glazed epidermis, and maintained by the water absorbed during the humid seasons; but they are thornless and are protected from animal enemies by pungent odors, and at least in some cases by toxic juices. Like various plants of the province they are measurably communal—indeed, the torotito appears to be dependent on union with an insect for reproduction, like certain yuccas, and like the cina and (in some degree at least) the saguaro and other cacti.

Along the lower reaches of Rio Bacuache, and in some of the deeper gorges of Sierra Seri and Sierra Kunkaak, grow a few veritable trees of moderately straight trunk and grain and solid wood, such as the guaiacan (*Guaiacum coulteri*) and sanjuanito (*Jacquinia pungens*); both of these fruit, the former in a wahoo like berry of medicinal properties, and the latter in a nut, edible when not quite ripe and forming a favorite rattle-bead when dry. On the flanks of such gorges the slender-branched barapricta (*Cæsalpinia gracilis*) grows up in the shelter of more vigorous shrubs, its branches yielding basketry material, while its fruit is a woody bean much like that of the cat-claw. In like stations there are occasional clumps of yerba mala or yerba de flecha (*Sebastiana bilocularis*), an exceptionally leafy bush growing in straight stems suitable for arrowshafts, and alleged to be poisonous from root to leaf—with inherent probability, since the plant is without the thorny armature normal to the desert. Along the sand-washes, especially about their lower extremities wet only in floods, springs a subannual plant (*Hymenoclea monogyra*) which shrinks to stunted tussocks after a year or more of drought, but flourishes in close set fens after floods; though of acrid flavor and sage-like odor, it is eaten by herbivores in

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137 time of need, and it yields abundant seeds, consumed by birds, small animals, and men. About all of the permanent waters not invaded by white men and the white man's stock there are brakes of cane or carrizal (*Phragmites communis* ?); the jointed stems are half an inch to an inch in thickness and 8 to 25 feet in height; the seeds are edible, while the stems form the material for balsas and afford shafts for arrows, harpoons, fire-sticks, etc., and the silica-coated joints may be used for incising tough tissues.

The coasts of Seriland, both insular and mainland, are skirted by zones of exceptionally luxuriant shrubbery, maintained chiefly by fog moisture. Along the mountainous parts of the coast the zone is narrow and indefinite, but on the plains portions it extends inland for several miles with gradually fading characters; this is especially true in the southern portion of Desierto Encinas, where the fog effects may be observed in the vegetation 12 or 15 miles from the coast. Most of the fog fed species are identical with those of the interior, though the shrubs are more luxuriant and are otherwise distinctive in habit. On the Tiburon side of gale-swept El Infiernillo, and to some extent along other parts of the coast, some of these shrubs (notably *Maytenus phyllanthroides*) grow in dense hedge-like or mat-like masses, often yards in extent and permanently modeled by the wind in graceful dune-like shapes. Somewhat farther inland the flatter coastwise zones of Tiburon are rather thickly studded with shrubby clumps from 6 inches to 2 feet high, made up of *Frankenia palmeri* with half a dozen minor communals; while still farther inland follows the prevailing Sonoran flora of mesquite, scrubby paloverde, and chaparral (*Celtis pallida*), etc, only a little more luxuriant than the normal.

Throughout Seriland proper, and especially in the interior valleys of Tiburon, grasses are more prevalent than in other portions of the Sonoran province, their abundance doubtless being due to the rarity of graminiverous animals during recent centuries.

FAUNA

136 Considered collectively, the fauna of the Sonoran province is measurably distinctive (though less so than the flora), especially in the habits of the organisms. The prevailing animals, like the plants of extraneous type, evidently represent genera and species developed under more humid conditions and adjusted to the arid province through a long-continued and severe process of adaptation; and no fundamentally distinct orders or types comparable with the cacti and torotes of the vegetal realm are known. The prime requisite of animal life in the province is ability to dispense with drinking, either habitually or for long intervals, and to maintain structure and function in the heated air despite the exceptionally small consumption of water; the second requisite is ability to cooperate in the marvelously complete solidarity of animal and vegetal life characteristic of subdesert regions. No

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systematic studies have been made of special structures in the animal bodies adapting them to retention of liquids, either by storage (as in the stomach of the camel) or by diminished evaporation, though the prevalence of practically nonperspiring mammals, scale-covered reptiles, and chitin-coated insects suggests the selection, if not the development, of the fitter genera and species for the peculiar environment. Much more conspicuous are the characters connected with cooperation in the ever severe but never eliminative strife for existence in the subdesert solidarity; the mammals are either exceptionally swift like the antelope, exceptionally strong like the local lion, exceptionally pugnacious and prolific like the peccary, or exceptionally capable of subsisting on waterless sierras like the bura and mountain goat; the reptiles are either exceptionally swift like the rainbow-hued lizards, exceptionally armed like the sluggish horned toads, exceptionally venomous like the rattlesnake, or exceptionally repulsive, if not poisonous, like the Gila monster; even the articulates avoid the mean, and are exceptionally swift, exceptionally protective in form and coloring, exceptionally venomous like the tarantula and scorpion and centipede, or exceptionally intelligent like the farmer ant and the tarantula-hawk; while there is apparently a considerable class of insects completely dependent on the cooperation of plants for the perpetuation of their kind, including the yucca moth and (undescribed) cactus beetle. Among plants the intense individuality (which is the obverse of the enforced solidarity) is expressed in thorns and heavily lacquered seeds and toxic principles; among animals it is expressed by chitinous armament, as well as by fleetness and fangs and deadly venom.

The larger land animals of Seriland proper are the mountain goat in the higher sierras, the bura (or mule-deer) and the white-tail deer on the mid-height plains and larger alluvial fans, with the antelope on the lower and drier expanses. Associated with these are the ubiquitous coyote, a puma, a jaguar of much local repute which roams the higher rocky sites, and a peccary ranging from the coast over the alluvial fans and mid-height plains of the mainland (though it is apparently absent from Tiburon). Of the smaller mammals the hare (or jack-rabbit) and rabbit are most conspicuous, while a long-tail nocturnal squirrel abounds, its burrows and tunnels penetrating the plains of finer debris so abundantly as to render these plains, especially on Tiburon, impassable for horses and nearly so for men. The California quail and the small Sonoran dove are fairly common; a moderate number of small birds haunt the more humid belts, and there is a due proportion of Mexican eagles and hawks of two or three forms, with still more numerous vultures. Ants abound, dominating the insect life, while wasps and spiders, with various flies and midges, gather about the vital colonies of the drier plains and swarm in the moister belts. Horned toads and various lizards—bright-colored and swift, or earth-tinted and sluggish—are fairly abundant, while black-tail rattlesnakes

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haunt the more luxuriant vegetation of fog zones, permanent waters and ciénegas. On the whole, the land fauna of Seriland is much like that of the province in general, though the various forms of life are less abundant than the average, since all (except the abounding squirrel) are sought for food by the omnivorous Seri; and the distribution, even when relatively abundant, is woefully sparse, as befits the scant and scattered vegetal foundation for the animal life.

Strongly contrasted with the meagerness of the land fauna is the redundant aquatic fauna of that portion of the gulf washing the shores of Seriland. Tiburon island is named from the sharks, said by some explorers to have been seen by thousands along its coasts; these voracious feeders find ample food in literal shoals and swarms of smaller fishes; a not inconsiderable number of whales have survived the early fisheries (one, estimated at 80 feet in length, was stranded in Rada Ballena about 1887); while schools of porpoises play about Boca Infierno and elsewhere, making easy prey of slower swimmers caught in the tide-rips and gale-swept breakers. Proportionately abundant and varied is the crustacean life; littoral mollusks cling to the ledges exposed along all the rocky coast stretches, and the entire beach from Punta Antigualla to Punta Ygnacio is banded by a practically continuous bank of wave-cast molluscan shells, the shell-drift being often yards in width and many inches in depth. Common crabs abound in many of the coves, and a large lobster-like crab frequently comes up from deeper bights and bottoms; oysters attach themselves to rocks and to the roots of shrubby trees skirting protected bays like Rada Ballena, while clams are numerous in all broad mud-flats, such as those of Laguna la Cruz; and the pearl oyster was fished for centuries toward Punta Tepopa, until the ferocity of the Seri put an end to the industry. Especially abundant and large are the green turtles on which the Seri chiefly subsist, leaving the shells scattered along the shore and about rancherías in hundreds; while two land tortoises (*Gopherus agassizii* and *Cinosternum sonoranse*) range about the margins of the lagoons, and one of these is alleged to enter the water freely.

The abundance of water-fowl is commensurate with that of the submarine life. The pelican leads the avifauna in prominence if not in actual numbers, breeding on Isla Tasnne (Pelican island), and periodically patrolling the whole of Bahía Kunkaak and El Infiernillo in lines and platoons of military regularity; gulls are always in sight, and the cormorant is common; while different ducks haunt several of the islets, and the shores are promenaded by curlews, snipes, and other waders. There is a corresponding wealth of plankton, which at low spring tide with offshore gale covers acres of shallow littoral with squirming or inert but always slimy life, the substratum for that of higher order; and jellyfish and echinoids are cast up by nearly every wave, while at night the surf rolls up the smooth strands in shimmering lines of phosphorescent light. On the whole, the aquatic life teems in tropic luxuriance

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and more than ordinary littoral variety; for the waters of the gulf are warmed by radiation and conduction from its sun-parched basin, while the concentrated tides distribute and stimulate the species and keep the vital streams astir.

Local Features

Considered as a tribal habitat, Seriland comprises four subdivisions of measurably distinct character, viz, (1) the broad desert bounding the territory on the east; (2) the mountainous zone of Sierra Seri; (3) Tiburon island and the neighboring islets; and (4) the navigable straits and bays contiguous to island and mainland.

1. So far as its marginal portions are concerned, Desierto Encinas is a typical valley of the Sonoran province, sparsely dotted with vital colonies of the prevailing type and variegated by the exceptionally luxuriant mesquite forests of the Bacuache and Sonora fans; but the interior of the valley is rendered distinct by the fact that it lies near, if not below, the level of the sea.[1] The central feature is Playa Noriega—a film of brackish water for a few days after each considerable semiannual freshet, a sheet of saline mud for a few weeks later, and for the greater part of the year a salt-crusted sheet 20 square miles in area, level as a floor and unimpressionable as a brick pavement. The playa is rimmed by dunes 10 to 40 feet in height, and about these and along the arroyos which occasionally break into it there is some aggregation of salt-enduring shrubs, evidently sustained in part by the semiannual freshet with its meager vapors and fogs. Outside this rim the surface is exceptionally broken; low dunes and irregularly wandering banks of soft and dust fine sand are interspersed with meandering salt flats much like the central playa, ranging from a few feet in width and a few yards in length up to mappable dimensions, as in the lesser playa lying east of the great one; and many of the dust-banks are honeycombed with squirrel burrows. This annulus of broken surface is narrow on the west, soon passing into okatilla scrub and then

[1] The expedition of 1895, during which Seriland was surveyed, was not provided with apparatus for accurate vertical measurement, and hence altitudes were only approximately determined. The determinations by Mr Johnson, who executed the topographic surveys, indicated that even the lowest part of the valley is somewhat above sea level; but other facts indicate that it actually lies below the level of the waters of the gulf, and forms a miniature homologue of Colorado desert (in south ern California): in the first place the central playa, which is undoubtedly flooded occasionally if not semiannually, does not embouch into, and has no channels extending toward, the sea; in the second place it is highly saline; again, the alluvial fans of Rio Bacuache and (especially) of Rio Sonora are so placed as to intercept and dam the trough occupied by Laguna la Cruz in its southern portion and Playa Noriega in its northern portion; concordantly, the detail configuration of the coast indicates marine transgression, apparently due to secular subsidence of the land—though the abundant marine shells of recent species toward the valley bottom attest recent displacement of the sea. On the whole, the facts seem to indicate that, during recent geologic times, the lower portion of this valley was a shallow gulf extending northward (and probably also southward) from the eastern limit of Bahia Kino; that the importation and deposition of sediment, chiefly by Rio Sonora, outran the secular subsidence of the land so far as to displace the water of the gulf in its central portion and to separate the northern arm from the sea; and that the waters of this northern arm were subsequently evaporated, disappearing finally in the central playa in which local inflow and evaporation are balanced by the usual mechanism of interior basins.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

into the saguesa forests of the eastern base of Sierra Seri; on the east it is miles in breadth, passing gradually into the normal Sonoran plain; on the south it widens still farther, stretching all the way to Arenales de Gil and Pozo Escalante, and merging into the playa-like mud-flats bordering Laguna la Cruz, into which the gulf waters are sometimes forced by southwesterly gales at high spring tides. Throughout this portion of the desert, marine shells are scattered over the playa-like flats or lodged in the adjacent banks, sometimes in great beds; the vegetation is scantier than usual and largely of salt-loving habit; the mud-flats are usually coated with saline and alkaline crusts, while the dunes are soft and fluffy, and expand into broad belts perforated with the tunnels of the surprisingly abundant rodents. Across this plain of bitter sand-dust lie the two hard land routes to Seriland—the supposed Escalante route of 1700, down the fan of Rio Bacuache and thence by Barranca Salina; and the Encinas route, down the northern border of the Rio Sonora fan and thence by Pozo Escalante to the shores of Bahia Kino.[1]

Desierto Encinas is an impossible human habitat in any proper sense; it is merely a broad and hardly passable boundary between habitats. The hardy stock of the frontier ranchos, pasturing partly on the thorny fruit of the cholla, push far out on the plains, and are sometimes watered for short periods, under strong guards of heavily armed vaqueros, at Barranca Salina; yet the greater part of the expanse is trodden only by the Seri. Two or three ruined frames of Seri jacales and a few graves crown the low knoll near Pozo Escalante, and there are one or two house remnants near Barranca Salina; these are notable not only as the easternmost remaining outposts of Seri occupancy, but because they represent the only known instances in all Seriland of the erection of even temporary houses adjacent to water. Distinct paths, trodden deep by bare Seri feet, radiate from both waters toward the Seriland interior, but no traceable trails extend eastward.

The southern limit of Desierto Encinas is marked either by the broad mud-flats opening into Laguna la Cruz or by the coast of the gulf, the coast cutting the lower portions of the plain being accentuated by a sand-bank 30 or 40 feet high, against which the surf thunders in nearly continuous roar, audible halfway or all the way to Pozo Escalante. A Seri trail skirts the crest of this bank, sending occasional branches into

[1] Both the routes were traversed by the expedition of 1895, the former from the headwaters of Rio Bacuache to the upper portion of its alluvial fan, and thence from the abandoned Rancho Libertad on the lower portion of the fan across Desierto Encinas by way of Barranca Salina. In the northern crossing a light vehicle (the first to traverse this portion of the desert), drawn by four horses and aided by several horsemen, was taken from Rancho Libertad across the northern portion of Playa Noriega and thence up Arroyo Mitchell to a point midway between Barranca Salina and Johnson peak, and was brought back over the same route. The Encinas trail from Rancho San Francisco de Costa Rica was traversed four times each way by the same outfit, and once each way by the running gear of a heavy wagon carrying the rude craft (about 1,000 pounds in weight) in which the Seri waters were navigated, this vehicle being drawn by 8 to 12 horses, frequently changed. Typical aspects of both routes are shown in plate III, the upper figure representing the Encinas trail and the lower a distant view of Sierra Seri, taken from Playa Noriega, in the depths of Desierto Encinas.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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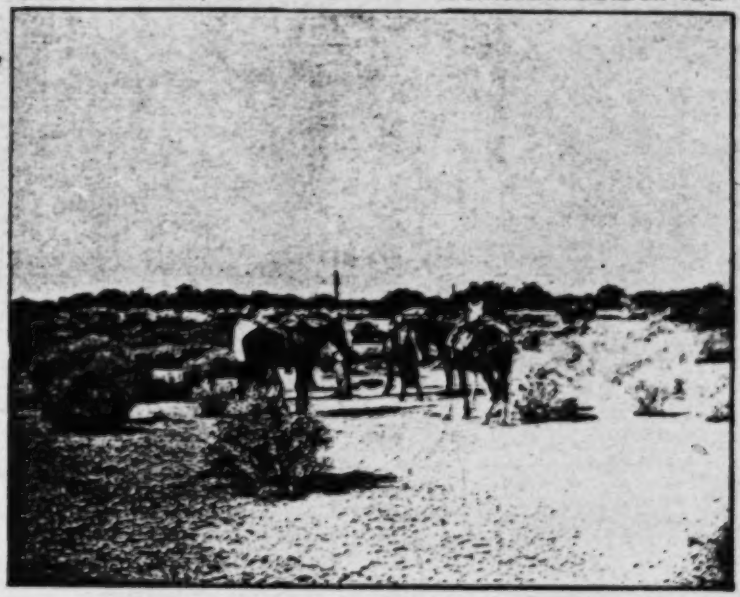
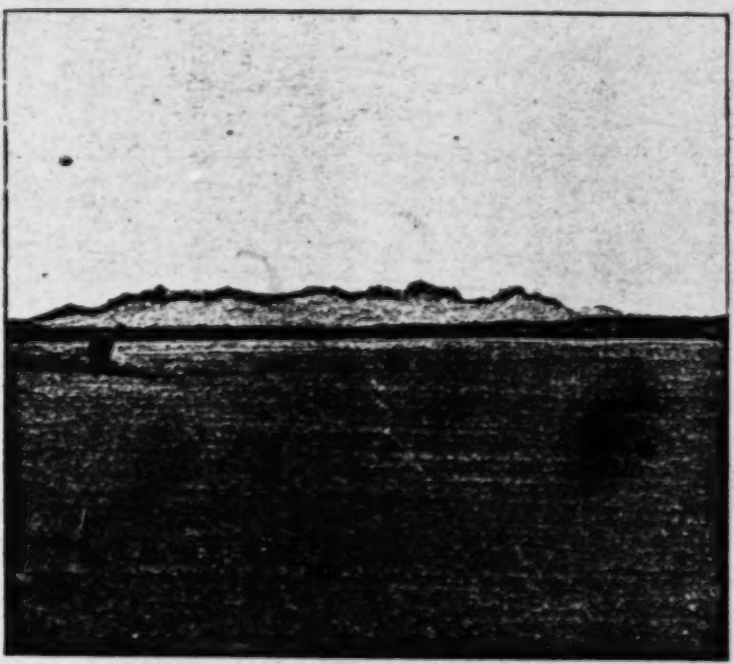


SERI FRONTIER



SIERRA SERI FROM ENCINAS DESERT

40 a

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

the interior. At Punta Antigualla the bank expands and rises into a great mammillated shell-mound nearly 100 feet high, with several of the cusps occupied by more or less ruined jacales; and occasionally occupied houses occur midway thence to the southernmost point of Sierra Seri, and again at the base of the first spur east of Punta Ygnacio. Beyond Punta Antigualla the sweep of the waves is stronger than in Bahia Kino, and the coastal sand-bank is generally higher. Between the rocky buttresses of Punta Ygnacio and the next spur eastward the sand-ridge rises fully 50 feet above mean low tide, and here, as elsewhere, its verge is protected by a fog-fed chaparral thicket with occasional clumps of okatilla and other cacti. Behind the coast barrier lie lagoon-like basins, generally dry and floored with saline silt-beds, though sometimes occupied by briny pools formed through seepage during southwesterly gales; and there are physiographic indications that the northwestward extension of Laguna la Cruz formerly stretched some miles farther than now and lay in the rear of Punta Antigualla in such wise as to form a source of supply of the clam-shells of which the eminence is built.

2. Sierra Seri is a double range, divided mid-length by a broad saddle barely 2,000 feet in height.[1] Like other Sonoran ranges, the nucleal portions are exceedingly rugged and precipitous—at least two of its picachos shoot so boldly that they commonly seem to overhang, and have been called leaning peaks. In large part the precipices rise abruptly from a symmetrical dome molded by sheetflooding, much as the insulated buttes rise from the Bacuache fan in northeastern Seriland; so that the tract lying between Desierto Encinas and El Infiernillo is a composite of exceptionally precipitous and exceptionally smooth mountain slopes. One of the Seri trails radiating from Barranca Salina lies across the mid-sierra saddle; others push into several mountain valleys, and the largest leads to Tinaja Trinchera, at the base of Johnson peak, where there are a few low walls of loose-laid rubble, somewhat like those of the trincheras (entrenched mountains) farther eastward—the only structures of the sort seen in Seriland. Toward the southern end of the range lie various trails, the most conspicuous paralleling the coast, either near the shore or over the steep salients, according to the configuration; while here and there ruinous jacales a few yards from the coast attest sporadic habitation. The eastern shore of Bahia Kunkaak from Punta Ygnacio northward reveals a typical geologic section of the Sonoran province: the transgressing waves have carved in the granitic subterrane a broad shelf lying just below mean low tide and usually stretching several furlongs offshore; this shelf is relieved here and there by remnantal crags of obdurate rocks, cumbered by bowlders and locally sheeted with sand and arkose derived from mechanically disintegrated granite; while the

[1] The northern portion, as seen from the east, is shown in plate III; the southern portion, as seen from the west, appears in the upper part of plate IV, while the southwesternmost point is shown in the lower part of the same plate.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

133 inner margin of the shelf is a sea-cliff, usually 30 to 50 feet high, of which the lower half is commonly granite and the upper half unconsolidated and recent-looking mechanical debris collected by sheetflood erosion. Sometimes the granite of the subterrane is replaced by volcanics; sometimes ancient and firmly cemented talus deposits separate the superficial mantle from the subterrane, as shown in the lower part of plate V; sometimes the line of sheetflood planation passes below tide-level, when the waves beat against the unconsolidated deposits in a deep embayment; sometimes the sharply defined planation surface ends abruptly at the sides of subranges or buttes shooting upward in the abrupt slopes characteristic of the sierra proper; yet this 10-mile stretch of coast is a nearly continuous revelation of the structure of sheetflood-carved plains and of modern marine transgression. The debris of the combined processes forms an abundant and varied assortment of bowlders, cobbles, and pebbles, whence the inhabitants readily derive their simple implements without need for studied forethought or manual cunning.

The long sand-spit terminating in Punta Miguel and the shorter one terminating in Punta Arena are the product of geologically recent wave building, and consist of irregular series of V-bars, backed by lagoon-like basins and enclosing considerable bodies of brine in the central portions; and the bars and basins become successively higher outward, in such wise as to attest the secular subsidence of this coast.

[361] [487] Several jacales are located on the higher portion of the southern sand-spit, midway between Punta Granita and Punta Miguel, while foot-paths traverse the flat and skirt the coast. Toward the terminal portion of the spit the sand is blown into hummocks, held by clumps of salt-enduring and sand-proof shrubbery; but there are no rancherias here, despite the fact that it is a natural point of embarkation—doubtless because no Seri structure could withstand the sand-drifting gales and storm inundations of this exposed spot. The more protected

[136] lagoons behind the outer bars harbor abundant waterfowl, within bowshot of shrub-clumps and dunes well adapted to the concealment of hunters, while the mud-flats open to the tide abound in clams and other edible things. The features of the Punta Miguel sand-spit are repeated with variations along the eastern shore of El Infiernillo; and

[361] Seri jacales, evidently designed for temporary occupancy, occur here and there, usually on higher banks above reach of the severer storms.

[131] 3. Tiburon island itself is apparently the chosen home of the Seri—a habitat to which the mainland tract is at once a dependency, an alternative refuge, and a circumvallation. Its dominant range, Sierra Kunkaak, mates Sierra Seri in its essential features, though the rocks are for the greater part ordinarily obdurate eruptives rather than exceptionally obdurate granites, as in the mainland sierra; accordingly the range is somewhat lower and broader, while the sheetflood sculpture, with its sharp transition into precipitous cliffs, is somewhat less trench-

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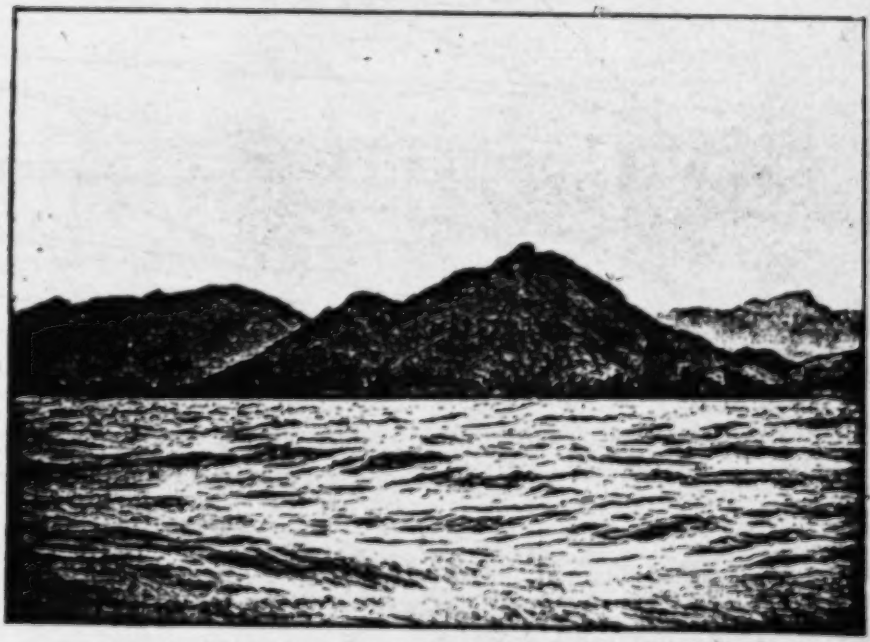
SIERRA SERI FROM TIBURON ISLAND



PUNTA YGNACIO, TIBURON BAY

42a

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

ant. Sierra Menor is a third term in the mountain series, in structure and geomorphy as in altitude; while the interior plain is a homologue of that portion of Desierto Encinas lying north of Playa Noriega—i. e., of its (potentially) free-drained portion. Almost the entire perimeter of Tiburon is suffering marine transgression, and is faced with seacliffs overlooking wave-carved shelves; and in both form and structure the greater part of the coast repeats, with minor variations, the features of the mainland coast from Punta Ygnacio northward. Partly because of the superior magnitude and height of its debris-yielding sierra, partly because of protection from the wave-beat of the open gulf, the eastern shore is skirted with a talus-shape slope, usually two to four miles wide; and while there are unmistakable evidences of sheetflood carving in the higher portions of this plane, the coastal cliff commonly reveals nothing but heterogeneous debris, sometimes rising thirty or forty feet above tide. Somewhat the greater part of the volume of this debris is fine—i. e., sand and silt and nondescript rock-matter; but there is always a considerable element of larger rock-fragments, which gather along the shore in a pavement of bowlders and cobbles (upper figure of plate v). These coarse materials—important factors in aboriginal industry—are harmoniously distributed: more conspicuously on the ground than on the map, the coast is set with salients (of which Punta Narragansett is a type), consisting merely of exceptional accumulations of debris from gorges in the sierra and from shallow arroyos, or pebble washes, traversing the coastwise plain. These salients owe their prominence partly to the relative coarseness, partly to the abundant supply, of fragmental material from the heights; and about their extremities the beach is paved with bowlders, which grade to cobbles or even to pebbles along the recentrant shores on either hand. This distribution of cobbles is one of the conditions governing the placement of Seri rancherias; and in many cases the jacales are located, either singly or in groups, where the coastal salients and recentrants meet, and where there is an abundant supply of cobbles of convenient size and wave-tested hardness.

The coastwise plain skirting eastern Tiburon has a few wave-built projections analogous to those east of El Infiernillo; the most conspicuous of these are Punta Tormenta, Punta Tortuga, and Punta Perla with its tide-swept extensions, Bajios de Ugarte. All of these are located primarily by sierra-fed arroyos, but all are greatly extended by wave-borne material laid down along lines determined by the prevailing currents of this best-protected portion of the coast. The long outer face of Punta Tormenta, shaped by the storms of Bahia Kunkaak, is strikingly regular and symmetric; its broad extremity and inner face are diversified by subordinate bars and lagoons, evidently tending to connect with the main coast toward Punta Tortuga, and thereby to transform the whole of Rada Ballena into a lagoon. Already the narrow embayment is so shallow that, although a com-

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

133 fortable haven at high tide, it is mostly mud-flat and sand-waste at extreme low tide—a condition which explains the stranding of an 80-foot whale in this treacherous harbor about 1887. The rada is between two and three miles in length. It abounds in marine life of 136 kinds preferring quieter waters: clams are plentiful in its mud-flats, a sponge lines portions of the bottom toward its inner extremity, oysters cluster numerously on bowlders and on the mangrove-like roots and trunks of a large shrub along the outer shore, and various fishes find refuge here from the fierce currents and the hungry sharks and porpoises of the open strait; these and other creatures form food for innumerable waders and other water-fowl that seek shelter in the quiet bay, which is still further protected by salt-enduring shrubbery on the bars of the point and by the shrubby thickets and wave-cast banks and wind-built dunes on the mainland side.

361 The combination of conditions renders this portion of the Tiburon coast the optimum habitat of the Seri Indians. There are, indeed, no houses or other traces of permanent habitation on Punta Tormenta itself, which is not only swept by gales but must sometimes be inundated by gale-driven waters at high spring tide; but at the inner end of the long sand-spit, and also on the mainland opposite the outer portion of Rada Ballena, there are extensive and well-kept rancherias, capacious enough to accommodate comfortably thirty or forty Seri families, i. e., 150 or 200 persons. Toward its landward end the sand-spit is built 311 largely of pebbles and cobbles, of which thousands of tons are adapted to industrial use; sea-food is practically unlimited and is readily taken; water-fowl literally crowd the protected rada within arrow-shot of natural cover; the outer slope of the bar is admirably suited for landing and embarking balsas in calm weather, while the bay is an ideal harbor for the portable craft, and the shrub-grown shores give unlimited opportunity for concealing them when not in use; the dunes and banks are high enough to protect the low jacales from storm-winds, while the abundant sponges and turtle-shells afford material for thatching and shingling the more exposed walls and roofs; and finally, [312] it is but a favorite distance (about 4 miles) to the permanent fresh water of Tinaja Anita. From this Seri metropolis well-trod trails 487 radiate toward all other parts of the island; the best beaten leads to the tinaja, sending branches into all the neighboring gorges, in which game is sometimes taken; next best-worn is the trail laid across Sierra Kunkaak to strike Arroyo Carrizal mid-length of its permanently wet portion; others pass northward to rancherias at different points on the coast, and still another skirts the coast southward by several smaller rancherias to the considerable jacal collection near Punta Narragansett—this, like other longshore routes, having alternative trails, the evanescent fair-weather one following the beach, while the permanent path threads the thorn-set thickets marking the crest of the sea-cliff or cuts across the longer salients. The Narragansett rancheria is

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WESTERN SHORE OF TIBURON BAY

EASTERN SHORE OF TIBURON BAY

[p. 44a]

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also a center for radiating trails, the best-beaten of these leading toward the fresh waters of Tinaja Anita and Arroyo Carrizal; and even the rancherías half-way thence to Punta Mashém send their most permanent paths over 15 miles of intervening ranges and spall-strewn valleys toward the same waters. According to Mashém's cautious statements, there is a minor Seri metropolis at the northwestern spur of Sierra Kunkaak, within reach of Pozo Hardy and Arroyo Agua Dulce, and two or three smaller rancherías along the western shore; but these were not reached by the 1895 expedition.

4. The seas washing Seriland are notably troubled by tides and winds. Gaping toward the Pacific, and narrowing and shoaling for the 800 miles of its length (measured from midway between Islas de Tres Marías and Cabo San Lucas), Gulf of California approaches Bay of Fundy, Bristol channel, and Broad sound as a tide accumulator; while the semidiurnal sweep of the waters in the upper half of the gulf is conditioned by the constriction of the basin to a fraction of its average cross-section at the narrows between Isla Tiburon and Punta San Francisquito. Toward the head of the gulf the ordinary spring tides range from 20 to 25 feet, and may be much increased by favoring winds; the debacles culminate there, but the currents culminate off Seriland in the great tide-gate half dammed by the islands of Tiburon, San Esteban, San Lorenzo, and Salsipuedes,[1] with their marine buttresses, and through the breaches of Pasaje Ulloa, Estrecho Alarcon, and Canal de Salsipuedes flow, four times daily, some two or three cubic miles of water in tremendous tidal floods, probably unsurpassed in vigor elsewhere on the globe. Naturally the islands and the adjacent coasts afford extraordinary examples of marine transgression; and while exceptional wave-work is a factor, the transgression is undoubtedly due mainly to the extraordinary tidal currents in this gateway of the gulf. The fierce currents and the frequent storms of the region condition local navigation, and have undoubtedly contributed to the development of the peculiarly light, strong, and serviceable water-craft of the aboriginal navigators among the islands.

El Infiernillo derives its distinctive characteristics largely from the local character of the tides. Bahia Kunkaak is a funnel-shaped embayment so placed as to catch half the volume of the incoming tide and to

[1] Originally the name Islas Sal-si-puedes (Get-out-if-canst) was applied to the various islands of this gateway of the gulf, including San Lorenzo, San Esteban, and San Agustin (now Tiburon), together with the smaller islets, as shown in the map of Padre Fernando Consag (in Noticia de la California y de su Conquista, etc., por el Padre Miguel Venegas, 1757, tomo iii, p. 194); and Padre Consag's account of the currents encountered in 1746 explains the designation: "The great sea which runs here even in fair weather would not allow us to stay, and it was with great difficulty we took in a little water. We now attempted to weather the Cape of San Gabriel de Sal-si-puedes, as greatly dreaded by seamen on account of those islands, several contiguous points of land and many ledges of sunken rocks extending a great way from the land. Here the sea is so agitated by the current that a gale or a calm makes but little difference" (English translation of Venegas' Noticia, titled A Natural and Civil History of California, 1759, vol. ii, pp. 312-313). Hittell speaks of "the group of islands known as Salsipuedes, the largest of which is now called Tiburon" (History of California, 1898, vol. i, p. 225). Dewey restricted the name to a single small island near the Baja California coast. Further references to the islands and their designations are noted postea, p. 66.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

133 concentrate the flow into a bore hurtling through Boca Infierno and thence throughout the shoaling strait with greatly accelerated velocity; meantime the body of the tidal stream is diverted around Tiburon, and then enfeebled in its northward flow by the expansion of the gulf above the Tiburon-San Francisquito gateway, so that the entire strait is flooded (to the limit fixed by the capacity of Boca Infierno) before the main tide flows into its head past Isla Patos and through Bahia Tepopa; and with this unobstructed inflow the strait is reflooded with a counterbore, whereby the waters are heaped and pounded into an unstable, swirling, churning mass.[1] The flooding is little less than catastrophic in magnitude and suddenness; indeed, the volume of water in the body of the strait between Punta Perla and Boca Infierno

[114]

[1] Unquestionably the clearest view of El Infiernillo ever enjoyed by Caucasian eyes was that of Messrs Johnson and Mitchell from the culminating point of Sierra Seri (Johnson peak), which they occupied for about twenty-three hours on December 7 and 8, 1895. Mr Johnson's notes on the appearance of the strait are as follows: "On the occasion of the ascent of Sierra Seri, which rises from the coast, shutting off the view of Isla Tiburon from the desert on the east, I received a striking impression of the elaborate and beautifully symmetrical plan of the long swirling currents of El Infiernillo. The climb had been made from the east direct to the summit peak, so that the first sight of both island and gulf was not only from close at hand, but from an elevation of about a mile. The crest of the ridge was reached at the instant of sunset, and the spectacle of the innumerable current-markings was brief. Our position was nearly opposite the northern end of the strait; and its elevation was so great that the opposite mainland and island shorelines were seen in map effect rather than in perspective. The entire strait, to its northern end at Punta Perla, was in the shadow of the island; and the current design was revealed only in the shadow. At the shadow-margin extending from the northern tip of the island the lines were sharply cut off; and beyond, along the westward bend of waters forming Bahia Tepopa and opening into the gulf in full sunlight, there was no suggestion of them. Within the shadow the effect was that of a film of oil on a water-surface which had been stirred and allowed to come to rest—though the regularity of the lines was as though the stirring had been orderly. Not the slightest motion was perceptible from the peak during the minute or two that the spectacle lasted before the sun disappeared and twilight fell, though the suggestion from configuration alone was that of violent swirling. The general movement was evidently southward toward Boca Infierno, and the swirls were apparently the result of frictional resistance along both shores; the system of curving lines as a whole was very much that which would be presented by a broad feather thrust into a bottle. There were central lines in great number, somewhat sinuous though never crossing, diverging one by one toward the shores on either hand, where they curved backward with complex interference in large reversing eyes and many minute circlings. The straightening out of the curves in perspective was quite perceptible toward Boca Infierno, and beyond it was pronounced. The air appeared to be still, so that the current pattern was not at all obscured by waves; and the spectacle of the broad strait, appearing almost beneath me, inclined with a crowded design of sweeping fine lines, the delicate elearness of which recalled a steel engraving, was peculiarly impressive. That we had been fortunate in the moment of reaching the summit was apparent next day. The spectacle was, indeed, repeated at sunrise and for a short period thereafter, though the general design was markedly different, and less intricacy of pattern was discernible, while the general effect was comparatively vague; perhaps the shadow of Sierra Seri was too heavy, or, more probably (as was my impression at the time), our position was not favorable for that direction of illumination. In full light during the day up to the hour of our departure in late afternoon, no hint or vestige of the current design remained. It was evident that the lines were brought out with especial clearness by the favorable illumination and comparative stillness of air; and it was particularly evident that the lines marked movements in the water, even if there were corresponding air currents, since they harmonized perfectly with the configuration of the shores and with the trend of spits and bars and offshore markings seen through the shallow waters, especially toward the northern end of the strait. The accord between shore current and the current lines seen in the evening indicated a southward motion much more vigorous than the reverse movement witnessed next morning; for the marked variation in the design noted in the morning was of a character strongly suggesting a reversed movement of the water, while the faintness of the markings then may perhaps have been due to comparative feebleness of current rather than to unfavorable lighting. Certainly the close agreement between the elaborate system of markings, so clearly revealed in the evening, and the prevailing curves of the shores would seem to indicate unmistakably that, whatever the direction and strength of flow, the markings were a product of current motion."

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is approximately doubled at neap tide and tripled at spring tide twice in each twenty-four hours. Then, as the crest of the main debacle advances into the upper gulf beyond Punta Tepopa, the trough of the ebb is already approaching the Tiburon-San Francisquito constriction; and even before the final flooding of El Infiernillo from the north is completed, the waters of Bahia Kunkaak are receding and a tiderip is roaring through Boca Infierno at a rate sufficient to half empty the reservoir of its accumulated volume before the ebb trough has rounded the island to the head of the strait. Thus the effect of the exceptional tides of the gulf and the peculiar configuration of Seriland is to concentrate and accentuate tidal currents in El Infiernillo, and to convert the channel into a raceway for nearly continuous tide rips. According to Dewey, the spring tides are 10 feet and the neaps 7 feet about the northern end of the strait;[1] in December, 1895, the tides about Punta Blanca and Punta Granita were roughly determined as 13 or 14 feet at spring and 7 or 8 at neap, the range varying considerably with the direction and force of the wind; and the consequent current through Boca Infierno was estimated at 4 to 8 miles per hour, the higher velocity of course coinciding with the spring tide. The change in direction of the current is almost instantaneous—indeed, the run is in opposite directions on opposite sides of the narrow strait when the wind sets obliquely—so that the tidal flow is practically continuous. The currents are of course slacker in the body of the strait, but even here suffice to transport coarse sediments; and it is to this agency that the "shoals and sand spits" noted by Dewey[2] and the maintenance of a deep channel through Boca Infierno are chiefly to be ascribed. The materials of Punta Tormenta and Punta Tortuga attest the transportation of pebbles up to 3 or 4 inches in diameter by the combined work of waves and tidal currents. 133

Like other mountain bound water bodies, the portion of the gulf washing Seriland is exceptionally disturbed by winds of given velocity by reason of the high angle of incidence; and moreover the exceptionally prominent local configuration disturbs the atmospheric currents in a manner somewhat analogous to that in which the tidal currents are disturbed; so that the winds are highly variable but generally strong. Under the combined action of tide and wind the waters are normally ruffled; choppy seas freely flecked with whitecaps are rather the rule than the exception,[3] and are replaced less frequently by calms than by steadier billows breaking in continuous surf on sand-beaches (figure 5) and dashing into foam-flecked and rainbow-tinted spray-jets, bathing the rocky cliffs for 50 feet above their bases. Sometimes the wind stills suddenly, when the sea sinks to rythmic swells, soon extinguished by reaction from the irregular shores and by the interference of tide-currents; but the swell seldom dies away before the gale springs again. 132 133

[1] Publication No. 88, U. S. Hydrographic Office, Bureau of Navigation, 1890, p. 142.
[2] Op. cit., p. 143.
[3] A stiller and navigable condition of the sea is shown in the view of Punta Ygnacio, plate IV.

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132 The broad valley between Sierras Seri and Kunkaak, bottomed by El Infiernillo, is especially beset by fierce and capricious gales; the general atmospheric drift is disturbed by the leading and lesser sierras, as well as by temperature convection from the gulf, and eddies are developed in such wise as to send air-currents directly or obliquely up or down the valley. These local or sublocal winds are characteristic. Judging from observations covering several weeks, the valley is wind-swept longitudinally for an average of eighteen or twenty hours daily, the winds ranging from strong breezes to gales so stiff as to load the air with sand ashore and spray asea; and even the calms may be broken

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FIG. 5.—Embarking on Bahia Kunkaak in la lancha *Anita*.

any minute by sudden gusts and williwaws, passing rapidly as they arrive. Not only waves but wind itself combines with tides to shape the [134] structural features of the valley; nowhere within it do flour-fine sands like those of Desierto Encinas occur, save as a hardly perceptible constituent of the dunes and banks of coarser sand—they have been blown into the sea or beyond the limits of the valley. Throughout the strait 132 so expressively named by its explorers, the capriciousness of the sea 133 culminates, despite the shoalness and the protection from easterly and westerly winds; the storm currents and tide-currents are half the time opposed, raising breakers even when the air is nearly still; eddies and whirls and cross-currents arise constantly, and even at the stillest

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hours tumultuous waves come and go sporadically, while about the mile-wide boca the choppy sea sometimes takes the form of spire-like jets, spurting 5 or 10 feet high and breaking into aigrettes of glittering spray in most unwaterlike and wholly indescribable fashion. Dewey described the strait as "unsafe for navigation by any except the smallest class of vessels"; it is safe, indeed, only for portable and indestructible craft like the Seri balsas, which may be put off or carried ashore at will by craftsmen willing to wait for wind and tide, and unpossessed of impediments of a sort to be injured by wetting. Of such an environment the balsa is a natural product.

The adjunct islets of Seriland are miniatures of Tiburon in all essential respects, save that they are without fresh water. The largest is San Esteban, a somewhat complex butte rising sharply from the waters in a nearly continuous sea-cliff recording vigorous work by storms and tides; it is occasionally visited by the Seri, chiefly in search of water-fowl and eggs. The most important of the series in Seri economy and mythology is Isla Tasane, off the mouth of Bahia Kino; it is a rugged butte some 600 feet high, rising in wave-cut cliffs on the sea side and pedimented by low spits and banks of sand toward the lea; the sand-banks are literally flocked with pelicans, while other fowl cover the flatter ledges and crowd the crannies of the pinnacle. Isla Turner is a somewhat smaller and still more rugged butte, bounded on both sides by precipitous cliffs, while Roca Foca is merely a great rock shelving upward from the storm-swept waters off the most exposed angle of Tiburon; in the crannies of the former birds nest abundantly, while the lower ledges of both are haunted by seals. Isla Patos, north of Tiburon, is a breeding-place for different water-fowl, and is especially noted as a refuge for ducks; it, too, is for the most part a rocky butte, with a sandy shelf at the eastern base. Beyond San Esteban lies the similar but smaller Isla San Lorenzo, while Isla Salsipuedes and a few other islets stretch thence northward half way to the southern point of Isla Angel de la Guarda, the second-largest island of the gulf. San Lorenzo and the smaller islets are occasionally visited by the Seri, partly for a mineral pigment used in face-painting, partly in quest of game; and they sometimes push on to the larger island to enjoy its fairly abundant game, including the easily taken iguana, amid the ruins of an ancient culture apparently akin to that of southern Mexico. Even the most frequented islets, Tasane and Patos, can be reached only by crossing miles of open sea; but in their way the Seri are as canny navigators as they are skilful boat-builders—it is their habit to hug the shore in threatening weather, to await wind and tide for hours or days together, to set out on distant journeys only when all conditions favor, and in emergency to seize inspiration from the storm like the vikings of old, and bend supernormal power to the control of their craft.

Summarily, the prevailing features of Seriland may be said to be

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13 characterized by extreme development or intensity, many of them being of such sort as to be adequately described only by the aid of strong comparatives or superlatives. Seriland is the most rugged portion of piedmont Sonora, and is bounded by its most forbidding desert; the territory is nearly if not quite the most arid and inhospitable of the Sonoran province; the diurnal and sporadic temperature ranges are apparently the widest, and the gales and other storms apparently the severest of the entire province; the flora is among the most meager and least fruitful, and the mountains are among the craggiest of the continent; the tides are among the strongest and the tidal currents among the swiftest of the world; and, as shown by the limited direct observations and by the extraordinary marine transgression, the waters are among the most turbulent known. At the same time, the waters washing Seriland are among the richest of America in sea-food, so that the habitat is one of the easiest known for a simple life depending directly on the product of the sea. It is but natural that these extreme factors of environment should be measurably reflected in pronounced characteristics on the part of the inhabitants.

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SUMMARY HISTORY

There is some doubt as to who was the first among the Caucasian explorers of the Western Hemisphere to set eyes on the Seri Indians. Nuño de Guzman, rival of Cortés and invader of Jalisco and Sinaloa, must have approached the southern boundary of Seri territory about 1530, though there is no record of contact with these tribesmen. Diego Hurtado de Mendoza, one of Cortés' captains, coasted along southern Sonora in 1532 to a point considerably beyond Rio Yaqui, where he was massacred on his return, and hence left no record of more northerly natives.[1] Both of these pioneers must accordingly be eliminated from the list of probable discoverers of the Seri.

In the course of their marvelous transcontinental journey, Alvar Nuñez Cabeza de Vaca and his companions also approached Seriland, and apparently skirted its borders shortly before meeting Captain Diego de Alcaraz, of Guzman's party; this was in April, 1536, according to Bandelier.[2] Vaca wrote: "On the coast is no maize: the inhabitants eat the powder of rush and of straw, and fish that is caught in the sea from rafts, not having canoes. With grass and straw the women cover their nudity. They are a timid and dejected people."[3] He added half a dozen ambiguous sentences, of which only a part, apparently, refer to the "timid and dejected people"; half of these describe a poison used by them "so deadly that if the leaves be bruised and steeped in some neighboring water, the deer and other animals drinking it soon burst". The people were identified as Seri (Ceris) by Buckingham Smith and General Stone,[4] and the identification may be considered as strongly probable, provided the Tepoka be classed with the Seri.

The next Caucasians to approach Seriland appear to have been the two Spanish monks, Fray Pedro Nadal and Fray Juan de la Asuncion, who, in 1538, sought to retrace Vaca's route, and traveled northward to a river somewhat doubtfully identified as the Gila;[5] but the meager accounts of this journey contain no clear reference to the Seri Indians.

On March 7-10, 1539, the Italian friar Marcos de Niza left San Miguel de Culiacan under instructions from the Viceroy, Don Antonio

[1] Theodore H. Hittell, History of California, 1885, vol. 1, pp. 43-44.

[2] Contributions to the History of the Southwestern Portion of the United States (Hemenway Southwestern Archaeological Expedition), Papers of the Archaeological Institute of America, American series, v, 1890, p. 44.

[3] Relation of Alvar Nuñez Cabeça de Vaca, translated from the Spanish by Buckingham Smith; New York, 1871, p. 172.

[4] Ibid, p. 174.

[5] Cf. Bandelier, Magazine of Western History, IV, 1886, p. 888.

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de Mendoza, to explore the territory traversed by Vaca, under the guidance of the negro Estevanico, the only one of Vaca's three companions remaining in Mexico; in good time he reached a point probably not far from the center of the present state of Sonora, whence messengers were sent coastward to return duly accompanied by certain "very poor" Indians wearing pearl-oyster (?) ornaments, who were reputed to inhabit a large island (almost certainly Tiburon) reached from the mainland by means of balsas. Bandelier identified these coastwise Indians with the Guaymas tribe, a supposed branch of the Seri;[1] but if the "large island" were Tiburon, it would seem more probable that the Indians belonged to the tribe now known as Seri, while both description and location suggest the Tepoka. This record is of questionable weight, partly by reason of the doubtful identification of the Indians, and partly because the friar's itinerary was found to be misleading by his immediate successors, because of the fact that portions of his narrative were based on hearsay; though it is just to note that Bandelier, after critical study, deemed the record about as trustworthy as others of the time, and to add that the disparagement of Niza's discoveries by his followers was in accord with the fashion of the day—indeed it was little more severe relatively than the criticism of the strikingly trustworthy Ulloa by his first follower, Alarcon.

On July 8–19, 1539, according to the collection of Ramusio, three vessels sent out by Cortés to discover unknown lands—"Of Which Fleete was Captaine the right worshipfull knight Francis de Ulloa borne in the Citie of Merida"—sailed from Acapulco.[2] Skirting the mainland northwestward, they explored Mar de Cortés, or Gulf of California; and on September 24 (as fixed by interpolation from Ulloa's excellent itinerary) they descried and described the features of the coast in such fashion as to locate their vessels (one was already lost) off the southern point of Tiburon, and in sight of the islands of San Esteban and San Lorenzo, as well as locally prominent points on the mainland of Lower California. Here they "discerned the countrey to be plaine, and certaine mountaines, and it seemed that a certaine gut of water like a brooke ran through the plaine" (p. 322). Judging from other geographic details, this "gut of water" was certainly the tide-torn gateway now named Boca Infierno; while the next day's sailing (it is noteworthy that this was "north" instead of northwestward as usual) carried them by "a circuit or bay of 6 leagues into the land with many coues or creeks", evidently Bahia Tepopa with the northern end of the turbulent strait El Infiernillo. The record shows clearly that Ulloa discovered Tiburon, but failed (quite naturally, in view of the route pursued and the peculiar configuration at both extremities of the strait) to perceive its insular character. No mention is made of inhabitants or habitations on this land-mass, though both are described on the

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[1] Ibid, pp. 861–863; Papers of the Archæological Institute of America, American series, v, p. 113.
[2] The Voyages of the English Nation to America, collected by Richard Hakluyt and edited by Edmund Goldsmid, 1889, vol. III, p. 317.

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neighboring island of Angel de la Guarda in terms that would be applicable to the Seri. 175

On Monday, February 23, 1540, according to Winship,[1] Captain-General Francisco Vazquez Coronado set out on his ambitious and memorable expedition to the Seven Cities of Cibola. His course lay from Compostela along the coast of Culiacan, and thence northward through what is now Sinaloa and Sonora. On May 9–20, 1540, Hernando de Alarcon set sail on the ancillary expedition by sea; he followed the coast from Acapulco to Colorado river, and although he undoubtedly saw and was the first to name Tiburon,[2] and claimed to have "discouered other very good haueus for the ships whereof Captaine Francis de Vllua was General, for the Marquesse de Valle neither sawe nor found them",[3] he made no specific record of any of the features of Seriland or of contact with the Seri Indians. Meantime Coronado's forces were divided, a considerable part of the army falling behind the leader; and some time during the early summer the belated army, under Don Tristan de Arellano, founded the town of San Hieronimo de los Corazones, which in the following year (1541) was transferred to a place in Señora (Sonora) not now identifiable. From Corazones Don Rodrigo Maldonado went down to the seacoast to seek the ships, and brought back with him "an Indian so large and tall that the best man in the army reached only to his chest", with reports of still taller Indians along the coast.[4] It is impossible to locate Maldonado's route with close accuracy, but in view of geographic and other conditions it is evident (as recently shown by Hodge[5]) that he must have descended Rio Sonora and approached or reached the coast over the broad delta-plain of that stream south of Sierra Seri, and thus within Seri territory. The reported gigantic stature practically identifies the Indians visited by him with the Seri, since no other gigantic tribes were consistently reported by explorers of western North America, and since the 6-foot Seri warriors, with their frequent Sauls of greater stature, are in fact gigantic in comparison with the average Spanish soldiery of earlier centuries. There are indications that the fame of these giants of the Southern sea spread to Europe and filtered slowly throughout the intellectual world, and that the fancy-clothed colossi grew with their travels, after the manner of their kind—indeed, there is no slender reason for opining that these half-mythical islanders were the real originals of Jonathan Swift's Brobdingnagians,[6] despite his location of their fabled land a

[1] The Coronado Expedition, 1540-1542, Fourteenth Annual Report of the Bureau of Ethnology, 1896, p. 337. 113

[2] As a harbor or anchorage marked "del Tiburon" on the map of "Domingo del Castillo, Piloto", drawn in 1541, and reproduced in Historia de Nueva-España, escrita por su esclarecido Conquistador Hernán Cortés, aumentada con otros documentos, y notas, por el Illustrissimo Señor Don Francisco Antonio Lorenzana, Arzobispo de Mexico; Mexico, 1770, p. 238.

[3] The Voyages of the English Nation to America, vol. IV, p. 9.

[4] Winship, op. cit., p. 424.

[5] Coronado's March to Quivira, in J. V. Brower, Harahey (Memoirs of Explorations in the Basin of the Mississippi, vol. VI, 1899, p. 56.

[6] Cf. The History of Oregon, California, and the other Territories on the Northwest Coast of North America, by Robert Greenhow, 1845, p. 97; History of California, by Theodore H. Hittell, 1898, vol. I, p. 149.

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[175] few degrees farther northward on the long-mysterious coast below the elusive "Straits of Anian".

About the middle of September, 1540, Captain Melchior Diaz, then in command at Corazones, selected 25 men from the force remaining at that point, and set out for the coast on what must have been one of the most remarkable, as it is one of the least-known, expeditions in the history of Spanish exploration; for he traversed either the streamless coast or the hardly more hospitable interior through one of the most utterly desert regions in North America, from the lower reaches of Rio Sonora to the mouth of the Colorado. The record of this journey is meager, ambiguous, and apparently inconsecutive; it indicates that he encountered the Indian giants seen by Maldonado, but confused them with the Indians of the Lower Colorado. On the return journey Diaz lost his life through an accident, and his party reached Corazones on January 18, 1541, after encountering hostility from Indians not far from that settlement. Word was sent to Coronado, then in winter quarters on the Rio Grande, who dispatched Don Pedro de Tovar to the settlement for the purpose of punishing the hostile natives; he, in turn, sent Diego de Alcaraz with a force to seize the "chiefs and lords of a village". This Alcaraz did, but soon liberated his prisoners for a petty exchange. "Finding themselves free, they renewed the war and attacked them, and as they were strong and had poison, they killed several Spaniards and wounded others so that they died on the way back. . . . They got back to the town, leaving 17 soldiers dead from the poison. They would die in agony from only a small wound, the bodies breaking out with an insupportable pestilential stink."[1]

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The Coronado expedition had still further experience with (evidently) the same Indians; for as the army approached Corazones on the return a soldier was wounded, and was successfully treated, according to the record, with the juice of the quince. "The poison, however, had left its mark upon him. The skin rotted and fell off until it left the bones and sinews bare, with a horrible smell. The wound was in the wrist, and the poison had reached as far as the shoulder when he was cured. The skin on all this fell off."[2]

There is some question as to the identity of the Indians met by Diaz's men, Alcaraz and his force, and the Coronado army near Corazones; but various indications point toward the Seri. In the first place, the several Indian settlements mentioned in the records define what must have been then, as it was two centuries later, the Seri frontier, beyond which lay the "despoblado" of Villa-Señor, i. e., the immense area hunted and harried by roving bands from Tiburon; so that the Seri must frequently have crossed the paths pursued by the Spanish pioneers. In the second place, the accounts themselves seem to be typical records of contact with Seri Indians, which might be repeated for each

[1] Winship, op. cit., p. 561. [2] Ibid., p. 532.

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subsequent episode in their history or century in time. The description of the effect of the poison is especially suggestive of the Seri; as pointed out on a later page, the Seri arrow-venom is magical in motive, but actually consists of decomposing and ptomaine-filled organic matter, so that it is sometimes septic in fact, while the arrow-poison of the neighboring Opata, Jova, and other Piman tribes was (so far as can be ascertained) vegetal; and these accounts seem to attest septic poisoning rather than the effects of any known vegetal toxic.[1]

Such (assuming the validity of the several identifications) are the earliest records concerning the truculent tribesmen and the desolate district known centuries later as the Seri and Seriland.

About 1545 began the Dark Ages in the history of northwestern Mexico; the excursion of Guzman, and the journeys of Cabeza de Vaca and Friar Marcos and of Coronado himself, died out of the memory of the solitary adventurers and scattering settlers who slowly infused Spanish culture and a strain of Caucasian blood into the Sonoran province; even the route taken by Coronado's imposing cavalcade was lost for centuries, to be retraced only during the present generation, largely through the determinations of Simpson, Bandelier, Winship, and Hodge.[2] It is true that Don Francisco de Ibarra penetrated the territory in 1563, and remained until rumors of gold in other districts drew him elsewhere; it is also true that Captain Diego Martinez de Hurdaide pushed into the province in 1584, and entered on a career of subjugation, waging persistent war with the Yaqui, which resulted in the acquisition of the territory of Sonora by treaty April 15, 1610;[3] yet few records of exploration or settlement were written before the advent of the Jesuit missionaries, toward the end of the seventeenth century.

Still more astounding was the eclipse of knowledge of the gulf. Despite Ulloa's survey of the entire coast, recorded in an itinerary so detailed that every day's sailing may readily be retraced, and despite Alarcon's repetition of the surveys and extension of the discoveries far up Rio Colorado (where his work was verified by that of Melchior Diaz), a mythic cartography arose to shadow knowledge and delude exploration for a century and a half; for "upon the authority of a Spanish chart, found accidently by the Dutch, and of the authenticity of which there never were, or indeed could be, any proofs obtained, an opinion prevailed that California was an island, and the contrary assertion was treated even by the ablest geographers as a vulgar error";[4] and a mythic strait formed by cartographic extension of the Gulf of California indefinitely northward haunted the maps of the seventeenth century. This error was adopted by various geographers, including Fredericus

[1] It should be noted that Mr. F. W. Hodge, whose large acquaintance with the Southwest and its literature gives his opinion great weight, is inclined to class the Indians in question as Opata.

[2] Op. cit., pp. 72-73.

[3] Sonora Histórica y Descriptiva, por F. T. Dávila, 1894, p. 8.

[4] A Natural and Civil History of California, translated from the original Spanish of Miguel Venegas, London, 1759, vol. i, preface.

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475 de Witt in 1662, Peter van der Aa in 1690, and even Herman Moll so late as 1708; but it was consistently rejected by Guillaume Delisle and other French geographers. The myth was finally punctured by Padre Kino in 1701; though even he and all his erudite co-evangels were apparently unaware that his observations only verified those of Ulloa, Alarcon, and Diaz.

475 During the stagnant sesquicentury 1545–1695 there was little record of the Seri Indians, though that little indicates recognition of their leading characteristics and their insular habitat. Writing especially of the Yaqui before 1645, Padre Andrés Perez de Ribas declared (freely translated):

> There is information of a great people of another nation called Heris; they are excessively savage, without towns, without houses, without fields. They have neither rivers nor streams, and drink from a few lagoonlets and waterholes. They subsist by the chase, but at harvest time they obtain corn by bartering salt extracted from the sea and deerskins with other nations. Those nearest to the sea also subsist on fish; and it is said that there is, in the same sea, an island on which others of the same nation live. Their language is exceedingly difficult.[1]

The same author mentions cannibalism among the aborigines of northwestern Mexico, saying:

> The vice of those called anthropophagi, who eat human flesh, introduced by the devil, enemy of the human genus, among nearly all these nations during their heathenism, is more or less common. In the Acaxee and mountains this inhuman vice is customary as eating of flesh obtained by the chase; it is of daily occurrence among them; just as they sally in chase of a deer, they go out over mountains and fields in search of enemies to cut in pieces and eat roasted or boiled.[2]

[114] There is nothing to indicate that the anthropophagy was confined to, or even extended to, the Seri—a fact of interest in connection with later opinion. Ribas' reference to an island inhabited by the Heris (Seri) indicates that the occupancy of Tiburon was fully recognized by the native tribes of the region.

Throughout the seventeenth century the western coast of Gulf of California, and in lesser degree the eastern coast also, became famous for pearl oysters, and expeditions were sent out and fisheries established at different times. The earliest of these expeditions was that of Captain Juan Iturbi in 1615; he sailed well up the gulf, reaching latitude 30° according to his reckoning (though the accounts imply between lines that he turned back at the Salsipuedes), collecting many pearls along the western coast "so large and clear that for one only he paid, as the King's fifth, 900 crowns";[3] and on his return he carried the fame of the Californian pearls to Ciudad Mexico, whence it resounded to Madrid and reverberated through all Europe. One of the more noteworthy

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[1] Historia de los Triumphos de Nuestra Santa Fee entre Gentes las mas Barbaras y Fieras del Nuevo Orbe; Madrid, 1645, p. 556. The "Heris" are identified as Seri by Bandelier (Final Report of Investigations among the Indians of the Southwestern United States, in Papers Arch. Inst. Am., American series, III, 1890, p. 74).

[2] Op. cit., p. 11.

[3] Venegas, op. cit., vol. I, p. 182.

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pearl-gathering expeditions was that of Admiral Pedro Portel de Casanate, which covered several years; he "took a very careful survey of the eastern coast of the gulf" in 1648, but was deterred from establishing a garrison by "the dryness and sterility of the country";[1] yet neither this voyage nor any of the others appears to have resulted in any considerable rectification of the maps, or in valuable records relating to the aboriginal inhabitants. Various records indicate, however, that both pearl fishers by sea and gold seekers by land must have met the warlike Seri—and sometimes survived to enrich the growing lore concerning the tribe, and to establish the existence of their island stronghold.

New light dawned on Sonoran history with the extension of evangelization by the Order of Jesuits into that territory under the pilotage of Padre Eusebio Francisco Kino (Kaino, Kuino, Kühn, Kühne, Quino, Chino, etc.), who sailed from Chacala, March 18, 1683,[2] for California, with the expedition of Admiral Isidro Otondo y Antillon. This expedition failing, the padre returned to the mainland in 1686, and during the same year obtained authority and means for establishing missions in Sonora, of which one was to be "founded among the Seris of the gulf coast".[3] Although the record of the padre's movements is hardly complete, it would appear that several years elapsed before he actually approached, and also (contrary to the opinion of two centuries) that he never saw, the real Seri habitat. According to the anonymous author of "Apostolicos Afanes" (identified by modern historians as Padre José Ortega), Padre Kino made many journeys over the inhospitable wastes now known as Papagueria during the years 1686–1701,[4] and must have seen nearly the whole of the northern and eastern portions of the territory; but only a single journey led him toward Seriland. In February, 1694, he, with Padre Marcos Antonio Kappus, Ensign Juan Mateo Mange (chronicler of this expedition), and Captain Aguerra, set out for the coast; and Mange's itinerary is so circumstantial as to locate their route and every stopping place, with a possible error not exceeding 5 miles in any case.

According to Mange's itinerary, the explorers left Santa Magdalena de Buquibava, on the banks of Rio San Ignacio or Santa Magdalena, February 9, traveling northwestward down the valley of that river (for the most part) 12 leagues to San Miguel del Bosna; the original party having been enlarged at Santa Magdalena by the addition of Nicolas Castrijo and Antonio Mezquita, with two Indians for guides. On February 10 they traveled from Bosna 5 leagues southward (evidently in the valley of Rio San Ignacio, which is here 5 to 25 miles in width), to sleep at the watering place of Oacue, or San Bartolome. The

[1] Venegas, A Natural and Civil History of California, vol. i, p. 102.

[2] Venegas, Noticia de la California, vol. i; Madrid, 1757, p. 219.

[3] The Works of Hubert Howe Bancroft, vol. xv (History of the North Mexican States, vol. i, 1531–1800), 1884, p. 292.

[4] Apostolicos Afanes de la Compañia de Jesus, escritos por un Padre de la misma Sagrada Religion de su Provincia de Mexico; Barcelona, 1754, p. 240 et seq.

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next day they journeyed westward along the wash (of San Ignacio), stopping, as was their custom, to baptize the sick and others, and after covering 10 leagues camped at a tanque. On February 12 they continued westward over mesquite-covered plains for 4 leagues, and then turned northwestward for 3 leagues along the San Ignacio to Caborca, where they spent the remainder of the day in evangelical work. Next morning, after saying mass, they again proceeded westward "por la vega del rio abajo" (down the bank of the river); at 2 leagues distance they arrived at the place at which the river "sinks", but continued westward along the sand-wash 5 leagues farther, passing the night at a tanque of turbid water. On February 14 they again celebrated mass, and then proceeded westward over the plains ("prosiguiendo nosotros al Poniente por llanos"); at 4 leagues they reached a ranchería which was dubbed San Valentin (still persisting as a Papago temporale; the "Biasnig" of various maps), watered from a well in the river bed; proceeding westward ("prosiguiendo al Poniente") 6 leagues farther, they ascended a sierra trending from south to north ("trasmontada una sierra que sita de Sur á Norte") of which they named the principal peak Nazareno, in a dry and sterile barranca in which they afterward slept; from this sierra they saw "the Gulf of California, and, on the farther coast, four mountains of that territory, which we named Los Cuatro Stos. Evangelistas, and toward the northwest an islet with three cerritos named Las Tres Marias, and in the southwest the Isla de Seria, to which they retreat when pursued by soldiers for their robberies, which we call San Agustin and others Tiburon."[1] The record continues:

On the fifteenth, after saying mass, we continued our route to the west by a dry and stony ravine which there is between the mountains, and at 3 leagues we met some Indians taking water from a small well in earthen jars, who, on seeing us, ran away, flying from fear; but at two musket shots we overtook them, treated them kindly, and brought them back to the well that they might assist in watering the horses, giving them all the water necessary, for the reason that they had not drunk the day before. For this reason we called this place Paraje de las Ollas. They were naked people, and only covered their private parts with small pieces of bare skin; and one of them was so aged that by his looks he must have been about 120 years old. We continued to the west over barren plains, arid and without pasture, a country as sandy as a sea-beach, until we reached the sand-banks, where the horses had great difficulty; and after another 7 leagues Father Kappus and the other people camped without water, and with only pasture of salt grass; but Padre Kino and I [Mange], with guides, and the governor of Los Dolores [Aguarra], in order to be forehanded, went west 2 leagues farther, crossing the bed of Rio San Ignacio; we arrived at the banks of an arm of the sea to which, in the sixty years that the province of Sonora had been peopled, no one had come, and we were the first who had the great privilege of seeing the Island of the Seris and that of Tres Marias, as well as the mountains of Cuatro Evangelistas, in California, on the other side of the gulf, the width of which, according to the measuring instruments at this position of 30° [actually about 30° 25'], is some 20 leagues. We returned to the bed of the river [San Ignacio], where we found a well nearly dry; we drew from it water for the horses, who had had nothing to drink, and took some ourselves, although it was turbid, muddy, and disagreeable.

[1] Translated somewhat freely from Rumores de Noticias, in Documentos para la Historia de Mexico, cuarta série, tomo i, 1854, pp. 226-236.

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Now, this itinerary recounts, in definite and unmistakable terms, the incidents and localities of a journey down the valley of Rio San Ignacio (also called Santa Magdalena, Altar, Asuncion, Pitiquito, Caborca, etc, in different parts of its course), from the present city of Santa Magdalena by the present town of Caborca to the coast at a point almost directly west of both Caborca and Santa Magdalena. Moreover, Kino's map of 1702[1] locates "Nazareno" on this river, and permits identification of the sierra with Dewey's "three conspicuous peaks" placed directly inland from the lagoon at the mouth of San Ignacio river, on the Hydrographic Office charts; it also locates Caborca (miswritten "Cabetka") in approximate position. Furthermore, it would have been physically impossible for the rather heavily outfitted Kino party, with carriages and churchly equipage, to traverse the untrodden and forbidding wastes from Caborca to even the nearest part of Seriland within the period of two days and a fraction, and the distance of 29 leagues (some 74 miles), detailed in the itinerary. The direct way from Caborca to Tiburon would lie due southward, over sierra-ribbed and barranca-cut plains never yet explored by white men, nor even traversed by Indians so far as known, for more than 100 miles in an air line; while the nearest practicable route, passing by way of Cieneguilla, Las Cruces, Pozo Noriega, Bacuachito, Sayula, Tonuco, Rancho Libertad, and Barranca Salina (or Aguaje Parilla) measures fully 200 miles, and requires at least six days for the passage with good horses and light equipage. The Kino party might, indeed, have turned southwestward at Caborca and pushed to the now abandoned landing at the anchorage below Cabo Lobos;[2] but the directions and distances specifically stated, and the specific identification of Rio San Ignacio at the end and at other points of the journey, all prove that this was not the route actually traveled. The terminus of the trip so clearly fixed by the itinerary is over 100 miles from the nearest point of Seriland proper; moreover, Tiburon is rendered invisible both from the coast and from Cerro Nazareno not only by distance, but by intervening sierras, notably those projecting into the Gulf to form Cabo Lobos and Punta Tepopa. It follows that Kino and Mange completely missed Seriland in their expedition to the coast, and there is nothing to indicate that they ever saw the Seri tribesmen. Their descriptions of the Indians encountered fairly fit the peaceful Papago of the interior and the timid Tepoka of the coast; and neither Mange's narrative nor other contemporary records suggest contact between the exploring party and the distinctive holders of Tiburon. The specific and repeated references in the itinerary to the island of San Agustin, or Tiburon, evidently relate to the ancient Isla de Santa

[1] Tabula Californiæ, anno 1702 (Via terrestris in Californiam comperta et detecta per R. Patres Eusebium Fran. Chino & S. I. Germanum. Adnotatio nova Missionibus ejusdem Sortis ab anno 1698 ad annum 1701), in Stocklein, Der Neue Welt-Bott, Augspurg und Grätz, 1726.

[2] Elaborately mapped and established (on paper) as the "Puerto y Villa de la Libertad" in 1861 (Boletin de la Sociedad Mexicana de Geografía y Estadística, 1869, x, p. 263 et seq.), and actually maintained from 1873 to 1884 as the port of Libertad (not the abandoned Rancho Libertad on the border of Seriland), or Serna, according to Dávila (Sonora Histórico y Descriptivo, pp. 149, 360).

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114 Ines, the modern Isla Angel de la Guarda,[1] one of the most prominent
*175 geographic features visible either from Cerro Nazareno or from the adjacent coast. There is no reason to infer that Kino or any of his party ever detected their error in identification of geographic features which must have been conspicuous in the lore of the aborigines and settlers of Sonora; indeed, the error well attests the prominence of the Seri and their habitat in the local thought of the time.[2]

*175 An effect of the Jesuit invasion was to give record to episodes growing out of alien contact with the Seri. One of the earliest of these records recounts nocturnal raids by the "Seris Salineros" for robbery and murder in the pueblos of Tuape, Cucurpe, and Magdalena (de Tepoca).[3] In January, 1700, Sergeant Juan Bautista de Escalante set out with fifteen soldiers to this mission of Santa Magdalena de Tepoca on an expedition of protection and reprisal; and here he learned that the "Seris Salineros" had killed with arrows three persons. Taking their trail, he reached Nuestra Señora del Populo only to find that ten families of converts had deserted to steal cattle, whereupon he started in search of them; he overtook them 20 leagues away, and, despite armed resistance on their part, arrested and whipped them and returned them to the pueblo. Among the captives were two "Seris Salineros" concerned in the murders at Tepoca, and three others guilty of similar outrages at the Pueblo de los Angeles de Pimas Cocomacagües; these he executed as a warning to the others, after taking their depositions and confessions, and after they were shrived by Padre Adano Gilo (or Adan Gilg), the priest of Populo. This duty performed, he resumed the trail of the Seri, accompanied by the padre; and, approaching the sea, he found a port, as well as an island to which most of the Seri had escaped in balsas, leaving eight of their number, who were arrested and turned over to the priest.[4]

This is the first record of actual invasion of Seriland by Cancasians. According to Bancroft, it "may be deemed the beginning of the Seri wars which so long desolated the province".[5]

The next noteworthy episode occurred when Sergeant Escalante, who had returned to Tuape and Santa Magdalena (de Tepoca), again set out for the coast on February 28, 1700, taking a new route (probably down Rio Bacuache). He traveled 30 leagues, passing four watering places, and on March 6 arrived at the Paraje de Aguas Frias (probably

[113] [1] Identified by Alexandre de Humboldt in his Carte Générale du Royaume de la Nouvelle Espagne, of 1804 (in Atlas Géographique et Physique, Paris, 1811). So late as 1840 the old name was sometimes retained, e. g., on Robert Greenhow's map accompanying his History of California and Oregon.

[2] In one of the last letters from his pen, dated November 28, 1900, the late Dr Elliott Coues wrote, "I find you trailing Kino and Mange in 1698 precisely as I had them, and I make no doubt of the substantial accuracy of your typewritten MS. I accept your position that the large island they sighted and named San Agustin was not Tiburon, but Angel de la Guarda Isl."

[113] [3] A mission founded in 1680 by Padre Melchor Bartiromo (Historia de la Compañia de Jesus en Nueva España, que sobe escribiendo el P. Francisco Javier Alegre, 1842, tomo III, p. 117), of which the location has long been lost.

[4] Buenrostro de Noticias, op. cit., tomo I, p. 321.

[5] Op. cit., p. 275 (the year is misprinted 1800 on this page and in the index).

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Poso Escalante or Agua Amarilla of recent maps); there, three nights later, he was attacked by archers, who discharged arrows into the soldiers' camp and immediately fled. Subsequently, seeking their enemies close to the sea 20 leagues away (probably on the eastern shore of El Infiernillo), Escalante and his men were joined by 120 Tepoka people; and, failing to find their assailants, they gave these allies a supply of provisions and turned them over to Padre Melchor Bartiromo, who allotted to them, in conjunction with 300 deserters from the missions who had been captured by the soldiers, not only lands but corn for sowing and eating. Having thus disposed of the Indians, Escalante and his soldiers returned to the coast on March 28, 1700, to punish the boldness and pride of the Indians in their stronghold ("los indios seris de la ranchería del medio"). Passing by balsas to the island, "they overtook those who caught up bows and arrows to fight, of whom they slew nine as an example to the others"; and these others they captured and sent to the priest at Populo—after which the party returned to Cucurpe in time to celebrate Holy Thursday on April 8.[1]

This contemporary recital, written by Escalante's acquaintance and rival in exploration and subjugation, Juan Mateo Mange, bears both internal and external evidence of falling well within the truth. It is corroborated and extended by Alegre's version, written forty or fifty years later on data at least partially independent: according to Alegre, Escalante and his soldiers went on balsas to the "Isla de los Seris, which is called San Agustin by some, but more commonly Tiburon". He added that the retreats of the Seri after the murders and robberies committed at the pueblos of Pimeria, as well as the abundant pearl-fisheries, have made this place highly noted ("muy famosa"); and he correctly described the strait and the projecting sand-banks opposite the center of the island, which reduce the open water to a width of barely half a league: "At this constriction the Seri cross in balsas composed of many slender reeds, disposed in three bundles, thick in the middle and narrowing toward the ends, 5 and 6 varas in length. These balsas sustain the weight of four or five persons, and with light two-bladed paddles 2 varas in length cut the water easily." He remarked also that while a part of the Seri seen on the island by Escalante were captured the major portion escaped, "fleeing with great swiftness".[2]

The early record is also corroborated, in a manner hardly credible in regions of more rapid social and physiographic development, by local tradition and by the survival of the well excavated by the party and still bearing Escalante's name.

On the whole it may be considered established that Sergeant Escalante crossed El Infiernillo and visited Tiburon in 1700; and, although it may be possible that pearl fishers or others preceded him, he must be credited with the first recorded exploration of strait and island by white men.

[1] Rousseau de Noticias, op. cit., tomo i, pp. 321–322. [2] Op. cit., tomo iii, pp. 117–118.

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The specific references to the Seri and their insular habitat by Ribas, by Kino and his chronicler, and by the various recorders of Escalante's expeditions, establish the extent of the lore concerning people and place, even before the end of the seventeenth century. This lore found measurable expression in maps prepared in Europe, even by those cartographers who purposely or otherwise ignored the surveys of Ulloa and Alarcon. In his "newest and most accurate" map of America, 1602, Fredericus de Witt depicted the Gulf of California ("Mare Vermio olim Mare Rvbrvm") as extending northward to connect with the mythic Strait of Anian ("Fretum Anian"), yet he located Rio Colorado ("R. de Tecon") and Rio Gila ("R. de Coral") approximately, placing the largest island in the gulf, named "I. Gigante", just off their (common) embouchure;[1] and an anonymous map of the Pacific ocean, apparently by the same author and of closely corresponding date, is essentially similar.[2] The map of the northern part of America by Peter van der Aa, about 1690, is also similar, though on smaller scale;[3] and the same may be said of that cartographer's new map of America, issued about the same time, in which the island is designated "I. de Gigante".[4] A somewhat later map by Van der Aa (although supposed to have been issued in 1690) is greatly improved; the "Mer de California" is brought to rather indefinite end a little above the mouth of Rio Colorado ("R. de bona guia"); the "Pimases" are placed in proper position with respect to the Gila ("R. de Coral"), and the "Herises" are located a third of the way and the "Ahomeses" half way down the gulf; while a greatly elongated island stretches from the one to the other off the province of "Sonora".[5] The origin of the name "Gigante" is uncertain; it may be borrowed from a land feature. As used in some cases it apparently connotes the size of the island, while the use in other cases evidently connotes gigantic inhabitants.

Naturally, in view of the slow and imperfect diffusion of knowledge characteristic of early times, cartographers were dilatory in introducing the observations of Kino and Escalante. The map of America by Herman Moll, about 1708,[6] represents the "Gulf of California or Red Sea", connecting the "South Sea" with the "Straits of Annian", and depicts Rio Colorado ("Tison R.") and a composite river apparently designed to represent Rio Gila (made up of "R. Sonaca", "R. Azul", and "R. Colorado", with two other long tributaries from the south) embouching separately a little below midlength of the gulf. Somewhat above these are three islands, one of which is designated "Gigate

[1] Novissima et Accuratissima Septentrionalis ac Meridionalis America, Amsterdam. (In American Maps, 1579-1796, Library U. S. Geological Survey, 135.)

[2] Mar del Zvr, Hispanis, Mare Pacificum. (Ibid., 139.)

[3] 't Noorder Deel van America, Leyden. (Ibid., 178.)

[4] Nouvelle Carte de l'Amerique, Leyden. (Ibid., 138.)

[5] L'Amerique Septentrionale Suivant les Nouvelles Observations, etc., Leyden. (Ibid., 181.) This island is not named, but is undoubtedly the Santa Inez of several other maps—the Angel de la Guarda of the present.

[6] North America, according to ye Newest and most Exact Observations, etc., London. (Ibid., 89.)

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Isle", while "Pimeria" is located correctly with respect to Rio Gila, though too close to the sea, and "R. Sonora" is located too far southward, with a province of the same name just north of it. There is no reference to the Seri, but a locality in Lower California opposite Sonora is named "Gigante".[1] Quite similar is the map of North America drawn and engraved by R. W. Seale about 1722, though the provinces of Pimeria and Sonora are brought closer together, while the magnified Gila is named Colorado ("Tison R." also being retained).[2] The map of North America presented to the Duc de Bourgogne by H. Iaillot about 1720 is much the same; the "Isle de Californie" is separated from the continent by "Mar Vermejo ou Mer Rouge" with four islands, of which the southernmost, "I. de Gigante", lies somewhat below the separate mouths of "R. de Tecon" and "R. de Coral", while the extravagantly magnified Gila of previous maps is partially replaced by a still more extravagant "R. del Norte", rising in a mythical lake above the fortieth parallel and falling into the gulf under the thirtieth.[3] The map of Mexico and Florida by Guillaume "De l'Isle", published in Amsterdam by Covens and Mortier, 1722, patently begs the question as to the northern extension of "Mer de Californie" by cutting off the cartography at the critical point. "R. del Tison" is retained as a subordinate river, while the separate and greatly magnified Gila corresponds with that of the Iaillot map, the upper tributary being "R. Sonaca ou de Hila"; "R. di Sonora" is depicted in approximate position, with the province of the same name extending northward and "Seris" located a little above the mouth of the river. No islands are shown in the vicinity, but the name "Gigante" appears on the western coast of the gulf, about latitude 29°.[4] The map of North America by the same author, supposed to date about 1740 though probably earlier, recalls the Van der Aa map of 1690 (?); "Mer de Californie ou Mer Vermeille" ends doubtfully about latitude 34°, where "R. de bona guia" and "R. de Coral" bound the "Campagne de bona guia", and fall separately into the gulf near its head; the "Pimaaes", "Herises", "Sumases", "Albinoses", and "Ahomeses" are distributed thence southward along the coast to about the twenty-eighth parallel, while a nameless island stretches parallel with the coast of "Sonora" from about 28° to 32°.[5]

With one or two exceptions, these maps demonstrate the prevailing neglect or ignorance of the classic explorations along the western coast of America early in the sixteenth century; yet they introduce features representing vague knowledge of the Seri Indians and their insular habitat, undoubtedly derived (like that of Padre Kino and Sergeant Escalante anterior to their expeditions) from native sources.

[1] Doubtless the mountain "La Gigante", named by Admiral Otondo toward the end of the seventeenth century (Documentos para la Historia de Mexico, cuarta série, 1857, tomo v, p. 122), and noted by Hardy in 1826 (Travels in Interior of Mexico in 1825, 1826, 1827, and 1828, London, 1829, p. 243).

[2] A map of North America, with the European Settlements and whatever else is Remarkable in ye West Indies, from the latest and best Observations. (American maps, loc. cit., 119.)

[3] Amerique Septentrionale Divisée en Ses Principales Parties. (Ibid., 169.)

[4] Carte du Mexique et de la Floride, des Terres Angloises et des Isles Antilles, etc. (Ibid., 126.)

[5] L'Amerique Septentrionale . . . par G. de l'Isle: Amsterdam, Chez Pierre Mortier. (Ibid., 172.) The island is, of course, Santa Inez, i. e., Angel de la Guarda.

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The Kino map of 1702 gradually came to be recognized as trustworthy in important particulars, and brought to an end the baseless extension northward of the gulf; yet it was seriously inaccurate in details, particularly those affected by the erroneous identification of the second-largest island in the gulf with the largest. Accordingly Isla Santa Ines (the modern Isla Angel de la Guarda) is omitted from its proper position, and replaced by "I. S. August" close to the eastern coast; yet the land-mass of Tiburon is roughly defined as a peninsula bounded on the north by "Portus S. Sabina" (Bahia Topopa) and on the south by "Baya S. Ios. Bapt." (Bahias Kunkaak and Kino). Two other considerable islands are represented as dividing the width of the bay west-southwest of "I. S. August", and are named "2. Saltz-Insel"; although evidently traditional, their positions correspond roughly with those of San Esteban and San Lorenzo. The map locates the "Topokis" between Rio San Ignacio and Rio Sonora, with the "Gualmas" immediately below the latter.[1] Kino's three pier-like islands bridging the gulf were adopted in Delisle's map of America, published in Amsterdam by Jean Cóvens and Corneille Mortier about 1722, in greatly reduced size, though larger islands are shown farther northward; and an ill-defined peninsula corresponding to Tiburon is retained.[2] The D'Anville map of 1746 embodies Kino's discoveries about the head of the gulf and retains his pier-like islands, yet not only corrects his error in omitting the second greatest island of the gulf, but perpetuates equal error in the opposite direction: "I. de S. Vicente" is made the largest of the islands and located near the western coast a little below the mouth of Rio San Ignacio, while "I. de Sta. Inés" is made second largest and is located southeast of it and near the eastern coast. The third island in size is named "Seris", while the fourth and fifth, completing the Kino trio, are called "Is. de Sal", and the mainland projection remains defined on the south by "B. de S. Juan".[3] The Vaugondy map of 1750 locates the transverse trio of islands in greatly reduced size, and omits the larger islands of the gulf.[4] The islands, etc., of the Covens and Mortier map of 1757 correspond closely with D'Anville's map of 1746, and a nameless bay defines a peninsula in the position of Tiburon.[5] The Pownall map of 1783 also follows that of D'Anville so far as the islands are concerned, though the position of that corresponding to the present Angel de la Guarda lies beyond the limit of the sheet; "I. de Inez" lies some distance below the mouth of "Sta. Madalena" river, off the territory of the "Sobas" and "Seris"; "Seris I." is smaller, the two "Sall Is." are smaller still, and there is an ill-defined projection of the mainland, bounded on the south by "B. de S. Juan".[6]

While the makers of the later of these maps were engaged in perpet-

[1] Map in Stöcklein, op. cit.

[2] Carte d'Amerique, etc. (American maps, loc. cit., 28.)

[3] Amérique Septentrionale . . . par le Sr. d'Anville, Paris. (Ibid., 30 and 31.)

[4] Amérique Septentrionale . . . par le Sr. Robert de Vaugondy, Paris. (Ibid., 37.)

[5] L'Amerique Septentrionale, etc., Amsterdam. (Ibid., 160.)

[6] A new map of North America, with the West India Islands. . . . Laid down according to the Latest Surveys, and Corrected from the Original Materials of Gover. Pownall, London. (Ibid., 32.)

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uating the vestigial features, erroneous and otherwise, of the Kino map, the Jesuits of peninsular California employed themselves in reexploration of the western coast of the gulf, a particularly productive expedition being that of Padre Ferdinando Consag, in 1747. The padre's map represents the western coast in considerable though much distorted detail, and depicts "I. del Angel de la Guarda" as a greatly elongated body, a third of the way across the gulf from the western coast; next in size is "I. d S. Lorenzo"; then come "I. d S. esteban" in the middle of the gulf, and in the same transverse line, but quite near the eastern coast, "I. d S. Agustin", the two being approximately equal in size, while above and about equidistant from them is "I. de S. Pedro", about half so large as either. These, with four smaller islands near the western coast, bear the general designation "Islas de Sal, si puedes", which in this case may be translated "Salt (possibly) Islands," though later forms of the name imply a quite different meaning, i. e., "Islands of Get-out-if-(you-) can", or "Get-out-if-canst".[1] The eastern coast shows two deep indentations named "Tepoca" and "Bahia d S. Juan Bautista" bounding a peninsula corresponding in position to insular Serriland.[2] It is evident that the cartography of the eastern coast is based on that of Kino, that the island of San Agustin is hypothetic, and that the land-mass of Tiburon proper is not separated from the mainland, while San Pedro island is apparently the Isla Patos of the present. The more general map by Venegas combines details of the Consag, Kino, and other maps; "I. del Angel de la Guarda" is greatly magnified and placed somewhat too far northward, while both San Lorenzo and San Esteban are made much larger than "I. San Agustin", which is represented as scarcely larger than "I. de S. Pedro"; the mainland is indented to

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[1] It seems probable that various early cartographers were misled by the traditional lure of "salinas", or salt-making Indians, in combination with the seasonal designation of these islands. In his text Padre Consag rendered the term "Sal-si-puedes", and strongly emphasized the violent tidal currents and consequent dangers to vessels which suggested the vigorously idiomatic designation to early navigators (Venegas, Noticia de la California, III, p. 149); in the Venegas map (ibid., tome I, p. I) the name is used without the qualifying comma, and in the text it is hyphenated "Sal-si-puedes", the author observing concerning the local currents, "These currents run with astonishing rapidity, and their noise is equal to that of a large rapid river among rocks; nor do they run only in one direction, but set in many interested gyrations" (A Natural and Civil History of California, p. 62). And the "Benedictio Religiosa", whose letters place him among the authorities on Lower California, wrote: "In the narrows of the gulf are a multitude of islets, for the passage being so dangerous to vessels they are called *Sal si puedes*" (Noticias de la Provincia de Californias, Valencia, 1796, p. 11); while Hardy, who navigated this portion of the gulf early in the present century (Travels in the Interior of Mexico, London, 1829, p. 279), mentioned a passage "between the islands called 'Sal si Puedes' (get back if you can)". So, too: Duflot de Mofras wrote of "les îles de Sal si puedes (Sans si en pouvoir)" in his Explorations du Territoire de l'Oregon, Paris, 1844, p. 219. Bancroft properly reduced the obscure connective phrase to the single denotive term "Salsipuedes," and noted the signification as "Get out if thou canst" (North Mexican States, vol. I, p. 444). In 1873-1875 Dewey restricted the name to a single island and a channel, and emphasized the currents in the latter "against which sailing vessels found it almost impossible to make any headway" (The West Coast of Mexico, Publication 56, U. S. Hydrographic Office, Bureau of Navigation, 1889, p. 113), and rendered the name "Sal-si-puedes" in the text, "Sal si puedes" on the charts. Mitchell's reference to "the group of islands then known as Salsipuedes, the largest of which is now called Tiburon" (History of California, vol. I, p. 225), doubtless expresses the early use of the term previously, save that the present Tiburon was long treated as a part of the mainland, while its names were applied to Isla Tacoss or some other islet. Vide postea, p. 66.

[2] Seno de California, etc., in Venegas, Noticia de la California, tome III, p. 184.

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great depth by Kino's "Pto. de Sta. Sabina" and "Bahia de Sn. Juan Baptista", in such wise as to define a decided peninsula, while the "Seris" are located 2° farther southward and below Rio Sonora, and the "Guaimas" still farther down the coast.[1] Another illustration of the chaotic notions of the time is afforded by the Baegert map, published in 1773, and credited largely to Consag.[2] The sheet locates the author's routes of arrival (1751) and departure (1768), the former overland from far down the coast to the mouth of "Torrens Hiaqui," and thence directly across "Mare Californiae", via "Tiburon" (lying just off the mouth of the river, in latitude 28°), with the usual congeries of islands, headed by "I. S. Ang. Gart" (Angel de la Guarda), in latitude 30°–31°, and the usual shore configuration above the debouchure of Rio Sonora; "Los Seris" are located in the interior between Rio Sonora and "Torrens Hiaqui", while just above the mouth of the latter lies "Guaymas M.[ision] destr. per Apostatas Seris". The Pownall map of 1786 incorporates Padre Consag's results on reduced scale, but omits the islands toward the eastern shore of the gulf.[3]

On the whole the cartography of a century indicates that the striking explorations of Ulloa, Alarcon, and Diaz were utterly neglected; it indicates, too, that Kino's observations were promptly adopted, but that his erroneous identification of the island seen from Nazareno occasioned confusion; yet there is nothing to indicate definite knowledge of Escalante's discoveries. Apparently the cartographic tangle began with the failure to discover the narrow strait traversing Seriland, coupled with hearsay notions of an insular Seri stronghold; it was complicated by Kino's erroneous identification of the hearsay island; and it grew into the mapping of a traditional islet about the position of Tiburon, and the extension of the mainland into a peninsula embracing the actual land-mass of that island[4]—the islet lying about the site of the modern Isla Tasaue, and often appearing under the name San Agustin.[5] Accordingly, so far as maps are concerned, Escalante's discoveries were no less completely lost than those of Ulloa.

The recorded history of the Seri Indians during the earlier two-thirds of the eighteenth century is largely one of zealous effort at conversion on the part of the Jesuit missionaries, who repeatedly approached the territory by both land and sea; yet the records touch also on events of exploration and on the characteristics of the tribe.

One of the earliest chroniclers was Padre Juan Maria de Sonora, who in 1690–1701 inspected many of the missions of Lower California and

[1] Noticia de la California, tomo i, p. 1.

[2] California, per P. Ferdinandum Consag, S. I., et alios, in Nachrichten von der amerikanischen Halbinsel Californien. . . . Geschrieben von einem Priester der Gesellschaft Jesu (identified as Jacob Baegert by Ross, Smithsonian Report, 1863, p. 382); Mannheim, 1773.

[3] A New Map of the Whole Continent of America, London. (American maps, loc. cit., 4.)

[4] This cartography reappeared occasionally up to about the middle of the nineteenth century, as illustrated by the Greenhow map accompanying the edition of his history issued in 1845.

[5] This condition is revealed in Mühlenpfordt, Versuch einer getreuen Schilderung der Republik Mejico, etc.; Hannover, 1844.

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Sonora and acquainted himself in exceptional degree with the neophytes and their wilder kindred. About the beginning of 1701 he crossed with great danger ("pasé con grande peligro") from Loreto to the eastern coast, and, accompanied by two "Indios Guaymas, caciques," proceeded among the Sonoran settlements.[1] On February 18 he was at the new town of Magdalena (de Tepoca), "where, with great labor, Padre Melchor Bartiromo had gathered more than a hundred souls of the maritime nation of Tepocas", and where the visitors were accorded an enthusiastic reception. He went on to say:

> It is notable that where the Tepocas and Salineros are located the sea is populous with islands [muy poblado de islas], and the first of these toward the coast contains foot-folk [gente de á pié], who live on it. Then there are two islands much nearer the mainland of California, and it is said that they [the Tepoka] are able to navigate in their barquillas [balsas] to the adjacent coast; and the possession of these Tepocas, who are all Seris by nation, of certain words of the Cuchimies of [Lower] California, who occupy the opposite coast, indicates that they have communicated in other times.[2]

This record is especially significant as indicating the affinity between the Seri and the Tepoka, as establishing the transnavigation of the Gulf by the Seri craft, and as explaining the possible passage of loan words from the Cochimi to the Seri, and presumptively from the Seri to the Cochimi.

A notable visitor to the shores of Seriland was Padre Juan María Salvatierra, who had previously "made a peace betwixt the Seris cristians, and the Pimas", soon violated by the former "in the murder of 40 Pimas". In August, 1709, he essayed the recovery of a vessel wrecked "on the barren coast of the Seris", which these Indians were engaged in looting and breaking up for the nails; and, by dint of his "persuasive elocution . . . not a little forwarded by the respectable sweetness of his air", aided by timely explosions of the bark's pateraroes (mortars), he induced restitution, the restoration of peace, and the reinstatement of several of the robbing and murdering Seri as communicants.[3] Padre Salvatierra observed the distinctive character of the Seri tongue, but made no extended exploration of Seriland, either coastwise or interior.

The next noteworthy visitor was Padre Juan de Ugarte, who, at the instance of Salvatierra, undertook an exploration of the gulf coast complementary to Kino's land explorations about its northern terminus. Ugarte was the Hercules of Baja California history; he awed the natives by slaying a California lion, unarmed save with stones, and enforced orderly attention to his catechizing by seizing an obstreperous champion by the hair, lifting him at arm's length, and shaking him into submission; and under incredible difficulties due to absence of material and distance of timber, he built the first vessel ever con-

[1] Documentos para la Historia de Mexico, cuarta série, tomo v; Mexico, 1857, pp. 125–170.
[2] Ibid., p. 132.
[3] Venegas, A Natural and Civil History of California, vol. i, pp. 408–411.

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F 175 structed in California, the bilander (two-master) *El Triunfo de la Cruz*—a fit prototype of the *Oregon* of nearly two centuries later—which proved to be the finest craft ever seen on the coast, and played an important rôle in later history.[1]

On May 15, 1721, Ugarte embarked at Loreto (Lower California) and skirted the coast northward to the Islas de Salsipuedes, whence he crossed the gulf to "Puerto de *Santa Sabina*, ó *Bahia de San Juan Bautista*" near the islands "en la Costa de los *Tepoquis*, y *Seris*".[2] The Indians soon appeared and, in excess of amity (ascribed to the display of the cross), threw themselves into the sea and swam to the ship, and afterward aided in taking water; for "early next day the Indians appeared in troops, and all with water-vessels; the men each with two in nets hanging from a pole across their shoulders, and the women with one."[3] After watering, the Ugarte party, accompanied by two of the Indians, set sail in the bilander with a pinnace and a canoe, and in the early morning found themselves in a narrow channel apparently separating the island from the mainland; the pinnace and the canoe were dispatched to courier the larger craft; but "the channel, besides being narrow and crooked, was so full of shoals that . . . the bilander stuck and was in danger of being lost", while the canoe and the pinnace were caught by the currents and carried "to such a distance as not to be seen". Finding it impossible to return, the party pushed on, and "after three days of continual danger, they reached the mouth of the channel, where they found the boat and pinnace"; when they were surprised to find the strait opening, not into the gulf, but into a great and spacious bay. Approaching a landing, they were met by Indian archers wearing feather headdresses and comporting themselves in a threatening manner; but these were pacified by the two Indians brought from the watering-place. Here Ugarte was taken ill, and the islanders made thirteen "balsillas" on which fifty Indians passed to the bilander and urged him to land on the island, where they had prepared a house for his reception; this he did, despite severe suffering, and was received with great ceremony. After a short stay, the party explored the coast northward, stopping off Caborca to lay in supplies, and discovered (anew and independently) the mouth of the Colorado; then, despite repeated risk and much suffering from the exceeding tides, severe storms, and the terrible tiderips off Islas Salsipuedes, they finally made return to Loreto.

The itinerary of this voyage recounts the first recorded navigation through El Infiernillo; and, while it is too meager to permit retracing the trip in detail, it seems practically certain that the vessels entered Bahia Tepopa, watered at Pozo Hardy, passed around Punta Peña and thence southward through the strait, and emerged through Boca Infierno into Bahia Kunkaak, afterward proceeding westward and

[1] Bancroft, op. cit., vol. i, pp. 189–193, 219–221.
[2] Venegas, Noticia de la California, tomo ii, p. 343.
[3] Venegas, A Natural and Civil History of California, vol. ii, p. 48.

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northward around the outer coast, and thus circumnavigating Tiburon. While Ugarte's pilot, Guillermo Estrafort (or Strafort),[1] displayed great energy and courage in charting the coast, the voyage neither yielded published maps nor affected current and subsequent cartography; for, although Ugarte's narrative and Estrafort's map and journal were sent to Mexico to be presented to the viceroy, they were apparently lost.[2] Nor does the itinerary indicate recognition of Kino's error in identification of the Seri island, though several days were occupied in voyaging from the island to the latitude of Caborca; indeed, it seems probable that it was either Salvatierra, Kino's intimate associate, or Ugarte, Kino's colleague and Salvatierra's intimate friend, who fixed the name of the pioneer padre on the geographic features still known as Bahia Kino and Punta Kino—features which Kino never knew, as already shown.

Although both Salvatierra and Ugarte were on superficially amicable terms with the Seri, the amity was evidently of the shallowest and most evanescent sort. Venegas says:

> Of the *Seris* and *Tepocas*, although the padre passed among them with the pay in his hand, he could not induce them to assist him in any way, even when they saw the party in the greatest distress; while others toiled, they reclined with the greatest serenity, nor have they shown the priests the slightest civility during the forty years of their acquaintance—they utterly refused to part with ollas of coarse ware, even for a liberal exchange.[3]

And the contemporary lore, crystallized in current administrative policy and later records, and corroborated by deep-rooted customs maintained for centuries and still persisting, is significant; it indicates that then, as now, it was the habit of the Tiburon islanders to flee from or fawn upon powerful visitors, to ambush or assail by night parties of moderate strength, to openly attack none but the weak or defenseless, yet ever to delight in tricking the credulity and consuming the stores and stock of aliens, and to revel in shedding alien blood when occasion offered. The adventurous hunters and gold seekers of the mainland, and the still hardier pearl fishers of the coast, wrote nothing; but both civil and ecclesiastical records imply common knowledge that weaker parties venturing into the purlieus of Seriland never returned—they disappeared and left no sign.

While Salvatierra and Ugarte were occupied on the coast, the missionaries were no less industrious in the interior. The mission of Santa Magdalena de Tepoca was apparently soon abandoned; but the so-called Seri missions at Pópulo (Nuestra Señora del Pópulo) and Angeles (Nuestra Señora de los Angeles) were maintained from the time of Kino's coming up to the expulsion of the Jesuits (in 1767), while that at Nacameri was nearly as well sustained. The relations

[1] An Englishman named (probably) William Strafford, according to Bancroft; op. cit., vol. i, p. 444.
[2] Venegas, Noticia de la California, tomo ii, p. 370.
[3] Ibid., p. 388.

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of these missions to Seriland are significant: according to the anonymous author of Sonora's classic, "Rudo Ensayo", written in 1763, Nacameri lay in the valley of Rio Opodepe (or Horcasitas), 7 leagues below the town of the same name (still extant); 9 leagues down the same stream lay Populo (on the site of the present town of Horcasitas); Angeles lay 3 or 4 leagues farther downstream, or over 12 leagues above the site of Pitic[1] (the present Hermosillo); while various references indicate that the temporary mission of Santa Magdalena was located in the same valley, probably a few leagues above Opodepe.[2] Accordingly, the missions ranged from 100 to 150 miles inland, measured in an air line, or four hard days' journey, as shown by Escalante's record, from the Seri coast. The nearest mission at Angeles was 75 miles, or three days' journey, from the inland margin of Seriland proper, and the intervening territory was a depopulated expanse ("el grande despoblado") according to Villa-Señor,[3] ranged but not inhabited by Seri and Tepoka hunting parties. Never traversed by white men, save those of Coronado's parties nearly two centuries before and of Escalante's hurried expeditions of 1700, this "despoblado" was practically unknown; even the surprisingly well-informed author of "Rudo Ensayo" was unaware of the existence of Rio Bacuache, and noted only such prominent mountains as Cerro Prieto and "Bacoatzi the Great in the land of the Seris",[4] lying far outside the tribal home. The remoteness of the missions from the habitat of the tribe bears testimony to the dread with which they were regarded, and to the slightness of the influence exerted on the tribesmen by the zealous padres.

Despite the efforts of both priesthood and soldiery, the number of Seri converts at the missions was limited. In 1700 there were ten families at Populo; true, they had slipped away to maverick the herds ("por ladrones de ganados"), but Escalante overtook them and whipped them back to the shadow of the church; later he captured 120 Tepoka people (probably some twenty families, with a few strays), and recaptured 300 backsliders (perhaps fifty families or more), and haled them all to the mission, where lands were allotted to them and where they were carefully guarded by the ecclesiastics—until opportunity came for escape; and to this congregation Escalante added a few Seri prisoners taken on Tiburon, as noted above. In 1727 Brigadier Pedro de Rivera noted a dozen tribes in central Sonora, including the "Seris" and "Tepocas", numbering 21,746 "of all ages and both sexes", all receiving

[1] Rudo Ensayo, Gulteras' translation in Records of the American Catholic Historical Society of Philadelphia, vol. v, 1894, p. 134. Bandelier identified the author as Padre Keutzig, S. J., of Huasavas, eastern Sonora (Final Report of Investigations among the Indians, etc., part 1, in Papers of the Archæological Institute of America," vol. III, 1890, p. 78). The name is written "John Keutzig" in a third-person reference in Gulteras' translation; but an editorial footnote adds, "No doubt a printer's mistake for Keutzig—L. F. B [lark]" (ibid., p. 191).

[2] Noticias Estadísticas del Estado de Sonora, by José Francisco Velasco, Mexico, 1850, p. 124.

[3] Theatro Americano, Descripcion General de los Reynos, y Provincias de la Nueva-España, y sus Jurisdicciones, Joseph Antonio de Villa-Señor, y Sanchez, segunda parte, Mexico, 1748, p. 382.

[4] Op. cit., p. 128.

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the ministrations of "los Padres de la Compañia de Jesvs". He added: 1757
"Besides the above-named Indians there are found in the middle part of the province of Ostimuri, in the western part bordering on the Gulf of California, certain nations of pagans in small numbers; they are the Salineros, Cocomaques, and Guaymas."[1] Neither the numbers of Seri and Tepoka at the missions, nor the respective proportions at the missions and on the native habitat, were recorded by the brigadier. According to Alegre, eighty families (including those transferred from Pitic) were gathered at Populo and Angeles, under the specially sedulous efforts of Judge José Rafael Gallardo, in 1749;[2] although Padre Nicolas de Perera, "who for the longest time bore with their insolent behavior, . . . did not see more than 300 hundred persons when they had all come together".[3] It would appear that the great majority of the Populo and Angeles converts belonged to the Tepoka, while others belonged to the Guayma and Upanguayma, with whom the Seri were at war about that time;[4] yet there were enough representatives of the Seri to gain a shocking character for sloth, filth, thievery, treachery, obstinacy, and drunkenness. Assuming that a quarter of the converts were Seri (and this ratio is larger than any of the known records would indicate), there could hardly have been more than a hundred of the tribe gathered about the several missions at this palmiest time of Jesuit missionizing; and the records show that by far the greater portion of these were women, children, cripples, and viejllards, the warriors being commonly slain in the vigorous proselyting expeditions conducted by the civil and military coadjutors of the padres. If at this time the Seri population reached the 2,000 estimated by Dávila[5] and others, the proportion of proselytes (or apostates from Seri naturalism) was but 5 per cent of the tribe and naturally comprised the less vigorous and characteristic element. The writer of "Rudo Ensayo" reckons that during six years preceding 1763 the Seri stole from the settlers (for eating, the sole use to which they put such stock) "more than 4,000 mules, mares, and horses",[6] i. e., enough to sustain two or three hundred people, or a full thousand if this meat formed no more than a fourth or a fifth of their diet, as the contemporary records imply—and this was after the "extermination" of the Seri by Parilla in 1750.

Evidently the good padres greatly overestimated their knowledge of and influence on this savage yet subtle tribe; actually they touched the Seri character only lightly and temporarily, contributing slightly

[1] Diario y Derrotero de la Caminada, Visita, y Observado en el Discurso de la Visita general de Provincias, situadas en las Provincias Internas de Nueva España; Guatemala, 1808, leg. 1514-1519. 113
[2] Historia de la Compañia de Jesus, vol. iii, p. 280.
[3] Rudo Ensayo, p. 102.
[4] Bancroft, op. cit., vol. i, pp. 552-553. The former were annihilated or driven into the Yaqui country by 1763 (Rudo Ensayo, p. 100).
[5] Sonora Historica y Descriptiva, p. 218.
[6] Ibid., p. 146.

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to spontaneous acculturation, but never coming into relation with the tribe as a whole.

And despite the efforts of both soldiers and priests, the savages continued to ravage the settlements, to repel pioneering, to decimate the herds and murder the vaqueros who sought to protect them, to plunder everything portable and ambuscade punitive parties, and even to engage in open hostilities. "In 1730 the Seris, Tepocas, Salineros, and Tiburon islanders kept the province in great excitement, killing twenty-seven persons and threatening all the pueblos with a general conflagration";[1] and both before and after this date the recorded sanguinary episodes were too frequent for even passing mention, while the indications between lines point to robberies and assassinations and minor conflicts too many for full record even by the patient chroniclers of the time.

Sometime about the beginning of the eighteenth century the Spanish settlements pushed down Rio Sonora beyond the confluence of the Opodepe to the last water gap, made conspicuous by a marble butte in its throat and by the fact that here the sometimes subterranean flow always rose to the surface in a permanent stream of pure and cool water. Here, according to Padre Dominguez, "it was attempted to locate the Presidio of Cinaloa against the rapacity of the Zeris, Tepocas, and Pimas; and here General Idobro, of Cinaloa, wished to found a pueblo of Tiburon Indians, brought for the purpose [probably from Populo and Angeles] that they might be kept in subjection, but most of them returned to their island and attempted to make attacks from their hiding places."[2] Nevertheless, the padre found 29 married persons, 14 single, and 99 children of these "races" at the rancho. At the time of his visit the place was known as Rancho del Pitquin; later it became the Pueblo of Pitic, or Pitiqui, or Pitiquin, or San Pedro de Pitic,[3] and long afterward the city of Hermosillo, while the beautiful marble butte was christened Cerro de la Campana.

By 1742 the settlements were so far extended as to warrant the establishment of a royal fort in the water-gap at Pitic;[4] and the ecclesiastics kept pace with the military movement by founding the mission of San Pedro de la Conquista,[5] or "Pueblo de San Pedro de la Conquista de Seris"[6] (now abbreviated to "Pueblo Seris", or merely "Seris"); both fort and mission being designed primarily for better

[1] Bancroft, op. cit., p. 517.

[2] Diario del Padre Dominguez en Sonora y Sinaloa, 1731; manuscript in archives of the Bureau of American Ethnology.

[3] This place on Rio Sonora is not to be confounded with the Rancho (afterward Pueblo) of Pitiqui or San Diego de Pitiqui (The Geographical and Historical Dictionary of America and the West Indies * * * of Colonel Don Antonio de Alcedo, by G. A. Thompson, London, 1814, vol. IV, p. 150), or Pitic chiquito (Bol. Soc. Mex. Geog. y Est., vol. VIII, 1860, p. 434), or Pitiquin, now the town of Pitiquito on Rio San Ignacio.

[4] Alegre, Historia de la Compañia de Jesus, tomo III, p. 288; Villa-Señor, Theatro Americano, segunda parte, p. 302; Rudo Ensayo, p. 108.

[5] Bancroft, op. cit., vol. I, p. 528.

[6] Reise-Erinnerungen und Abenteuer aus der neuen Welt, von C. A. Pajeken. Bremen, 1851, p. 97.

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protection of the settlements against Seri sorties. These outposts brought the missionaries and their soldier supporters a day's journey nearer Seriland, i. e., to within some 27 leagues (71 miles), or two days' journey, from Bahia Kino and the desert boundary of the Seri stronghold; and although neither fort nor mission was continuously maintained, the event marked a practically permanent advance on the "despoblado" previously despoiled and desolated by the wandering Seri.

Even before this date friction between missionaries and laymen had grown out of the ecclesiastical charity for a people whose repeated atrocities placed them outside the pale of sympathy on the part of the industrial settlers; and this friction was felt especially about the new presidio. In 1749 Colonel Diego Ortiz Parilla became governor of Sonora, and began a rigorous rule over civilians, soldiers, ecclesiastics, and Indians; and when the 80 families (classed as Seri, but mainly of Tepoka and other tribes) domiciled at Pópulo were dissatisfied with his transfers of land and people, he promptly met their protests by arresting them and transporting the greater part of them, including all the women and children, to various places, "some even in Guatemala and other very distant parts of America."[1] Naturally this was resented, not only by the Seri messmates at the missions, but to some extent by their kinsmen over the plains and along the coast, with whom sporadic communication was maintained—chiefly through spies, but partly by occasional escapes of the practically imprisoned proselytes and the less frequent but more numerous captures of new converts; and the Seri raids became more extended and vindictive, reaching northward to Caborca, northeastward to Santa Ana and Cucurpe, and eastward into the fertile valley of Rio Opodepe at several points. Deeply incensed in his turn, Parilla undertook a war of extermination—a war interesting not merely as an episode in Seri history, but still more as a type of the Seri wars of two centuries. Organizing a force of 500 men, and bringing canoes from Rio Yaqui, he planned an expedition to Tiburon, to cover two months—and returned with 28 prisoners, "all women and children and not a single Seri man"; though he reported killing 10 or 12 warriors in action (according to other accounts the slain comprised only 3 or 4 oldsters). These women and children were domiciled at the pueblo of the Conquest of the Seri, which in current thought thenceforth became the pueblo of the Seri, and gradually passed into lore and later into history as the home of the tribe rather than the mere penitentiary which it was in fact. The padres waxed satirical over this quixotic conquest: Alegre recounts that—

> The good governor returned so vainglorious over his expedition that it was even said he would punish anyone intimating that there was a *Seri left in the world*, and proclaimed through all America and Europe that he had extirpated by the roots that infamous race. . . . The truth is that the force, on reaching Tiburon, ascertained that the enemy had retreated to the mountains; that some of the 75 Spaniards who accompanied the governor could be induced, either by entreaties or

[1] Rodo Ensaya, p. 194; Bancroft, op. cit., vol. i, p. 533.

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175 threats, to ascend in search of the Seri; but that some of the Pima allies undertook to beleaguer the mountains, those, with one or another of the officers, being the only ones that saw the face of the enemy, and even these on two occasions only. From the first sally they returned reporting that they had killed 3 of the Seri, and their empty word was accepted; the second time they were so fortunate as to discover a village of women and children, whom they took prisoners, and returned declaring that the men had been left dead on the field. This famous conquest, which the manuscript drawn up by the commander of the expedition did not hesitate to compare with those of Alexander and Cæsar, who were as nothing beside the governor of Sonora, intoxicated much more the allied chief of the Pima, who had taken the leading part in the final victory.[1]

Eventually the vanity of this chief (Luis, or "Luys de Sarie") led to a revolt on the part of the Pima tribe with the massacre of Padres Tello and Rohen at Caborca.

Ortega was still more sarcastic in his fuller record of the expedition. The skepticism of the padres as to the completeness of Parilla's extermination was well grounded, as was attested by the continuation of Seri sorties with undiminished frequency and by the persistence of hippophagy at the expense of the stockmen as already noted; moreover, in the absence of records of maritime operations, in view of the impracticability of transporting so large a force as that of Parilla on balsas, and in the light of a still common application of the name Tiburon to Sierra Seri and its environs as well as to the island, it would seem to be an open question whether the much-lauded expedition ever attained the insular stronghold, or even reached the seashore. However this may be, the expedition was the first of a long series sent out to exterminate one of the hardiest and acutest of tribes, wonted to one of the hardest and aridest of habitats; and, save in the subsequent advertising, all have yielded results more or less similar.

Another curtailment of the range of the Seri dates from the refounding of the mission of "San José de Guaimas"[2] (on the site of the present Guaymas) in 1751, and the establishment of a "rancho called Opan Guaimas" some distance up the coast about the same time; the site of the mission being that of a sanctuary located by Kino in 1701, and revisited by Salvatierra and Ugarte, though never continuously maintained. True, the padre and the ranchero suffered from the Seri, who displaced the former, killed eight of his converts, burned the church, and scattered the hundred families of the pueblo, afterward keeping the Spaniards at a distance for ten years;[3] yet the settlers only returned with new vigor, and gradually gained the strength requisite for holding the town. Naturally the belligerency of the Seri in this vicinity impressed the state authorities with the desirability of further "extermination"; and when in 1756 a band of the Seri, after a hypocritical suit for peace, entrenched themselves among the all but inaccessible

[1] Historia de la Compañía de Jesus, tomo III, pp. 289–291; *cf.* Apostólicos Afanes de la Compañía de Jesus, escritos por un Padre de la misma Sagrada Religion de su Provincia de Mexico; Barcelona, 1754, pp. 388–393.

[2] Rudo Ensayo, p. 229 (misspelled "Guisamas").

[3] Bancroft, op. cit., vol. i, p. 554.

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rocks and barrancas of Cerro Prieto (a rugged sierra midway between Pitic and San José de Guaimas, which for this reason came to be regarded—erroneously—as the headquarters of the tribe), Don Juan Antonio de Mendoza, then governor of Sonora, sent out a strong body of soldiery to dislodge or destroy them; but after 200 of the soldiers were ambushed and 24 of them wounded, the expedition returned to the capital, San Miguel de Horcasitas. Stung by this defeat, Mendoza reorganized his force and led the way in person to Cerro Prieto, where one of the four parties into which the force was divided wrought such execution that, in the following May, there were seen the bodies of enemies "dead and eaten by animals, dead and partly buried in the earth, dead lying in caves, and dead in the water-pockets of the sierra".[1] In this battle Mendoza himself was ambushed and attacked by three Seri archers, escaping only by the mediation of his saint ("por medio de mi santo"); but during the ensuing night he carried out the ingenious ruse of beating drums in different parts of the canyon, which reechoed from the rocky heights with such terrifying effect that the enemy fled, leaving him in victorious possession of the field.

Again in 1760, when a band of the Seri (supposed to be temporarily combined with the Pima) took refuge in Cerro Prieto, Governor Mendoza attacked them with over 100 men; but a band of 19 Seri successfully held this force at bay for several hours, until their chief (called El Becerro) fell wounded and dying, yet retaining sufficient vitality to rise, as the Spaniards approached, and transfix Mendoza with an arrow—when the two leaders died together.[2] Mendoza was succeeded by Governor José Tienda de Cuervo, who, in 1761, led a force of 420 men to Cerro Prieto, where a still bloodier battle was fought, the Seri losing 49 killed and 63 captured, besides 322 horses; though the greater part of their force escaped to the island of San Juan Bautista (San Esteban?).[3]

In 1763 Don Juan de Pineda succeeded to the governorship, and obtained the cooperation of a force of national troops under Colonel Domingo Elizondo:

> Headquartering in El Pitiquí, he commenced active war against the said Seris, but was unable to reduce them, because, being separated and dispersed over their vast territory, they wore out the troops, who only occasionally stumbled on one little rancheria or another. For this reason, and because in many years they could not exterminate them, and desiring to leave the country, they opened negotiations with them, making them small presents and offering them royal protection if they would surrender peacefully. Some of them pretended to do this and assembled at Pitiquí, where they remained with the same bad faith as always, fed at the expense of the royal treasury, when the troops retired, leaving the evil uncured, but merely covered.[4]

In the same year Padre Tomás Ignacio Lizasoin reported, for the

[1] Documentos para la Historia de Mexico, cuarta série, tomo i, p. 49.
[2] Historia de la Compañía de Jesus, tomo iii, p. 296.
[3] Ibid., p. 330; Rodo Kenaya, p. 198. It is probable that part or all of the captives were quartered at Pueblo Seri, though the record is silent on this point.
[4] Documentos de Hellotes, op. cit., vol. i, p. 230.

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1775 information of the viceroy, that the ravages of the Seri and other Indians "had caused the almost total abandonment of Pimeria and Sonora provinces", and proposed plans for protection which were apparently never carried out.[1]

The aggressive and bloody policy of Parilla, Mendoza, and Cuervo undoubtedly widened the divergence between the civil and ecclesiastical authorities, and brought to nought the pacific policy of the latter. Inspired by fervid zeal, the good padres stretched the mantle of charity to its utmost over their converts, bringing into the fold all whom they could coax or coerce, and clinging unto all whom they could subsidize or suppress. Uninformed or misinformed concerning the extent of Seriland and the numbers and real traits of its inhabitants on their native heath, and professionally prone to see the most favorable side of the situation, they imagined themselves making conquest over a cruel and refractory tribe; yet careful review of the records indicates that they deluded themselves, and in some measure distorted history, through overweening notions concerning their progress in evangelizing the Seri. Actually, their converts were the lame and halt and blind left behind in the harder-pressed raids, captives taken in battle by the intrepid Escalante and other soldiers, apostates and outlaws ostracized and driven off by their fellows, spies sent out to find the way for further rapacity,[2] and the general riffraff and offscouring of the tribe, who esteemed parasitism above the hereditary independence of their kin. This condition is attested by later examples; it is also attested by the rapidly growing divergence of the ecclesiastical and civil policies; it is equally attested by at least partial recognition of the situation on the part of several of the padres: Villa-Señor, writing about 1745, parades the mission and two pueblos of the tribe, and says, "All the Ceris Indians are Christians" ("Todos los Indios Ceris, son Cristianos");[3] yet he adds that "it is rare to find one who does not cling to the idolatry of their paganism", and elsewhere describes the great "despoblado" extending to the coast as inhabited by pagan Seri and Tepoka Indians ("habitado de los Indios Seris, y Tepocas, Gentiles").[4] Venegas, writing about 1750, refers to "the Seris and Tepocas, who are either infidels or imperfectly reduced, and tho' Father Salva Tierra civilized them and the missionaries have baptized many, they still retain such a love for their liberty and customs as all the labours of the missionaries have not been able to obliterate, so that it is impossible to incorporate them with the missions by mildness";[5] and his last word of them notes their massacre of Padres Tello and Roben in Caborca, and ends

[1] Bancroft, op. cit., p. 595.

[2] Captain Fernando Sanchez Salvador, in his official Representations to the Crown in 1751, complains that these Indians "are allowed on frivolous pretexts to visit the presidios, and they make use of the privilege to discover weak points and to plan attacks" (Bancroft, op. cit., p. 542).

[3] Theatro Americano, segunda parte, p. 561.

[4] Ibid., p. 562.

[5] History of California, vol. ii, p. 339.

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with an invocation "for the complete reduction of these unhappy savages, now involved in the shadow of death".[1] So, also, the talented author of "Rudo Ensayo", writing in 1763, says of the Seri: 175

They have always been wild, resisting the law of God, even those who had removed from among them to Populo, Nacameri, and Angeles, and who constituted the smallest part of the nation. And even these few, in order to have constant communication with and give information to their heathen relatives, used to go, as if they could not arouse suspicion, to spy out in other villages what they wanted to know for their plans, and immediately giving the intelligence they obtained to the runaway Indians, these would act accordingly and nobody could guess how they acquired the necessary information.[2]

Again, in summarizing the relations with the tribe, this anonymous author naively remarked:

And at the present day, notwithstanding that in different encounters during the campaign of November, 1781, and before and since then, more than forty men have been killed by our arms and over seventy women and children have been captured, still they are as fierce as ever and will not lend an ear to any word of reconciliation.[3]

In general, the Jesuit history of the Seri is clear enough with respect to the small extruded fraction, but nearly blind to the normal tribe; there is nothing to indicate clear recognition of Serilandi as a hereditary habitat and stronghold; yet the records are such as to define the salient episodes in Seri history as seen from a distantly external view-point. Nor can it be forgotten that the erudite evangelists made a deep and indelible impression on the intellectual side of Sonora, and drew the strong historical outline on which their own relations to the civil authorities on the one hand and to the Seri Indians on the other hand are cast by the light of later knowledge. [114]

The discordance between the civil and military authorities and the dominant ecclesiastical order of Sonora sounded to Ciudad Mexico, and eventually echoed to Madrid, and was doubtless one of a series of factors which led to the needlessly harsh expulsion of the scholarly Jesuits in 1767—and hence to a hiatus in the history of the province and its tribes.

Although the padres knew little of the habits and customs of the "wild" Seri save through hearsay, some of their notes are of ethnologic value: Villa-Señor located them on the deserts extending from Pitic and Angeles to Tepopa bay, and added: [114]

They hold and occupy various rancherias, and subsist by the chase of deer, liebre [mule-deer], rabbits, hares, and other animals, and also on the cattle they are able to steal from the Spaniards, and on fish which they harpoon with darts in the sea, and on the roots in which the land abounds.[4]

Villa-Señor distinguished the "Tepocas", whom he combined with the

[1] Ibid., p. 311. It is improbable that the Seri had anything to do with this particular butchery. According to Coues, the latter padres was killed at Sonoita; and he renders the name "Bueno or Rubios" (in the Trail of a Spanish Pioneer; the Diary and Itinerary of Francisco Garcés, etc., 1900, vol. i, p. 60).
[2] Op. cit., p. 305.
[3] Op. cit., pp. 196-196.
[4] Teatro Americano, p. 405.

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"Guaimas" and "Jupanguaimas". Alegre located the Seri on the coast of the gulf from a few leagues north of the mouth of Rio Yaqui to Bahia San Juan de Bautista (Bahia Kino), adding, "with them may be classed the Guaimas, few in number and of the same language".[1] Writing about the same time, José Gallardo observed: "The distinction is slight between the Seri and Upanguaima, the one and the other having the same idiom" ("Poco es la distincion que hay entre seri y upanguaima, . . . y unos y otros casi hablan un mismo idioma").[2] The author of "Rudo Ensayo" wrote: "The Guaimas speak the same language, with but little difference, as the Seris."[3] He mistook Cerro Prieto as their principal retreat; mentioned the mountains of Bacoatzi Grande, Las Espuelas, and others as other haunts; noted Tiburon and San Juan Bautista (San Esteban ?) islands as less-known shelters, and gave extended attention to "the poison they use for their arrows" as "the most virulent known in these parts"; for "even in cases where the skin only is wounded, the injured part begins to swell, and the swelling extends all over the body to such a size that the flesh bursts and falls to pieces, causing death in twenty-four hours." To test this poison, the Seri "bandage tightly the thigh or arm of one of their robust young men; then make an incision with a flint and let the blood flow away from the wound. When the blood is some distance from the incision, they apply the point of an arrow to it, steeped in the deadly poison. If at the approach of the point of the arrow the blood begins to boil and recedes, the poison is of the right strength, and the man who lends his blood for the experiment brushes it out with his hand to prevent the poison from being introduced into his veins." He was unable "to find out with certainty of what deadly materials the deadly poison is composed. Many a thing is spoken of, such as heads of irritated vipers cut at the very moment of biting into a piece of lung; also half putrefied human flesh and other filth with which I am unwilling to provoke the nausea of the reader." He added the opinion that "the main ingredient is some root."[4] Padre Joseph Ocio, who, with other German evangels including padres Mittendorf, Pfefferkorn, and Ruen (or Rohen), was stationed in northwestern Sonora shortly before the eviction of the Jesuits, was one of the recorders of aboriginal traits and features, though his record (like that of most of his confreres) is impoverished by his failure to discriminate tribes; but one of his notes is specific:

As an extraordinary trapping [Zierde] the Seris pierce the nasal septum and hang small colored stones, which swing in front of the mouth, thereto by strings. A few carry, suspended from the nose, little blue-green pebbles, in which they repose great faith. They prize these very highly, and one must give them at least a horse or a cow in exchange for one.[5]

[1] Historia de la Compañia de Jesus, p. 250.

[2] The Works of Hubert Howe Bancroft, vol. III (The Native Races, vol. III), 1883, p. 704.

[3] Op. cit., p. 366.

[4] Ibid., pp. 197, 198.

[5] Nachrichten von verschiedenen Ländern des Spanischen Amerika, aus eigenhändigen Aufsätzen einiger Missionare der Gesellschaft Jesu, herausgegeben von Christoph Gottlieb von Murr, erster Theil: Halle, 1809, p. 224.

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It is significant fact, and one attesting the physical and intellectual distance of the padres from the normal Seri, that so few notes of ethnologic value were made during the Jesuits' régime. With a single exception, so far as is known,[1] they recorded not a word of the Seri tongue, not a distinctive custom beyond those evidently of common knowledge, none of the primitive ceremonies and ideas such as attracted their coadjutors in Canada and elsewhere. They made no reference to the alleged cannibalism so conspicuous in later lore; but their silence on this point cannot be regarded as evidential, since they were equally silent concerning nearly all the characteristic customs and traits. The neighboring Papago tribe met the invaders frankly as man to man, displaying a notable combination of receptivity and self-containment which enabled them to assimilate just so much of the Caucasian culture as they deemed desirable, yet to maintain their purity of blood and distinctiveness of culture for centuries; the Seri, on the other hand, met the invaders as enemies, to be first feared, then blinded, baited, and bled by surreptitious and sinister devices, and finally to be assassinated through ambuscade or remorseless treachery; and it is manifest that they surpassed the gentle padres in shrewdness and strategy, using them as playthings and tools, and carefully concealing their own characters and motives the while.

With the passing of the Jesuits, the publication of Sonoran records received a check from which the province has never completely recovered. True, the place of the order was partly taken by the Colegio Apostolico de Querétaro, which promptly dispatched fourteen Franciscan friars to Sonora, early in 1768, to take possession of the old missions and to found others;[2] it is also true that civil enactments and commissions, as well as military orders and reports, increased with the growth of population; but comparatively few of the events and actions found their way to the press. Seri episodes continued to recur with irregular frequency; according to Dávila, the Seri outbreaks and wars "exceed fifty in number since the conquest of Sonora",[3] and there are decisive indications that the Franciscan régime was not without its due quota of strife. Moreover, the period was one of somewhat exceptionally vigorous pioneering, of the initiation of mining and agriculture, and of conquest over the "despoblado" formerly ranged and inhabited by the Seri. It was during this period that the Seri were permanently dislodged from their outlying haunts and watering-places in Cerro Prieto; and it was during this period, too, that exploration and settlement were extended to Rio Bacuache with such energy as to displace the Seri from their other outlying refuge in the barrancas of this stream. But, as the events and lines of progress multiplied, the burden for the contemporary chronicler

[1] The Noticia de las Personas que han escrito ó publicado algunas obras sobre Idiomas que se hablan en la Republica (of Mexico), by Dr José Guadalupe Romero, includes a MS. "Vocabulario de las Lenguas Kodeto, Pima y Seris", written by Padre Adamo Gilg (Bol. Soc. Mex. Geog. y Estad., 1900, tomo viii, p. 378).

[2] Dávila, Sonora Histórico y Descriptivo, p. 10; Bancroft, op. cit., p. 672.

[3] Ibid., p. 319.

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augmented without corresponding increase in incentive to writing, and it is little wonder that the custom of writing, copying, manifolding, and printing the contemporary records fell into desuetude.

Despite the meagerness of the Franciscan chronicles, the friars of this order are to be credited with making and recording one of the most noteworthy essays toward the subjugation of the Seri—an essay involving the first and last actual attempt to found a Caucasian establishment within Seriland proper. The ecclesiastical corps, sent out from Querétaro college under the presidency of Fray Mariano Antonio de Buena y Alcalde, reached Sonora early in 1768, and were distributed among the missions to which they were respectively assigned before the end of June; and Fray Mariano participated in the efforts to subdue the Seri ensconced in Cerro Prieto. After some months of apparently nominal siege, the hostiles straggled out of their retreat, whereupon "the governor, seeing them assembled and peaceful, besought the friar to instruct and baptize them";[1] the friar promptly acquiesced, with the provision that he should be furnished with the requisite appurtenances of a mission, including not only a church and sacred ornaments, but a house and living for a resident minister. The requirements delayed procedure, but resulted in the appointment of Fray Juan Crisóstomo Gil de Bernabe (already designated by the Querétaro college as Fray Mariano's successor) to take charge of the Seri mission. "The new president, desiring to gratify his proper zeal and the insistence of the governor as to the need of those miserable Indians for the bread of doctrinism", obtained candles and wine from private benefactors, and, despite his inability to find even a hut for shelter, established a sanctuary in the Ranchería de los Seris (Pueblo Seri) on November 17, 1772:

> It was impossible to satisfy the ambition of the missionaries to catechize all the Indians, because, although the whole nation was peaceable, no small portion of them were devoid of desire to hear doctrinism, as many of them had withdrawn to their ancient lurking haunts, principally on Isla Tiburon, whence they came to the Presidio Horcasitas, making false displays to the governor of great fidelity and obedience, petitioning that they should not be taken from the island, but should be given a minister to baptize them the same as those at Pitic; and they did not wish to join these nor to leave the rocky fastness of their libertinage and asylum of their crimes. . . . To conceal their purposes, they petitioned that a town for them should be established on the opposite coast, where they might assemble on leaving the island. Their request was embarrassing because on examination of the coast there was found only a single scanty spring in a carrizal in a playa-like country [toda la tierra como de playa], with little fuel and no timber.

Not unnaturally Fray Crisóstomo hesitated to locate a mission on the practically uninhabitable site, in which, moreover, "the mission would be of no utility because the Indians did not really wish to leave their island and submit to religious instruction, nor could the coast supply the necessary food, as it was a barren sand-waste, so that it would become

[1] Crónica Serática y Apostólica del Colegio de Propaganda Fide de la Santa Cruz de Querétaro en la Nueva España. . . . escrita por el Padre Fray Juan Domingo Arricivita, 2ª parte, Mexico, 1792, p. 428.

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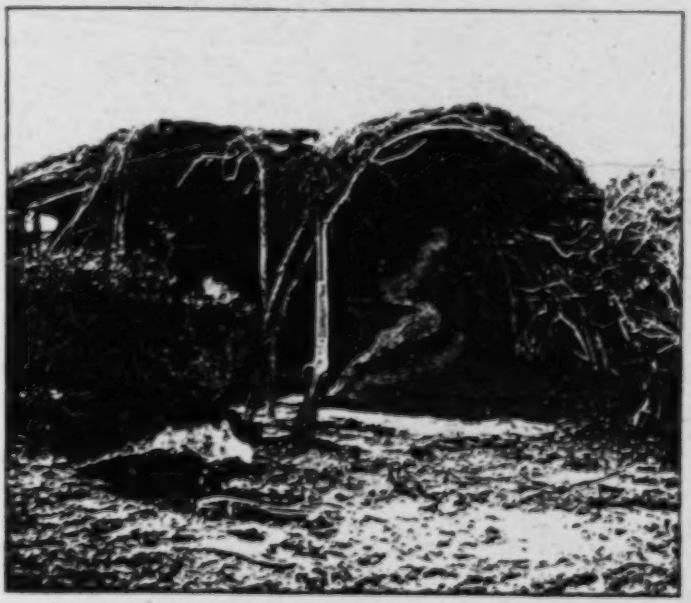
RECENTLY OCCUPIED RANCHERIA, TIBURON ISLAND



TYPICAL HOUSE INTERIOR, TIBURON ISLAND

[p. 80 A]

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necessary for the King to constantly supply provisions, else the converts would have a pretext for wandering around and avoiding attention to the catechism." But the governor was obdurate, and only complained to the viceroy and the Querétaro college. Between fires, Fray Cristóbal yielded, and on November 28, 1772, proceeded to Carrizal and established himself as a minister, without company or escort save a little boy to serve as acolyta. "With the aid of the Indios Tiburones the friar erected a jacal [or hut bower][1] to serve as a church, and a tiny hut as a habitation, and began immediately, with the greatest kindness, to convoke the people for religious instruction, only to see that the desires they had expressed to the governor to become Christians were not deep enough to bring them from their island to attend services—except a few who came and took part in the prayers when they thought fit. But as the congregation at the place was only nominal, and with only three jacales under control, so also was the instruction they sought; and because of both the condition of the land and their wandering instinct, which is in them almost a necessity and more excusable than in other Indians, because neither within their island nor on the coast is the territory fit for cultivation, and still less for the stability essential to civil and political life", the missionary naturally despaired of substantial progress; indeed, "the only fruit for which he could hope, under his mode of living, was reduced either to a child or an adult whom he could, in special circumstances, shrive in extremis." In this disheartening condition the friar spent the winter from near the end of November to March 6, 1773. Then, as appears from an official declaration, there came to him by night an Indian called Yxquisis, with a trumpery tale about a revolt on the part of the Pisto and Apache, which led the guileless friar away from the poor shelter of his jacal under the guidance of the Indian. At the inquest Yxquisis confessed, although with many falsehoods ("con muchas mentiras"), that he had stoned the friar, but "without stating any motive for committing such an atrocious crime". Yet even before the story reached Horcasitas two "Indios del Tiburon", supposed to be implicated, were beaten to death with sticks on the spot in which the friar's body was found,[2] and the body was buried by a chief of the tribe. And so ended the mission of Carrizal in the land of the Seri.

Traditions of this Franciscan mission still linger about Hermosillo and at Rancho San Francisco de Costa Rica, and they, like Arricivita's account, indicate that the churchly jacal was planted either hard by Pozo Escalante or at a traditional Ojito Carrizal (Aguaje Parilla, not found in the surveys of 1895), supposed to lie a few miles farther northwestward. All the probabilities point to Pozo Escalante as the site, despite the fact that no cane now grows there; the topographic description applies exactly, while the state of the padre's remains,

[1] Doubtless the structure approached the conventional Seri pattern, illustrated in the accompanying plate VI, from photographs taken on Tiburon in 1895.

[2] Arricivita, op. cit., pp. 626-628, 670-671.

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when exhumed six months later, attests the dry and saline soil in this vicinity. None of these conditions exist about Aguaje Parilla at the southeastern base of Sierra Seri. The present absence of living carrizal at Pozo Escalante is of little significance, since the extinction of the plant might easily have been wrought either by the stock of later expeditions or by the rise of the salt-water horizon accompanying the local subsidence of the land; certainly dried roots and much-weathered fragments of cane still remain about the margin of the playa extending southward from the well.

The episode culminating in the assassination of Fray Crisóstomo was characteristic: beset at all points and rankling under the invasion of their range, the Seri sought anew to delude the governor with fair words, using their own reprobates and apostates at Pitic and elsewhere to point their asseverations; and remembering the facility with which the earlier ecclesiastics were duped into unwitting allies, they made the kindly and long-suffering friars the immediate object of their petitions. But some of the tribe galled under the lengthy and still lengthening blood-feud too deeply to tolerate the alien presence; and one of these, either alone or supported by the alleged accomplices or others, tried a typical ruse, suggested less by need than inherited habit; for the friar was helpless in their hands, and might have been slain in his jacal as easily as in the open. Typically, too, the assassination initiated or deepened factional dissension and further bloodshed.

[114] The Franciscan records are of even less ethnologic use than those of the Jesuits. Beyond his incidental expressions concerning Seri character and custom in connection with the founding and abandonment of Carrizal, it need only be noted that Arricivita makes hardly a reference to the Tepoka, but habitually combines the "Seris y Pimas"—the latter perhaps representing the "confederate Pima" of "Rudo Ensayo", or the Sobas occupying the lower reaches of Rio San Ignacio about that time.

Among the meager and scattered Franciscan records is a letter from Fray Francisco Troncoso, dated September 18, 1824, which is of note as containing an estimate of the Seri population at the time:

> This island [Tiburon] has more than a thousand savage inhabitants, enemies of those of California, and it has frequently occurred that, on balsas of reeds, . . . they have crossed over to invade the mission [of Loreto], killing and robbing some of those they found there.[1]

The record is of value also as indicating that the Seri traversed the gulf freely, and raided settlements and tribes of the peninsula ruthlessly as those of the mainland.

The Carrizal episode was followed by a half century of comparative silence concerning the Seri, though various contemporary records and later compilations indicate customary continuance of the Seri wars.

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[1] Incorporated in Escudero, Noticias Estadísticas de Sonora y Sinaloa, Mexico, 1849, p. 16.

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Among the more useful compilations is that of Velasco; and among the more important episodes noted by him was the Cimarrones-Migueletes war of 1780.[1] The Cimarrones included the greater part of the Seri of Tiburon and the Tepoka (then estimated at 2,000 of both sexes),[2] together with the "Pimas called *Pintos*, of the pueblos of Cavoras, Tubutama, Oquitoa, etc", and supposedly certain other representatives of the Pima and Apache, who had shortly before marauded Magdalena and sacked Saric, killing a dozen persons;[3] the Migueletes were national troops assigned to Sonora under the command of Colonel Domingo Elizondo. The forces met in several bloody battles in Cerro Prieto, at Jupanguaimas, and at Presidio Viejo; and the former, or at any rate the Seri, were once more "annihilated" ("reducidos a nulidad"). Nevertheless, the hydra-headed tribe retained enough vitality in 1807 to induce Governor Alejo Garcia Conde to send an army of a thousand men to Guaymas, en route to Tiburon, to repeat the extirpation—though the expedition came to naught for international reasons.

Among the more useful contemporary records is an unpublished manuscript report by Don José Cortez, dated 1799, found in the Force library, translated by Buckingham Smith, and abstracted by Lieutenant A. W. Whipple for the Report of the Pacific Railway Survey. A subsection of this report is devoted to "the Seris, Tiburones, and Tepocas". It runs:

> The *Seri* Indians live towards the coast of Sonora, on the famous Cerro Prieto, and in its immediate neighborhood. They are cruel and sanguinary, and at one time formed a numerous band, which committed many excesses in that rich province. With their poisoned shafts they took the lives of many thousand inhabitants, and rendered unavailing the expedition that was set on foot against them from Mexico. At this time they are reduced to a small number; have, on many occasions, been successfully encountered by our troops; and are kept within bounds by the vigilance of the three posts (*presidios*) established for the purpose. None of their customs approach, at all, to those of civilization; and their notions of religion and marriage exist under barbarous forms, such as have before been described in treating of the most savage nations. The *Tiburon* and *Tepoca* Indians are a more numerous tribe, and worthy of greater consideration than the Seris, but their bloodthirsty disposition and their customs are the same. They ordinarily live on the island of Tiburon, which is connected with the coast of Sonora by a narrow inundated isthmus, over which they pass by swimming when the tide is up, and when it is down, by wading, as the water then only reaches to the waist, or not so high. They come onto the continent, over which they make their incursions, and, after the commission of robberies, they return to the island; on which account no punishment usually follows their temerity. It is now twenty-three or twenty-four years since the plan was approved by His Majesty, and ordered to be carried out, of destroying them on their island; but, until the present season, no movement has been made to

[1] Noticias Estadísticas del Estado de Sonora. Mexico, 1850, p. 124 et seq.

[2] Ibid., p. 132.

[3] Bancroft, op. cit., vol. II, p. 662. It is incredible that such a confederation of so incongruous elements could ever have been effected; it is incomparably more probable that there was a succession of outbreaks of the Seri, Pima, and Apache, each stimulated by the removal of soldiers for defense against the other enemies, just as Seri outrages follow Yaqui outbreaks today; but it was undoubtedly a custom of the times (a custom still existing) to connect the several enemies in current thought and speech.

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put it into execution. To this end the troops of Sonora are being equipped; a corvette of the department of San Blas aids in the expedition and two or three vessels of troops from the companies stationed at the port of that name on the South sea.[1]

The record is significant as voicing an ill-founded discrimination of the wandering Seri from the inhabitants of Tiburon, as echoing persistent conception of Tiburon as a peninsula, and as summarizing the characteristics of the tribe recognized at the end of the last century.

Meantime population and industries increased, while civil and military development pursued its course; the Presidio of Pitic expanded into a pueblo, and later into the city which gradually adopted the cognomen of General José María Gonzalez Hermosillo, a hero of Sonora in the stirring times of 1810–1812; Pueblo Seri became Mexicanized, retaining only a few Seri families in 1811, according to Manuel Cabrera;[2] Guaymas grew into a port of some commercial note; pearl fishing progressed along the coast and prospecting in the interior; despite constant harrying by Seri raids, the rancho of Bacuachito (probably the Bacoachizo of Escudero[3]) became a flourishing pueblo; and plans for ports in the northern gulf were broached and even tested. Moreover, the dawn of the nineteenth century stirred scientific interest in the native tribes, including the obstinate owners of Tiburon—an interest stimulated by Humboldt's American journeys of 1803.

Combining earlier cartography (originating with Kino) and persistent tradition up to the beginning of the nineteenth century, Humboldt mapped "Isla de Tiburon" nearly a degree too far northward, and separated from the mainland by a greatly exaggerated strait. The land portion of the map is strikingly defective, revealing in numerous imaginary mesas the author's penchant for Mexican plateaus, while "Rio Hiaqui" ("de Yaqui ou de Sonora" in the text) is combined with Rio Sonora and given an intermediate position, and "Rio de la Asuncion" (Rio San Ignacio) is represented as passing through an estuary into the gulf just off the northern end of Tiburon; the "Indiens Seris" being located on a figuentary mesa north of the latter river and due west of Cabeora, Pitic (apparently a composite of San Diego de Pitic, or modern Pitiquito, with San Pedro de Pitic, or modern Hermosillo), and Altar.[4] His text corresponds:

On the right bank of Rio de la Asuncion live some very bellicose Indians, the Seris, to whom many Mexican savants ascribe an Asiatic origin by reason of the analogy offered by their name with that of the Seri located by the ancient geographers at the base of the Ottorocorras mountains.[5]

[1] Reports of Explorations and Surveys to ascertain the most practicable and economical Route for a Railroad from the Mississippi River to the Pacific Ocean, vol. iii, part 3: Report upon the Indian Tribes, 1855, pp. 122–123. The original Cortés manuscript is now in the Library of Congress.

[2] In Velasco, op. cit., p. 137.

[3] Noticias Estadísticas de Sonora y Sinaloa, Compiladas y Ampliadas para la Comision de Estadística Militar, por el Lic. D. José Agustin de Escudero; Mexico, 1849, p. 88.

[4] Atlas Géographique et Physique du Royaume de la Nouvelle-Espagne, par Al. de Humboldt; Paris, 1811, carte générale.

[5] Voyage de Humboldt et Bonpland, troisième partie: Essai Politique sur le Royaume de la Nouvelle-Espagne, tome i; Paris, 1811, pp. 396–397.

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Naturally most of the scientific inquiries of the time were, like those of Humboldt, based on tradition rather than on direct observation. [114]

Toward the end of the first third of the century an important contribution to actual knowledge of Seriland and the Seri at last grew out of the pearl industry. In May, 1825, Lieutenant R. W. H. Hardy, R. N., was commissioned by the "General Pearl and Coral Fishery Association of London" to investigate the pearl fisheries of the Californian gulf; and his task was performed with promptness and energy. On February 13, 1826, he visited Pitic (under Hermosillo):

> Half a league short [south] of it is another small place, called the Pueblo de los Céres, inhabited by a squalid race of Indians who are said to indulge in constant habits of intemperance and to have lost the fire of the warrior. In its stead they manifest the sullen stupidity peculiar to those who, feeling themselves unfitted for companionship, strive to vent their pusillanimous rage upon objects the most helpless and unoffending, such as women, children, and dogs, who appear to be the chief victims of their revenge.[1]

His chief object in visiting Pitic was to obtain information concerning Tiburon, its natives, and its pearl-oyster beds; and he was rewarded with characteristic accounts of the ferocity of the tribesmen and their use of poisoned arrows, which he received with some incredulity.[2]

After examining the principal pearl fisheries of the western coast, Lieutenant Hardy reached the "Sal si Puedes" in the throat of the gulf, and, on August 9, "got aslant of wind, which carried us up to the northwest end of Tiburow island"[3]—i. e., apparently over the precise route sailed by Padre Ugarte in 1721. Anchoring on the island, he had the good fortune first to meet a native able to speak Spanish, and later to successfully treat the sick wife of the principal chief, after which he was treated with great consideration, and—unwittingly on his part—adopted into the tribe as a member of the chief clan by the ceremony of face painting, the symbol being that of the turtle totem, to judge from the superficial description. Taking slightly brackish water, just as Ugarte had done one hundred and five years before, and arousing his crew, he spent the night near the rancheria (evidently in Bahia Agua Dulce). Next morning he "traveled over the greater part of the island" (!) in fruitless search for pearls and gold, and in the afternoon "got under weigh, and stood into a bay of the continent to the northeast of the island," discovering and naming "Sargent's Point", together with "Cockle Harbour", and "Bruja's bay" in the lee of the point, and also "Arnold's Island"; this island being apparently the present prominent cuspof Punta Sargent, now connected with the mainland by a continuous wave-built bar rising a little way above reach of tide. Anchoring in the bay named from his vessel (*La Bruja*), he examined the adjacent shore, ascertaining that "there is no fresh water near the spot, except

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[1] Travels in the Interior of Mexico in 1825, 1826, 1827, and 1828; London, 1829, p. 95.
[2] Ibid., p. 107.
[3] Ibid., p. 280.

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during the rainy season, which only lasts about a month or six weeks", nor "any vestige of Indians to be seen except a solitary hut erected by the Tiburons to serve them when they go there to fish"; and, noting the report that Padre Kino had visited this point, he quite appositely questioned the truth of the tradition, partly on the ground of the absence of fresh water, partly because "the Tepoca Indian establishment" mentioned in the tradition "is many leagues farther to the northward." Awakened by an approaching storm, he was under way next morning at daylight, and, getting out of the "bad holding ground", was caught by a gale and carried back to his "old anchorage in Freshwater Bay", where he found the Indians rejoicing over the success of a ceremonial incantation to which they ascribed his return. The reconnaissance map is ill-drawn, locating "Fresh Water B." on the mainland side and apparently combining "Sargent's Point" and "Arnold's Island" as "Sargents I."; "San Miguel Pt." is properly located, and idealized route lines traverse the "Canal peligroso de San Miguel" (El Infiernillo), which is of greatly exaggerated width. The careful itinerary shows, however, that Hardy scarcely entered this strait, and made but three or four anchorages in the vicinity—i. e., in Bahia Agua Dulce, in Bahia Bruja, probably in Cockle harbor (or "Cochla Inlet"), and finally off Isla Patos.

Hardy's notes on the Indians are first hand, and hence of exceptional value. He says:

> The Indians on the island of Tiburon are very stout, tall, and well-built fellows, exceedingly like the Twalchil tribe of Indians in Patagonia, and with a language so like theirs that I imagined I was transported back into those wild regions. They by no means look so ferocious as they are represented, and there is something peculiarly mild in the countenances of the females. Their dress is a sort of blanket, extending from the hips to the knees. But most of the old women have this part of the body covered with the skins of the eagle, having the feathers turned *towards the flesh*. The upper part of the body is entirely exposed, and their hair is dressed on the top of the head in a knot which greatly sets off the effect of their painted faces. The men use bows and stone-pointed arrows; but whether they are poisoned I do not know. They use likewise a sort of wooden mallet called Macána, for close quarters in war. They have a curious weapon which they employ for catching fish. It is a spear with a double point, forming an angle of about 5 degrees. The insides of these two points, which are 6 inches long, are jagged; so that when the body of a fish is forced between them it can not get away on account of the teeth.[1]

He saw "about fifteen or twenty canoes made of three long bamboo bundles fastened together", and observed that, when engaged in turtle fishing, the Indian "paddles himself from the shore on one of these by means of a long elastic pole of about 12 or 14 feet in length, the wood of which is the root of a thorn called mosquite, growing near the coast", this pole serving also as a harpoon shaft, provided with a harpoon head and cord, such as those still in use. Respecting the invocatory appurtenances, he says:

> My attention was directed by the old women to a pile of bushes outside the hut, which had a staff of about 5 feet in length sticking up through the center. From

[1] Op. cit., p. 388-389.

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the upper end of the staff was suspended by a cord 12 or 14 inches long a round stone ball, and to this ball was fastened another string furnished with bits of cork, surrounded with small feathers stuck into them at the distance of about 3 inches apart: the only use of the stone ball being to prevent the wind from blowing out horizontally the string which was furnished with feathers. . . . Upon examining the bushy pile, I discovered a wooden figure with a carved hat, and others of different shapes and sizes, as well also as feathers bags, the contents of which I was not permitted to explore.[1]

He also mentions that "in their festivities the Indians wear the head (with the horns on)" of the buck or male deer. He adds:

It is believed that the Córa Indians have discovered a method of poisoning their arrows, and that they do it in this way: They kill a cow and take from it its liver. They then collect a number of rattlesnakes, scorpions, centipedes, and tarantulas, which they confine in a hole with the liver. The next process is to beat them with sticks in order to enrage them, and being thus infuriated, they fasten their fangs and exhaust their venom upon each other and upon the liver. When the whole mass is in a high state of corruption the old women take the arrows and pass their points through it. They are then allowed to dry in the shade, and it is said that a wound inflicted by them will prove fatal. Others again say that the poison is obtained from the juice of the yerba de la flécha (arrow wort).[2]

He purchased some of the arrows, which were stone-tipped, and had "certainly had an unguent applied to them".

He was impressed by indications of family affection, and noted the custom of having two wives. Concerning tribal relations he says:

These people have been always considered extremely ferocious, and there is little doubt, from their brave and warlike character, that they may formerly have devastated a great part of the country; but in modern days their feuds are nearly confined to a neighboring tribe of the same name as themselves (Córas), who speak the same language and in all probability originally descended from the same stock. They are said to be inferior to those of this island both in courage and stature, and they are never suffered to cross the channel. From what I was told . . . the Tiburon Córas have lately returned from a sanguinary war with the Tépoca Córas, in which the former were victorious.[3]

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Later in his itinerary Hardy noted a typical Yaqui revolution, with a characteristic effort to secure the cooperation of the Seri.[4] He defined the Seri habitat as "the island of Tiburon, the coast of Tepoca, and the pueblo of Los Céres, near Pitic";[5] and he estimated the population at "3,000 or 4,000 at the very utmost",[6] and quoted the estimate of Don José María Retio, viz, that the Seri population of Tiburon was 1,000 to 1,500.[7]

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Like most of those visitors to the Seri who have returned to tell their tale, Hardy "praised the bridge that carried him over" and gave the tribe passable character—worse, of course, than that of any other, yet hardly so bad as painted at Pitic.

A noteworthy traveler in western America during 1840–1842 was M. Duflot de Mofras, an attaché of the French legation in Mexico. He

[1] Op. cit., pp. 294–295.
[2] Ibid. pp., 295, 296.
[3] Ibid., pp. 296, 297.
[4] Ibid., p. 305 et seq.
[5] Ibid., p. 457.
[6] Ibid., p. 458.
[7] Ibid., pp. 293, 540.

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traversed the Californias and entered Sonora, and while he failed to see Sertland, he made a note on the tribe, valuable as a current estimate of the population:

> At the gates of the city of Hermosillo is established a Mission which contains 500 Seri Indians; 1,000 of them inhabit the coast to the north of Guaymas and Île du Raquin (Isla del Tiburon).[1]

The next noteworthy episode in the external history of the Seri chronicled in the civil records of Sonora culminated in 1844. "The above-named Seris, although their number never became important, did not abandon their propensity to revolt, and, while they never rose en masse, made many factional uprisings. Ultimately . . . they displayed such boldness, robbing ranches, assassinating all they encountered, assaulting on the roads arrieros and other travelers", that a considerable force was sent against them from Hermosillo under the direction of Captain Victor Araiza. It was planned to support this land force by a sea party from Guaymas, but delays and misunderstandings caused the practical abandonment of the plan. Tiring of the delay, Araiza "declared war on the Indians, surprising them on Punta del Carrizal, killing 11, including several innocent women and children", and taking 4 captives of from 1 to 11 years in age; whereupon the army returned to Hermosillo.[2]

Disapproving of this undignified and inhuman crusade, the acting governor, General Francisco Ponce de Leon, planned a still more vigorous campaign by land and sea for the purpose of capturing the entire tribe and transporting them to Pueblo Seri, where a few of their kin were still harbored.[3] The command was intrusted to Colonel Francisco Andrade, who took personal charge of the land force, including 100 infantry from Guaymas, 60 infantry and 30 cavalry from Hermosillo, and considerable corps from Horcasitas and Altar. The naval auxiliary, in charge of Don Tomás Espence,[4] pilot, comprised a schooner of 12 tons; two launches, one carrying a 4-pound cannon and the other a 2-pound falconet; and one rowboat. On August 11, 1844, Espence sailed from Guaymas, and six days later cast anchor at the embarcadero (apparently a convenient place on the coast of Bahia Kino due west of Pozo Escalante—the Embarcadero Andrade of figure 1) opposite Tiburon. Andrade marched from Hermosillo August 13,

[1] Exploration du Territoire de l'Ouigan, des Californies et de la Mer Vermeille, exécutée pendant les années 1840, 1841 et 1842, tome 1; Paris, 1844, p. 214.

[2] Velasco, Noticias Estadísticas, pp. 134, 135. This chronicle is rendered peculiarly valuable by supplements in the form of Andrade's and Espence's journals, the latter incorporated (p. 125) after Velasco's own writing was completed. The whole was revised, extended, and republished in the several volumes of the first series of Bol. Soc. Mex. Geog. y Estad., 1851–1865.

[3] On August 14, 1844, Secretary Manuel Cabrera reported that "there are in this pueblo not more than fifteen families of Seris located within its borders, maintaining themselves by the manufacture of earthen ollas and by the garbage of their neighbors, i. e., in time of harvest they glean the wheat and corn left scattered, and the bones, entrails, and hoofs of the stock slaughtered for consumption by the inhabitants." (Incorporated in Velasco, op. cit., p. 138.)

[4] Thomas Spence, of Guaymas; apparently the "Mr. Spence" mentioned favorably by Hardy (Travels, p. 96).

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reached Carrizal August 16, and had detachments at the coast to meet the squadron the next day. Both the vessels and this detachment were out of water, and next morning Espence, taking a few soldiers and an Indian guide, made his way to Tiburon in search of springs; but "on arriving it turned out that the Indian had deceived the party or did not wish to reveal the water." Nevertheless they landed, and Espence hoisted the Mexican flag, "taking possession of the island in the name of the Mexican Government, as the first civilized person to touch the soil." Afterward he divided his force, and he and the sailors wandered far, spending the entire day in vain search for water. Toward evening he "made the men wade into the sea up to their necks, and in this manner mitigated somewhat their burning thirst." Meantime the soldiers had traveled inland some 6 or 8 miles, and found water at the head of an arroyo (apparently a temporary tinaja west of Punta Narragansett), but it was surrounded by Indians, who at once gave battle. Such was their thirst that the soldiers held their ground, drinking one at a time under the protection of their comrades. At length they killed two chiefs (one of whom wore a jacket taken from one Hijar, robbed on the Cienega road a few days before), and succeeded in withdrawing to a small eminence and sheltering themselves behind a rock. Later they effected a retreat without loss, and of course without water, so that they arrived at the shore even thirstier than the sailors. Making their way back to the mainland during the night, the party were relieved the following day by mule-loads of water sent over from Carrizal. On August 20 Colonel Andrade marched to the coast with most of his force, leaving a detachment to guard the route; and the next day Espence transported to the island 125 troops, 16 horses, and some mules and cattle, without other accident than the drowning of a mule and a steer "by the strength of the current". Suffering much from thirst, the troops pressed inland to the watering-place already discovered, where they camped. The next day Colonel Andrade, with Lieutenant Jesus Garcia, worked northward, finding another watering-place (doubtless Tinaja Anita) 3½ leagues distant from the first; and this was made headquarters for the force. Several parties were sent out in search of water and Indians. A few watering-places were found, and a number of women and children with a few men were captured, though the journals indicate that the excursions were of limited extent only. Meantime Espence brought over the baggage and provisions; and on August 24, leaving a launch and a rowboat for the use of the troops, he sailed northward through the strait, and three days later, after passing many bars of sand, entered the bay at the extreme north (Bahia Agua Dulce), opposite Punta Tepopa, finding sharks swarming in thousands. Here he found fresh water 250 paces from the beach—the water which sustained Hardy eighteen years before, and Ugarte over a century earlier still. He found no Indians here, but a number of jacales and balsas (which he

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X175 immediately burned), as well as bones and other remains of horses.[1] On August 28 and 29 Espence skirted the abrupt and rocky coasts of Tiburon, west and south of the northern bay, without seeing trace of natives; on the 30th he reached the western bay, where he found huts and fresh tracks, and captured a woman disabled by snake-bite. Farther down the bay he encountered a considerable party, who first prepared to attack, and then, overawed by his bold front, sued for peace; whereupon he accepted their submission, and sent them with a letter to Colonel Andrade. This affair concluded, and escaping currents so contrary that he was nearly locoed ("por las corrientes encontradas que me volvian loco"),[2] he coasted southward; and on September 1, at the southwestern point of the island, he found another rancheria, and made peaceful conquest of the occupants, whom he also sent with a letter to Andrade. Thence he coasted eastward, and, on September 3, returned to his starting point, "having navigated the island in the period of nine days, having in this time burned 64 huts and 97 balsas, and reduced to peace 104 Indians with their families." The next day he transported the captives to the mainland, "their number, comprising men, women, and children, reaching 384, besides about 37 remaining at large on the island."[3] On September 5 the remaining troops were transferred to the mainland, with the exception of a small detachment, which remained for an unspecified, but evidently short period, in the vain hope of corraling the warriors, with the families to which they belonged, supposed (on grounds not given) to remain on the island. The troops and their captives immediately moved to Laguna de los Cercaditos (probably Laguna la Cruz) to rejoin the cavalry guard; thence, suffering much from thirst, they marched toward Hermosillo, arriving at that place September 12,[4] where the troops and captives formed a triumphal procession, met on the highroad by the merchants and the civil and military authorities, and greeted by the ringing of bells and the firing of rockets, and with music and refreshments.

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[1] The expressions of the journal indicate that Espence was not familiar with the Seri custom of eviscerating and quartering stolen stock, consuming the entrails at once, and transporting the more substantial pieces across the strait on their balsas. Velasco fell into still further error in assuming that the expressions relate to tracks and other indications of the presence of living stock on the island.

[2] Velasco, op. cit., p. 168.

[3] Ibid., p. 169. On the same page Espence classifies the captives as 6 old slaves ("viejos de nuestra obra arriba"), 12 boldanes ("viejos de cuarenta arriba"), 1 blind, 1 idiotic boy, 5 cripples male, 1 cripple female, 180 women, 160 children, and 144 men—510 in all. Andrade's report enumerates the captives as 120 in each of two lots, with 20 or more in a third, making 260 odd (Ibid., p. 130); while Velasco put the number at 300 and odd ("doscientas y tantas personas"), men, women, and children, including only 30 odd oldsters and warriors combined. The discrepancies are characteristic, and of a piece with those prevailing in the same latitude and longitude today: e. g., Velasco says there are but four waters on the island, Espence says there are eight or ten, and Andrade implies that there are many; Velasco says there were 140 troops from Guaymas, while Andrade mentions only 80; Espence says that in transporting the stock (as noted above) but one mule was drowned by the strength of the current, while Andrade says that a mule and a steer were lost on account of the bad storm which prevailed during the day; yet there is such agreement between dates and facts in the independent journals of Andrade and Espence as to establish general verity despite the provincial wantonness concerning details.

[4] According to Andrade (Ibid., p. 182); Velasco says September 10 (Ibid., p. 170).

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The captives were imprisoned over night in the mint, the children weeping, the women chattering angrily or humbly, and the men sulking. Next day the Hermosillefios began distributing the children among themselves, some families taking three and many two, while the adults were transferred to Pueblo Seri, placed in charge of a single keeper, and set to gathering fuel, etc. Naturally this unstable status did not long persist; "within two months they began to disappear, fleeing to their respective and native haunts, stealing and carrying with them the children from whom they had been separated";[1] and, according to Espence, they committed "many murders on the Pitic and Guaimas roads" as they returned to Tiburon.[2]

While the Tiburon captives were escaping, the campaigning continued; and, in November, 1844, several Seri families, comprising 63 men, women, and children, who had been scavengering Rancho del Burro ("manteniéndose allí á merced de los desperdicios de dicho rancho"),[3] were captured and transported to the mint at Hermosillo, and soon afterward transferred to Pueblo Seri. During the same month a report came from Rancho del Pocito, on the Guaymas road, that Seri marauders (assumed to belong to the 16 families left on the island) had killed 10 head of stock; and a detachment of 15 cavalry was sent to inflict punishment. Early in December this party met a Seri force of over seventy warriors, including some of those captured on Tiburon and escaped from Pueblo Seri; after a battle of four hours the troops found their ammunition exhausted, several of their carbines out of order, and all but four or five of their horses winded; so that they were driven to parley with the Indians and to procure their surrender by pacific means—especially promises of good treatment.[4] Subsequently a municipal commission from Hermosillo reminded the defeated Seri of their surrender, and "three, four, or eight" of them presented themselves ("presentándose tres, cuatro ú ocho hombres"), and were probably added to the colony at Pueblo Seri.

Espence's journal clearly indicates a complete circumnavigation of Tiburon, the second in history (that of Ugarte in 1721 being the first); and naturally some of his notes are of ethnologic value:

The Ceris Indians are tall, well formed, not very corpulent; the women are remarkable for small breasts and feet and high instep. At night they travel ill; this is to be attributed to the reflection of the sun on the sand, which is quite white, and as they all live on the shore where they gain sustenance, which is fish and plankton [mariscu], they are daily exposed to a glare which injures their vision. Their favorite food is turtles and horses. . . . They are all in the most savage condition it is possible to conceive. Their language is guttural, and they are most filthy in their persons, as in their food, which is mostly eaten raw, or at the best half

[1] Velasco, Noticias Estadísticas, p. 127.
[2] Ibid., p. 170.
[3] Ibid., p. 128.
[4] Ibid., p. 129. This native recital is far from unique among the chronicles of conquest over the Seri. All of the records recount victories more or less brilliant, even when there are strong indications between lines that the Conquistadores were outnumbered, outfought, forced from the field, and even driven into the protection of the pueblos. The Seri side of the story has never been told.

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1775 cooked; they endure a thousand miseries on the island, yet the love they have for it is incredible. They are always accompanied by innumerable dogs, . . . which they have domesticated.[1]

Velasco adds:

The Curis subsist on fish, the seeds of grass, and coastwise shrubs, as well as on the flesh of horses and deer, which they kill. There is no better proof of this fact than this—on approaching the said Curis, one instantly perceives that their bodies exhale an intolerable stench, like that of a corpse of eight or more days, totally rotten, so that it is necessary to withdraw far as possible from them.[2]

Of all the Indian tribes known in Sonora, none are more barbarous and uncivilized than the Curis. They are perverse to the limit, vicious beyond compare in drunkenness, infinitely filthy, the bitterest enemies of the whites, like the worst of the Indians.[3]

He adds also that the men wear a pelican-skin robe and a breechclout of cotton cloth, with most of the body uncovered; "they have their faces painted or barred with prominent black lines. They use no foot-gear of any kind, and many have the nasal septum pierced and adorned with pieces of greenstone or ordinary glass." "They are robust in stature, tall and straight, generally with bright black eyes. The women are not uncomely, and of bronzy color [de color abronzado]. Their clothing is made of pelican skins fastened together, retaining the feathers; with this they are covered from the waist downward", the remainder of the body being bare. The women of Hermosillo provide them with cast off garments when they approach the city, and these they wear, unwashed, until they fall to pieces. "The said tribe, in addition to being the vilest and most brutal known in the country, are preeminently treacherous and traitorous, so that forty of their outbreaks may be counted during the efforts to reduce them to civilized life." At the time of the Cimarrones outbreak, the Seri of Tiburon and Tepoka numbered 2,000; [161] "to day [about 1846 or 1847], counting the 250, which are all that inhabit Tiburon and the most that can be presented, including the Tepoka Seri [los Curis Tepocas], who have always been much fewer, their whole number will not amount to 500 persons of all sexes and ages, and the warriors can not exceed 60 or 80 at the most." The Seri are not polygamous, though apparently promiscuous ("se nota en sus matrimonios mucha tolerancia mútamente"). They "adore the moon, which they venerate and respect as a deity; when they see the new moon, they kneel and make obeisance; they kiss the earth and make a thousand genuflections, beating their breasts."[4]

1775 The remarkably vigorous expedition of Andrade and Espence occurred within the memory of men still active, and naturally it lives in tradition at Hermosillo and Bacuache, and among the ranchos lying toward the border of Seriland; indeed, one of the two Mexicans accompanying the 1895 expedition, Don Ygnacio Lozania, retained shadowy impressions of participating in an invasion of the island, which could have been none other than that planned by Governor De

[1] Velasco, Noticias Estadísticas, pp. 169-171.
[2] Ibid., p. 170.
[3] Ibid., pp. 127-128.
[4] Ibid., pp. 131-132.

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Leon and executed by Colonel Andrade. Yet it is not uncharacteristic of Sonoran history that the wave of anti-Seri activity culminating in 1844 hardly outlasted its own breaking; certainly Escudero, writing less than five years later, declared of "la nacion *Seri*": "During thirty-three years they have committed not a single act of hostility and live in peace and perfect harmony with the Sonorenses." He added that they occupied the islands of Tiburon and Tepoca (sic) and the coasts of the gulf contiguous to Sonora and California, and from the most remote antiquity had been known by the names of "*tiburones*" or "*serris*". Describing Pueblo Seri, he observed: "It now contains hardly a dozen aged Seris of both sexes"; and he forecast the early extinction of the tribe, since the people were incapable of abandoning their independent and solitary existence.[1]

Here ends, practically, the history of Pueblo Seri as a Seri settlement, for, although one of the tribe survived for half a century and a few others may have survived for a decade, the "aged Seris of both sexes" melted away so rapidly as to leave no later record, and were apparently never replaced by others. Briefly, the history of the pueblo began with the establishment of a presidio or military post in 1741 in the natural gateway and watering-place leading into the settled valleys of the Opodepe and upper Sonora, for the sole purpose of protecting the settlements against the wandering Seri, who used this typical Sonora watergap as a way-station on forays but never as a place of residence. The history grew definite when the Jesuits obtained the allotment of lands for the Seri and established for them a mission, which was at the same time a place of catechizing for Seri neophytes, a place of detention for Seri captives, a place of refuge for Seri weaklings, and a place of resort for Seri sneaks and spies. The history proceeded with many vicissitudes, as the presidio was alternately abandoned under Seri attacks and reoccupied when the attacks were repulsed, and as the neophytes alternately escaped and suffered recapture; the formal history waned in relative importance as the population and interests of Pitic and afterward of Hermosillo waxed, and as the lands originally allotted to the Seri were gradually taken and held by Mexican settlers, and ended when the Seri tenure was formally extinguished in 1844, as described by Cabrera and Velasco; and the general history dropped into unimportance with the escape of Andrade's captives, after temporary quartering on the legally established landholders and householders of the Mexicanized pueblo. For a century and a half the name of the pueblo has continually raised and renewed the assumption that it marks a site of aboriginal Seri habitation or has played some other leading rôle in Seri history, and this assumption has shaped opinion past and present; yet its error is clearly shown by scrutiny of the historical records, as well as by collateral ethnologic and archeologic evidence.

[1] Escudero, pp. 141-142.

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114 Here may be said to end, too, the local chronicles of the Seri; for
+175 although the state archives are crowded with charges, petitions, commissions, reports, and other papers pertaining to the irrepressible Seri; although these materials have overflowed to Ciudad, Mexico, and even to Washington, in official documents both numerous and voluminous; although Dávila in 1894 increased Velasco's forty Seri wars to fifty; and although the weightiest events in the internal history of the Seri have occurred since 1844, little attempt has latterly been made to reduce the abundant data to print.

The Mexican geographic knowledge of the time was surprisingly vague, as is shown by the current maps, for example, the Tanner maps which appeared in several editions: the 1846 edition recalls and evidently reflects the Humboldt map of the beginning of the century; "R. Ascencion" is represented as embouching through an estuary about 30° 20′, with the "Seris Indians" north of its lower half-length and west of "Pitic" and "Ft. del Alter"; Ures is located 3 or 4 miles southeast of this fort, and "Racuach" (the Bacuachito of the present) is 20 miles farther southeastward. Neither Rio Sonora nor any of its important branches are indicated, while "Pitic" is placed several times too far from the coast and from Guaymas, in a featureless expanse of paper; "Rio Hiaqui" is shown as a branchless and conventional stream of a single crescentic curvature, embouching in about the right latitude. The coast of the gulf is distorted, and "Tiburon" is shown as an island much too large and nearly a degree too far north, separated from the mainland by a greatly exaggerated strait, with an elongated mesa ("Mt. del Pica") skirting the mainland coast—in short, the cartography is largely traditional if not fanciful.[1]

The career of the Seri during the half century 1844–1894 is traceable by aid of (1) unpublished documents, (2) published results of scientific inquiries and surveys, and (3) personal reminiscences of men living on the Seri frontier; but in a summary touching only salient points the first-named source may be passed over.

One of the first foreign visitors to follow Baron Humboldt in systematic inquiries concerning the aborigines of northwestern Mexico was Henri Ternaux-Compans; his information, too, was secondhand and remote, yet he correctly recognized Isla Tiburon as "inhabited by the Seris, who have some huts also on the mainland".[2]

Later came Eduard Mühlenpfordt, an attaché of a German commercial company and later a Mexican state official, who traveled extensively and wrote partly at first hand, though there is little indication of personal acquaintance with Seriland or the Seri: he described "Bahia de San

[113]

[1] A Map of the United States of Mexico, as organized and defined by the several Acts of the Congress of that Republic, constructed from a great variety of Printed and Manuscript Documents, by H. S. Tanner. Third edition, 1846. The map in De Mofras (op. cit., atlas) is little better.

[2] Nouvelles Annales des Voyages, tome III, 1842, p. 230 (cited by Buschmann, Die Spuren der aztekischen Sprache im nördlichen Mexico und höheren amerikanischen Norden, in Abhandlungen der Königlichen Akademie der Wissenschaften zu Berlin, aus dem Jahre 1854, zweiter Supplement Band; Berlin, 1859, p. 399).

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Juan Bautista", with "the small island San Augustin" lying before it (in such manner as to identify this islet with Isla Tasone), and located "the large island Tiburon farther northward, opposite a mountainous coast".[1] He added:

> The waterless but cattle-stocked plains between the place Pitic and the coast, and thence up to the river Asuncion, are inhabited by a meager remnant of the Seri tribe, while on Tiburon island, opposite this coast, the Tiburones dwell. The Seris were formerly very numerous, by far the fiercest of all the Indian tribes of northern Mexico, and very warlike. Through ceaseless war with the Tiburones and the troops from the Spanish presidios they are now nearly extinct.[2]

Elsewhere the Tiburones were characterized as enemies of the Seri,[3] while the "Heris" tribe was enumerated as a branch of the "Pimas Bajas" people. Herr Mühlenpfordt's characterization of the Seri and the Tiburon islanders as enemies would appear to be groundless, yet not wholly incomprehensible; in the first place, the earlier literature indicates that the term Seri (Seris, Ceris, Heris, etc.) was an alien designation of lax application,[4] doubtless extended occasionally or habitually to marauding nomads, regardless of affinity; again there is conclusive evidence that in many instances Seri convert-captives attached to the missions and pueblos were often regarded as tribal apostates and outlaws whose lives were forfeit; and, moreover, the region in which Herr Mühlenpfordt gained his information was and still is one of abounding tale, whose frequent exaggeration and not infrequent invention conceal and distort the simple facts.

In 1850, Don Diego Lavandera transmitted to the Mexican Society of Geography and Statistics, through the hands of Señor Jose F. Ramirez, certain documents, accompanied by a note to the effect that "The tribe of the Seris speak Arabic, and it is understood by the Moors at the first interview"—this note merely expressing a prevailing current opinion. Undertaking to test the opinion, Señor Ramirez sent to Lavandera, in Sonora, a number of words in three Arabic dialects, at the same time asking for the Seri equivalents; and the inquiry yielded a Seri vocabulary (probably the first ever printed) of eleven words. Of these none show the slightest affinity with the Arabic dialects; at least four (horse, chamber, population, wine) express concepts alien to the Seri; and only three or four can be identified with Seri terms recorded in later vocabularies. No reference is made to Señor Lavandera's aboriginal informant; but there is a strong presumption that it was the official interpreter at Hermosillo and Pueblo Seri—a presumption

[1] Versuch einer geitreuen Schilderung der Republik Mexico besonders in Beziehung auf Geographie, Ethnographie, und Statistik: Hannover, 1844, Band I, p. 441; Band II, p. 415.

[2] Ibid., Band II, pp. 419-420.

[3] Ibid., Band, I p. 230.

[4] Pimentel defines "Seris" as the "name of a tribe of Sonora, originating probably in the Opata language." (Memoria sobre las Causas que Han Originado en Mexico la Falta de Subsistencias, Mexico, 1862, p. 22); Pimentel defines "Seri

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warranted by coincident historical records and statements of contemporaries still living, to the effect (1) that an official interpreter was there then and for a long time later, (2) that neither then nor later were there other Seri representatives able to furnish vocabularies at Hermosillo, Pueblo Seri, or other towns, and (3) that at that time (as at most others) the relations between the Seri and the whites were such as to prevent amicable communication through casual meeting or otherwise.

Proceeding with his discussion, Señor Ramirez sought to correct the allegation of Abbé Hervas that "in the mission of Belen live three nations, called Hiaqui, Seri, and Guaimas, who speak *three different languages*." After quoting a Jesuit manuscript of July, 1738, reporting that "the language of the Seris is the same as that of the Guaimas", he added a significant statement contained in a manuscript report from the Bishop of Sonora, directed to Don José de Galvez, under date of September 20, 1784, concerning the mission of Belen: "Two nations of Indians, Pimas Bajos and Guaimas, live united, the latter having abandoned their pueblo under the continuous assaults of the Seris. The Pimas use their own language. . . . The Guaimas use their ancient language." Summarizing the evidence (*of course secondhand and derived from the observations and reports of the missionaries*), Señor Ramirez held as proved, first, "the existence of two diverse languages at the mission of Belen—that of the Guaimas and that of the Pimas Bajos"; and second, that "the Guaimas and the Seri are the same".[1] It would appear that Señor Ramirez hardly appreciated the significance of the statement of sixty-four years before that the Guaymas were still using their "ancient" language, with the implication that they were acquiring familiarity with the Pimas tongue—a familiarity that may well have misled later inquirers.

It is just to say that scientific knowledge of the Seri began with the visit to Hermosillo of United States Boundary Commissioner John Russell Bartlett, on December 31, 1851. True, Commissioner Bartlett approached no nearer Sonfland than Hermosillo and Guaymas, and saw but a single Seri; yet he obtained an excellent vocabulary and considerable collateral information from this Indian. According to this information—

The Coras tribe of Indians, with the exception of those which are christianized and reside in the village near Hermosillo, occupy the island of Tiburon in the Gulf of California, north of Guaymas. Although believed not to number over 300 warriors, they have long been the dread of the Mexicans between Guaymas and Hermosillo, as well as the country to the north, on account of their continual depredations and murders. Their practice is to lie in wait near the traveled roads, and there surprise small and unprotected parties. Their place of abode being on an island or the shores adjacent, and their subsistence being chiefly gained by fishing, they have no desire to steal animals, which would be of no use to them; nor do they take any prisoners. To murder and plunder small parties of Mexicans seems

[1] Langues Primitives, in Boletin del Instituto Nacional de Geografia y Estadistica de la República Mexicana, third edition, tome iv, Mexico, 1891, pp. 146-148.

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to be their only aim, and every arrow or lance thrown by the Ceris that pierces the skin causes death, as all are poisoned. Many expeditions, fitted out at a great expense, have been sent against them; but, though commanded by competent officers, all have failed. The number being so small, they manage when pursued to conceal themselves where they can not be found. The island of Tiburon, as well as the mainland adjacent, is exceedingly barren and destitute of water; hence parties have suffered greatly in the campaigns against them, without accomplishing anything. I was told that the Government had already expended more than $1,000 for every male of the tribe. The last serious attack of these people was made upon a gentleman traveling to Guaymas in his carriage with his family and attendants, embracing 18 persons. They were surprised in an unfrequented place and every soul put to death.[1]

Commissioner Bartlett quoted Hardy's description of the arrow poison, and, speaking of the Seri tongue, added:

I found it an extremely harsh language, very difficult to express with our letters, and totally different from any aboriginal tongue I had heard spoken; . . . but it was impossible for me, without a close philological comparison with other Indian languages, to arrive at any correct conclusion as to whether this people are allied or not to other aboriginal tribes.

He also referred to a prevalent notion that "the Ceris were of Asiatic origin, in proof of which some statements were made too improbable to repeat. This idea seems to have originated from the resemblance between their name and that given by the ancients to the Chinese."

In order to obtain a Seri vocabulary, Commissioner Bartlett had a messenger dispatched "to a pueblo or village of these Indians near Hermosillo. The person sent for made his appearance in a few hours"; he was "a good-looking man, about 30 years of age. His complexion was fair, and resembled that of an Asiatic rather than an American Indian. His cheek bones were high, and his head round and well formed, though the anterior portion was somewhat angular and prominent. His hair was short, straight, and black. He was a full-blooded Ceris, and came originally from the island of Tiburon. In about three hours I completed the vocabulary quite satisfactorily to myself."[2] The vocabulary was not printed with the narrative; nor were references made to the Seri population, either in the pueblo or in Seriland.

While the vocabulary was not published by Commissioner Bartlett, it was preserved and passed into the hands of George Gibbs, who made a systematic transcript;[3] this came into possession of Dr Albert S. Gatschet, and a copy is preserved in the archives of the Bureau of American Ethnology. The name of the native informant is not recorded, but fortunately he was found still living, and was fully identified, during the expeditions of 1894 and 1895—especially toward the end of the

[1] Personal Narrative of Explorations and Incidents, in Texas, New Mexico, California, Sonora, and Chihuahua, Connected with the United States and Mexican Boundary Commission, during the years 1850, '51, '52, and '53; New York, 1854, vol. i, p. 403 et seq.

[2] Ibid., pp. 403–404.

[3] This transcript is entered in a blank schedule Vocabulary of 100 Words, printed by the Smithsonian Institution for Gibbs, with a supplementary sheet; it is dated January 1, 1853; and while the published "Narrative" implies that it was recorded December 31, 1852, the manuscript date is confirmed by the Seri interpreter, Kalunte.

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115 latter, when, on January 4, 1896, he was employed as an informant. He was then a fine-looking man of noble stature and figure, and of notably dignified air and manner, dressed in conventional attire; his hair was luxuriant, iron-gray in color, and trimmed in Mexican fashion. His looks indicated an age of about 70, but in his own opinion (which was corroborated by that of Señor Pascual Encinas and other old acquaintances) he was at least 75. His movements were vigorous, his eyes clear and bright, his vision good, and, except for hardly perceptible imperfection of hearing, he was in full possession of normal faculties. He was in the employ of the state as a trustworthy attaché of the governor's palacio, where his services were nominal; his real function was that of a Seri interpreter in case of need; and on the day specified he was temporarily assigned to the service of the expedition by His Excellency Governor Corral. By Mexican acquaintances he was commonly called Fernando, though he called himself Kolusio, sometimes using the former designation as a forename; he was also known as "El General" (= Chief), or "El General de los Seris". He had a vague memory of Tiburon island, which he left in childhood (at about 6 years of age, according to his estimate) and had never revisited, though he had been on the Seri border so late as 1870. Except when temporarily at Rancho San Francisco de Costa Rica, he had lived in Pueblo Seri, usually reporting in Hermosillo daily for such duty as might be assigned to him at the palacio. He was aware that he was regarded as a tribal outlaw, and admitted that no consideration could induce him to approach Seriland, since he would be slain by his tribesmen more eagerly than any alien; indeed, he hardly dared venture so far westward as Molino del Encinas, in the outskirts of Hermosillo, and only did so in daylight or in company of others. His few kinsfolk in Pueblo Seri had died or deserted so long before that he had forgotten names and dates; and, as he remarked with half-realized pathos, he had been alone amid aliens for very many years ("muy muchos años"). The linguistic inquiries put to him reminded him of previous interrogations of the sort, and he voluntarily described the visit of a distinguished American who, a long time ago (more than 40 years, he thought), came down from Ures, with many books and papers, and spent New Year's day in interrogating him about his language and his people. He was much impressed with the ability displayed by the "Gringo muy grande" in writing the terms and afterward pronouncing them properly; and he described the visitor as appearing very pale and sick ("muy pálido y malo"), and under the necessity of frequently resting and taking medicine, and also as having wavy hair, worn so long as to hang down over the neck and shoulders. He could not recall that he had ever heard the American's name; but his description pointed clearly to Commissioner Bartlett, who had risen from a sick-bed at Ures and was on his way to Guaymas to get the benefit of a sea voyage, and who wore his hair long during a part or all of his expedition (as was subsequently

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ascertained by extended inquiry). Kolusio also remembered "giving his language" (a bold if not sacrilegious act, according to his view) to two or three other persons, (one "not a Mexicano" though speaking Spanish, none "Americano"[1]); but the first-mentioned instance was the one most deeply impressed on his mind. At this time (1890) he retained a working knowledge of the Seri tongue, and was able to serve satisfactorily as a Spanish-Seri interpreter; yet careful test showed that he had forgotten numerous native terms, and sometimes inadvertently substituted other Indian (Yaqui, Papago, and probably Opata) and Spanish words; while he knew so little of the tribal customs and beliefs that inquiries pertaining to them were too nearly fruitless to be long pursued. Undoubtedly his knowledge of the Seri tongue was fresher and fuller in 1832; but since he was practically isolated from his tribe in early childhood, he probably never possessed much information concerning the esoteric characters of his people.

The next noteworthy scientific student of the Seri was Johann Carl Eduard Buschmann, who visited various Mexican tribes, but whose knowledge of the Seri was wholly secondhand. Quoting Villa-Señor and Arrecivita and other early writers, noting unfortunate passages from Bartlett, and magnifying Mühlenpfordt's misapprehensions into positive error, he reduced knowledge of this and neighboring tribes to chaos. The "Guaymas" were separated from the "Seris (oder Seres)", and these (at least by implication) from the "Tiburones", while the "Pintos" were combined with the Seri, the traditional alliance with the Apache was greatly overdrawn, and the "Heri oder Heris" and the "Tepocas" were treated as distinct.[2] No new facts were adduced, no use was made of local sources of information, and no notice was taken of other than literary data.

In 1857 the gigantic surveying enterprise of Jecker & Co. was undertaken, under a concession from the Government of Mexico, and the scientific surveys were intrusted to a commission headed by El Capitan Carlos Stone (General Charles Pomeroy Stone, U.S.A.). The commission headquartered at Guaymas, purchased vessels for the survey of the coast, and began operations also in the interior; Bahia Pinacati and George island (named by Hardy in 1826) were surveyed, as well as the entire Sonoran coast south of Guaymas, and "one hundred miles of coast near Tiburon", besides many hundred square miles of valuable lands. At this stage friction developed between the progressive commission and the conservative Sonorenses, which ended in the expulsion of the scientific commission by the State government.[3] By reason of the

[1] At the time of inquiry the importance of the other vocabularies was not suspected, and the interrogation was not pushed far enough to permit identification of the persons to whom they were given.

[2] Die Spuren der aztekischen Sprache im nördlichen Mexico und höheren amerikanischen Norden. Zugleich eine Musterung der Völker und Sprachen des nördlichen Mexicos und der Westseite Nordamerikas von Guadalaxara an bis zum Eismeer. Von Joh. Carl Ed. Buschmann (in Abhandlungen der Königlichen Akademie der Wissenschaften zu Berlin, aus dem Jahre 1854, zweiter Supplement-Band); Berlin, 1859, pp. 216-231 and elsewhere.

[3] *Arizona and Sonora*, etc., by *Sylvester Mowry*; New York, 1864 pp. 88-102.

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†175 premature termination of the work, few of the observations and other
[114] results were ever published. General Stone himself traveled extensively in Sonora, and delved deeply in the historical records of northern Mexico; and, while there is no indication that he ever came in personal contact with the Seri, he collected and sifted current local information relating to the tribe with notable acumen. In certain "Notes" prepared in Washington in December, 1880, he wrote:

105 †175 The *Coris* are a peculiar tribe of Indians occupying the island of Tiburon and the neighboring coast. They are yet in a perfectly savage state, and live solely by fishing and hunting. Having been at war with the whites from the time of the first missions, they have become reduced in numbers to about 300, counting some 80 warriors. They are of large stature, well made, and athletic. In war and in the chase they make use of poisoned arrows, the wounds from which are almost always fatal. In preparing the poison, it is said they procure the liver of a deer or cow, and by irritating rattlesnakes and scorpions with it, cause it to be struck by a great many of these reptiles. They then hang up the mass to putrefy in a bag, and in the drippings of this bag they soak their arrowheads. I can not vouch for the truth of this statement, but it is current in Sonora. I was informed by a gentleman in Hermosillo that one of his servants, who was slightly shot by a Cori's arrow, died quickly from the effect of the wound (which mortified almost immediately) in spite of the best medical treatment. Their language is guttural, and very different from any other Indian idiom in Sonora. It is said that on one occasion some of these Indians passed by a shop in Guaymas, where some Welsh sailors were talking, and on hearing the Welsh language spoken, stopped, listened, and appeared much interested, declaring that those white men were their brothers, for they had a tongue like their own. They are very filthy in their habits, and are said to be worshipers of the moon.[1]

†175 Another Mexican traveler of note who collected local and contemporary information concerning the Seri, though enjoying no more than slight inimical contact with them, was Herr Clemens A. Pajeken, of Bremen (for some time a resident of California). He classed as wild Indians ("Wilde Indianer, Indios broncos") the Seri and Apache tribes. Of the former he wrote:

105 †175 Coris. This is a small tribe, their number not exceeding 400 souls, or rather head [dasses Seelenzahl oder besser Kopfzahl]; yet the government of the State could not restrain this little band of robbers and marauders that for more than twenty years have perpetrated their atrocities on travelers between the port of Guaymas and the city of Hermosillo, the metropolis of the State. . . . The Coris appear not to grasp the idea that they are human. Like the prey-beasts of the wilderness, they go out to slay men and animals, sparing only their own kind. In many respects they are viler than the beasts, since they slay without need merely to satisfy a lust for slaughter. They are not only the stupidest and laziest of the Indians of Sonora, but also the most treacherous and deceitful. During the Spanish rule, from the time the first visit was made to lead them toward social life, they have rebelled more than forty times. Only a couple of families [ein paar Familien] still reside in the village [Pueblo Seri], where they make adze and subsist on the offal of the shambles. The proper home of these barbarians is the island of Tiburon and the adjacent coasts, whither they return after their outbreaks, although it is an incredibly desert region. Thence they repair to the highways to kill travelers and arri-

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[1] "Notes on the State of Sonora, by Charles P. Stone, 1880, Washington, 1861, p. 19. Reprinted in Historical Magazine, vol. v, 1861, pp. 161-169.

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arms, or to the refugee to steal cattle. They confine themselves to the bow and arrow, and the latter are poisoned, so that every wound made by them is deadly, or at least highly dangerous. On my second journey into the interior of the country my horse received an arrow in the hip; the arrow, which entered 4 inches, could not be withdrawn until the following day; and for seven months the wound suppurated. . . . Their chief food consists of oysters, mussels, snakes, with fish and other sea food, which they consume entirely raw and which surrounds them with an intolerable stench; though this may be partly due to their exceeding uncleanliness, since the process of washing is wholly unknown to them. Their clothing consists of a kilt of pelican skin. They tattoo their faces, and some pierce their noses to insert a certain green stone [obsidian]. They are of dark copper color, large and strongly built. Although in their faces no human sentiments can be discerned, yet they can not be called ugly. Their limbs are so beautifully proportioned that the Spanish ladies in Hermosillo view with envy the slender shapes and the comely hands and feet of the young Seris maidens. They wear no headdresses, and as their coarse, shaggy hair is neither combed nor cleaned, it sticks out in tangled tufts in all directions like spines on a hedgehog; this alone gives them a forbidding appearance. Their speech is quite like their character; it is guttural, discordant, and meager, resembling more the howling of wild animals than human speech, wherefore it is difficult for a human to learn. They have no religion—at least, I do not deem the gambols and amusing capers in which they indulge at the new moon to be religious customs. The tribe is constantly diminishing in numbers, and it is hoped they may soon disappear from the earth by natural decrease—unless the State government sooner undertakes a war of extermination.[1]

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Herr Pajeken's record bears inherent evidence (at least to one familiar with the region) of reflecting the current local knowledge and opinion concerning the Seri with unsurpassed—indeed unequaled—fidelity; and it is also of value in that it indicates the approximate number of the tribe then surviving in Pueblo Seri, and in that it gives the contemporary estimate of the tribal population.

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Among the more careful students of the Seri at second hand should be mentioned Buckingham Smith, an enthusiastic collector, translator, and publisher of rare Americana. In the introduction to an anonymous and dateless grammar of the Heve language he wrote in 1861:

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The lower Pimas are in the west of the province [of Sonora], having many towns extending to the frontier of the indomitable Seri, who live some 30 leagues to the north of the mouth of the Hiaqui, and have their farthest limit inland some dozen leagues from the sea, finding shelter among the ridges and in the neighboring island of Tiburon.

He added in a note:

The Guaimas speak nearly the same language as the Seri, are few in number, and live among the Hiaqui in Belen and elsewhere, having retreated before the sanguinary fury of their conquerors.[2]

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While the scientific knowledge of the Seri began with Bartlett's visit, it assumed definite shape only through the classic researches of Don Francisco Pimentel (Count Herras) in the early sixties. His analysis and classification of the Seri tongue rest on a short vocabulary

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[1] Reise Erinnerungen und Abenteuer aus der neuen Welt in ethnographischen Bildern, von C. A. Pajeken: Bremen, 1868, pp. 97-98.

[2] A Grammatical Sketch of the Heve Language, translated from an unpublished Spanish manuscript, in Library of American Linguistics, vol. iii, New York, 1861, p. 7.

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collected by Señor D. A. Tenochio and transmitted to the Mexican Society of Geography and Statistics. Noting the condition of the tribe at the time, Señor Pimentel wrote:

> The Seris are now reduced to a few families only, inhabiting Sonora, especially the island of Tiburon, for which reason they are also known sometimes by the name Tiburones. The Indians called Salineros, who live on the borders of Pimeria Alta, and the Tepocas, who live toward the south, belong to the Seri nation. The Seris have always been notable for their ferocity and barbarism, preferring death in war against the whites to the adoption of civilization. They are dreaded and notorious for their arrows, poisoned with a most virulent venom [emponzoñadas con activísimo veneno]. They are tall and well formed, and their women are good-looking. By reason of their distrust of the whites, it has not been possible to ascertain their traditions, further than that their ancestors came from distant lands of unknown direction. Of their religion it is known that they adore daily the rising sun.[1]

After brief discussion of the grammar, and extended comparison of some sixty out of the seventy vocables selected by Señor Tenochio, he concluded:

> Although in the list of Seri words consulted the foregoing reveal analogies with those of the Mexicanâ group, there are, without doubt, other terms belonging exclusively to the Seri or some other branch extraneous to the Mexican group; for this reason it would appear that the idiom represents a distinct family.[2]

The list of these distinct words was appended. Referring to the dialects, Señor Pimentel expressed the opinion, based on literary references, that the "Guayma" or "Guyama", "Upangualma", and "Cocomaques" may be considered as belonging to the Seri family.[3]

While Señor Pimentel gave credit to his informant, Señor Tenochio, he did not indicate the original source of the vocabulary; but the source may be defined approximately by a process of elimination: there is hardly a possibility that the terms were obtained from any tribesmen in Seriland, since they were all inimical to the whites, and since very few of them have ever known enough of the Spanish tongue to permit communication with the Mexicans; accordingly, it is practically certain that the Seri interpreter must have been either (1) a resident of Pueblo Seri or (2) an attaché of rancho San Francisco de Costa Rica (of which more anon); and in either case it would seem certain that the native informant could have been none other than the standard Seri-Spanish interpreter of the last half century—Kolusio. Indeed, Kolusio was, at the time, the only Seri habitué of Pueblo Seri possessing sufficient knowledge of the Spanish and enough intelligence and independence to "give his language", and was one of the two frequenters of the rancho similarly equipped.

Pimentel's contemporary, Licenciate Manuel Orozco y Berra, contributed in important measure to systematic knowledge of the Seri, which

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[1] Cuadro Descriptivo y Comparativo de las Lenguas Indígenas de México, ó Tratado de Filología Mexicana, por Francisco Pimentel, segunda edicion mas completa, tomo II; Mexico, 1875, p. 338. The first edition of the work was published in two volumes, dated, respectively, 1862 and 1865.

[2] Ibid., p. 341.

[3] Ibid., p. 338.

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he defined (apparently on the basis of the Tamachio vocabulary systematized and published by Pimentel) as a distinct linguistic family with two dialectic branches,[1] viz:

IX FAMILIA.—SERI.

XXXIII. *Séri*, por los séris, séris, tiburones, tepocas, cultiacas, en Sonora.
61. i. *Upangaimas*, por los upangaimas, en Sonora.
62. ii. *Guaimas*, por los guaimas, guaymas, guaymas, cocomaqueas, en Sonora.

Orozco's map assigns to the Seri family an immense area (recalling Villa-Señor's "despoblado") extending from just above the mouth of the Yaqui, northward to the thirtieth parallel on the coast, stretching inland nearly to Cucurpe, Opodepe, and Ures, and including Tiburon; the "Salineros" lying adjacent to the coast in the north, the "Tepocas" medially, and the "Guaymas" in the south, within this area. In elucidating the map he wrote, under the title "El séri.—El upanguaima.—El guaima":

The *Séris*, a tribe inhabiting Sonora, forms, with its subtribes, a separate family. By their language, by their customs, and by their physiognomy, they are completely set apart from affiliation with the surrounding nations; and apparently they have lived in the district which they now occupy from times anterior to the establishment of the Pima race and its affines; their use of poisoned arrows recalls the Caribs of the Islands, as well as of the continent, and it seems not unlikely, although very curious, that they are related to them. The *Séris*, known also as Tiburones, a name derived from the island of Tiburon in the *Mar de Cortés*, which serves them as a shelter, considered as parts of their tribe the Tepocas and the Salineros.

The "Upanguaima" (a very small tribe occupying the Seri border) and the "Guaimas", as well as the "Cocomaques" were combined chiefly on the authority of Jesuit writers.[2] In describing the State of Sonora he further wrote:

The *Séris*, bounded by the sea on the west, the Pimas Altos on the north, the Opatas and the Pimas Bajos on the east, and the pueblos of Rio Yaqui on the south, form the smallest nation of Sonora, but at the same time the most cruel and deceitful and the least capable of reduction to political organization. Hardly uniting with the smaller pueblos as at Populo and Belen, the rest of the nation engaged so constantly in cruel warfare that it was necessary to persecute and exterminate them. . . . Small as was the tribe, three divisions are known: the Salineros, extending to the confines of Pimeria Alta; south of them the Tepocas, nearest to the island of Tiburon; the Guaymas and Upanguaymas occupying the territory adjacent to the harbor of the same name, afterward added to the pueblo at Belen and blended with the Indians of Rio Yaqui. Ferocious and savage, they preferred to die in war against the whites rather than adopt their usages and customs; lazy and indolent, they so surrendered themselves to the passion of intoxication that mothers conveyed aguardiente from their mouths to the smallest babes. They are tall and well formed, the women not lacking in beauty. The poison with which they envenom their arrows is proverbial for deadly effect; they compound the venomous juice from a multitude of ingredients and fortify the compound by superstitious practices.[3]

[1] Geografía de las Lenguas y Carta Etnográfica de México, Precedidas de un Ensayo de Clasificacion de las Mismas Lenguas y de Apuntes para las Investigaciones de las Tribus, por el Lic. Manuel Orozco y Berra; Mexico, 1864, p. 38.

[2] Ibid., p. 42. [3] Ibid., pp. 230-234.

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The classifications by Pimentel and Orozco were widely accepted, and were given still wider currency by republication in standard works, such as the classic dictionary of the Nahuatl tongue by Rémi Siméon, in which is defined "La famille *Seri*, dans la Sonora, avec 3 idiomes: le *Seri*, le *Guaima* et l'*Upanguaima*."[1] In his ethnographic tableau of the nations and languages of Mexico, M V. A. Malte-Brun followed Orozco almost literally, save that he emphasized the suggested Caribbean affiliation of the Seri, saying:

> They make use of poisoned arrows, and when one studies their manners, their habits, their modes of life, one is tempted to find in them a strong affinity [grande affinité] with the Caribs of the continent and the islands.[2]

During the seventies Hubert Howe Bancroft was engaged in collecting material for his monumental series of works, and in arranging the ethnologic data for publication. Of the Seri he wrote:

> East of the Opata and Pima bajo, on the shores of the Gulf of California, and thence for some distance inland, and also on the island of Tiburon, the Cora language with its dialects, the Guaymi and Tepoca, is spoken. Few of the words are known, and the excuse given by travelers for not taking vocabularies is, that it was too difficult to catch the sound. It is represented as extremely harsh and guttural in its pronunciation and well suited to the people who speak it, who are described as wild and fierce. It is, so far as known, not related to any of the Mexican linguistic families.[3]

The only vocabulary of this language which Bancroft was able to find was added (without reference to the aboriginal source); it comprised the eleven words collected by Lavanderu and discussed by Ramirez in 1850.[4]

The Seri, with their affines, the Tepoka, Salinero, Guayma, and Upanguayma, were included by Bancroft in his arbitrarily defined "Northern Mexican family".[5] The accompanying map (which is highly inaccurate) located the "Salineros" on the gulf coast, considerably north of the common embouchure of "R. de Horcasitas" and "Rio de Sonora", while the "Seris" were more conspicuously represented about the broad estuary into which the rivers embouch, and the "Tepocas" were located still farther southward on both Tiburon and the mainland, the island being placed too far southward and the river much too far northward.[6] Numerous data relating to the Seri were incorporated in his text; all were second-hand, though many were taken from unique or rare manuscripts. The coastwise natives of Sonora were said to "live on pulverized rush and straw, with fish caught at sea or in artificial enclosures"; mention was made of the allegation that "the Sali-

[1] Dictionnaire de la Langue Nahuatl ou Mexicaine, rédigé d'après les Documents Imprimés et Manuscrits les plus authentiques et précédé d'une Introduction; Paris, 1885, p. xviii.

[2] Tableau de la Distribution ethnographique des Nations et des Langues au Mexique; Congrès International des Américanistes, Compte-rendu de la Seconde Session, tome II, 1878, p. 37.

[3] The Works of Hubert Howe Bancroft, vol. III (The Native Races, vol. III, 1882, p. 704). The "east" in this quotation is obviously a misprint for west.

[4] Ibid., p. 705.

[5] Op. cit., vol. I, pp. 604-605.

[6] Ibid., p. 671.

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nerve sometimes eat their own excrement";[1] anthropophagy was noted, but as pertaining rather to the interior than to the coastwise tribes; and prominence was given to the Seri arrow poison, of which an early author wrote:

> The poison with which they envenom the points of their arrows is the most active that has ever been known here. . . . It has not been possible to ascertain with certainty the deadly materials of which this pestilential compound is brewed. Many things are alleged, e. g., that it is made from the heads of vipers, irritated and decapitated at the moment of striking their teeth into a piece of lung or of half putrefied human flesh.

Reference was made also to the "magot" (probably the yerba mala of the modern Mexicans) as a source of arrow poison.[2] The girls' puberty feast was said to be kept up for several days among the Seri and Tepoka, and the former were said to "superstitiously celebrate the new moon, and bow reverentially to the rising and setting sun", and also to "employ charms in their medical practice".[3] Finally, the constituent tribes were discriminated in a manner recalling the persistent assumption that the parasite-converts at the missions fairly represented the Seri:

> The Tepocas and Tiburones are fierce, cruel, and treacherous, more warlike and courageous than the Ceris of the mainland, who are singularly devoid of good qualities, being sullenly stupid, lazy, incontinent, revengeful, depredating, and much given to intemperance. Their country even has become a refuge for evil doers. In former times they were warlike and brave, but even this quality they have lost, and have become as cowardly as they are cruel.[4]

It is evident that this characterization of "the Ceris of the mainland" was based on the degraded scavengers outlawed by the tribe and attached to the missions and pueblos during much of the historical period.

It was also during the seventies that the errors and uncertainties of three and a half centuries concerning the coasts of the Californian gulf were finally brought to an end through the surveys of Commander (now Admiral) George Dewey, U. S. N., and the officers of the United States ship *Narragansett*, under the direction of the Hydrographic Office of the United States. These surveys resulted in trustworthy and complete geodetic location of all coastwise features, in geographic placement of the entire coast-line, in soundings of such extent as to determine the bottom configuration, in tidal determinations, in recognition of the currents, in definition of harbors and anchorages, and eventually in a series of elegant and accurate charts (dated 1873–75) available for the cartographers and navigators of the world. As the largest island in the gulf, Tiburon received especial attention; its coast was accurately surveyed and mapped, while the interior was sketched in considerable detail, and the adjacent channels were carefully defined and sounded.

[1] The Works of Hubert Howe Bancroft, vol. III (The Native Races, vol. III, 1883, p. 576.)
[2] Ibid., p. 570.
[3] Ibid., pp. 566, 567, 569.
[4] Ibid., p. 569.

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Naturally the surveyors came into contact with the Seri tribesmen. Of them Commander Dewey wrote:

> During the greater part of the year Tiburon Island is resorted to by the Seris (or Coras) tribe of Indians, who inhabit the adjacent mainland, and their huts and encampments may be seen in many places along the shore, principally on the eastern side of the island. They are reputed to be exceedingly hostile and to use poisoned arrows in opposing the landing of strangers on what they consider their domain, but during the stay of the *Narragansett* in the vicinity they were very friendly. At first they were shy and made threatening gestures, but soon finding that our intentions were peaceable, became friendly and returned our visits to the shore by frequent and lengthy calls on board ship. They are very expert in hunting with the bow and arrow and in catching fish and turtles, which abound in the surrounding waters. The canoes of these Indians deserve especial mention. They are made of long reeds, which are bound together with strings after the manner of fascines, three of which when fastened together . . . have sufficient buoyancy to support one or two persons. They kneel in these canoes when paddling, the water being at the same level in the canoe as outside of it.[1]

Illustrations of the "Tiburon canoe" (or balsa), drawn by H. Von Bayer, were also introduced.[2] In addition Mr Von Bayer succeeded in obtaining two photographs of Seri Indians, taken on shipboard; one of these is of special interest in that it illustrates the peculiar attitude of the Seri archer in the act of using his weapon.[3]

Unfortunately the surveys were confined to the coast, and the interior remained unmeasured and unmapped save on the basis of tradition and travelers' tales, supplemented by a few vague itineraries and traverses. Except along the international boundary and the railway (Ferrocarril de Sonora), the locations of pueblos and ranchos remained guesses, the delineation of mountains remained a work of imagination, and even the best cartographers continued to run in rivers at random or in such wise as to afford artistic effect.[4]

In 1879 M Alphonse L. Pinart traveled extensively in northern Mexico and southwestern United States, and made considerable linguistic collections among various tribes. Desiring to obtain a Seri vocabulary, he planned a visit to the tribal territory; but on reaching Caborca in March he was met by the information that the Seri were on the warpath, and had recently devastated a hacienda on their frontier and slain more than a dozen white settlers.[5] Thence he repaired

[1] Publication No. 96, U. S. Hydrographic Office, Bureau of Navigation. The West Coast of Mexico, from the Boundary Line between the United States and Mexico to Cape Corrientes, including the Gulf of California (revised edition), 1898, p. 146.

[2] Ibid., pl. xv, p. 138 (one of these illustrations is reproduced in figure 39).

[3] The negatives of these pictures were retained by Mr Von Bayer, and have been kindly turned over to the Bureau of American Ethnology. Unfortunately the corkery negative had been shattered, but enough of the fragments were preserved, to show all essential details and to afford a basis for the drawing reproduced in plate XXIX.

[4] The imposing official map of 1899, titled Carta General de la República Mexicana, formada en el Ministerio de Fomento con los datos mas recientes, por disposición del Secretario del Ramo, General Carlos Pacheco, engraved and printed by Richard Herrmanns, Paris, on a scale of about 32 miles to the inch, represents Rio Sonoyta as about the right length and with its center in about the right location, but as running at almost exactly right angles to its actual course; and it contains divers other equally startling errors.

[5] Recorded by Gatschet, Zeitschrift für Ethnologie, Berlin, Band xv, 1883, p. 130. The location of the hacienda was not specified, but there are local traditions of Seri raids about that time, both on Hacienda Sierra (between Cobareo and Libertad exchanges) and at Sonoyta.

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to Pueblo Seri, and early in April obtained there a Seri-Spanish vocabulary of several hundred words, with a number of short phrases throwing some light on the grammatic construction. This record was transmitted to Dr Albert S. Gatschet. It comprises a title page inscribed "Vocabulario de la lengua Séri | Interprete el Gl. de los Seris | y otro Indio. | Pueblo de Seris | 4 Abril 1879"; four foolscap sheets (written on both sides, thus making 16 pages) of vocabulary; and a final page bearing two short phrases and inscribed "Los Séris, me dice el general de ellos, son como doscientos hombres de llevar armas—viven todavia parte en la isla de Tiburon, parte en la costa.' Pueblo de Seris, 4 Abril, 1879, Alph. Pinart." A transcript of this invaluable vocabulary is preserved in the Bureau of American Ethnology. There is nothing either in the original vocabulary or in the known correspondence relating to it to identify the aboriginal informant, but the identification is made easy through the coincident testimony of living witnesses and the unmistakable implication of the historical records to the effect that there was at that time but a single Seri Indian[1] resident at Pueblo Seri—i. e., the official interpreter, "El General" Kolusio. This identification is strengthened by the remarkable similarity between this vocabulary and that of Bartlett, a similarity made the more striking by the fact that one was recorded in English, the other in Spanish; the identification is supported, too, by Kolusio's memory of "giving his language" to a stranger "not a Mexicano" yet familiar with the Spanish; and the identification is practically established by the considerable number of terms expressing concepts alien to the Seri (e. g., ax, adobe, house, horse, hog, field, irrigate, pigeon, thrush, tobacco, shirt, the names of the months, etc), evidently acquired through long and intimate acquaintance with Mexican customs and domiciles and modes of thought—for all these concepts were familiar enough to Kolusio, yet to no other known Seri Indian of recent decades. Accordingly it may be deemed practically certain that M Pinart's vocabulary, like that of Commissioner Bartlett, was obtained from Kolusio; and it is at least strongly probable that both the Lavandera-Ramirez and the Tenochio-Pimentel vocabularies were derived from the same aboriginal source—an indubitably excellent source, save for the occasional interjection of alien notions, and the infrequent substitution of foreign equivalents for forgotten terms.

Barred from Seriland by the current war craze, M Pinart was prevented from obtaining much collateral information concerning the Seri; but he concluded (on grounds not stated) that "the Tepoca spoken on

[1] "The Seris, the chief tells me, comprise about 200 men fit to bear arms—they still live part on the island of Tiburon, part on the coast."

[2] M Pinart's reference to his interpreter is not only impersonal but ambiguous. "Interpreter by the chief of the Seri and another Indian" might be considered to imply two Seri Indians, though it may, with equal linguistic probability, be interpreted to mean the specified Seri and another Indian; and while the temporary presence of a second Seri at the pueblo seems possible, the sum of probabilities points so clearly the other way as to demand the latter interpretation.

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the south of Rio del Altar is identical with the Seri",[1] and also that "the Guaymas were of the stock of the southern Pimas, or Nebomes".[2]

While M Pinart failed to publish, his linguistic collections were compared, systemized, and made public by Dr Albert S. Gatschet in a notable memoir on "Der Yuma-Sprachstamm", 1853. Comparing the Seri, as represented by the Pinart and Bartlett and Pimentel vocabularies, with the Yavapai, M'Mat, and incidentally with the Kosino, Tonto, Cochimi, and other tongues, Dr Gatschet was led to adopt the suggestion of Professor Wilhelm Herzog[3] that the Seri is a dialect of the Yuman stock. In the comparative vocabulary, which comprises about a hundred and forty Seri words (selected from the 611 terms in the Pinart collection), there are perhaps a dozen terms presenting some similarity to those of one or more Yuman dialects; among these are terms for ax, tree, split, tobacco, heaven, pigeon, dog, and others of presumptively or certainly alien character.[4]

Herzog's suggested classification, with Gatschet's indorsement, was accepted even more promptly and widely than the earlier classifications of Pimentel and Orozco. It was tacitly adopted by Director J. W. Powell in his classic arrangement of Indian linguistic families of America north of Mexico;[5] it was explicitly approved by Adolph F. Bandelier in his "Final Report of Investigations";[6] and it was implicitly accepted and fortified by Dr Daniel G. Brinton in his work on "The American Race".[7] Brinton's Seri words were "chiefly from the satisfactory vocabulary obtained by the late John Russell Bartlett"; of the 21 terms, about 8 (including that for the alien concept "house") suggest affinity with the Yuman, chiefly in the Mohave dialect; the others are either wholly distinct or only superficially similar, e. g., in the concurrence of a consonant or two, or merely in the correspondence in number of syllables.[8]

Stated briefly, the scientific researches relating to Seriland and the Seri during the fifty years from the fourth decade of the century to the middle of the last decade resulted in (1) a satisfactory survey of the coast, (2) the collection of two excellent Seri vocabularies, with a few others of less extent, and (3) two discrepant linguistic classifications of the tribe, both widely quoted and accepted.

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[1] Gatschet, op. cit., p. 121.

[2] Bandelier, Final Report of Investigations among the Indians of the Southwestern United States, part i, in Papers of the Archæological Institute of America, American series, iii, Cambridge, 1890, p. 76. As already noted, it is probable that the Guaymas lost their "antigua lengua" (Ramirez, op. cit. p. 149) long before M Pinart's visit; and pending definite statement of the facts on which his conclusions rests it is necessary to retain the classification based on specific and repeated, albeit unskilled, observations of the identity of the Guaymas speech with that of the Seri.

[3] In correspondence with Dr Gatschet, op. cit., p. 123.

[4] Dr. Gatschet has recently revised the data and recognized the distinctness of the Seri tongue (Science, new series, vol. xii, 1900, p. 123-124).

[5] Seventh Annual Report of the Bureau of Ethnology, 1885-'86, Washington, 1891, p. 137.

[6] Op. cit., p. 74.

[7] The American Race: A Linguistic Classification and Ethnographic Description of the Native Tribes of North and South America, New York, 1891, p. 333.

[8] Mr. Hewett's discussion (pp. 20-24) gives fuller details of this short vocabulary.

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During the half century of historical silence from 1844 forward, and pending the progress of the desultory researches, the Seri suffered a succession of external shocks more serious in their internal effects than any of those of the three centuries preceding; indeed it is just to say that during this half century the Seri range was curtailed, the Seri customs were modified, and the Seri population was diminished more effectively than during the preceding sesquicentury of fairly definite record. The chief factor in this transformation was an intrepid pioneer, who pushed actual settlement toward the Seri frontier more vigorously than any predecessor—Señor Pascual Encinas, a son of Sonora.[1]

Born near Hermosillo in 1819, Don Pascual was in early maturity at the time of Colonel Andrade's expedition, and was fully conversant with the later history of the Seri. Of adventurous disposition, and holding interests in Hacuachito, he was familiar with the Seri frontier; and in hunting deer and other large game over the vast delta plain of Rio Sonora he had perceived the agricultural possibilities of the region. During the struggle of 1844 he became impressed with the idea that the Seri might be controlled and gradually inducted into useful citizenship through a judicious combination of industrial, educational, and evangelical agencies; and before the end of the year he began the establishment of a rancho (the present Rancho San Francisco de Costa Rica) on the Seri borderland, with the double object of developing new resources and regulating the relations between tribesmen and settlers. Enlisting the aid of a corps of vaqueros, mechanics, and farmers, he excavated a deep well, erected corrals and adobe houses, cleared away the exceptionally luxuriant mesquite forests, fenced fields, and stocked the plains with horses, burros, and cattle. At the same time he sought Seri wanderers and treated them with such kindness and firmness as to gain their confidence; and while most of the tribe held aloof, some attached themselves to the rancho, and a few even were taught to labor, albeit in desultory fashion. In this stage, as for some years afterward, he was materially aided by his contemporary, Kolusio, then in his physical prime and still in good repute among his kinsmen. Meantime he obtained the assignment of two priests, who made it their chief duty still further to placate the tribesmen and their families and to induct them into religious observances and belief; and as the confidence of the Indians increased, he had two boys domiciled in the rancho and educated in the Spanish as well as in the faith, in the hope that they might pass into priesthood and so form a future bond with their kin. One of these neophytes disappeared in the troublous times of a later decade, though tradition indicates that he became a tribal outcast (like Kolusio still later) and slunk away to Pitiquito and Altar, and afterward to California; the other, christened Juan Estorga and

[1] The following paragraphs are condensed from oral recitals by Señor Encinas (a notably straightforward and judicious authority), supplemented and corroborated in all essential details by Señores Andres Noriega, Ygnacio Loustau, and several other habitués of the Seri borderland, as well as by Kolusio and Madrid, several Papago informants, and various collateral documents.

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nicknamed El Gran Pelado ("The Great Shorn"), survives as subchief Mashém, long since relapsed into his native savagery, save that he remembers the Spanish, affects a hat, cuts his hair to the neck (whence his nickname), and prefers footgear to the fashion of his fellows.

Industrially, Don Pascual's venture proved successful; the fertile soil, periodically watered from below by the underflow of the semi-annual freshets, yielded incredible crops; reveling in the exceptional floral wealth of the delta and tided over bad seasons by the artificial forage, the stock increased and multiplied beyond precedent; and so the rancho became a flourishing establishment, housing a score or more of families and harboring a hundred or two dependents, in addition to the thousands of half-wild horses and cattle. Meantime, the industrial lines ramifying from the rancho formed a drag net for Seri raiders, practically cutting off forays eastward toward Hermosillo and Horcasitas, and greatly reducing the sallies southeastward toward Guaymas and northeastward toward Bacuachito and Caborca; and Don Pascual began to receive recognition and state and federal concessions as a public benefactor. For a decade the industrial and evangelical influence and the effect of the bold kindness of El Patron extended and became felt throughout the tribe, and most of the families visited the rancho at least occasionally. Yet even the best of them remained averse to labor save in sporadic spurts, and indifferent to the religious teaching, save when sweetened by substantial largess; while all but the decrepit and the two carefully restrained neophytes came and went capriciously, and were much given to decamping incontinently by night to return shamefacedly one by one in the course of a week or two, without consistent or adequate excuse for their stampede—indeed the vaqueros habitually classed these nocturnal flights of the Seri and the reasonless stampedes of their stock in the same category. Ostensibly a few of the larger boys and girls and a still smaller number of the adults were helpers about the rancho; actually they were scavengers, consuming the waste of the shambles and the earth-mixed scatterings from the thrashing floors, and saving the rancheros the noisome duty of removing the carcasses of animals dead by disease or accident; and as their indolence increased under the easy régime, they grew into more and more open thievery. By no means deficient in shrewdness and cunning, they adopted numberless devices for imposing on the credulity of the majordomo and other officials of the rancho. When coin-like tokens of stamped copper were used in the transactions of the rancho as equivalents of labor, the Seri ingeniously obtained sheet copper by stealth or barter, systematically counterfeited the tokens, and exchanged them for supplies at the rancho store; it was a favorite trick to surreptitiously break the neck or a leg of a horse, cow, or burro, and report finding the dead or crippled animal, at the same time begging for the carcass; and, whenever opportunity offered, they slyly slaughtered a head of stock, consumed it to the hoofs and horns

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HOUSE FRAMEWORK, TIBURON ISLAND

HOUSE COVERING, TIBURON ISLAND

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and larger bones, sucked up the blood stains, and buried the few remains in cactus thickets, impenetrable save by their own hardy limbs and bodies. Nor did any of the tribe except the two restrained neophytes ever really enter the collective life of the patriarchal group headed by Don Pascual; they attended no industrial or social or churchly function save in response to reminder and solicitation; they craved the white man's medicines in slight disorders, but rejected them in extremis; and the dying or dead were spirited away to be inhumed and mourned, according to their wont, in their harsh but beloved motherland.

During this period of mutual toleration the Seri were so deeply influenced by the white contact that, for probably the only time in their history, they voluntarily allowed an alien free entry into their territory; and Don Pascual explored the coast of Bahia Kino, projected a port, and even visited Isla Tiburon twice or thrice. In one of these visits he was ferried over Boca Infierno on a balsa, but, finding himself unable to keep pace with the swift-footed Seri on their hilly pathways, he returned for his saddle mule; halfway across, the poor animal swimming behind the balsa suddenly plunged and struggled, and, on landing, hobbled out on three legs—the fourth having being snapped by a shark. Warned by this incident, Don Pascual abandoned a half-formed plan of stocking the island, and afterward brought up a small vessel from Guaymas in which he carried across a dozen caballeros (including Don Ygnacio Loxania, who had visited the island with the Andrade expedition); and this party examined the southeastern quarter of the island, watering two or three times at Tinaja Anita, and pushing as far westward as Arroyo Carrizal. On this trip he studied the Seri house-building, and was the first to note the large use of turtle-shells and sponges in the process.[1]

About the middle fifties it became apparent that the Seri were dividing into a parasitical portion clustered about the rancho (as their forbears gathered about Populo and Pueblo Seri long before), and a more independent faction clinging to their rugged ranges and gale-swept fishing grounds; and it became evident, too, that the thievery of the dependent faction would soon ruin the rancho if not checked, or at least greatly diminished. Accordingly the passive policy was modified by introducing a more active police service. At first the penalties for theft and misdemeanors were light, and the system promised well—especially as even a slight punishment was equivalent to banishment, the criminal fleeing to Tiburon on his escape or immediately after the crime; yet the experience of a year or two proved that the escaped parasites seldom resumed the hard customs of their tribal life, but generally returned to the borderland and there preyed on the wandering stock from the rancho. Finally, driven to extremity, and supported

[1] Typical flint knives, as described by Don Pascual in 1856, were observed on Tiburon by the 1895 expedition, as shown by the photographs reproduced in plates VII, VIII, and IX.

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by the state and federal authorities (themselves confessedly unable successfully to cope with the condition), Don Pascual reluctantly adopted a severer régime. Sending out as messengers several Seri still remaining at the rancho, he convened the leading chiefs and clanmothers of the tribe in a council, and announced that the stock-killing must cease, on pain of a Seri head for each head of stock thereafter slain. The Indians seemingly acquiesced, and separated; but within two days a group of Seri women "killed" a band of horses, caught and threw one in such wise as to break its neck, and immediately sucked its blood, gorged its intestines, and buried its quarters to "ripen", after their former fashion. Thereupon a matron remaining near the rancho was sent to demand the delivery of the perpetrators; and, when she failed to return, the vaqueros were instructed to shoot the first Seri seen on the llano. Within two days more, the tribe were on the warpath for revenge—and the war raged for a decade.

During the early months of the Encinas war Don Pascual's vaqueros sought merely to enforce the barbaric law of a head for a head; but, as they found themselves beset by ambush, assailed and wounded by night, despoiled of favorite animals, and kept constantly in that most nerve-trying state of eternal vigilance, their rancor rose to an intensity nearly equal to the savage passion for blood-vengeance; and thenceforth the Seri were hunted from the plain east of Desierto Encinas precisely as were the stealthy jaguar and sneaking coyote—and the ghastly details were latter spared. There were few open battles; commonly the vaqueros rode in groups and guarded against ambuscades, and the Seri were picked off one by one; but once in the early sixties Don Pascual, at the head of some 30 vaqueros, fell into an ambush on the frontier, and several of his horses were killed and some of his men wounded, while 60 or 70 Seri warriors were left on the field. Don Pascual's horse received a slight arrow wound, to which little attention was paid; next morning the gash was swollen and inflamed and the beast too stiff and logy for use; in the afternoon the glands under the jaw were swollen, and there was a purulent discharge from eyes and nostrils. On the second morning the animal was hardly able to move, its head was enormously swollen, there were fetid ulcers about the jaws and throat, and the swelling extended to the legs and abdomen. On the third morning there were suppurating ulcers on various parts of the body, while rags of putrefied flesh and stringy pus hung from the head and neck, and the animal was unapproachable because of the stench; during the day it dropped dead, and even the coyotes and buzzards shrank from the pestilential carcass. This and parallel incidents impressed Don Pascual with the dangers incident to Seri war; but fortunately the fact that he—the leader of the party, the first to fall into the ambush, and the target of most of the arrows—had escaped unscathed impressed still more deeply the surviving savages, and they soon sued for peace. Thenceforth he was revered as a shaman greater than those of the tribe, feared as an irresistible fighter, and honored as a just lawgiver; and

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SPONGE USED FOR HOUSE COVERING, TIBURON ISLAND

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gradually the condition of mutual tolerance was restored, to rest on a firmer basis than before.

Don Pascual estimates that during the dozen years of strife between his men and the Seri forces about half of the tribe were slain. The horror of the history of this period may be passed over; it may merely be noted as a casual fact that one of the two Mexicans accompanying the 1895 expedition was credited with 17 Seri heads. When he pointed out the site of his last exploit, a mile or two south of Rancho Libertad, and some incredulity was expressed, he immediately galloped to the spot and brought back a silent witness in the form of a bleached Seri skull.[1]

At the close of the war Don Pascual continued the industrial development of the plains lying east of the desert border of Seriland, received new concessions in recognition of his conquest, and developed the ranchos of Santa Ana and Libertad; but the evangelical arm of his vigorous mission gradually withered. For a dozen years the Seri looked up to "El Patron" as a quasi ruler, whose approval was requisite for the ratification of chieftainship, and through him ran a slender thread of nominal fealty to the state and the republic; yet few parasites gathered about the rancho. Mashém had gone back to his clan; and when depredations were committed at Bacuachito or elsewhere and the criminals were caught, usually through Don Pascual's instrumentality, they were sometimes haled to Hermosillo for trial, and Kolusio was kept there as the official interpreter of charges and evidence and findings. Sometime during the sixties a few Seri youths were coaxed to Pueblo Seri for education, but when they were instructed to cut their hair they slunk dejectedly to their temporary domicile, only to decamp during the ensuing night; again, in 1870, Kolusio was commissioned to bring in a few young people and a matron or two of the tribe, and succeeded in doing so just in time to encounter an epidemic of measles, from which some died, while the others shook the dust of the pueblo from their feet forever; and this last straw, added to his alien residence and his presence at the dreaded trials, broke down the tribal toleration of Kolusio and made him an outlaw forever.

In the later seventies Don Pascual's energies began to wane, while the Seri population was waxing again; and, although the Encinas frontier was protected, raids began to recur toward Bacuachito, on the ranchos southwest of Caborca, and sometimes toward Guaymas; and the hostilities then engendered have never terminated. In the eighties Don Pascual suffered from cataract, gradually losing his sight, and his rule relaxed still further; Rancho Libertad was abandoned, and a condition of armed neutrality supervened at San Francisco de Costa Rica and Santa Ana; and this condition still persists, save as occasionally modified by a crude sort of diplomacy on the part of the Seri: when blood-feud is not burning (and it is usually extinguished by the killing of an alien on the coast or some remote part of the frontier), and when no stock have

[1] The specimen described by Dr Hoffman, ante, p. 101.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

648 been slaughtered for some months, an aged woman may be seen stalking about the mesquite clumps in sight of the rancho; if her presence is tolerated for a day or two, she approaches to beg for water and food and to receive the cast-off rags hastily forced on her nakedness by the sensitive señoras; if she deem her welcome not too chill, she erects a jacal a few hundred yards away, and there she is usually found, a morning or two later, to be accompanied by a younger matron with a child or two; and if these are tolerated, the ranchería may grow to half a dozen jacales and half a hundred persons.[1] The band may remain a fortnight or even a month; but in case of serious illness of any of their number, or of threat or punishment for petty peccadillos, or of an unusual storm, or of a brilliant meteor, or of any exceptional occurrence about the rancho, the ranchería is commonly found empty next morning. If the attaches of the rancho are indisposed to tolerate the first envoy, yet feel kindly rather than rancorous, she is merely dogged and stoned away like a depredating domestic animal from another hacienda; if the rancor of past encounters remains, the mercy accorded her is precisely that shown the predatory coyote or other feral animal from the fastnesses of the sierras—and the tribe take warning and doubtless rejoice that their loss is no greater.

1175 177 [648] Any recital of the common history of the peculiarly savage Seri and the whites necessarily conveys an exaggerated notion of intimacy and mutual influence, since it emphasizes the few positive interrelations scattered along the decades of neglected nonrelation; and this is true of the Encinas régime as of earlier centuries. The great fact is that throughout their recorded history the Seri have touched civilization so slightly and so seldom that the effect of each contact was largely lost before the next supervened; and the unprecedentedly intimate contact of the Encinas régime, especially during the initial period of abnormal toleration, serves less to indicate relationship in characteristics and sympathies than to measure the breadth of the chasm between the Seri and the Mexican—a chasm not exceeded, and probably not equaled, elsewhere in America. About the middle fifties, probably every Seri above infancy and below decrepitude had seen Don Pascual and some other habitués of the rancho; they yielded to the seductions of indolent scavengering apparently more numerously than ever before; they substituted cast-off rags and barter-bought manta (plain cotton cloth) for the products of their own primitive weaving; they ate cooked food when it fell in their way; they half-heartedly adopted metal cutting implements, and sought or stole nails and hoop-iron for arrowpoints; some of them acquired a smattering of Spanish, and many of them solicited and sported Spanish names, just as they begged and flaunted tawdry handkerchiefs and beads; and they generally enjoyed mildly the ecclesiastical fiestas, and took kindly to the cross as a symbol of peace and plenty and perhaps of deeper import. Yet

[1] A typical simple jacal and two native merchants gathered at Costa Rica in 1895 are shown from photographs in plates 1 and 2.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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HOUSE SKELETON, TIBURON ISLAND

INTERIOR HOUSE STRUCTURE, TIBURON ISLAND

[p. 114 a]

1: McGee E-5 (1894-1895)1898 NU31 Cop.1 NU31

even during this halcyon term no Seri save Kahesio and the Altar outlaw ever learned to live in a house; none but these and Mashém were hats habitually; and, despite the fact that they often witnessed and sometimes playfully or perforce participated in the processes, no Seri ever really encompassed the idea of house-building or even of making adobe. Though surrounded by horses when near the ranchos, they never learned to ride nor to use the animals otherwise than for immediate slaughter and consumption; though in frequent sight of skilful ropers, they never fully grasped the idea of the riata, preferring to seize their prey with hands and teeth; though familiar with the agricultural operations of the ranchos, they never turned a sod nor planted a seed on their own account; though in frequent sight of cooking, they seldom began and never finished the process with their own food; though acquainted with firearms, they continued to regard them as thaumaturgic devices, and chose the bow and arrow for actual use; though submitting to apparel on the frontier, they constantly cast away the incumbrances on returning to their hairs; and no Mexican or other Caucasian ever saw within their esoteric life—their names remained unrevealed, their hair remained sacred, their mourning for the dead was unheard save at a distance, and no alien, even unto today, has ever seen the birth of their babes, the christening of their children, the burial of their dead, or the ceremonies of their shrines. The Seri and the whites were, indeed, mutually tolerant; but, so far as concerns mutual sympathy, the toleration was almost precisely on a par with that between the rancheros and the vulture-flock that scavengers his corrals—and when depredation began the toleration was of a piece with that between householders and their unwillingly domiciled rodents. It is not too much to say that the interracial mistrust and hatred of the Western Hemisphere culminates on the borders of Seriland; though the antipathy is commonly regarded by the alien tribesmen and the Mexicans as other than racial, since the Seri are felt to be hardly human—a feeling fully shared by the Seri, who undoubtedly drew themselves more closely akin to their deified bestial tutelaries than to the hated humans haunting their borders.

Even during the Encinas régime the Seri came in occasional contact with aliens on other parts of the frontier: on Hacienda Seras, the somewhat remoter borderland outpost on the north, the relations between the landholders and the Seri were analogous to those on the Encinas plains, though less acute in the ratio of relative distance. Occasionally small parties of warriors journeyed to Guaymas[1] on balsas or on foot to barter pelican-skin robes for Caucasian commodities, chiefly aguardiente and manta; still more rarely similar pilgrimages were made to the outskirts of Hermosillo; a few marauding raids were made to the ranchos lying near Cienegnilla and Caborca; and a com-

[1] The accompanying plate XII is reproduced from a photograph of a small group of Seri traders taken near Guaymas, probably during the eighties. It was kindly furnished by F. A. Glass, who purchased it in Guaymas.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

† 975 648

her of ill-advised prospecting parties, coming by land or water, paid the penalty of foolhardiness. Writing about 1864, Historian Velasco reserved to the Seri to say:

> This handful of bandits, cimarrons, thieves, brutes [inhumanos], infinitely vile and cowardly, on February 23 last, on the Guaymas road, at the place called Hacienda, assassinated 4 unhappy women, including a girl of 9 years, and 7 men who were conducting them in a cart toward that port.

He bitterly denounced the apparent apathy of the state and federal authorities, adding:

> When it is read in history fifty years hence that a handful of murderous Curis, certainly not more than 80 of the tribe able to bear arms, was able to dominate in the midst of their crimes with unexampled audacity on account of the debility of the government and the inhabitants, it will be regarded as a romance or a fable; for it seems impossible that in the nineteenth century such a condition of things could exist to degrade the reason, the morality, and the dignity of civilized man.

Yet a final note, apparently added in press, recorded that—

> In consequence of the last incident of the Curis, the prefect of Guaymas, Don Cayetano Navarro, took the field, returning with 12 women and 16 children prisoners; also 2 striplings and a vieillard. He slew 9 among those who had no leader. This was on Isla Tiburon. The Indians fled thence, and are supposed to be at Tepoca.[1]

These may be considered as characteristic skirmishes attending the Encinas war. Other episodes followed, including the outbreaks of 1879, noted in part by M Pinart. Bacuachito suffered in various locally important events that will never be written: when Don Jesus Omada, a water guide to the expedition of 1895, was asked about the Seri at Bacuachito, he answered with cumulative vehemence, "They killed my father. They killed my brother! They killed my brother's wife!! They have killed half my friends!!!" As he spoke he was feverishly baring his breast; displaying a frightful scar over the clavicle, he exclaimed: "There struck a Seri arrow"; then he stripped his arm with a single sweep to reveal a ragged cicatrix extending nearly from shoulder to wrist, and added in a tone tremulous with pent bitterness, "The Seri have teeth!"

In the course of the half century from 1844 onward, the population of Sonora increased materially, and carried more than a proportionate increase in the development of agricultural and mineral resources; and, especially under the beneficent Diaz regime, the state passed from the condition of a remote frontier province into that of a well-governed commonwealth. Naturally this progress carried the Caucasian element, including that of blended blood, farther and farther away from the nonprogressive Seri; and thereby the horror and detestation awakened by the very utterance of the name of the lowly tribe were intensified beyond description or ready understanding. The traditions of arrow poisoning were kept alive, and, doubtless, growing; the recitals of carrion eating were repeated, and possibly—just possibly—magnified beyond the reality; the accounts of offense and defense by nails and

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[1] Boletin de la Sociedad Mexicana de Geografia y Estadistica, tome xi, 1862, pp. 126-128.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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SEVENTEENTH ANNUAL REPORT PL. II

BUREAU OF AMERICAN ETHNOLOGY

TYPICAL SERI HOUSE ON THE FRONTIER

[FACING P. 117]

I: McGee E-5 (1894-1895):1898 NU3 : Seri NU31

teeth (such as that of Jesus Omada) passed from mouth to mouth until—incredible as it may seem—the more timid Sonorenses stood in greater dread of these natural weapons of the Seri than of their brutal clubs and swift-thrown missiles, or even of their poisoned arrows; while traditions of cannibalism came up and received such general credence that the current items of Seri outrages, both in local gossip and in the Mexican and American press, customarily recounted savage butcheries ending with gruesome feastings on the raw or slightly cooked flesh of the victims. The shuddering antipathy felt for the perpetrators of these inhumanities even a thousand miles away increased toward their frontier, as light toward its source; the dread was deepened by the failure of punitive expeditions sent out again and again only to be balked by waterless sand-wastes or wrecking tidetips; and in 1894 and 1895, at least, the horror of the Seri was a daily and nightly incubus on half the citizens of Hermosillo and the tributary pueblos and ranchos, and a thorn in the flesh of the state officials.

The external history of the Seri since the spring of 1894 is fairly known, both through the direct researches and through press reports, and would seem to be typical. This era may be assumed to open with the arrival on Tiburon's shores of the sloop *Examiner*, carrying two San Francisco newspaper writers, Robinson and Logan, with two assistants, Clark and Cowell. The to-have-been-expected happened duly, save that two of the party escaped, and on reaching Guaymas advertised the disaster through correspondence and the press. Several of the accounts indicated that the two victims were not only slain but eaten, and various plans were laid in California, Arizona, and Sonora for the recovery of the bones[1]—as if, forsooth, the omniverous and strong-toothed Seri spared anything save scattered teeth and split sections of the longer shafts of skeletons the size of those of *Homo sapiens*. While in Guaymas the two survivors set up claims for indemnity, which initiated international correspondence and inquiry into the details of the affair. These details are indicated, in sufficient fulness for present purposes, in a formal communication incorporated in the international correspondence, viz:

SMITHSONIAN INSTITUTION,
BUREAU OF AMERICAN ETHNOLOGY,
Washington, December 11, 1894.

SIR: Early in November I visited the Seri tribe of Indians, inhabiting Tiburon island in the Gulf of California and an area of several thousand square miles of the adjacent mainland in Sonora, Mexico. The visit was for the purpose of making collections under your authority as secretary of the Smithsonian Institution; but I availed myself of the opportunity for obtaining additional information relating to the customs, habits, and history of the tribe. In addition to my own party I was accompanied by Señor Pascual Encinas, a prominent citizen of Hermosillo, and

[1] A number of Californians and Arizonians, especially M. M. Ives, of Phœnix, intimated a strong desire to join the 1895 expedition of the Bureau of American Ethnology for the express purpose of personally ascertaining the fate and seeking the remains of Robinson, who was extensively known in southern California and southwestern Arizona.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

owner of several ranches adjacent to, and one within, the territory claimed by the Seri Indians; also by Señor A. Alvarado-Leon of Hermosillo, a young Mexican gentleman educated in the United States. For Señor Encinas the Seri Indians have the highest regard, and his kindly motive in accompanying the party was to facilitate friendly intercourse with the Indians; Señor Alvarado-Leon acted as Spanish-English interpreter, and one of the tribe who speaks Spanish (Mauhém) acted as the Seri interpreter.

One of the subjects of inquiry of the Indians related to the alleged killing of two Americans by the Seri Indians on Tiburon island during last spring at a date not definitely known either to the Indians or to myself. At first the Indians were indisposed to convey information on the subject, but after receiving promises from Señor Encinas and myself, and friendly assurances from the former, the interpreter for the tribe confessed the crime and detailed the circumstances, denying, however, that any of the Indians present at the place of conference (Rancho de San Francisco de Costa Rica, 17 leagues west-southwest of Hermosillo and near the coast) participated.

According to the first account given through the Indian interpreter, the Indians on the island saw a small vessel approach the shores of the island, and saw four men land therefrom in a small boat. The spokesman among the strangers made inquiry, chiefly by signs, as to whether game was abundant in the interior of the island, and was by signs answered in the affirmative by the chief of the tribe, who displayed a letter of authority from the state officials at Hermosillo. Then the strangers divided, two remaining on the shore by the small boat, while the spokesman and another, accompanied by several Indians, started toward the interior of the island. When they were some distance away—the account continues—some of the Indians remaining on shore indicated by signs a desire to borrow the rifle of one of the two men on the beach, and after some parley the rifle was turned over to them; then the Indians desired also to borrow the small boat in which the party of white men had landed, and after one of the two men remaining on the shore was put aboard the vessel, this, too, was placed in the hands of the Indians. Thereupon several of the Indians entered the small boat, carrying the white man's rifle, and rowed around a headland a short distance away. Passing this point they landed and a part of them ran quickly into the interior in such direction as to intercept the course of the white man. There they lay in wait until the strangers appeared, when they shot the spokesman, killing him almost instantly. On this the second white man cried out for help, whereupon he too was shot and wounded, and then (according to the first account) ran away and concealed himself in the bushes and was seen no more. The Indians who had borrowed the boat then went back to the shore, and reentered the boat with the intention of returning and capturing the fine vessel of the strangers; but as they approached the vessel, being at the time quite near the shore, the man on board arose suddenly with a gun pointed toward them and shouted, whereupon they dropped the borrowed gun and, leaping from the boat, ran away among the mesquite bushes, all escaping unhurt. The white man on the beach then, on the account ran, leaped into the boat, and, recovering his gun, rowed to the vessel and got aboard, when the two men at once made sail and escaped down the bay.

The foregoing account was given to Señor Encinas alone by the Indians through their interpreter, and was afterward conveyed to me through Señor Alvarado-Leon. Both of us recognized the incongruity with the character of the Seri Indians of that part of the narrative relating to the wounding and escape of the second man, and before Encinas and Leon and myself sought to impress the improbability of the account on the interpreter. Subsequently the Indians, through their interpreter, conveyed to Señor Encinas a modification of the account (after adhering to the first version for twenty-four hours), which agreed in all essential respects with the first, excepting the supplementary statement that some of the Indians (but neither the party who accompanied the white man nor those who followed in the boat) ran after the wounded man, caught him, shot him again—whereupon he again cried out—and

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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OCCUPIED RANCHERIA ON THE FRONTIER

[FACING P. 119]

h McGee E-5 (1894-1895)1898 NU31 Seri NU31

them killed him with stones. This modified account, also, Señor Encinas duly conveyed to me. 124

Still later, in collecting linguistic material through the Seri interpreter with the assistance of Señor Alvarez-Leon, I reverted to the subject incidentally (or at least ostensibly so) on two or three occasions, partly with the view of verifying or disproving the current report that the men were eaten by the Indians; and since the first distrust on the part of the interpreter and the companions (by whom he was commonly surrounded) had worn off, the questions were answered freely and with apparent truth. In brief, the information gained in this way was a repetition in general terms of the statement of the killing of both men; but the responses indicated (1) that the Indians are not cannibals, (2) that they do not eat any portion or portions of the body of an enemy slain in war, (3) that they do not eat human flesh in a sacrificial way, and (4), specifically, that they did not eat the flesh of the two white men killed last spring. I am disposed to give credence to all of these statements. 648 [266]

Señor Encinas informed me that for a long time after the reputed killing of the two Americans on the island the Seri were exceptionally shy and were seldom seen on the mainland; that the first representatives of the tribe to appear were one or two old women who came to his rancho with much trepidation; that these representatives being not ill-treated, a man appeared, who was also well treated, and that still later other members of the tribe appeared, though it was only a few days before our visit that any considerable body of the Seri Indians showed themselves at their favorite mainland haunt on his rancho. It was his first communication with the Indians since the killing, and, both he and they agreed, the first confession of the crime outside of their own tribe. 648

While in Sonora various conflicting accounts of the affair were given me. One, to which I was disposed to attach credence by reason of the character of my informant and his explanation of the circumstances under which the information was gained, was given me (just before the visit referred to above) by ex-Consul Forbes, of Guaymas. This account corresponds in all essential details with that conveyed to my party by the Indians, except that, according to Mr Forbes' account, the survivors were altogether unarmed after the borrowing of the rifle by the Indians, and that when the man in the boat arose suddenly and shouted he pointed at the Indians not a gun but a stick, in the hope of deceiving them thereby, as he was fortunate enough to do. 115 124 648

It may be added that the Seri Indians are at the same time the most primitive and the most bloodthirsty and treacherous of the Indians of North America, so far as my knowledge extends; also that their character is well known throughout Sonora, and indeed generally throughout Mexico, Arizona, and the southern part of California. I was assured by the acting governor of Sonora and by the prefect of Hermosillo that it would be little short of suicide for even a Mexican official to visit these Indians or land on their island without an armed guard. Through conference with the Indians, also, I learned that any white man, Mexican, or Indian of another tribe coming in contact with them is killed without the slightest compunction, unless they are restrained by fear. Accordingly I am satisfied that the character of the Seri Indians is quite as bad as the unsavory reputation they have acquired throughout the Southwest. 181 648

It should be observed that while the Indians were unable to give the names of the men killed, their description of race and vessel agreed exactly with those of the newspaper correspondent Robinson and his companion, and with the sloop *Examiner*; and Mr Forbes' information was obtained direct from the survivors of the expedition of which Mr Robinson had charge. There can thus be no doubt that it was Mr Robinson and his companion who were killed by these Indians, and whose killing was confessed by them, as set forth above. 124 648

With great respect, your obedient servant,

W J McGEE,
Ethnologist in charge.

Honorable S. P. LANGLEY,
Secretary of the Smithsonian Institution.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

On first learning of the incident, months before the diplomatic correspondence began, the state and federal authorities promptly adopted vigorous punitive measures. A vessel carrying a force of federal troops was dispatched from Guaymas and a body of state troops were sent from Hermosillo with instructions to meet on the coast and capture the criminals at any cost, even to the extermination of the tribe if resistance was offered. But like so many others, the expedition failed; the horses of the land party were stalled in the sands and burrow-riddled plains, the vessel was harassed by storms and tidal currents, and the landing boats were swamped by the surf, while the Indians merely fled at sight of the invaders toward inaccessible lairs or remote parts of their territory; and when the water was gone and men and animals were at point of famishing, the forces retired without so much as seeing a single Seri.

During the ensuing autumn the tribe, having quenched their bloodfeud in alien blood, turned toward peace, and sent a matron of the Turtle clan, known as Juana María, to Costa Rica—i. e., Rancho de San Francisco de Costa Rica—where she was gradually followed by younger matrons and children, then by youths, and finally by warriors (after the fashion of Seri diplomacy) to the aggregate number of about sixty. Here they were found by the first expedition of the Bureau of American Ethnology, in November, 1894; and here, under the still strong influence of the venerable Don Pascual, supplemented by small gifts and persistent pressure, they gradually "gave their language", submitted to extensive photographing, confessed specifically to the Robinson killing, and yielded up nearly the whole of their portable possessions in the way of domestic implements and utensils, face-painting material, pelican-skin robes, snake-skin necklaces, etc.

With the return of the Bureau party to Hermosillo the Indians became restive and soon withdrew beyond the desert. In the course of the ensuing winter a group returned to the neighborhood of Costa Rica, where, by aid of strategy, seven warriors (including some of those seen at the rancho in the preceding November) with the families of four, were arrested, taken to Hermosillo, tried, and, according to oral accounts, banished. Irritated by this action, and connecting with it the visit of Don Pascual and the strangers desiring their language and sacred things, the clans roamed the warpath, displaying special animosity toward the residents of Costa Rica. There were a few minor skirmishes; then, at the instance of the state officials, a number of Papago Indians, who are feared by the Seri beyond all other enemies, were domiciled at the rancho, where their mere presence proved a sufficient protection. Meantime, according to apparently trustworthy press accounts, two small exploring parties entered Seriland; the first consisted of seven prospectors, who kept well together until about to leave the territory, when one of their number fell behind—and his companions saw him no more, though they carefully retraced their trail beyond the

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GROUP OF SERI INDIANS ON TRADING EXCURSION

[FACING P. 131]

I: McGee E-5 (1894-1895)1896 NU31 Seri NU31

1: McGee E-3 (1894-1895):898 NUSI Seri .W31

point at which he had stopped; the other was a German naturalist-prospector with two mozos (servant-companions), purporting to hail from Chihuahua, who started across the delta-plain of Rio Bacuache and Desierto Encinas with saddle animals, and never reappeared. 648

Then came the second expedition of the Bureau of American Ethnology, to which several Papago domiciled at Costa Rica were attached as guards. While the party were at the rancho the day before the first entrada into Seriland via Barranca Salina, a party of vaqueros from Rancho Santa Ana tended a herd of stock to the barranca for water; one of the animals strayed behind a dune, and the vaqueros, following its trail, came on a small band of Seri already devouring the entrails, and attacked them so vigorously that they escaped only by outrunning the horses, leaving behind all their unattached possessions, including a bow and quiver of arrows and an ancient and nonusable army rifle. This incident, albeit typical, was untimely, and doubtless aided in rendering the Indians too wild to permit communication with the aliens during the ensuing weeks spent in their territory. 123 648

After the withdrawal of this expedition the Seri resumed their range over the borderland plain, with the evident intention of avenging the insult of the invasion. There were a number of skirmishes, in which some of the Papago guards of the 1895 expedition were wounded and had horses killed under them, though they did customary execution on the worse armed Seri; and extensively published press items indicate that, toward the end of January, 1896, a party of five gold prospectors landed on Tiburon, whence one escaped. 648 721

A well-attested episode ensued toward the end of 1896: Captain George Porter and Sailor John Johnson spent the later part of the summer in cruising the coasts of the Gulf, collecting shells, feathers, and other curios in the small sloop *World*. About the end of October they apparently anchored in Rada Ballena; and a day or two later Captain Martin Mendez, of Guaymas, in charge of the schooner *Otila*, being driven up the gulf and into Bahia Kunkaak by storms, came on a horde of Seri hailing Porter's vessel. The episode received publicity on Mendez's return to Guaymas; United States Consular Agent Crocker instituted inquiries, and Governor Corral sent a force to Costa Rica, where, after some delay, a parley was held with a strong band of Seri under the chiefship of "a seven-foot warrior named El Mudo (The Mute), . . . so called for his reticence of speech."[1] The testimony obtained at the parley and from Captain Mendez indicates that Porter and Johnson landed, or at least approached the shore, probably in a small boat; that they were met by a shower of arrows, under which Johnson immediately fell, while Porter defended himself with a shot- 648

[1] San Francisco Chronicle, October 10, 1896, p. 3. The details of the episode, including the correspondence of Consular Agent Crocker, were printed in the newspapers of San Diego (the place of residence of Porter and Johnson), as well as in those of San Francisco and other cities; and there was considerable correspondence concerning the matter with the State Department at Washington. Some reports stated that the bodies of Porter and Johnson were sent to fragments and devoured, but these details naturally lack confirmation. El Mudo's portrait appears in plate 41a. [113]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

648 gun, slaying five of the Seri before he was himself transfixed; that the vessel was then looted, and that Mendez and his crew were prevented from landing and apparently driven off by the Seri force. In the course of the parley the state officials "demanded the surrender of the ringleaders in the massacre", with the alternative of "regarding the whole tribe as guilty and punishing them accordingly"; but El Mudo, evidently holding the invasion of the island as the initial transgression and deeming the loss of the tribe under Porter's marksmanship as more than commensurate with the Caucasian loss, peremptorily ended the conference and returned to the island. Vigorous efforts were made to pursue the tribesmen beyond their practically impassable frontier, with the usual product of ruined horses and famished riders. Then the episode died away in an armed neutrality strained somewhat beyond the normal. Meantime the Papago guards remained at Costa Rica. "They are continuously on the lookout for these Seris, and once or twice have killed a stray one or two."[1]

Both before and after the Porter-Johnson episode schemes were devised by various parties, chiefly Californians, for obtaining concessions covering Tiburon and its resources, most of these schemes involving plans for the extermination of the Seri; and press accounts indicate that a concession covering the islands of the gulf above the latitude of 29° (i. e., including about half of Isla Tiburon) was granted to an American company of much distinction. It would appear from numerous news items that representatives of the company sought to land on Tiburon, where they were first cajoled with offerings of food, afterward found to be poisonous, and later driven off by an enlarged force of naked archers. A recent publication bearing some official sanction announces that "Mr W. J. Lyons, of Hermosillo, Sonora, has secured a concession for the exploration of the island and in November of this year will fit out an expedition for that purpose."[2] The various movements are significant as indices of current opinion and official policy with respect to the tribe.

On the whole, the later episodes are natural sequels of the eventful and striking earlier history of the Seri; and they can only be interpreted as pointing to early extinction of one of the most strongly marked and distinctive of aboriginal tribes.

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[1] The quotations are from the account of T. H. Hilton, of San Diego, prepared on his return from a visit to Costa Rica.

[2] El Estado de Sonora, Mexico. Sus Industrias, Comercio, Minería y Manufacturas. Obra Publicada bajo los Auspicios del Gobierno del Estado. Obra Ilustrada, Octubre de 1897. By J. R. Southworth. Nogales; p. 72.

1: McGee E-5 (1894-1895)1896 NU31 Ser(NU31

TRIBAL FEATURES

Definition and Nomenclature

According to Mashém and the clanmother known as Juana María, the proper name of the tribe known as Seri is *Kwahíak* (the first vowel obscure and the succeeding consonant nasalized; perhaps *K*ʷ*-hiak* or *K*ʷ*-hiak* would better express the sound). According to Kolusio, as rendered by M. Pinart, the Seri term *for* people or nation is *kom-kak*, while the Seri people are designated specifically as *Kwihz*, this designation being practically equivalent phonetically (and doubtless somatically) to Sr Tenochio's general term for women, *kmyktij*. Mashém was unable or unwilling to give the precise signification of the tribal appellation used by him, merely indicating Juana María and one or two other elderwomen squatting near as examples or types; but comparison of the elements of the term with those used in other vocables affords a fairly clear inkling as to its meaning. The syllable *kwa* (or *k*ʷ, *koa*, *kom*, etc.) certainly connotes age and woman, and apparently connotes also life or living (*kwa-kaiem*=an old woman, McGee; *i-kom*=a wife, *ekam*=alive, Bartlett; *kikam*=a wife, *kwam-kikamcam*=a married woman, *Yak kom*=Yaqui *tribe*, Pinart; *koa-kabre*=an old woman, Tenochio), the forms being distinct from the word for woman (*kwamm*, McGee; *ik-e-mam*, Bartlett; *kmam*, Pinart and Tenochio) and widely different from the term for man (*kō-ttam*, McGee; *ik-e-tam*, Bartlett; *ktam*, Pinart; *tam*, Tenochio) with its several combining variants; there are also indications in numerous vocables that it connotes person or personality. On the whole, the syllable appears to be an ill-formulated or unerystallized expression, denoting at once and associatively (1) the state of living or being, (2) personality, (3) age or ancientness (or both), and (4) either femininity or maternity (much more probably the latter), this inchoate condition of the term being quite in accord with other characters of the Seri tongue, and frequently paralleled among other primitive languages. The syllable *kaak* (or *kak*, and probably *kok*, *koj*, *kaick*, etc.) would seem to be a still more vague and colloidal term, despite the fact that it is used separately to designate the fire-drill. There are fairly decisive indications that it is composite, the initial portion denoting place and the final portion perhaps more vaguely connoting class or kind with an implication of excellence, both elements appearing in various vocables (too numerous to quote). On the whole, *kaak* would appear to be a typical egocentric or ethnocentric term, designating and dignifying Person, Place, Time,

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and Mode, after the manner characteristic of primitive thought;[1] so that it may perhaps be translated "Our-Great-(or Strong-)Kind-Now-Here". The combination of the two syllables affords a characteristically colloidal connotation of concepts, common enough in primitive use, but not expressible by any single term of modern language; in a descriptive way the complete term might be interpreted as "Our-Living-Ancient-Strongkind-Elder-Women-Now-Here," while with the utmost elision the interpretation could hardly be reduced beyond "Our-Great-Motherfolk-Here" without fatal loss of original signification. It should be noted that the designation is made to cover the animals of Seriland (at least the sole tutelaries of the tribe) and fire as well as the human folk.

The proper tribe name is of no small interest as an index to primitive thought, and as an illustration of an early stage in linguistic development. It is significant, too, as an expression of the matronymic organization, and of the leading rôle played by the clanmothers in the simple legislative and judicative affairs of the tribe; and it is especially significant as an indication of the intimate association of fire and life in primitive thought.

The designation "Seri", with its several variants, is undoubtedly an alien appellation, and neither Mashém nor Kolusio could throw light on its origin or meaning, though they did not apparently regard it as opprobrious. Pénafiel describes it as an Opata term; and Pimentel's Opata vocabulary[2] (extracted from the grammar and dictionary compiled by Padre Natal Lombardo) indicates its meaning satisfactorily, albeit without special reference to the tribe. The key term in this vocabulary is "*Sereái*, vehículo de la persona que corre." The accent over the first vowel serves to indicate prolongation, so that term and definition may be rendered, literally, *se-ereái*, speed of the person who runs. Analysis of the term shows that the essential factor or root is that introduced elsewhere in the same vocabulary as "*Ere*, llegar." Now, "llegar" is a protean and undifferentiated Spanish verb neuter, without satisfactory English equivalent; it may be interpreted as arrive, reach, attain, fetch, endure, continue, accomplish, suffice, ascend, or mount to, while as a verb active and verb reflective its equivalents are approach, join, proceed a little distance, unite, etc; it may be said to imply movement or process with a centripetal connotation—i. e., a connotation antithetic to that of the expressive irregular verb "ir" in its protean forms, including the ubiquitous and ever present "vamos" (an American slang equivalent of the Castilian verb "llegar" in certain of its phases is the strong interjectory phrase, "get together"). The prefix *se* is merely an intensive, running not merely through the Opata, but throughout various tongues of the Piman stock. In his extensive vocabulary of the Pima and Papago Indians of Arizona (1871),[3] Captain

[1] Cf. The Beginning of Mathematics, in the American Anthropologist, new series, vol. 1, 1899, p. 661.

[2] Vocabulario Manual de la Lengua Opata, por Francisco Pimentel. Boletín de la Sociedad Mexicana de Geografía y Estadística, época 3, 1865, pp. 567-593.

[3] In the archives of the Bureau of American Ethnology.

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F. R. Grossmann defines the term "*ac*, very, sel. (predx)", and over a hundred and fifty of his terms illustrate the use of this adjectival or adverbial prefix as an undifferentiated yet vigorous intensive (*e. g.*, *af*, female or woman, *ac-af*, a lady—great or grand woman; *ôt*, high or height, *ac-ôt*, highmost); and in the Pimentel vocabulary this signification is attested by several other terms (*e. g.*, "*Xecoxai*, jugo memolo y bueno"). Finally, the intervalated consonant *r* is a common participial element in the Piman, while the suffix *ái* is a habitual assertive termination, as shown by various terms in the Pimentel and other vocabularies. Dropping this termination, the expression becomes *ac-arer*, or—without the nonessential participial element—*ac ere*, signifying (so far as can be ascertained from the construction of the language) "moving", or "mover", qualified by a vigorous intensive.[1] To one familiar with the strikingly light movement characteristic of the Seri—a movement far lighter than that of the professional sprinter or of the thoroughbred "collected" by a skilful equestrian, and recalling that of the antelope skimming the plain in recurrent impulses of unseen hoof-touches, or that of the alert coyote seemingly floating eerily about the slumbering camp—this appellation appears peculiarly fit; for it is the habit of the errant Seri to roam spryly and swiftly on soundless *fiptoes*, to come and go like fleeting shadows of passing cloudlets, and on detection to slip behind shrub or rock and into the distance so lightly as to make no audible sign or visible trail, yet so fleetly withal as to evade the hard-riding horseman. The Seri range over a region of runners; the Opata themselves are no mean racers, since, according to Velasco and Bartlett, "In twenty-four hours they have been known to run from 40 to 50 leagues";[2] and, according to Lumholtz, their colinguals, the Tarahumari, or "Counting-Runners", are named from their custom of racing,[3] and display almost incredible endurance:

> An Indian has been known to carry a letter from Guazapares to Chihuahua and back again in five days, the distance being nearly 800 miles. In some parts where the Tarahumaris serve the Mexicans they are used to run in the wild horses, driving them into the corral. It may take them two or three days to do it, sleeping at night and living on a little pinole. They bring in the horses thoroughly exhausted, while they themselves are still fresh. They will outrun any horse if you give them time enough. They will pursue deer in the snow or with dogs in the rain for days and days, until at last the animal is cornered and shot with arrows or falls an easy prey from sheer exhaustion, its hoofs dropping off.[4]

[1] The latter form (*ac ere*) corresponds precisely with the current Papago pronunciation of the term, though none of the various Papago informants consulted were able to interpret the expression; indeed, they simply relegated it to the category of "old names" which they deemed it needless to discuss. An archaic form of orthography, noted in the synonymy (pp. 139-140), in which *ac* suggests the same sounding of the initial sibilant.

[2] From 100 to 120 miles.—Bartlett, Personal Narrative, vol. i, p. 405.

[3] Members of the International Congress of Anthropology, Chicago, 1893, p. 304. In a letter to Mr F. W. Hodge, under date of September 11, 1900, Dr Lumholtz says: "After renewed investigation I have come to another opinion regarding the meaning of the tribal name *Tarahumare*. This word is a Spanish corruption of the native name 'Rarámuri'. Though the meaning of this word is not clear, that much is certain that *rale* or *lare* means 'foot', and I therefore take it that we must be at least approximately correct when we say that the word signifies 'foot runner'."

[4] American Anthropologist, vol. viii, 1895, p. 32.

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The Papago, of the same region and linguistic stock, have a racing game in which a ball of wood or stone caught on the foot is thrown, followed, and thrown again until the two or more rival racers have covered 20 to 40 miles in the course of a few hours; and their feats as couriers and trailers are quite up to those of the Opata. Yet among all these tribes, and among the Mexicans as well, the Seri are known as *the* runners par excellence of the Sonoran province; and it is but natural that their astounding swiftness and lightness of foot should have brought them an appellation among contemporaries to whom these qualities peculiarly appeal.

Accordingly, both derivation and connotation give meaning to the name, and warrant the rendering (much weakened by linguistic infelicities) of "spry" or "spry-moving", used in substantive sense and with an intensive implication.

The chronicles of the tribe, especially those written during the seventeenth and eighteenth centuries, indicate that the alien designation was applied loosely and with little appreciation of the tribal organization, just as was the case elsewhere throughout the continent. Gradually the chroniclers took cognizance of intertribal and intratribal relations, and introduced various distinctions in nomenclature expressing tribal or subtribal distinctions of greater or less importance. One of the earliest distinctions was that between the Seri and the Tepoka, and this distinction has been consistently maintained by nearly all later authorities, despite the commonly accepted fact (brought out most authoritatively by Hardy) that the tongues of the tribes are substantially alike. Another early distinction was that made between the Seri and the Guayma; it was based primarily on diversity of habitat and persistent enmity, though all the earlier authorities agreed, as well shown by Ramirez, that the tongues were essentially identical. The distinction has been maintained by most authorities and strongly emphasized by one (Pimart, as quoted by Bandelier), and since the Guayma are extinct, and hence beyond reach of direct inquiry, the early interpretation of tribal relation must be perpetuated.[1] Still another distinction was that made between the Upanguayma and the Guayma, and inferentially the Seri also; although the grounds for this distinction were not specifically stated, it seems to have grown out of diversity in habitat merely; but there were clear implications that the tribe or subtribe was affiliated linguistically with the Guayma, and hence with the Seri, and this assignment has been adopted by leading authorities, including Pimentel and Orozco. Among the earlier distinctions based on imagi-

[1] In view of the above indictment, both a priori and posteriori, that the latest Guayma survivors must have taken the language of the Pima (Yaqui) tribesmen with whom they found refuge, and in view of the tedious time he required to prepare his data for public consideration, M Pimart's statement that the Guayma belonged linguistically to the Pima stock can hardly be admitted to hold against the specific statements of the Jesuit missionaries and such accomplished linguists as Ramirez and Pimentel.

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trial factors was the setting apart of the Salineros, or Seri Salineros; yet this distinction, fortuitous and variable at the best, expressed no essential character and has not been maintained. A much later distinction was that between the Seri and Tiburones, emphasized by Mühlenpfordt and exaggerated by Buschmann; but there seem to have been no better grounds for it than misapprehensions naturally attending a slowly crystallizing nomenclature. In any event it has not been maintained.

At several stages the chroniclers coupled the Seri with other tribes, on various grounds: in the eighteenth century they were thus combined with the Pima, the Piaté, and especially the Apache tribes. In the earlier half of the nineteenth century they were frequently coupled in similar fashion with the Pima and Apache tribes, and in the later half of the nineteenth century, and even in its last lustrum, they have been similarly combined with the Yaqui. The later combinations seem to explain the earlier: the Yaqui outbreaks withdraw portions of the arm bearing population from the Seri frontier, and the marauders take advantage of the withdrawal so regularly that a Yaqui scare is invariably followed by a Seri scare, and hence the two warlike tribes are constantly associated in the minds of the Sonorenses as synchronous insurrectionists; and scrutiny of the earlier chronicles indicates that most of the so-called combinations of former times were of similar sort.

On putting the chronicles together, it seems clear that the term "Seri" was originally of lax application, but was gradually restricted to the tribe inhabiting Tiburon and ranging adjacent territory, including the collingual but inimical Guayma and Upanguayma, and also the collingual and cotolerant Tepoka; and that the various Piman tribes, as well as the Apache, were always distinct, and commonly if not invariably inimical.

The ethnic relations of the Seri people attracted early and repeated attention. Humboldt gave currency, albeit not unquestioningly, to a supposed Chinese or related Oriental affiliation; Hardy noted the similarity of the Seri tongue to that of the Patagonians; Lavandera classed the language as Arabic; Stone and Bancroft circulated a supposed identification of the speech with the Welsh; Ramirez, and more especially Pimentel, narrowed the field of affiliation to Mexico and defined the tongue as distinct; Orozco y Berra, and more especially Malte-Brun, slightly reextended the field and suggested affiliation with the Caribs; while Herzog, Gatschet, and Brinton reextended the field in another direction and saw, in a vocabulary obtained from a Seri scion but alien thinker, similarities between the Serian and Yuman tongues. The recent researches tend strongly to corroborate the evidence collected and the conclusions reached by Ramirez and Pimentel; for the somewhat extended comparisons between the Serian and neighboring languages (introduced and discussed in other paragraphs) indicate that the

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Seri tongue is distinct save for two or three Cochimí or other Yuman elements, which may be loan words such as might readily have been obtained through the largely inimical interchange of earlier centuries described by Padre Juan María de Salvatierra and other pioneer observers—certainly the slight and superficial similarities with other tongues of the region seem insufficient to meet the classific requirement of supposititious descent from "a common ancestral speech".[1] Accordingly the group may be defined (at least provisionally) as a linguistic family or stock, and may be distinguished by the family name long ago applied by Pimentel and Orozco, with the termination prescribed in Powell's fifth rule,[2] viz, *Seriana*. Conformably, the classification of the group would become—

Seriana stock, comprising—
- Seri tribe, including Tiburones and (certain) Salineros;
- Tepoka tribe;
- Guayma tribe;
- Upanguayma tribe.

Naturally this classification is provisional in certain respects. It is little more than tentative in so far as the Tepoka are concerned, since no word of the Tepoka tongue has ever been recorded, so far as is known, and since the tribe is still extant and within reach of research; it must be held provisional also in respect to the separateness of the stock, which may be found in the future to be affiliated with neighboring stocks, though the effect of the more recent and more critical researches in eliminating supposed evidences of affiliation points in the opposite direction. The arrangement is in some measure provisional also with respect to the relations between the long-extinct Guayma and Upanguayma and the type tribe, especially since contrary suggestion has been offered in terms implying the existence of unpublished data; yet the presumption in favor of the critical work by Ramirez, Pimentel, and Orozco is so strong that practically this feature of the classification may be deemed final.

No attempt has been made to render the tribal synonymy exhaustive, though search of the records has incidentally brought out the more important synonyms, as follows:

Seri Tribe

CERI—1826; Dualy, Travels, p. 95.
CERI—1875; Pimentel, Lenguas Indígenas, tomo II, p. 229.
CERIS—1745; Villa-Señor, Theatro Americano, p. 391.
CERIS TEPOCAS—1850; Velasco, Noticias Estadísticas, p. 132.
HERI—1854; Buschmann, Die Spuren der aztekischen Sprache, p. 221.
HERIS—1615; Ribas, Triumphos de Nuestra Santa Fee, p. 358.
HYAMAS—1730 (?); Van der Aa, map.

[1] Indian linguistic families, by J. W. Powell, in Seventh Annual Report, Bureau of Ethnology, 1891, Introd., p. 11.
[2] Ibid., p. 10.

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Sano—1896; San Francisco Chronicle, January 26.
Sa-sus—Etymologic term.
Sauta—1864; Mühlenpfordt, Republik Mejico, Band i, p. 310.
Seri—1754; [Ortega], Apostolicos Afanes, p. 364.
Seris—1694; Mange, Breuuen de Noticias (Documentos para la Historia de Mexico, série 4, tome i, p. 250).
Seri Salineros—1862; Alegre, Historia de la Compañia de Jesus, tome iii, p. 117.
Seris Salineros—1694; Mange, Breuuen de Noticias (Documentos, série 4, tome i, p. 220).
Serve—1754; [Ortega], Apostolicos Afanes, p. 367.
Sonie—1846; Dunbar, The Races of Man, p. 533.
Siris—1863; Gatschet, Der Yuma Sprachstamm, p. 139.
Zeris—1731? Dominguez, Diario (MS.).
Kuiis—1879; Pinart, MS. vocabulary.
Kunkaak—1879; Pinart, MS. vocabulary.
Kunkaak—1896; Mexia and Johnson, "Seriland", Nat. Geog. Mag., vol. VII, p. 133.
Salineros—1727; Rivera, Diario y Derrotero, I. 511–1519.
Tiburon—1799; Cortez (Pacific Railroad Reports, vol. III, p. 121).
Tiburones—1782; Arricivita, Cronica Seráfica, segunda parte, p. 436.
Tiburon Cerro—1826; Hardy, Travels, p. 260.

Tepoka Tribe

Tepoca—1847; Disturnell, Mapa de los Estados Unidos de Mejico, New York.
Tepoca—1749; Villa-Señor, Theatro Americano, p. 262.
Tepoca Cerro—1826; Hardy, Travels, p. 260.
Tepocas—1748; Villa-Señor, Theatro Americano, p. 391.
Tepoque—1865; Velasco, Bol. Soc. Mex. Geog. y Estad., tome xi, p. 125.
Tepoka—Phonetic form.
Tepopa—1825; Hervey, map.
Tepoques—1787; Venegas, Noticia, tome ii, p. 343.
Topoque—1701; Kino, map (in Stocklein, Der Neue Welt-Bott).
Topoques—1701; Kino, map (in Bancroft, Works, vol. XVII, 1889, p. 360).

Guaymas Tribe

Batwas—1754; [Ortega], Apostolicos Afanes, p. 377.
Gayama—1826 (?); Pike (Balbi), (in Pinnotel, Lenguas Indigenas, tome II, p. 214).
Guaimo—1861; Buckingham Smith, Hove Grammar, p. 7.
Guaimas—1768; Kino, map (in Stocklein, Der Neue Welt-Bott).
Guayamas—1757; Venegas, Noticia, tome ii, p. 79.
Guaymas—1701; Juan Maria de Salvatierra, Report (Documentos para la Historia de Mexico, série 4, tome v, p. 154).
Guaymas—1700; Juan Maria de Salvatierra, Report (Documentos para la Historia de Mexico, série 4, tome v, p. 126).
Guaymi—1862; Bancroft Works, vol. III, (Native Races, vol. III), p. 701
Guaymis—1854; Mühlenpfordt, Republik Mejico, Band i, p. 210.
Guymas—1748; Villa-Señor, Theatro Americano, p. 401.
Guymas—1748; Villa-Señor, Theatro Americano, p. 402.
Guiamas—1765; [Neutwig?], Reale Enmyo, p. 229.
Guivims (?)—1701; Kino, map (Bancroft, Works, vol. XVII, 1889, p. 360).

Upanguayan Tribe

Hoopdie Guaymas—1829; Hardy, map.
Jupaguaymas—1803; Velasco, Bol. Soc. Mex. Geog. y Estad., tome VIII, p. 282.
Jupahuaymas—1748; Villa-Señor, Theatro Americano, p. 401.

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101 UPAS GUAIMAS—1763; [Kaniwig?], Rudo Ensayo, p. 220.
UPANGUAIMA—1864; Orozco y Berra, Geografía de las Lenguas, p. 42.
475 UPANGUAIMAS—1879; Malte-Brun, Congrès International des Américanistes, tome II, p. 30.
UPANGUAYMA—Synthetic form.
UPANGUAYMAS—1892; Bancroft, Works (Native Races, vol. I, p. 66).
UPAN-GUAYMAS—1890; Bandelier, Investigations in the Southwest, p. 73.

Possibly the name *Cocomaques* (1864, Orozco y Berra, Geografía de las Lenguas, p. 42), or *Cocomaques* (1727, Rivera, Diario y Derrotero, I. 1514–1519) should be introduced among the synonyms of the Seri, but in the absence of definite information it may perhaps better be left unassigned.[1]

101 Of the four tribes assigned to the stock, the Upanguayma have been extinct probably for more than a century; the Guayma may survive in
197 a few representatives probably of mixed blood and adopted language; the Tepoka have never received *systematic* investigation, but appear to survive in limited numbers on the eastern coast of Gulf of California about the embouchure of the Rio Ignacio sand-wash; while the Seri alone continue to form a prominent factor in Sonoran thought.

EXTERNAL RELATIONS

131 The most conspicuous characteristic of the Seri tribe as a whole is
648 isolation. The geographic position and physical features of their habitat favor, and indeed measurably compel, isolation: their little principality is protected on one side by stormy seas and on the other by still more forbidding deserts; their home is too hard and poor to tempt conquest, and their possessions too meager to invite spoliation; hence, under customary conditions, they never see neighbors save in chance encounters on their frontier or in their own predatory forays—and in either case the encounters are commonly inimical. The natural isola-
[186] tion of the habitat is reflected in modes of life and habits of thought; and during the ages the physical isolation has come to be reflected in a bitter and implacable hereditary enmity toward aliens—an enmity apparently forming the strongest motive in their life and thought, and indeed grown into a persistent instinct. Thus the Seri stand alone in every respect; they are isolated in habitat and still more intensely isolated in habits of thought and life from all contemporaries; they far out-Ishmael the Ishmael of old on Araby's deserts.

648 The isolation of the Seri in thought and feeling is well illustrated by the relations with their nearest neighbors (activitally as well as geographically), the Papago Indians. The Papago are much esteemed in Sonora as fearless fighters, always ready to join or even to lead a forlorn hope; yet when the expedition of 1895 was projected it was found no easy matter to induce the picked Papago guards quartered at Costa Rica to enter Seriland. They were ready, indeed mildly eager, for fray, provided it were on the frontier; but they held back in dread

[1] The name seems rather to be Cocomi, cf. Cocopa, Cocomicas, Cocomaricopa, Kokoma, etc.

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from actual invasion of the territory of the hereditary enemy. Like representatives of the faith-dominated culture-grades generally, they spoke weightily of inherent rights descended from the ancient time, even back unto the creation; they repeatedly declared the right of the Seri to protect their territory because it was *theirs;* yet their converse but served to show the depth and persistence of their abhorrence of the Seri and of everything pertaining to them. And when gales arose to delay the work, when the frail craft of the party was storm buffeted and lost for days, when they were seized with the strange sickness of the sea, when the salt and sugar mysteriously disappeared (having been secretly sacrificed to diminish suffering from thirst), when all of the earth-powers and air-powers seemed to be arrayed against the expedition, they stoically held it to be but just punishment for a sacrilegious infraction of the ancient law—and their steady adherence to duty, despite tradition and physical difficulty and constant danger, revealed a real heroism. The strain was no slight one; it may have been felt more by the stay-at-homes than by the men in action; certainly a sister of one of the party (Anton Castillo) and spouse of a supporter at the supply station broke under the strain, and died of her terrors—and the return of the party was, to the Papago women and children at least, as the rising of the dead. The dread inspired by the personal presence of the alien is stronger still; when the Seri rancherías at Costa Rica was visited in 1894 it was found needful to keep the Papago interpreter and others of the tribe at a distance, since the mere sight of the inimical tribesmen threw even the women and children into watchful irritation, like that of range-bred horses at scent of bear or timber-wolf, or that of ill-harried cats and swine at sight of passing dog—they instinctively huddled into circles facing outward, and ceased to think connectedly under the stress of nervous tension. The irritation was so far mutual that it was days before the usually placid interpreter, Jose Lewis, recovered his normal spirits; while the 1895 interpreter, Hugh Norris, was actually rendered ill by the mere entrance into Seriland at Pozo Escalante. And the antipathy between Seri and Yaqui is nearly as great as that between the common-boundary neighbors.

The instinctive antagonism, or race antipathy, between the Seri and the widely distinct Caucasian is less truculent and intense than the local antipathy; yet even between Seri and Caucasian there would seem to be hardly a germ of sympathy. In the days of his prime, the Tiburon islanders flocked around Don Pascual, first as a provider of easy provender and later as a superpotent shaman whose wrath bore destruction; yet their allegiance was never more than that of the cowed and beaten brute to a hated trainer, and his coming never brought a smile to their stolid features—indeed, his passage among their jacales was met with the same stolid yet sinister indifference accorded the solitary visitor to a menagerie of caged carnivores. And no sooner did his vision become

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impaired than their fear-born veneration evaporated, and their native antipathy reappeared in original virulence. The 1894 party was fortunate in successfully treating a sick wife of sub-chief Mashém, and subsequently spent days in the rancheria, distributing gifts to old and young in a manner unprecedented in their experience and making liberal exchanges for such small possessions as they wished to spare; yet, with a single possible exception, they succeeded in bringing no more human expression to any Seri face or eye than curiosity, avidity for food, studied indifference, and shrouded or snarling disgust. Among themselves they were fairly cheerful, and the families were unobtrusively affectionate; yet the cheerfulness was always chilled and often banished by the approach of an alien. The Sonorenses generally hold the Seri in indescribably deep dread as uncanny and savage monsters lying beyond the human pale; while the reciprocal feeling on the part of the Seri toward Caucasians, and still more toward Indian aliens, seems akin to that of the average man toward the rattlesnake, which he flees or slays without pause for thought—it seems nothing less than intuitive and involuntary loathing. The Seri antipathy is at once deepened into an obsession and crystallized into a cult; the highest virtue in their calendar is the shedding of alien blood; and their normal impulse on meeting an alien is to kill unless deterred by fear, to flee if the way is clear, and to fawn treacherously for better opportunity if neither natural course lies open.

Concordantly with their primary characteristic, the Seri have avoided ethnic and demotic union beyond the narrow limits of their own kindred; and even of these they seem to have cast out parts, annihilating the Guayma and Upanguayma, displacing and nearly destroying the Tepoka, and outlawing individuals and (apparently) small groups. The earlier chronicles indicate that the Jesuit missionaries, and after them the Franciscan friars and the secular officials, sought to scatter the tribe by both cajolery and coercion, and endeavored to divide families by restraint of women and children and by banishment of wives; there are loose traditions, too, of the capture and enslavement of Indian and Caucasian women in Seriland; yet the great fact remains that not a single mixed-blood Seri is known to exist, and that no more than two of the blood (Kolusio and perhaps one other) now live voluntarily beyond the territorial and consanguineal confines of the tribe. The romantic story of a white slave and ancestress of a Seri clan, sometimes diffused through pernicious reportorial activity, is without shadow of proof or probability; the tradition of the captivity of a Papago belle was corroborated, albeit indefinitely, by Mashém's naive admission that an alien woman was once kept as a slave to a childless death due to her inaptitude for long wanderings; and there is not a single known fact indicating even so much as miscibility of the Seri blood with that of other varieties of the genus *Homo*. Naturally the presumption of miscibility holds in the absence of direct evidence; yet the presumption

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is at least partially countervailed by conspicuous biotic characters, such as color, stature, etc., so distinctive as almost to seem specific: the Seri are distinctively dark-skinned, their extreme color range (so far as known) being less than their nearest approach to any neighboring tribe; they are nearly as distinctive in stature, the difference between their tallest and shortest normal adults being apparently less than that between their shortest and the tallest of the neighboring Papago—though they are not so far from the more variable and often tall Yaqui; and they appear to be no less distinctive in such physiologic processes as those connected with their extraordinary food habits. Still more distinctive are the demotic characters connected with their habits of life and modes of thought; and when the sum of biotic and demotic characters is taken, the Seri are found to be set apart from all neighboring Sonoran tribes by differences much more striking than the individual range among themselves.[1]

It is especially noteworthy that the Seri have held aloof from that communality of the deserts which has brought so many tribes into union with each other and with their animal and vegetal neighbors through common strife against the common enemies of sun and sand—the communality expressed in the distribution of vital colonies over arid plains, in the toleration and domestication of animals, in the development of agriculture, and eventually in the shaping of a comprehensive solidarity, with the intelligence of the highest organism as the controlling factor.[2] Dwelling on a singularly prolific shore, the Seri never learned the hard lesson of desert solidarity, but looked on the land merely as a place of lodgment or concealment, or as a source of luxuries such as cactus tunas, mesquite beans, and tasty game; they never formed the first idea of planting or cultivating, and their only notion of harvesting and storing against time of need was the intolerably filthy one of nature's simplest teaching; they apparently never grasped the concept of cooperation with animals, and came to tolerate the parasitical coyote only in that its persistence was greater than their own, and in so far as it was stealthy enough to hide its travail and the suckling of its young against their ravening maws; and they apparently never rose to real recognition of their own kind in alien forms, but set their hands against agricultural and zoocultural humans as peculiarly potent and hence especially obnoxious animals. Naturally their racial intolerance was seed of battle and blood-feud; and they would doubtless have melted away under the general antagonism but for the natural barriers and unlimited food of their restricted domain.

At present, as for the later and best-known decades of their history,

[1] It seems probable that the Seri were nearer to tribes of southern Baja California than to those of Sonora at the time of the earliest explorations, yet that the distinction was sufficiently strong to warrant the extension of the proposition to the ex-tribe also.

[2] The Beginning of Agriculture, American Anthropologist, vol. VIII, 1895, p. 350. The Beginning of Zoöculture, ibid., vol. X, 1897, p. 215.

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the Seri are absolutely without extratribal affiliations, or even sympathy. When the chronicles of three centuries are scanned in the light of recent knowledge, it seems practically certain that they have been equally isolated since the dawn of Caucasian history in Mexico; and both recent data and the chronicles combine with the principles of demotic development to indicate that the Seri have stood alone from the beginning of their tribal career, and have never foregathered with the neighboring tribes of distinct blood, distinct arts and industries, distinct organization, distinct language, and distinct thought and feeling.

The present isolation of the Seri throws light on their early history and reveals the extent of the misapprehension of the pioneer missionaries, who half deluded themselves and wholly deluded distant readers into the notion that the Seri were really proselyted and actually collected in the mission adjuncts of military posts established to protect settlers against forays of the tribe; for, as illumined by later and fuller knowledge of the tribal characteristics, the chronicles are seen to indicate merely that a few captives, malingerers, cripples, spies, and tribal outcasts were harbored at the missions until death and occasional escapes brought the colonies to a natural end, with no real assimilation of blood or culture on either side. So, too, the persistent tribal antipathy reveals the error of confounding the independent or even inimically related outbreaks of the Seri and of the Pima or Apache with the concerted action of confederated tribes. Doubtless the ever-watchful spies from Tiburon habitually gave notice of the disturbance due to outbreaks of contemporary tribes, just as they do today when the local soldiery are withdrawn for duty on the Yaqui frontier; naturally the civil and military authorities were thereby led to provide for protection against the Seri and Piats, against the Seri and Pima, or against the Seri and Apache at each period of disturbance, just as they provided against the Seri between periods; and it would appear that this association in thought and speech led to the unconscious magnification, in the minds of the chroniclers, of a supposed alliance.

In brief, the tribal relations of the Seri seem always to have been antipathetic, especially toward the aboriginal tribes of alien blood, in somewhat less measure toward Caucasians, and in least—yet still considerable—degree toward their own collinguals and (presumptive) consanguineals.

POPULATION

So far as could be ascertained by inquiries of and through Mashém in 1894, the Seri tribe then comprised about 60 or 70 warriors, with between three and four times as many women and children—i. e., the population was apparently between 250 and 350. The group of about 60 (including 17 warriors) seen at Costa Rica was evidently growing rapidly, to judge from the proportion of youths of both sexes, infants in arms, and pregnant women; and there are other indications that

H McGee E-5 (1894-1895)1898 NU31 Ser NU31

the tribe is prolific and well-fitted to survive unless cut off in consequence of the hereditary antipathy toward alien blood and culture. [16]

The population estimates of the past are naturally vague. In 1643 Ribas spoke of the tribe as "a great people"; and a century later Villa-Señor expressed himself in somewhat similar terms, and described their range in such manner as to indicate a population running into thousands. A few years after Villa-Señor (in 1750), Pardo claimed to have annihilated the entire tribe, with the exception of 24 captives; but according to Velasco's estimates, the people numbered fully 2,000 some thirty years later, when the tribe was, however, once more nominally annihilated. In 1824 Troncoso estimated the Seri at over 1,000, and two years later Ortiz reckoned the population of Isla Tiburon alone at 1,000 or 1,500, while Hardy thought the entire tribe might number 3,000 or 4,000 at the utmost. About 1841 De Mofras put the aggregate population at 1,500; and at the time of the vigorous invasion by Andrade and Espence (1844), when a considerable number of the tribe were captured and a few slain, the total population was estimated at about 550—though it is probable that a good many tribesmen were left out of the reckoning. According to the chroniclers, a number of the Seri were slain after, as well as before, this invasion; and in 1846 Velasco estimated the tribe at less than 500, including 60 or 80 warriors. This estimate was in harmony with that made by Señor Encinas, who reckoned the tribe at 500 or 600 at the beginning of his war, in which half the tribe lost their lives. The figures of Velasco and Encinas correspond fairly with the reckoning by Mashem in 1894, due allowance being made for natural increase and for the losses through occasional skirmishes; and Mashem's count is shown not to be excessive by the considerable number of jacales and rancherias and well-trodden pathways found throughout Seriland in 1895. [16] 1750

On the whole it seems probable that the Seri population extended well into the thousands at the time of the Caucasian invasion; it seems probable, also, that the body was then too large for stability under its feeble institutional bonds, and hence threw off by fission the Guaymas and Upanguayma fractions, and the Angeles, Populo, and Pueblo Seri fragments. Furthermore, it seems probable that the prolific group fairly held its own against these normal losses and repeated decimations by battle up to the Miguelete-Cimarrones war of 1780, despite the vaunted annihilation in 1750; but that thenceforward the death-rate due to increasingly frequent encounters with incoming settlers exceeded the birth-rate, gradually reducing the tribe from some 2,000 to the 250 or 300 surviving the Encinas conflict. Finally, it seems probable that the tribe has again held its own and perhaps increased slowly under the renewed isolation of the last decade or two. [101]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

SOMATIC CHARACTERS

142 **Several physical characteristics of the Seri Indians are so conspicuous as to attract attention even at first sight. Perhaps the most striking is the noble stature and erect yet easy carriage; next in prominence is the dark skin-tint; a third is the breadth and depth of chest; another is the slenderness of limbs and disproportionately large size of extremities, especially the feet; still another is length and luxuriance of hair; and an impressive character is a peculiar movement in walking and running.**

141 **The mean stature of the adult Seri may be estimated at about 6 feet (1.825 meters) for the males, and 5 feet 8 inches (1.727 meters) or 5 feet** 126 **9 inches (1.73 meters) for the females, these estimates resting on visual** 128 **comparisons between Caucasians of known stature and about forty adult Seri of both sexes at Costa Rica in 1894. In several of the accompanying photomechanical reproductions (e. g., plates XIII, XVI, XIX, XXIII, and XXVIII) a unit figure, introduced partly for the encouragement of the individuals and groups but chiefly to afford a basis for approximate measurement, gives opportunity for test of the estimate, the figure measuring 5 feet 11 inches (1.80 meters) to 5 feet 11½ inches (1.812 meters), and weighing about 215 pounds in the costume shown, including hat and boots.[1] These pictures and some thirty unpublished** 141 **photographs, like the observations on the ground, indicate that practically all of the fully adult males and several of the females overtop the Caucasian unit. The only definite measurement known is that of the youthful and apparently immature female skeleton examined by Dr Hrdlička, of which the dimensions indicate a stature (estimated by the method of Manouvrier) of about 5 feet 3⅞ inches (1.62 meters),[2] or 3½ inches above the female normal of 5 feet ¼ inch (1.53 meters) given by Topinard; but this considerable stature is, probably on account of the youth of the subject, much below the mean indicated by the ocular and photographic comparisons (it corresponds fairly with that of the Seri maiden represented in plate XXV, whose age was estimated at 18 years). Naturally this striking stature, especially that of the warriors, has been much exaggerated by casual observers; the typical warrior, El Mudo, depicted in plate XIX, is indeed commonly reckoned as a 7-footer, though his actual stature (diminished somewhat in the pictures by fearsome shrinking from the ordeal of photographing) can hardly exceed**

[1] The approximate height and weight of the unit figure (that of the author) are about 5 feet 9½ inches and 200 pounds, respectively.

[2] Or about 1.6170 meters estimated by the method of Rollet (cf. The Races of Man, J. Deniker, London, [illegible] p. 59).

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GROUP OF SERI INDIANS ON THE FRONTIER

(FACING P. 137)

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

1: McGee E-5 (1894-1895)1898 NU31 Se-. NU31

6 feet 3 inches (1.90 meters); while for centuries the folk have been reputed a tribe of giants. 141

The estimation of Seri stature is difficilitated by the impossibility of defining maturity; and the effort to determine whether particular individuals were adult brought out clear indications of slowness in reaching complete maturity, i. e., of the continuation of somatic growth throughout an exceptionally long term in proportion to other stages in the life of the individual. Thus, with scarcely an exception, the polygynous matrons were taller than the mean of 5 feet 9 inches, while the apparently adult maidens (with one exception) and the younger wives were below this mean; and in like manner the stature of the warriors varied approximately with appearance of age, all of the younger men falling below the mean, and all of the older (except Mátsheim) rising above it. The difficulty of estimation is further increased by the absence of age records and the impracticability of ascertaining and standardizing the habitually guarded expressions for relative age implied in the kinship terminology; so that the age determinations were roughly relative merely, and there was no means of fixing the absolute age of maturity, of puberty, of marriage, or of the assumption of manhood and womanhood however defined. 141 145

Under the conditions, the determination of stature-range in the Seri rancheria at Costa Rica in 1894 was not only difficult but uncertain; yet in general terms it may be said that the women having two or more children—about twenty in number—were notably uniform in stature, ranging from about 5 feet 7¼ inches (in the case of an aged and shrunken elderwoman) to 5 feet 11 inches; that the younger women were more variable; and that the warriors (seventeen in number), of whom only a part were apparently heads of families, were more variable still, though the variation, apart from that apparently correlated with age, was less than is customarily found among the exceptionally uniform Papago, and decidedly less than that seen among the Yaqui or the local Mexicans. 141

The Seri skin-tint is of the usual Amerindian bronze, save that it is exceptionally dark, with a decided tone of black. Essayed representations of the characteristic color appear in plates XVIII and XXIV; but the essays are little more satisfactory than the innumerable attempts at depicting the skin-color of the American aborigines that have gone before. Experienced observers of the native tribes may form an impression of the Seri color from the explanation that they are as much darker than the neighboring Papago as the Papago are darker than the average tribesmen about the Great lakes; the Papago themselves being as much darker than the southern plains or Pueblo folk as these are darker than those of the Lake region. The range in color seems to be slight; the variation among the 60 individuals of both sexes and all ages seen at Costa Rica was hardly perceptible, being less than that usually observed in a single family of any neighboring tribe; while the 142

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

142 color distinction alone sufficed to distinguish the Seri from any other people at a glance.

Foremost among the general somatic distinctions between the Caucasian and the American native is the peripheral development of the former, displayed in better-muscled limbs, more expressive features, etc—i. e., the Caucasian body expresses a readily perceptible but difficultly describable peripherization, in contradistinction from the centralization displayed by the aboriginal body. Save in a single particular (the large feet and hands), the Seri exemplify this distinction in remarkable degree: their chests are strikingly broad, deep, and long, recalling the thoroughbred racer or greyhound; their waists are shortened by the chest development, yet are rather slender; their hips are broad and deep, with a clean-cut yet massive gluteal development; and, in comparison with the robust yet compact bodies, the tapering arms and legs seem incongruously slender.[1] This physical characteristic, like that of color, is insusceptible of quantitative expression, at least without much more refined observations than have been made; but its value may be indicated roughly by the statement that the Seri differs from the average aboriginal American in degree of somatic concentration as much as the average aborigine differs from the average Caucasian—though it is noteworthy that the departure in this direction from the aboriginal mean is in some measure regional (i. e., the Seri differ less in this respect from the Papago and other swift-footed natives than from the average tribesmen of the continent). The Seri robustness of body and slenderness of limb are brought out by the absence (in appearance at least) of adipose; the skin is strikingly firm and hard and evidently thick, yet the play of muscle and tendon beneath indicate a dearth of connective tissue and convey that impression of physical vigor which their familiars so miss in the photographs; and in no case, save perhaps in the young babe, could the slightest trace of obesity be discerned. Thus the Seri, male and female, young and old, may be described as notably deep-chested and clean-limbed quick-steppers, or as human thoroughbreds.

The somatic symmetry of the average S[illegible] marred somewhat by the slenderness of limb, is still more marred by the large extremities. The hand is broad and long; the fingers are relatively long as those of the Caucasian; the nails are peculiarly thick and strong, and the skin is so thick and callousod as to give a clumsy look to the entire organ; the feet are still larger and thicker-skinned; appearing disproportionately long and broad for even the heroic stature of the tallest warriors. The integument covering the feet, ankles, and lower legs is incredibly firm and hard, more resembling that of horse or camel than the ordinary human type;

[126] [1] The photo-mechanical reproductions do not manage justice to the splendid chest development of the Seri, young and old, for they were not only at semi-recumbent rest during the latter hours at which photography was most feasible, but invariably applied before the mysterious apparatus and crouched shrinkingly in such wise as to contract their chests and lose their habitually erect and expansive carriage.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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SEVENTEENTH ANNUAL REPORT PL. XIV

BUREAU OF AMERICAN ETHNOLOGY

SERI FAMILY GROUP

[FACING P. 139]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

its astounding protective efficiency being attested by the readiness with which the Seri run through cactus thickets so thorny as to stop horses and dogs, or over conglomerated quail-beds so sharp that even the light coyote leaves their trail. In the absence of measurements it may merely be noted that the hands and feet of the Seri are materially larger, not only absolutely but relatively to their stature, than those of neighboring tribesmen or even of Mexican and American workmen. And, on the whole, it may be said that in their proportions, as in their stature and color, the Seri are strikingly uniform, their range being less than that commonly observed in contemporary tribes, and the differences between them and their neighbors much exceeding the range among themselves. 142

Somatically distinctive as is the Seri at rest, he (or she) is much more so in motion—though the characteristics so readily caught by the eye are not easily analyzed and described. Perhaps the most conspicuous element in their walk is a peculiarly quick knee movement, bringing the foot upward and forward at the end of the stride; this merges into an equally quick thrust of the foot forward and downward, with toe well advanced, toward the beginning of the next stride; and these motions combine to produce a singular erectness and steadiness of carriage, the body moving in a nearly direct line with a minimum of lateral swaying or vertical oscillation, while the legs neither drag nor swing, but spurn the ground in successive strokes. Thus the walk seems notably easy and graceful, while the walker carries an air of alertness and reserve power, as if able to stop short at any point of a pace or to bolt forward or backward or sidewise with equal facility; he simulates the "collected" animal whose feet tap the ground lightly and swiftly while his body appears to yield freely to voluntary impulse. In this deer-like or antelope-like movement all the Seri are much alike, and all are decidedly removed from their neighbors, even the light-footed Papago. The component motions are most conspicuous in leisurely walking, though the resultant movement is more striking in rapid walk or the incredibly swift run of youths and adults. The general movement is akin to that shaped by the habit of carrying burdens balanced on the head, as the Seri women actually carry their water ollas for astonishing distances; but the carriage is shared—indeed, best displayed—by the warriors and growing boys, who are not known to carry water in this way. 481 [482]

Among the conspicuous but nondistinctive somatic characters of the Seri is luxuriant straight hair habitually worn long and loose. Commonly the hair is jet-black for most of the length, growing tawny toward the tips; sometimes it is black throughout, while again the tawny tinge, or perhaps a bleached appearance, extends well toward the scalp. Age-grayness seems not to be characteristic; the most aged matrons known have no more than a few inconspicuous and scattered gray hairs, though the pelage of some is slightly bleached or faded. None of the warriors at Costa Rica showed the slightest grayness except 142 [302] 142 145

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

142 Mashém (aged about 50 years), who had a few gray strands about the
145 temples; but it may be significant that the hair of the tribal outlaw Kolusio, who has lived with white men for full three score years, is iron-
[115] gray. Kolusio's pelage is trimmed in Caucasian fashion; that of Mashém is cut off mid-length in a manner exciting comment, if not derision, on the part of his fellows and others, and resulting in his (Spanish)
[302] sobrijuet, Pelado (literally, Peeled, or idiomatically, Shorn); but with few exceptions the hair is kept long as it can be made to grow, and receives careful attention to this end. Naturally the length is somewhat variable; in many cases it depends to or slightly below the waist, while in other cases it merely sweeps the shoulders; and in general it appears to increase in both length and luxuriance not only throughout adolescence, but up to late maturity, for the best pelages are presented by moderately aged persons, while none of the youths are so luxuriantly tressed as their elders. Not the slightest trace of baldness appears. The infantile pelage is short, brownish in color, soft or even silky, and inclined to curl toward the tips. It is not until the age of several months that the hair begins to acquire the adult character, and at least some children retain traces of the infantile pilary character up to 5 or even 10 years; and none of the children display such jet-black shock-heads as are frequently found among other tribes, whose adult pelage may nevertheless be much less luxuriant than that of the Seri. On the whole, it may be said that the Seri hair is luxuriant and vigorous beyond the aboriginal average, and that it, like various other somatic features, indicates a relatively late maturation in the life-history of the individual.

142 Both sexes are beardless. The female faces seen were entirely free of strong pilary growth; one or two of the warrior faces showed scattering hairs, and Mashém sported a feeble and downy but jet-black mustache with an exceptional number of scattered hairs about the chin; while Kolusio shaved regularly, and might, apparently, have grown moderately stiff but straggling mustaches and beard. Axillary hair seems to be wanting; pubic hair is said to be scanty; otherwise the bodies are practically hairless (more nearly so than those of average Caucasians).

The teeth are solid, close-set, and even, and impress the observer as large; they close with the upper incisors projecting slightly beyond the lower denture in the usual manner.

128 The skeletal characteristics of the Seri are known only from a single
141 specimen obtained in the course of the 1895 expedition in such manner as to establish the identification beyond shadow of question. This skeleton was submitted to Dr Aleš Hrdlička for measurement and discussion.[1]

In making his examination, Dr Hrdlička compared the unquestion-

[1] A separate cranium was obtained by the 1895 expedition, having been sought out and picked up by a Mexican member of the party in vindication of his account of the killing of one of the Seri, but, in view of the possibility of erroneous identification, this skull was not submitted in connection with

1: McGee E-5 (1894-1895):1898 NU31 Seri NU31

ably authentic cranium of the entire skeleton with two skulls preserved in the American Museum of Natural History, viz, No. 99/84, designated as a skull of a Tiburon mound-builder, and No. 99/85, labeled as having

the complete skeleton. Subsequently this specimen also was put in Dr Hrdlička's hands for his research, and was kindly examined, with the results recorded in the following letter:

MARCH 29, 1898.

Professor W J McGee,

Bureau of American Ethnology, Washington, D. C.

DEAR SIR: The skull which you submitted to me for examination shows the following:

The skull is that of a male between 40 and 50 years of age. The facial parts and a portion of the left temporal bone are wanting; otherwise the specimen shows nothing pathologic. There are signs that the skull belonged to a very muscular individual. The occipital depressions, ridges, and protuberance are very marked, and the temporal ridges approach to within 1.7 cm. on the left and 2.3 cm. on the right of the sagittal suture. The whole skull is rather heavy and massive; thickness of parietal bones 4–5 mm.

The shape of the skull is unusual. The frontal region is rather broad (frontal diameter, minimum, 9.7; frontal diameter, maximum, 12.1 cm.), but quite flat and sloping. Frontal ridges wanting (broken away).

The sagittal region is elevated into a crest which begins 4 cm. posteriorly from the bregma, is most marked at the vertex, and proceeds in two tapering diverging crests to the lambdoid suture. The whole vertex region is considerably elevated and forms a blunt crest, which is particularly noticeable when the skull is viewed from the side.

The temporo-parietal regions are moderately convex and expanded anteriorly, but become flattened and gradually narrow toward the parietal bones. The parietal bones measure each 11 cm. along the coronal, but only 8.8 cm. along the lambdoid suture. The gradual tapering of the parietal regions from their middle backward constitutes on the occipital bone up to the inion, and gives the norma verticalis of the skull a peculiar appearance.

The occipital region, as a whole, does not protrude much, as in true dolichocephals, but it shows a prominent broad crest, formed by the two superior semicircular lines and the region between them. The extreme occipital protuberance is pronounced and shows signs of strong muscular attachments. A small distance above the foramen magnum, on each side of the median line, is a very marked depression, surmounted by a small ridge.

Of the mastoids, the right has been broken off and the left is damaged, but they do not seem to have been of extraordinary size.

The base of the skull is fairly well preserved and shows the following characters: The basilar processes and the petrous portions of the temporal bones are more massive than usual. The glenoid fossæ are broad and of fair depth. The styloids are quite thin, entire (right 0.7, left 0.8 cm. long). The foramen magnum is hexagonal in outline; it is 4.4 cm. long, 3.6 cm. wide; its plane is inclined backwards in such a way that its antero-posterior diameter prolonged would touch about the lower borders of the nasal aperture.

The cranial cavity can be well inspected through the opening caused by injury. The internal surface of the frontal bone shows but very few traces of brain impressions. There are several large impressions on each parietal bone, and deep, though rather small, fossæ for the extremities of the occipital lobes on the occipital bone. The superior border of the foramen ostbe shows in the middle a rounded notch about 3 mm. deep.

The serration of the sutures is throughout very simple.

Measures.—The glabello-occipital length and maximum width of the skull can not be accurately determined on account of injuries to the bones. They amount, respectively, to about 18.8 and 14 cm., giving the cephalic index of about 74.4 (moderate dolichocephaly). The basion-bregma height is 14.1 cm.; basion-vertex, 14.6 cm.; basion-obelion, 13.6 cm.; basion-lambda, 12.2 cm. The two more anterior of these measures characterize the skull as a rather high one. The two more posterior measures show the rapid downward slope of the posterior half of the sagittal region. The maximum circumference of the skull (above the ridges) is 52 cm.

The bregma-lambda arc measures 13.3, the lambda-opisthion arc 12.2 cm. The arc between the asterions = 10.7 cm.

If the skull under examination is considered from a purely evolutionary standpoint, it must be pronounced to be in many points inferior to the average white and even to the majority of Indian crania. An anthropological identification of the specimen is difficult, for the reason that we are still very imperfectly acquainted with the craniology of the peoples of southwestern United States and northern Mexico. From what we know of the crania of the Pimas, and the extinct Santa Barbara, Santa Catalina, etc, Californians, it is possible to say that the individual whose skull is here reported upon may have belonged to a people physically related to either of these groups. The skull is very distinct from that of an Apache. The female Seri cranium examined by me in fact does not show certain of the peculiarities of this specimen; nevertheless it is very possible that both crania belonged to individuals of the same tribe.

ALES HRDLIČKA.

[144]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

128 141 bers found in a shell mound at Tiburon, California; but, in view of the possible error in identification in these cases, the comparisons are omitted. Otherwise, Dr Hrdlička's determinations are as recorded in the following report (and his drawings of the anterior and left lateral aspects of the cranium are reproduced in figure 6):

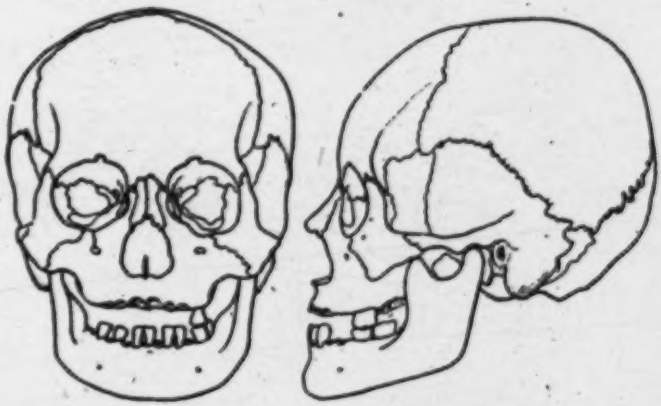

FIG. 6—Anterior and left lateral aspects of Seri cranium.

REPORT ON AN EXAMINATION OF A SKELETON FROM SERILAND

[By Dr ALEŠ HRDLIČKA, Associate in Anthropology, Pathological Institute, New York]

The Skeleton

141 All the bones of the skeleton are present, except the sternum, the coccyx, a few of the teeth, and a few of the small bones of the extremities.

It is a skeleton of a young adult, between 20 and 24 years of age, female. The age of the subject is indicated mainly by the unattached epiphyses of the long and some of the short bones, those epiphyses, namely, which are the last to ossify. The femininity of the subject is indicated by the generally slightly marked ridges, etc, of muscular attachment, and by the decidedly feminine character of the pelvis (light, well-spread ilia, broad subpubic arch) and of the skull (lack of supraorbital ridges, thin dental arches, small mastoids, etc).

There are no wounds or pathological conditions noticeable on the skeleton. Several peculiarities and anomalies are observable. They will be described with the parts they concern.

[128] The measurements to follow are expressed in centimeters. The French anthropometric methods and nomenclature have been adopted.

The Skull

The skull is of *fair* size, and is symmetrical throughout, with the exception of a slight irregularity in the occipital region. All the sutures, with the exception of the basilar, open; nerve foramina all large; serrations rather simple; no intercalate bones of any kind.

Norma frontalis—Visage symmetrical. Forehead well arched, medium height.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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SERI MOTHER AND CHILD

[P. 142 A]

1: McGee £- 5 (1894-1895)1898 NU31 Seri NU31

Supraorbital ridges almost absent; glabella convex. Nasion depression medium. Orbits obliquely quadrilateral; their axes (internal inferior corner—internal superior corner) meet at ophryon. Sphene-maxillary fissure, lachrymal canal, and nerve foramina all above average in size. Nasal bones well bridged, very slightly concave; nasal aperture regular; no "gouttières"; turbinated bones well formed; septum wanting; spine 0.65 long, bifid at the end. Zygomæ of medium size and strength. Superior maxillæ of medium size, well formed. Dental arches regular; no prognathism. Bone of lower jaw moderately strong; does not protrude anteriorly; conformation normal.

Norma basilis—Contour almost round. Whole base symmetrical, except as noted below; the middle structures appear shortened antero-posteriorly, slightly more on the left than on the right; basilo-vomeric angle rather acute (109°); foramina of the base all spacious; the petrobasilar suture is large (average diameter, 5 mm.) and is throughout pervious. Superior dental arch regular and of medium thickness. Dentition incomplete—right upper wisdom tooth not fully erupted; left lower wisdom tooth wanting entirely. Denture fine and regular; no teeth decayed. Both upper first incisors absent.[1] Teeth set regularly in socket and of medium size. Palatine arch symmetrical. Shape of palate normal. Posterior nasal foramina oblong. Styloids small, shell-like, flattened.

Norma occipitalis—The posterior part of the skull is somewhat flattened. The sides of the surface present a pentagonal outline with rounded corners, the apex corresponding to the sagittal suture, or obelion. There is a slight asymmetry, the right side being somewhat flattened. Exterior occipital protuberance not well marked.

Norma verticalis—Outline an irregular ovoid, wider posteriorly and more prominent on the left and posteriorly. Slight symmetrical depression of the parietals, beginning about 1 cm. and ending 5 or 6 cm. behind the coronal suture and extending laterally from the sagittal suture to the upper temporal ridge.

Norma lateralis—Outline ovoid, larger posteriorly. Pterions en H, of medium breadth. Temporal ridges not very distinct. Parietal bosses prominent.

	cc.
Skull capacity, Broca's method	1,545
Skull capacity, Flower's method	1,490
Antero-posterior diameter, maximum	18.3
Lateral diameter, maximum	14.4
Cephalic index, 68.3 = Brachycephalic.[2]	
Chin-bregma	21.2
Chin-ophryon	13.2
Alveolar point-ophryon	8.6
Bizygomatic breadth, maximum	13.0
Facial index	98.5
Superior facial index (Broca's), 66.1 = Mesosema.	
Height of nose aperture	5.4
Breadth of nose aperture	2.65
Nasal index, 49.0 = Mesorhine.	
Mean height of orbits	3.89
Mean breadth of orbits	3.95

[1] Both these incisors were apparently lost at the same time, not from general lesion, and some years previous to the death of the individual, as the sockets appear exactly alike, bear no signs of violence, and are almost filled up with cancellous tissue (some religious or social rite?).

[2] If allowance is made for the effects of flattening of the occipital on the long diameter, and hence on the index, of a skull, it becomes apparent that the true index of this skull is probably of a low brachycephalic, or, at most, of mesocephalic order. It is very doubtful if the deformity is intentional; its moderate extent and the total lack of signs of counter-compression would indicate with more probability that the deformity might have been produced by the individual lying, when an infant, by compulsion or habit, on something hard, probably a board.

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	cm.
Orbital index, 86.3=Megasemic.	
Mean depth of orbits	4.6
Dijugyon to dacryon	2.3
Frontal diameter, minimum	9.2
Frontal diameter, maximum (interstephanic)	11.4
Biauricular diameter[1]	12.3
Diameter through parietal bosses	14.3
Mimastoid diameter	10.55
Distance from superior alveolar arch to inferior occipital ridge	14.35
Distance between supramastoid eminences	13.9
Length of basilar process (notch of vomer to basion)	2.95
Basion-bregma height	13.45
Basion-obelion height	? (obelion indistinct.)
Basion-ophryon	14.0
Basion-inion	8.1
Circumference, maximum	49.4
Nasion-ophryon arc	1.8
Nasion-bregma arc	12.3
Nasion-inion arc	30.0
Nasion-opisthion arc	35.5
Pterion-bregma arc	11.2
Arc external meatuses, over forehead	29.2
Arc external meatuses, over frontal bosses	30.4
Arc external meatuses, over bregma	34.0
Arc external meatuses, maximum	35.7
Arc external meatuses, over inion	23.6
Temporal ridges to sagittal suture (stephanions-bregma), (arc) mean	7.5
Lateral diameter of foramen magnum, maximum	2.75
Antero-posterior diameter of foramen magnum, maximum	3.60
Index of foramen magnum	76.4
Length of hard palate, maximum	4.6
Height of hard palate at first molars	1.55
Breadth of hard palate at first bicuspids	2.9
Breadth of hard palate at first molars	3.55
Breadth of hard palate at third molars	4.1
Height of posterior nares	3.1
Breadth of posterior nares	2.55
Index of posterior nares	82.2
Angle of mandibles	114°
Length of mandibular rami	9.55
Bigoniac diameter of mandibles	9.95

The Vertebral Column

Cervical vertebræ.—Number complete; characters normal. All cervical spinous processes bifid; vertebræ prominens well defined. All epiphyses absent.

	cm.
Transverse diameter of third cervical vertebra (between posterior tubercles of the pedicles), maximum	5.05
Antero-posterior diameter of third cervical vertebra (body-spinous process), maximum	4.20
Greatest lateral diameter of foramen, same vertebra	2.15

[1] The "biauricular" signifies the distance between points of the skull immediately above the commencement of the supramastoid border on the temporal.

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GROUP OF SERI BOYS

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Greatest antero-posterior diameter of foramen, same vertebra	1.45
Height of body in center, same vertebra	.90

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Dorsal vertebræ—Number complete; characters absolutely normal. Resemblance to lumbar processes begins with tenth dorsal vertebra; a number of the epiphyses of the various processes either imperfectly united or detached; body epiphyses absent.

	cc.
Antero-posterior diameter of body of sixth dorsal vertebra, maximum	2.55
Lateral diameter of body of sixth dorsal vertebra, maximum	2.90
Height of body in center	1.67
Separation of transverse processes	5.60
Edge of upper articular processes–tip of spinous processes	5.50
Breadth of foramen, maximum	1.80
Length of foramen, maximum	1.50

Lumbar vertebræ—Number complete; characters absolutely normal. Only disk epiphyses detached.

	cc.
Antero-posterior diameter of body, maximum	3.12
Antero-posterior diameter of whole vertebra, maximum	7.10
Lateral diameter of body, maximum	4.55
Lateral diameter of transverse processes, maximum	7.10
Height of articular processes, maximum	4.33
Height of body in center, maximum	2.20
Antero-posterior diameter of canal, maximum	1.50
Lateral diameter of canal, maximum	2.10

The Sacrum

Aspect normal with the following exception: There are distinct intervertebral disks between the different segments (5 segments); there are deep lateral incisures in places where the lateral processes unite, and the fourth and fifth segments are entirely separated (in one piece) from the upper three (four small spots of consolidation along the posterior border of the articulation are visible). The articular processes of the first and second sacral segments are similar in form to the lumbar, and form open articulations. There is a large foramen situated below the spinous processes of the first and third segment, and a smaller beneath the second. Coccyx absent. Curvature medium.

	cc.
Breadth of the sacrum, maximum	10.5
Height of the sacrum, maximum	11.2
Index of the sacrum	93.7

The Thoracic Cage

Aspect of ribs normal. Strength medium. Sternum absent.

Length second right rib (arc)	31.8
Long diameter second right rib	12.5
Maximum height of the curve	7.3
Length ninth right rib (arc)	36.8
Long diameter ninth right rib	18.7
Maximum height of curve	8.45

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Bones of the Upper Limbs

141 *Clavicle*—Form normal, slender; epiphyses united. Length, maximum, 13.5. Muscular attachments of slight prominence.

Scapula—Form normal, spine directed somewhat more upward than is usual; whole bone light and slender; acromial epiphyses absent.

Height (middle of glenoid fossa-tip of inferior angle)	13.0
Breadth (middle of glenoid point, maximum)	8.7

Humeri—Form normal; bone slender; head-epiphyses not united; left head perforated by large oval foramen from coronoid to olecranon fossa (8 mm. by 4½ mm.)

Length of left humerus (with epiphysis)	31.2
Length of right humerus (with epiphysis)	31.6

Ulnæ and radii—Form normal; bones slender; lower epiphyses ununited.

Length of left radius (head and end of styloid)	24.1
Length of left ulna (olecranon-styloid)	25.8

Metacarpus, carpus, and phalanges—Nothing special.

Bones of the Pelvis and Lower Limbs

All the bones of the pelvis and lower limbs of normal shape and medium size. Pelvis apparently that of a female (subpubic angle 100°). Bones well united; all traces of the union in acetabulum effaced. Epiphyses ununited except on the ischiatic protuberances, where bony union just begins. Above the fossa acetabuli (8 mm. postero-superiorly from the uppermost edge of the fossa) there is in both acetabula an irregularly triangular depression of about 2 water-drops capacity (accessory tendon?).

Anterior to posterior-superior spine	13.7
Point of pubis to posterior-superior spine	15.8
Point of pubis to anterior-superior spine	12.7
Point of pubis to point of ischium	10.8
Biiliac diameter of whole bony pelvis (between internal iliac borders), maximum	21.0
Height of coxal bones (tuberosity of ischium to iliac border in this case without its epiphyses), maximum	19.4
Antero-posterior diameter of superior strait	11.8
Lateral diameter of superior strait	11.4
Oblique diameter of superior strait	11.3

Height of subject (determined after Manouvrier's method) about 1.630 m. (above the general average).

Femora—Lower epiphyses ununited. Muscular attachments, including linea aspera, but little prominent.

Length of femora (both condyles applied to base)	43.6
Inclination of neck to shaft	130°

Tibiæ—Both platycnemic. All the epiphyses ununited, especially the upper.

Antero-posterior diameter at center, maximum	2.5
Lateral diameter at center, maximum	1.62
Length (articular surface-tip of styloid)	35.6

$$\text{Femoro-tibial index } \left(\frac{\text{length of tibia} \times 100}{\text{length of femora}}\right) = 82.0$$

This index is 81 in the European, 83 in the negro, and 86 in the Bushman.[1]

Fibulæ—Length, 35.2. Epiphyses not yet united, particularly the upper.

Tarsal, metatarsal, and phalangial bones—Nothing special.

[1] Quain, Anatomy, 1890: Osteology, p. 128.

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MASHEM, SERI INTERPRETER

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Résumé of the Peculiarities of the Skeleton

The nerve and blood-vessel foramina are generally large. This character and the platycnemic tibiæ indicate an ample musculature of the subject. 141

The height is above the general average for a woman, which, according to Topinard, is 1.53.

The petro-basilar fissures are large and visibly pervious. This condition is found occasionally; significance doubtful; it is more frequent in young subjects.

Platycnemic tibiæ.—This is considered a simian character.[1] It was found first by Broca in 1868[2] on bones from Eyzies; it is associated with relative strength of the muscles of the leg; is very frequent among the characters found on bones from the epoch of polished stone in Europe.[3] J. Wyman found this character more accentuated than at Cro-Magnon or at Gibraltar on a third of the tibiæ from the mounds of the United States.[4]

Perforated humerus.—Noticed first by Desmoulins, 1826, on the humeri of Guanches and Hottentots;[5] occurs with greatest frequency in the following peoples:[6]

	Per cent.
156 neolithic humeri from around Paris	21.8
97 humeri of African negroes	21.7
122 humeri of Guanches	25.6
80 humeri from the mounds of United States (J. Wyman)	31.2
32 humeri of Polynesians	34.3
30 humeri of altaic and American races	36.2

Summarily, Dr Hrdlička's special determinations conform with the external observations on the Seri body; they indicate an exceptionally large stature, together with a notably well-developed and well-proportioned osseous framework, of the native American type, yet significantly approaching the Caucasian in several respects. It is especially noteworthy that the cranium is well formed and capacious, the precise measurements corroborating the external observation that the Seri head is of good absolute size, though relatively smaller (in comparison with height and weight) than that of some neighboring tribes of less stature—e. g., the Papago. It may be noted, too, that the imperfect ankylosis of the epiphyses, and various other skeletal features, are in accord with the inferences from the living body as to the slowness of attaining maturity. It may be noted further that the extraordinary development of the muscular attachments, especially in the masculine cranium, is quite in harmony with the habits of the tribe. 141 142 [145] [147]

The remaining somatic characteristics of the Seri are for the greater part of such sort as to be described by generalities and negatives. In general they correspond with those of typical American tribesmen and other peoples; and they do not exhibit striking peculiarities in proportion or structure. In the opposability of the thumb, the nonopposability of the hallux, and the independence of fingers and toes, the Seri hands and feet are developed quite up to, if not somewhat beyond, the 142 144

[1] Hovelacque et Hervé, *Précis d'Anthropologie*, 1887, pp. 112, 207.
[2] *Bulletin de la Société d'Anthropologie*, 1868.
[3] Hovelacque et Hervé, op. cit., p. 113.
[4] *Histoire Naturelle des Races Humaines*, 1868, p. 306.
[5] Hovelacque et Hervé, op. cit., p. 221.

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142 Amerindian[1] average; the feet are set straight in walking, as befits the pedestrian habit; the arms are not elongated, and the thighs seem no
[144] longer in proportion to other elements of the stature than are those of the highest human types. In like manner the bodies are notably free from artificial deformation; the skulls are not flattened or otherwise
[304] distorted; there is no scarification, or even tattooing; neither ears nor lips are pierced for pendants or labrets; the teeth are not filed or drilled, though in some cases at least the first incisors of females are extracted; and while there are trustworthy records of the piercing of the nasal septum for the insertion of pendants, no examples were found at Costa Rica in 1894. The food habits and other customs of the tribe indicate, or at least suggest, more or less specialized and perhaps distinctive internal characters; but, without actual examination of the organs, these inferred characters demand little more than passing notice.

On reviewing the more prominent somatic characters of the Seri, it is found that the greater number are either functional or presumptively correlated with function, and that only a few—chiefly stature and color—are simply structural; accordingly a comparison of the peculiar somatic features and the peculiar individual habits of the tribe would seem to be instructive in more than ordinary degree.

361 The most striking trait of the Seri is the pedestrian habit. The warriors and women and children alike are habitual rovers; their jacales and even their largest rancherias are only temporary domiciles, evidently vacant oftener than occupied; the principal rancherias are separated by a hard day's journey or more; and none of the known
[312] rancherias or jacales of more persistent use are nearer than 4 to 10 miles from the fresh water by which their occupants are supplied. Probably the most persistently occupied rancherias of the last half century have been those located from time to time near Costa Rica, yet even these were seldom occupied by the same group for more than a fortnight or possibly a month, and were often vacated within a day or two after erection. Still more temporary camps intervene between jacales, and their sites may be seen in numbers in the neighborhood of the better-beaten paths, or along the shores, or even over the trackless spall-strewn plains; they may be merely trampled spots, sparsely strewn with oyster shells and large bones gnawed at the ends, usually in the lea of a shrub or rock; in places of small shrubbery or exceptionally abundant grass there may be two or three or perhaps half a dozen "forms" (suggesting the temporary resting places of rabbits), in which robust bodies nestled and shrugged themselves into the warm earth and under the meager vegetation. Rarely there are ashes and cinders hard by, to mark the site of a tiny fire, and more frequently battered and stained or greasy bowlders record their own use as meat-

[1] The term *Amerind* (with the self-explanatory mutations *Amerindian*, *Amerindic*, etc.) has been established by the Anthropological Society of Washington as a convenient collective designation for the aboriginal American tribes (American Anthropologist, new series, vol. 1, 1899, p. 562).

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blocks or metates, though it is manifest that most of the camps were fireless and many foodless. It is particularly noteworthy that even the more temporary resting-places are seldom if ever less than a mile or two from the nearest fresh water. In short, the Séri are not a domiciliary folk, but rather homeless wanderers, customarily roving from place to place, frequently if not commonly sleeping where overtaken by exhaustion or storm, ordinarily slumbering through a part of the day and watching by night, habitually avoiding fresh waters save in hurried and stealthy visits, and apparently gathering in their flimsy huts only on special occasions. 361 [312]

In conformity with their rovingness the Seri are notable burden-bearers. They habitually carry their entire stock of personal belongings (arms, implements, utensils, and bedding), as well as their stock of food and—weightiest burden of all—the water requisite for prolonged sustenance amid scorching deserts, in all their wanderings, the water being borne chiefly by women, in ollas, either balanced on the head singly or slung in pairs on rude yokes like those of Chinese coolies. And they have never grasped the idea of imposing their burdens on their bestial associates; their coyote-curs are not harnessed or even led; when they surround and capture horses, burros, and kine they make no use of ropes, never think of mounting even when pursued by vaqueros, but immediately break the necks or club out the brains of the beasts, perchance to tear the writhing body into quarters and flee for their lives with the reeking flesh still quivering on their sturdy heads and brawny shoulders—and scores of vaqueros agree in the affirmation (wholly incredible as it would be if supported by fewer witnesses) that even when so burdened the Seri skim the sand wastes of Desierto Encinas more rapidly than avenging horsemen can follow. 482 [231] 224 177 [481]

The hardly conceivable fleetness of the Seri is conformable with their habitual rovingness and their ability as burden-bearers; and this faculty is established by cumulative evidence so voluminous and consistent as to outweigh the presumption arising from the standards attained among other peoples. A few minutes after they were photographed, the group of boys shown in plate XVI, with several others of about the same size, provided themselves with a stock of their favorite human-hair cords, "rounded up" a dozen mongrel coyote-dogs haunting the rancheria at Costa Rica, and herded the unwilling animals toward a shrubbery-free space a quarter of a mile away, in order to rope them in imitation of the work of the Mexican cowboys earlier in the morning. From time to time as they went a frightened cur sneaked or broke through the cordon of boys, and made for distant shrub-tufts at top speed; yet in every case a boy darted from the ring, headed off the animal within one or two hundred yards, and lashed it back to its place. On arriving at their miniature rodeo the boys widened their ring, and at a signal scattered and frightened the dogs; then, when the fleeing animals had a fair start, each selected his victim and fol- 177 231 481 857

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lowed it, yelling and swinging his light lasso, until, after much doubling and dodging and many unsuccessful casts, he caught and dragged the howling beast back to the open; and it was only after half a dozen repetitions that enough dogs had escaped to spoil the sport. As the boys lounged chattering back toward the rancheria their course lay between two clumps of the usual desert shrubbery, so placed that when the first was obliquely left and 40 or 50 feet distant from them, the other was obliquely right and 100 feet away. At this point a bevy of small birds (perhaps blackbirds—at any rate corresponding to blackbirds in size and flight) fluttered suddenly out of the nearer clump toward the more distant one, when, too instantaneously for the untrained eye to catch exchange of signal or beginning of movement, the boys lunged forward in a common effort to seize the birds; and though none were entirely successful, one exultantly displayed a tuft of feathers clutched by his fingers as the bird darted into and through the thorny harbor. When the distances were paced it was found that, although the birds had the advantage of the start, the boys covered at least 90 per cent of their distance in the same time; while the spontaneity of the impulse demonstrated habitual chase of flying game under fit conditions.

While obtaining the Seri vocabulary with Mashém's aid, advantage was taken of every opportunity to secure collateral information concerning the actual use of the terms, and thereby of gaining insight into the tribal habits. Through his naive explanations, usually repeated and corroborated by the elderwoman of the Turtle clan (Juana María) and others of the tribe, it was learned that half-grown Seri boys are fond of hunting hares (jack-rabbits); that they usually go out for this purpose in threes or fours; that when a hare is started they scatter, one following it slowly while the others set off obliquely in such manner as to head it off and keep it in a zigzag or doubling course until it tires; and that they then close in and take the animal in their hands, frequently bringing it in alive to show that it was fairly caught—for it is deemed discreditable, if not actually wrong, to take game animals without giving them opportunity for escape or defense by exercise of their natural powers. Similarly, Mashém described the chase of the bura and other deer as ordinarily conducted by five persons (of whom one or two may be youths), who scatter at sight of the quarry, gradually surround it, bewilder it by confronting it at all points, and finally close in either to seize it with their hands, or perhaps to brain it with a stone or short club; the former being held the proper way and the latter a partial failure. This hunting custom, described as a commonplace by Mashém, is established by the vaqueros who had frequently witnessed it from a distance; and the same extra-tribal observers described still more striking feats of individual Seri hunters: Don Manuel, son of Señor Encinas, and Don Ygnacio Lozania were endeavoring to train to work a robust Seri (one of a band sojourning temporarily at Costa

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"JUANA MARIA," SERI ELDERWOMAN

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Rica) noted for his prowess in hunting. One hot afternoon he begged 224
relief from his tasks, saying the spirit of catching a deer had hold on him; and he was excused on condition that the deer be brought entire to the rancho. Two hours later he was seen driving in a full-grown buck; on approaching the rancho the terrified animal turned this way and that, describing long arcs in wild efforts to avoid the human habitation; yet the hunter kept beyond it, heading it off at every turn and gradually working it nearer, until, at a sudden turn, he was able to rush on it; whereupon he caught it, threw it over his shoulders, and ran in to the rancho with the animal still struggling and kicking off its overheated hoofs.

Señor Encinas himself, with Don Andrés Noriega and several other [648]
attachés, vouch for the catching of a horse by a Seri hunter in still more expeditious fashion: one of the horses belonging to the rancho was exceptionally fat, and hence exceptionally tempting to the Seri band (and at the same time worthless to the vaqueros); the chief begged for it persistently until, wearied by his importunities, the ranchero offered the horse to the band on condition that a single one of them should catch it within a fixed distance (about 200 yards) from the gateway of the corral—and the offer was promptly accepted. With the view of making the test of fleetness fair, a vaquero was called in to frighten the horse and start him running around the interior of the corral, while a boy stood by to drop the bars at the proper moment, the Indian standing ready outside the gateway; when the animal had gained its best speed the bars were dropped and it bolted for the open plains—but before the 200-yard limit was reached the hunter had overtaken it, leaped on its withers, caught it by the jaw in one hand and the foretop in the other, and thereby thrown it in such manner as to break its neck. Knowing of these and other instances, L. K. Thompson, of Hermosillo, undertook arrangements for publicly exhibiting Seri runners as deer catchers at different expositions during the nineties; but his arrangements failed, chiefly because of the anticipated (and probably underestimated) difficulty of taming the Seri sufficiently for the purpose.

About 1893, Señor Encinas and several attendants left Costa Rica 481
one morning for Hermosillo, leaving at the rancho, among others, a Seri matron with a sick child nearly a year old; in the evening (as they learned later) the child was worse, and the matron took the trail about dusk, in the hope of finding a cure in the white man's touch or other medicine—and at dawn next morning she was at Molino del Encinas, 17 leagues (nearly 45 miles) away, with her helpless child and a peace offering in the form of a hare, which she had run down and caught in the course of the journey. And the matrons, with children [484]
astride their hips and water-filled ollas balanced on their heads, and all their goods and chattels piled on their backs, habitually traverse Desierto Encinas from the sea to Costa Rica (some 30 miles), or from Costa Rica to the sea, in a night.

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481 Examples of Seri fleetness and endurance might be multiplied indefinitely, and many of still more striking character might be adduced; but these instances, all attested by several witnesses, all corroborated by independent facts, and all consistent with the observations of the 1894 expedition, seem fairly to represent one aspect of the pedestrian habit of the tribe.

412 A trait of the Seri hardly less conspicuous than their pedestrian habit is habitual use of hands and teeth in lieu of the implements characteristic of even the lowly culture found among most primitive tribes. Perhaps the most nearly universal implement is the knife—at first of shell, tooth, bone, or wood, later of stone, and last of metal—and hardly a primitive tribe known from direct observation or from relics has been found independent of this most serviceable implement; yet the Seri may be described with reasonable accuracy as a knifeless folk. Awls and marlinspikes of bone and wood, shell cups, and protolithic mullers or hammers are found in numbers in their hands, on their ranchería sites, and in their ancient shell accumulations, while rudely chipped stone arrowp ints are sparsely scattered over their range; yet not a single knife of stone or other wrought substance has been found in their territory or in their possession, save for an occasional metal knife obtained by theft or barter. And the habit of dispensing with this primary implement is attested both by everyday customs and by the traditions and chronicles concerning the tribe. Thus, various observers (notably Hardy) have recorded the features and uses of balsas, harpoons, ollas, etc, yet no records of cutting implements have been found; similarly the chronicles contain records of barter between the Seri and the Sonorenses through which the savages acquired aguardiente, manta, garments, sugar, grain, etc, yet no record is known of the leading articles of exchange to practically all other tribes of the continent, viz, cutlery; and in like manner the local traditions recount the constant desire of the Seri for liquor and tobacco, saccharine and other food substances, clothing or material for making it, tin cups, lard-cans, and other metallic utensils, as well as nails for harpoons and hoop-iron for arrowpoints, in addition to firearms and ammunition; yet the recounters are significantly silent on the subject of knives.

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Conformably, the 60 Seri gathered near Costa Rica in 1894 made it their business to pick up or beg all sorts of industrial products and materials, yet apparently did not possess so many as a dozen knives in the entire band; and while protolithic implements, ollas, shell cups, paint-stones, etc., were seen in constant use, none of the men, women, or children were observed to use knives for cutting meat or for any other customary purpose. Among the supplies laid on top of the

264 jacal shown in plate x, to keep them out of the way of the dogs, was a hind leg of a horse, from femur to hoof (some three days dead and still

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ripening); most of the larger muscles were already gnawed away, leaving loose ends of fiber and strings of tendon clinging to the bone, the condition being such that the remaining flesh might easily have been cut and scraped away by means of a knife; yet whenever a warrior or woman or youth hungered he or she took down the heavy joint, squatted or sat on the ground with back to one side of the doorway, held the mass at the height of the mouth, and gnawed, sucked, and swallowed, frequently tearing the tissue by twisting and backward jerks of the head, and not only masticating, but swallowing the free ends of tendons still attached to the bone. This process was varied only by seizing with the hands and tearing off a strip of flesh or skin already loosened by the teeth; and it was continued until the bones were practically clean, when they were wrenched apart by the stronger men in order that the cartilaginous cushions and epiphyses might be gnawed away. The only approach to cooking or carving was a parboiling of the foot, after the leg was wrenched off at the hock, until the hoof was sufficiently softened to be knocked off with the protolithic hupf[1] shown in plate XLIII, when half a dozen matrons and well-grown maidens gathered about to gnaw the gelatinous tissue (already softened by incipient decay as well as by the parboiling) investing the coffin bone. The entire procedure in this as in many other cases proclaimed the absence of knife-sense. The Caucasian huntsman does not have to think of his knife when game is to be bled or skinned or dissected; his habit-trained hand knows where to find the implement, how to seize it, and in most cases how to wield it advantageously; but the Seri hand possesses no such cunning, and uses the knife only clumsily and at second thought, if at all. The Seri huntsman, on the other hand, does not have to think of nails and teeth, for they are trained and coordinated by hereditary habit to spontaneously act in unison and with the utmost possible or needful vigor; while the Caucasian at least has completely lost the claw-and-teeth instinct of offense and defense.

Conformably with their striking independence of knives, the Seri are conspicuously unskilful in all mechanical operations involving the use of tools. Their most elaborate manufacture is the balsa, made from reeds broken at the butts and with the leaves and tops removed by the hands or by fire, bound together with hand-made cords; next in elaborateness come the bow and arrow, normally made without cutting tools; then follows their fictile ware, which is made wholly by hand, without aid of the simple molds and paddles and other devices used by neighboring tribes; while their primitive fabrics were apparently of hand-extracted fibers, twisted and woven wholly by hand, with the aid of wood or bone perforators in sewing and possibly in weaving. Practically the Seri possess but a single tool, and this is applied to a peculiarly wide variety of purposes—it is the originally natural cobble used for crushing bones and severing tendons, for grinding seeds and

[1] Defined previously, p. 152.

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412 rubbing face-paint, for bruising woody tissue to aid in breaking ocatilla poles for house-frames or mesquite roots for harpoons (both afterward finished by firing), and on occasion for weapons; and this many-functioned tool is initially but a wave-worn pebble, is artificially shaped only by the wear of use, and is incontinently discarded when sharp edges are produced by use or fortuitous fracture. The hupf is supplemented chiefly by the simple perforator of mandible or bone or fire-hardened wood; and these two primitive implements, together with mollusean shells in natural condition, apparently serve as the primary tools for all the mechanical operations of the tribe.

726 The dearth of tools and the absence not only of knives but of knife-sense among the Seri illumine those traditions of Seri fighting made tangible by the tooth-torn arm of Jesus Omada; for they explain the alleged recourse of the Seri warriors to nature's weapons, used in the centripetal fashion characteristic of nascent intelligence.

186 The Seri are distinguished by another trait hardly less striking than the pedestrian habit, and even more conspicuous than the tooth-and-nail habit with the correlative absence of tool-sense; the trait is not tangible enough for ready definition or description in terms (of course because so unusual as not to have bred words for its expression), but is akin to—or, more properly, an exceeding intensification of—race-pride in all its protean manifestations; it may be called *race-sense*. Like other primitive folk, the Seri are self-centered (or egocentric) in individual thought, i. e., they habitually think of the extraneous phenomena of their little universe with reference to self, as in the labyrinth of consanguineal relationship extending and ramifying from the speaker; furthermore, they typify primitive culture in their collective thinking, which is tribe-centered (or ethnocentric), i. e., they view extraneous things, especially those of animate nature, with reference to the tribe, like all those lowly folk who denote themselves by the most dignified terms in their vocabulary and designate aliens by opprobrious epithets; but the Seri surpass most, if not all, other tribes in dignifying themselves and derogating contemporary aliens. Concordantly with this habitual sentiment, they glory in their strength and swiftness, and are inordinately proud of their fine figures and excessively vain of their luxuriant locks—indeed, they seem to exalt their own bodies and their own kind well toward, if not beyond, the verge of inchoate deification. The obverse of the same sentiment appears in the hereditary hate and horror of aliens attested by their history, by their persistent blood-thirst, and by the rigorous marriage regulations adapted to the maintenance of tribal purity; for just as their highest virtue is the shedding of alien blood, so is their blackest crime the transmission of their own blood into alien channels. The potency of the sentiment is established by the unparalleled isolation of the tribe after centuries of contact with Caucasians, by their irreducible love of native soil, by their implacable animosity toward invaders, and by

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TYPICAL SERI WARRIOR

(p. 154 A)

1: McGee F-5 (1894-1895)1893 NU31 Ser1 NU31

their rigorously maintained purity of blood; it is manifested in their commonplace conduct by a singular combination of hauteur and servility, forbidding association with aliens on terms of equality. The entire group at Costa Rica in 1894 were on good behavior, partly, no doubt, for profit, partly because they were at peace bought by bloodshed; yet they kept an impassable gulf between themselves and the Caucasians, and a still wider chasm against the Papago and Yaqui. They came to the tanque, usually in groups, rarely alone, always alert; especially when alone or in twos or threes, they moved slowly and stealthily in their peculiar collected and up-stepping gait, often stepping, always glancing furtively with roving eyes, and bearing a curious air of self-repression—as of the camp-prowling coyote who seems to hold down his instinctively bristling mane by voluntary effort. And the visitor to their rancheria sent a wave of influence before as his approach was noted; laughter ceased, languor disappeared, and a forced, yet sullen, amiability took their place, though the children and females edged away; if he appeared unexpectedly or came too close, the children and younger adults simply flitted like young partridges, while the elders stiffened rigidly, with bristling brows and everting lips and purpling eyes, perhaps accompanied by harsh gutturization—indeed the curiously canine snarl and growl, often evoked by the stranger unintentionally, betrayed the bitterness of Seri antipathy toward even the most tolerable aliens. Every human is panoplied in a personality, perhaps intangible but none the less real, which repels undue approach and fixes limits to familiarity on the part of strangers, friends, kinsmen, and mates, according to their respective degrees of mutually elective affinity; but the Seri are so close to each other and so far from all others that they are collectively panoplied against extra-tribal personalities even as are antipathetic animals against each other—and the Seri can no more control the involuntary snarl and growl at the approach of the alien than can the hunting-dog at sight or smell of the timber-wolf.

While the highly developed traits represented by pedestrian habit and hand-and-tooth habit and segregative habit expressing race-sense are conspicuous during exercise, each carries an equally well-marked obverse. Thus, while the Seri are known as runners par excellence in a region of runners, and were named by aboriginal neighbors from their spryness of movement, they have been no less notorious among the Caucasian settlers of two generations for unparalleled laziness—for a lethargic sloth beyond that of sluggish ox and somnolent swine, which was an irritating marvel to the patient padres of the eighteenth century, and is today a byword in the even-tempered Land of Mañana; concordantly the sinewy hands and muscular jaws are noticeably inert during the intervals between intense functionings, are practically free from the spontaneous or nervous movements of habitually busy persons, and contribute by their immobility to the air of indolence or languor which

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

461 so impressed padres and rancheros; concordantly also, the manifestations of race hate, doubtless culminating among warriors on the warpath, are strongly contrasted with the abject docility of the Seri groups when at peace and in camp near Costa Rica and other ranches—a docility far exceeding that of the Papago, whose personal dignity is an ever-present possession, or that of Yaqui, whose strong spirit so often breaks the curb of Caucasian control. So the observer of the Seri is impressed by the intensity of functioning along lines defined by their characteristic traits, and equally by the capriciousness of the functioning and the remarkably wide range between activity and inactivity which render them aggregations of extremes—the Seri are at once the swiftest and the laziest, the strongest and the most inert, the most warlike and the most docile of tribesmen; and their transitions from rôle to rôle are singularly capricious and sudden. At the same time the observer is impressed by the relatively long intervals between the periods of activity; true, the intense activity may cover hours, as in the chase of a deer, or days, as in a distant predatory raid, or perhaps even weeks, when the tribe is on the warpath; yet all the known facts indicate that far the greater portion of the time of warriors, women, and children is spent in idle lounging about rancherias and camps, in lolling and slumbering in the sun by day and in huddling under the scanty shelter of jacales or shrubbery by night—i. e., when their activity is measured by hours, their intervals of repose must be measured by days.

000 Summarizing those somatic traits connected with habitual functioning, the Seri may be considered as characterized by (1) distinctive pedestrian habit, (2) conspicuous hand-and-tooth habit correlated with defective tool-sense, and (3) pronounced segregative habit correlated with a highly specialized race-sense; yet they are characterized no less by extreme alternations from the most intense functioning to complete quiescence—the periods of intensity being relatively short, and the intervals of quiescence notably long.

14 On reviewing the more conspicuous somatic structures and functions jointly, they are found to throw some light on their own development, and hence on the natural history of the Seri tribe.

Certain characteristics of the tribe strongly suggest lowly condition, i. e., a condition approaching that of lower animals, especially of carnivorous type; among these are the specific color, the centripetally developed body, the tardy adolescence, the defective tool-sense, the distinctive food habits (especially the consumption of raw offal and carrion), the independence of fixed habitations, and the extreme alternations between the rage of chase and war and the quiescence of sluggish repose. But these primitive characteristics are opposed or qualified by such features as the noble stature, the capacious and shapely brain-case, the well-developed hands, and the considerable intelligence revealed in native shrewdness as well as in organization and belief. Collectively the characteristics are in some measure incongruous; yet

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TYPICAL SERI MATRON

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all are at least fairly compatible with the inference that the tribe is exceptionally (if not incomparably) low in the scale of general human development, yet at the same time highly specialized along certain lines; and the inference in turn is corroborated by the coincidence between the special lines of development and the peculiar conditions of environment characterizing the habitat of the tribe. 14

A striking correspondence between Seri physique and Seri habitat is revealed in the pedal development, with the attendant development of muscle and bone, lung capacity, and heart power, together with other faculties involved in the pedestrian habit. Seriland is a hard and inhospitable home; sea-food is indeed abundant and easily taken, but water is terribly—often fatally—scarce, and obtainable only by distant journeying from the places of easy food supply; moreover, the monotony of the diet is alleviable only by extensive wandering for the collection of vegetal products or severe chase after land animals; while the warlike spirit, apparently inherited from a still less humane ancestry and fostered by the geographic isolation, combines to keep the tribe afoot, avoiding waters, conducting raids, and moving constantly from place to place in the endless search for safety. There is a widespread Sonoran tradition that the Seri systematically exterminate weaklings and oldsters; and it is beyond doubt that the tradition has a partial foundation in the elimination of the weak and helpless through the literal race for life in which the bands participate on occasion. A parallel eliminative process is common among many American aborigines; the wandering bands frequently undergo hard marches under the leadership of athletic warriors with whom all are expected to keep pace, and this leads both to desertion of the aged and feeble and to increased strength and endurance on the part of the strong and enduring; yet it would appear that this merciless mechanism for improving the fit and eliminating the unfit attains unusual, if not unequaled, perfection among the Seri. Now pedal development is one of the special processes of peripheral (or centrifugal) functioning and growth involved in the general process of *chirization*, which, coordinately with cephalization, defines human progress;[1] and this developmental process explains the specialization of the Seri along one or more lines, and connects the special development directly with environing conditions. 182 147 [888]

A notable correspondence between structure and function, of such sort as to reflect the habit and habitat, appears in the conspicuous manual development of the Seri. Enjoying a climate too mild to make houses necessary, finding animal food too plentiful to necessitate elaborate contrivances for the chase or milling or other devices for reducing vegetal food, provided by nature with material (in the form of carrizal) for an ideally suitable water craft, barred by geographic boundaries from neighboring tribes, and having neither material for nor interest in commerce, the denizens of Seriland were never forced into the way of mechanical development; yet their simple industries, involving as they

[1] The Trend of Human Progress, American Anthropologist, new series, vol. I, 1899, p. 401.

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do swift stroke and strong grasp and dexterous digitation, are mainly such as urge manual development more strenuously than would be normal among tribesmen connected with their environment through the medium of tools. The demand for manual strength and skill is intensified among the Seri by both natural and domestic conditions; the ever-ready (and almost the sole) material suitable for simple adjunct to the hand abounds in the form of wave-worn cobbles; these cobbles are easily usable in such wise as to serve all ordinary purposes, and their abundance discourages the production of more highly differentiated tools; while their habitual use promotes manual strength and deftness, coupled with that digital freedom (required, for example, in grasping a ball) which most clearly distinguishes the human hand from the subhuman paw. Conjoined with these natural conditions are domestic demands tending to cultivate manual fitness and eliminate the manually unfit; for, in addition to the direct industrial premium on dexterity, through which the dexterous survive while the clumsy starve, there is a special premium growing out of the marriage custom, through which only the manually efficient (and at the same time morally acceptable) are put in the way of leaving lines of descendants.[1] Naturally, in view of the combination of factors, all traceable directly or indirectly to environmental conditions, the Seri afford a peculiarly striking example of cheirization extended to an entire tribe (if not to a genetic stock of people)—indeed the remarkably developed Seri hands and feet first suggested the importance of this process of human development and led to its formal characterization.

Accordingly, the robust-bodied and slender-limbed yet big-fisted and big-footed Seri seem to be adjusted, so far as several of their more striking somatic characters are concerned, to distinctive habits themselves reflecting a distinctive habitat; and the coincidences appear to reveal and establish the law of interaction between the human organism and its environment—an interaction effected through the habits and hence through the normal functioning of the individual organisms as constrained through their collective relations. And recognition of the law of interaction opens the way to consideration of other correspondences between structures and functions and environing conditions.

Conspicuous among the more strictly functional traits of the Seri is the intensity of action characteristic especially of the warriors, though in less degree of the entire tribe—an intensity made all the more striking by contrast with the extreme inertness between stresses. Manifestly the capacity for concentrated effort is in harmony with the tribal habits, themselves reflecting habitat. The resource of prime importance in Seriland—that which directly and constantly conditions the very existence of human inhabitants—is potable water. This prime source of life is too heavy to be transported and too unstable to be stored with the facilities of primitive culture, yet it is always within reach of an organism strong enough to journey ten or twenty or fifty

[1] The mental evolution of the tribe is described further, pp. 238-245.

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SERI RUNNER

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miles in search of it, and acute enough to follow trails and indications. Naturally the meager water-supply serves as a mechanism for sorting out and preserving the strong and the acute, and for eliminating the weakly and the dull; and hence the tribe have developed a faculty, or perhaps a potentiality, of distinctive sort—the potentiality of providing against thirst-death by a reserve power in the organism itself rather than in the form of mechanical devices such as characterize higher culture. Quite similar are the relations to the resource of second importance, i. e., ordinary food. Habituated to dispensing with storage and transportation of their primary resource, and accustomed to finding food whenever forced to sufficiently active effort to obtain it, the Seri have never grasped that first principle of thrift expressed in the accumulation of food supplies; and accordingly they intuitively rely on successful fishing or chase or search of vegetal edibles for sustenance, and habitually delay effort until they are stirred into activity by the pangs of hunger. Naturally this improvidence serves as another mechanism for perpetuating families of stored vitality, and especially those able to prevail over swift or strong or cunning quarry by sustained vigor and alertness after prolonged deprivation; and the effect of this mechanism, too, is to develop a reserve power in the organism itself, in lieu of the material reserve made through thrift in higher culture. Similar in their consequences are the relations of the individual organisms to the third industry of Seriland, i. e., navigation of the gale-swept and tide-troubled waters. Even the buoyant balsa can not weather the williwaws or ride the tideripa of El Infiernillo without exercise of the utmost strength and skill on the part of the navigators; while the often persistent storms may delay for days embarkation on voyages in quest of fresh water or food. Naturally, the frequent delays and not infrequent perils of such navigation constitute a mechanism for selecting navigators possessed of reserve powers adequate to meet desperate emergencies with vigor and judgment even after enervating waits for wind and tide, while those not so well endowed are either brought up to standard in their hard training-school or expelled from their class by drowning or dashing on the rocks, as may happen; so that the effect of this mechanism also is to preserve individuals and perpetuate generations characterized by reserve power, and hence to develop latent potentiality in the tribe. Now, the normal product of these and other natural mechanisms immediately reflecting environmental conditions is capacity for spurts, or for intense functioning under severe stress, despite accentuation of the stress by thirst or hunger or exhaustion, or by all combined—i. e., the effect of habitat and habit is to produce precisely such a somatic regimen as that so conspicuously displayed by the Seri folk. So the intensified activity with long intervals of inertness, simulating the habits of carnivorous and some other lower animals, and hence suggesting primitive condition, would appear to be largely a phylogenetically acquired character expressing specific adjustment to environment.

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147 182 To the actual observer of the Seri in his prime there is an indefinable but none the less impressive harmony between the intense regimen and the trenchant structural development characteristic of the tribe—a harmony like unto that felt by naturalist and artist alike in viewing at once the clean-cut form and vigorously easy mobility of tiger or thoroughbred horse; and simple inspection of the lithe limbs and body-muscles stirs into living realization a half-felt inference from many facts—the obvious and indubitable inference that they are stress-shaped structures. Accordingly, the concentrated and robust bodies, the shapely jaws, the well-chiseled arms, and the statuesque legs of the Seri, no less than their powerful hands and bulky feet, direct special attention to the axiom that somatic structures are the product of exercise, and indicate with convincing clearness that the structures are trenchantly developed because of the supreme intensity of the creative exercise. It may be impracticable to outline in terms of metabolism the precise processes of waste and repair in organs and organisms, or to define the relative periods of action and assimilation (or of catabolism and anabolism) best adapted to the development of motile tissue; yet the external facts of all bodily growth demonstrate the efficiency of alternating effort and repose, while the characteristics of highly developed animal bodies (including those of the Seri) demonstrate that the most beneficial exercise is that of relatively brief but intense stresses alternating with relatively long intervals of sluggish movement or complete repose. Moreover, the facile metabolism involved in the widely alternating regimen implies exceptional somatic plasticity of the sort normally accompanying youth and attending tissue growth; and this persistent bodily plasticity is in harmony with the peculiarly dilatory maturation characteristic of the Seri tribe. So the animal-like bodies of the Seri, no less than their animal-like movements, which at first sight suggest primitive condition, may safely be held in large measure to reflect specific habits of life, themselves reflecting a distinctive habitat.

144 186 Still more suggestive to the observer than the well-molded structures and the intense functioning with which they are conjoined are those elusive yet persistent characteristics of the Seri comprised in their distinctive race sense—characteristics ranging from overweening intratribal pride to overpowering extratribal hatred. Even at first blush it would seem obvious that the tribal isolation, itself the reflection of environment, would necessarily tend toward a segregative habit with concomitant hostility toward aliens; yet the race-sense of the Seri so far transcends that of other segregated tribes as to suggest the existence of a specific cause. So, too, it would seem obvious that the race feeling gathers about a corporeal nucleus in the form of the race-type exemplified in the heroic stature, the shapely face, the mighty chest, the luxuriant hair, the well-modeled muscles, the powerful feet and hands, the "collected" carriage, and the stored vitality, which (as already indicated) synthesize the environmental interactions of generations; yet the actual student can not avoid the impression that the

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SERI MATRON

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race-sense dominates the race-type—that the Seri are farther away from neighboring tribes in feeling than in features, in function than in structure, in mind than in body. Now, in seeking the sources of this distinctive (not to say specific) race-sense, several suggestions arise. Naturally the first suggestion is that of simple sexual selection, the (assumptive) analogue of an important factor in biotic evolution; but the suggestion is at once apparently negatived by the fact that all the mature men and women are married and have families of children proportionate to their ages. True, undesirable spouses may be expelled from the tribe, or even executed (as intimated by neighboring Sonoreuses); yet there is little evidence that either method of selection is employed among the Seri more largely than among other peoples; and, as all recent researches indicate, the higher peoples at least have risen above the plane of sexual selection per se as an effective factor in somatic development. A second suggestion arises in the axiom (vivified by realization of the connection between Seri movements and Seri structures) that perfected organs are the product of stressful functioning—indeed, the suggestion is but the extension of the axiom from the individual to the stirp and the group. In developing the suggestion it is convenient to divide the career of the stirp into periods defined by the successive wax and wane of vitality in its most significant manifestations; and this may be done in terms of successive individual lifetimes in their three successive aspects of (1) youth, (2) maturity, and (3) senility, in which the dominant constructive functions are respectively (1) somatic growth, (2) collective growth (comprising both procreation and the accumulation of artificial possessions), and (3) dissipation of somatic vitality and distribution of extrasomatic accumulations (generational as well as material and intellectual). Now, it is a commonplace in every stage of culture that vital capacity, and also the inherent sense of kind manifested in pairing, culminate in the medial portion, or prime, of individual life; and if this universal recognition is valid, it is just to hold that the career of the stirp is defined by the successive vital climaxes expressing the primes of the series of generations pertaining to the stirp. It follows that each generation must represent, not the average qualities of the entire generation past, but the qualities of the most virile and muliebrile fraction of that generation; whence it follows in turn that in general the generations must develop along the lines most prominent in the lives of each people in their prime. The process may be formulated as the *law of periodic conjugation*, under which successive generations are initiated, not at random, but at periods of culminant effectiveness in shaping the course of the stirp. The immediate application of this law to the Seri tribe is manifest, for it explains (the initial condition of isolation and the consequent incipient segregative habit being given) how and why the tribal standards have grown more definite from generation to generation, and have interacted cumulatively with the distinctive environment in such manner as continually to widen the chasm between the desert-

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

143 bound tribe and their alien neighbors. Yet the general application of the law leads only to a more specific application; for, just as the career of the stirp is made up of a succession of vital maxima and minima, so the lifetime of the individual, even in the median stage, is made up of a series of vital climaxes separated by relatively inert intervals; and, as recognized by every naturalist and romancist, every philosopher and poet, in every stage of culture, it is during the periods of conative domination by the master passion that the career of the individual is shaped and that the stirp-sentiment (or susceptibility to kind) culminates in intensity. It follows that the progeny of successive generations represent not merely the optimum median stage of life in which vitality and virility and muliebrity are at flood, but the very climaxes of this stage in which manhood and womanhood attain their ideals, and in which the ideals react on the physical system with unequaled intensity; it follows in turn that each generation must (in so far as intellectual tension can control long series of metabolic interactions after the manner in which short series are controlled by direct volitional exercise) incarnate the ideals of the preceding generation; whence it follows still further that in general isolated race-types tend constantly and cumulatively to increase in definiteness—at least until the somatic factors are counterbalanced by demotic relationships arising with considerable increase in population. It is true that the extent to which the incarnation of ideals is effective or even possible has not been measured; it is also true that the naturalists of the higher culture-stages commonly neglect the process; yet the occasional recognition of its positive aspect, as in Goethe's "elective affinities" and in Jacob's getting of "ringstraked, speckled, and spotted" stock (Genesis XXX, 37–41), and the practically universal recognition—more especially among primitive peoples—of its negative aspect in adverse prenatal influences, clearly indicates its importance; the fact that the ancient Greeks at once idealized in unparalleled degree, and produced unexcelled perfection in, the human form being of no small significance. Even if the measure of the incarnation of ideals be reduced to the lowest minimum consistent with common knowledge, it remains true that the progeny of successive generations are not the offspring of average parents, but of pairs at the perfection and conjugal culmination of their virile and muliebrile excellencies; so that the generations must run in courses of cumulatively increasing racial (or human) perfection, under a general *law of conjugal conation*.

143 182 186 In extending the general law of conjugal conation to the Seri, it is found peculiarly applicable, in view of their distinctive marriage custom, the effect of which is to intensify conjugal sentiments, with the attendant magnification, and potential if not actual incarnation, of ideals.[1] Accordingly there would appear to be a harmony between

[1] The law of conjugal conation was indeed suggested by observations on the peculiar marriage customs and peculiarly developed race-sense of the Seri tribe, and it has already been applied in certain of its aspects as an explanation of the initial humanefactions of mankind (The Trend of Human Progress. American Anthropologist, new series, vol. I, 1899, pp. 625-638).

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THE HELIOTYPE PRINTING CO., BOSTON

YOUTHFUL SERI WARRIOR

[p. 162 A]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

Seri race-sense and Seri race-type no less delicate than that between the stressful action and the stress-shaped structures of the tribe, and while the inception of both type and feeling may be ascribed to the isolated environment, it seems manifest that both have interacted constructively and in cumulative fashion through a significant process exemplified more clearly by this tribe than by others thus far studied. At the same time, analysis of the harmony between type and sentiment indicates that the lowly Seri are actually, albeit unconsciously, carrying out a meaningful experiment in stirpiculture—an experiment whose methods and results are equally valuable to students. The Seri gymnastic and the Seri stirpiculture are in close accord, in that both are conditioned by initially dilatory yet ultimately intense action; the results are equally accordant in that the one conduces toward individual vigor and the other toward a vigorous and distinctive stirp; while the excellence of the methods (viewed from the somatic standpoint) is attested by the magnificence of the product. Now, comparison of the stirpicultured Seri with contemporary tribes shows that the desert-bound folk have attained unequaled somatic development, and suggests that the intuitive stirpicultural processes have been rendered peculiarly effective through the persistence of that tribal isolation in which the processes apparently took rise; so the race-sense of the Seri may be regarded as the product of long-continued stirpicultural processes, initially shaped by environment, yet developed to unusual degree by somatico-social habits, kept alive largely through continuous environmental interaction.

Summarily, the Seri are characterized by noble physique, by peculiarly swift and lightsome movements, by great endurance coupled with capacity for vigorous action, by animal-like symmetry and slowness of maturation, and by various minor attributes combining with the major features to form a distinctive race-type; and they are still more conspicuously characterized by an acute race-sense which holds them apart from all aliens. At first sight, several of their somatic attributes seem incomparably primitive, yet analysis of the attributes in the light of certain laws which they exemplify better than other peoples thus far studied indicates not so much a lack of development as an excess of growth along purely somatic lines, with a correlative defect of development along demotic lines; and when the lines of growth are traced to the sources and conditions, it becomes fairly clear that the aberrant development of the tribe is merely the reflection of a distinctive environment operating (evidently) throughout a long period. In brief, the somatic interest of the Seri seems to center in the remarkable adjustment of the tribe to a peculiar environment—an adjustment of such delicacy as to imply interaction throughout many generations.

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DEMOTIC CHARACTERS

000 The Seri, like all other peoples, are characterized by various collective attributes which vastly transcend in interest and importance the somatic attributes exhibited by the individuals. These superorganic attributes are essentially activital—i. e., they represent what the people *do* rather than what they merely *are;* and in both collective and activital aspects they serve to distinguish the human realm from the organic realm, and to afford a basis for the classification of mankind—i. e., they combine to form demotic characters.

128 The demotic characters of the Seri, like those of other peoples, may be classed as (1) esthetic, (2) industrial, (3) institutional, (4) linguistic, and (5) sophic; and in this order the essentially human attributes of the tribe (except the last named) may be described. It is a matter of deep regret that the data concerning the demotic characters of the tribe are too meager to afford more than a mere outline of their activities, and that their suggestive mythology must be passed over for the present.

Symbolism and Decoration

Face-painting

302 One of the most conspicuous customs of the Seri is that of painting the face in designs by means of mineral pigments. Of the 55 members of the tribe shown in the group forming plate XIII, 28 (in the original photograph; a somewhat less number in the reproduction) exhibit face-painting more or less clearly, and this proportion may be regarded as typical; i. e., about half of the tribe are painted.

On noting the individual distribution of face-painting, it is found to be practically confined to the females, though male infants are sometimes marked with the devices pertaining to their mothers, as adult warriors are said to be on special occasions; and so far as observed all the females, from aged matrons to babes in arms, are painted, though sometimes the designs are too nearly obliterated by wear to be traceable. About 35 of the individuals shown in the group (plate XIII) are females; of these, fully four-fifths showed designs or definite traces of the paint, while the remaining fifth bore traces too faint to be caught by the camera; but none of the men or larger boys were painted. In the smaller group shown in plate XIV all of the females display paint, as does the small boy in the center also, while the man (husband of the middle-aged matron) reveals no trace of the symbol. The two pictures typify the prevalence and the distribution by sex of the painting.

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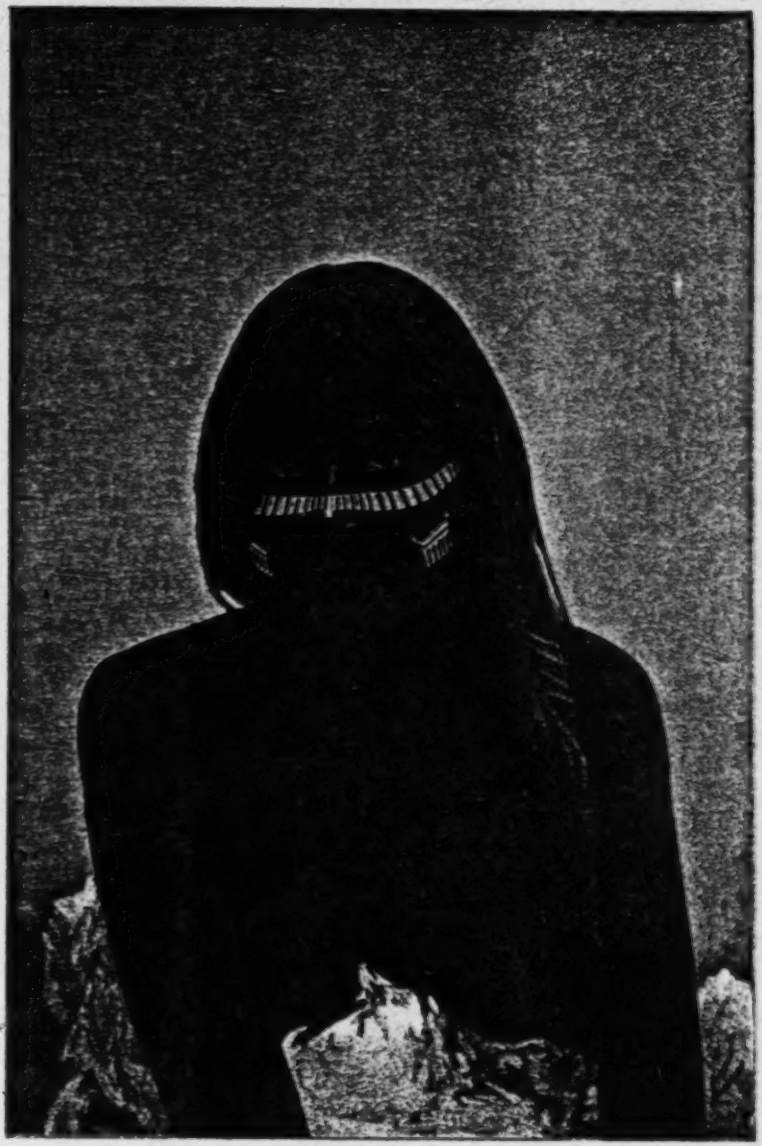

SERI BELLE

[p. 164 A]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

The painted designs vary among different individuals, but are fairly persistent for each. The prevailing design at Costa Rica in 1893 was that of the aged matron known as Juana Maria (plate XVIII), with variations in detail such as that exhibited by her unmarried daughter Candelaria (the Seri belle shown in plate XXIV); next in frequency were the designs, in white and red, exhibited by the matrons portrayed in plates XX and XXII. Other designs observed are indicated in plate XXVI. The variations in individual designs are apparently due either to varying care in the application of the paint or to the degree of obliteration by wear—e. g., the withered Juana Maria sometimes put on her design askew and was negligent of details, while the blooming Candelaria greatly elaborated the details of the pattern and carefully perfected the symmetry of the whole when preparing for her full-dress sitting before the camera (plate XXIV), so that her design was then gorgeous by contrast with the nearly obliterated blur of a half-hour before. The designs are renewed every few days, especially for ceremonious occasions, and hence are practically permanent.

When grouped in relation to their wearers, the designs are found to exhibit family connection. Thus, Juana Maria's design is repeated, with greater elaboration of detail and with a pair of supplementary marks, in that of her daughter Candelaria; the winged symbol of the Seri matron portrayed in plate XX is repeated with minor variations in that of her daughter, the Seri maiden pictured in plate XXV; while the symbols of the mother and infant daughter depicted in plate XV are essentially alike. It is noticeable, too, that in the nearly spontaneous arrangement of individuals in the group shown in plate XIII there is a tendency toward subgrouping by symbols; and it was constantly observed that the family groups gathered about particular jacales (such as that shown in plate XIV) displayed corresponding designs, though there were frequent visitors from neighboring jacales bearing other designs. Briefly, all the observed facts, as well as the supplementary information gained by inquiry, indicate that the designs are hereditary in the female line, but are susceptible of slight modification both in elaborateness of detail and in the addition of minor supplementary features.

The principal apparatus and materials used in the face-painting are illustrated in plate XXVII. The chief pigments are ocher, gypsum, and the rare mineral dumortierite; the ocher yields various shades of red, ranging from pink to brown; the gypsum affords the white used in most of the designs; while the dumortierite is the source of the slightly varying tints of blue. So far as was observed, the pigments are not blended by mixing, though there is some blending due to overlapping in application. The ocher is commonly extracted and transported as lumps of ocherous clay or ocherous gypsum (plate XXVII, figures 1 and 5), though it is sometimes reduced to powder and transported in bits of skin or rag, or in cylinders of cane (plate XXVII, figures 3 and 4); and it is

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

386 prepared by trituration with a pebble or rubbing with the fingers, usually in a shell cup. Sometimes the shell used for the purpose is the [412] valve of a *Cardium*, which serves indiscriminately as cup, spoon, skin-scraper, etc; but preference is apparently given to thick and strong shells, such as the wave-worn valve of *Chama* (?), shown in plate XXVII, figure 7, which are consecrated to the use and eventually buried [764] with the user, together with a supply of the paint (like that illustrated in the cane cylinder—figure 4—which was a mortuary sacrifice). The gypsum is usually carried in natural slabs or other fragments, perhaps rounded by wear (plate XXVII, figures 6 and 8); it is prepared by wetting and rubbing two pieces together, the larger being reduced to metate shape by the operation. The dumortierite was observed only in the form of a pencil made by pulverizing the substance and mixing with sufficient clay to give consistency. The several pigments are 302 applied wet by means of human-hair brushes kept for the purpose, the process occupying from half an hour to three or four hours for the more elaborate designs. So far as observed at Costa Rica in 1894, the paints were mixed in water only; but since painting outfits found on [386] Tiburon island in 1895 were smeared with grease, it is probable that either water or fats may serve for menstrua, at the convenience of the artists. Commonly the process of painting is measurably cooperative. The matron usually depicts her device on the faces of her daughters [593] up to the age of 12 or 15 years, when they learn to make the applications themselves; and frequently two or more women (usually those [476] with similar devices) work together in preparing and applying the pigments, each laying the paint on her own face and apparently guiding her hand partly by the sense of feeling and partly by suggestions from her coworkers; but Candelaria and some other of the younger women at Costa Rica frequently worked alone, aided by a mirror in the form of a shallow bowl of water set in the shadow while the brilliant desert glare fell full on the face.

317 The mines yielding the pigments were not located. The geologic conditions are such that the ochers are undoubtedly abundant; but it is probable that the gypsum is uncommon and confined to a remote locality or two, and that the dumortierite is rare and scanty here as elsewhere. The care with which the paints are preserved, prepared, and 386 applied, the fact that they are indispensable feminine appurtenances 435 even on the longest journeys, and their sacred rôle in the mortuary customs, all combine to indicate that they are among the most highly prized possessions of the people and by far the most precious of their minerals.

The sematic functions of the designs are esoteric, yet an inkling of 302 their meaning was obtained through Mashém, the interpreter at Costa 614 Rica in 1894; from his expressions it appears that the designs are sacred insignia of totemic character, serving to denote the clans of which the tribe is composed. But three clans were identified, and

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SERI MAIDEN

Cp. 166 A.)

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these only with some uncertainty, viz, the Turtle clan,[1] denoted by the symbols of Juana Maria (plate XVIII) and Candelaria (plate XXIV and the upper left figure in plate XXVI); the Pelican clan, denoted by the designs of two typical matrons (plates XX and XXII) and a typical maiden (plate XXV), and probably also by those of the medio-lateral figures in plate XXVI; and (still less certainly) the Rattlesnake clan, denoted by the symbol of the lower left figure in this plate. The special sematic values of the colors also are esoteric, and were not ascertained; even in the case of the simple pelican design, the differences in meaning between the solid red pattern of one group and the similar pattern of white in another group was successfully concealed. So, too, the significance of the various subordinate or supplementary devices—the distinct border-line shown in plate XX, the lower cheek devices in plate XXIV, the separate chin mark in plate XXV, the fetish-like symbols on the lower cheeks in the lower left figure of plate XXVI, etc—eluded inquiry; while some of the minor features of both form and color were sufficiently variable in the devices borne by different faces of the same family, and even in successive paintings of the same face, to suggest some individual freedom in carrying out the detail of the generally uniform designs.

The telic functions, or ultimate purposes, of the face-painting are also esoteric, though not beyond the reach of inference from the sematic functions, coupled with general facts of zoic and primitive human customs. Even at first sight the painted devices bring to mind the directive markings of lower animals defined by Professor Todd[2] and interpreted by Ernest Seton-Thompson;[3] and in view of the implacably militant habit of the Seri it would seem evident that the artificial devices are, at least in their primary aspect, analogous to the natural markings. On analyzing the directive markings of animals, it is convenient to divide them into two classes, distinguished by special function, usual placement, and general relation to animal economy: the first class serve primarily to guide flight in such manner as to permit ready reassembling of the flock; they are usually posterior, as in rabbit, white-tail deer, antelope, and various birds; and they primarily signify inimical relations to alien organisms, with functional exercise under stress of fear. The second class of markings serve primarily for mutual identification of approaching individuals; as comports with this function, they are usually facial, or at least anterior; and their functional exercise is normally connected with peaceful association—though the strongly emphasized facial symbols of the males doubtless

[1] This tutelary may be the shark; it was described as a water monster instrumental in the creation and good for food, but the identification is not beyond doubt. Cf. p. 178.

[2] American Naturalist, vol. XXII, 1888, pp. 201–207.

[3] Wild Animals I Have Known, 1898, p. 119; Century Magazine, vol. LIX, 1900, pp. 656–668. In his lectures, Mr Seton-Thompson extends his interpretations to anterior as well as to posterior markings, especially the conspicuous and persistent facial features of deer, antelope, mongrel (or ancestral) dog, etc. Such facial markings seem especially characteristic of gregarious animals; and they are peculiarly significant as social symbols rather than as mere beacons for guidance in flight.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

302 blazon forth the alternative meanings of preference for peace or readiness for strife, like the calumet tomahawk of the Sioux warrior (as interpreted by Cushing). So the directive markings of the first class are substantially beacons of danger and fear, while those of the second are just as essentially standards of safety and confidence; and they may properly be designated as *beacon-markings* and *standard-markings*, respectively.[1] On seriating the two classes in terms of development, it is at once found that the beacon-markings are in large measure connected with excursive movement and are centrifugal in effect, while the standard-markings are connected mainly with incursive movement and are centripetal in effect; at the same time the latter express not only the higher intelligence, but also the greater degree of that conjustment which forms the basis of collective organization; so that the latter unquestionably represents the higher developmental stage. Now, the primary functions of these directive markings of the higher grade—signalization (or attentionization) and identification—correspond precisely with paramount needs of the alien-hating and clan-loving Seri; so that careful analysis would seem fully to justify the casual impression of functional similitude between the Seri face-painting and the directive markings of social animals.

While the first survey establishes a certain analogy between the primitive face-painting and the standard-markings of animals, an important disparity is noted when the survey is extended to individuals; for among beasts and birds the standards are usually the more conspicuously displayed by the males, while the paint devices of the Seri are confined to the females. A suggestion pointing toward explanation of this disparity is readily found in the seriation of developmental stages marked by (1) the fear-born beacon-markings, (2) the confidence-speaking standard-markings, and (3) the painted symbols; for the artificial devices coincide with an immeasurably advanced mental development, with concomitant advance in safety and peace on the one hand and in artificializing weapons on the other hand. This suggestion alone fails to explain the disparity fully, yet it raises another, growing out of the great social advancement connected with the mental development—i. e., the effect of the distinctively domestic organization of the human genus as represented by the Seri people. On considering this organization, it is found strictly maternal: the tribe is made up of clans defined by consanguinity reckoned only in the female line; each clan is headed by an elderwoman, and comprises a hierarchy of daughters, granddaughters, and (sometimes) great-granddaughters, collectively incarnating that purity of uncontaminated blood which is the pride of the tribe; and this female element is supplemented by a masculine element in the persons of brothers, who may be war-chiefs or shamans, and may hence dominate the movements of groups, but whose

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[1] The fundamental distinction is none the less valid by reason of the occasional combination of functions, as in the antelope "chry-anthemum" interpreted by Baker-Thompson.

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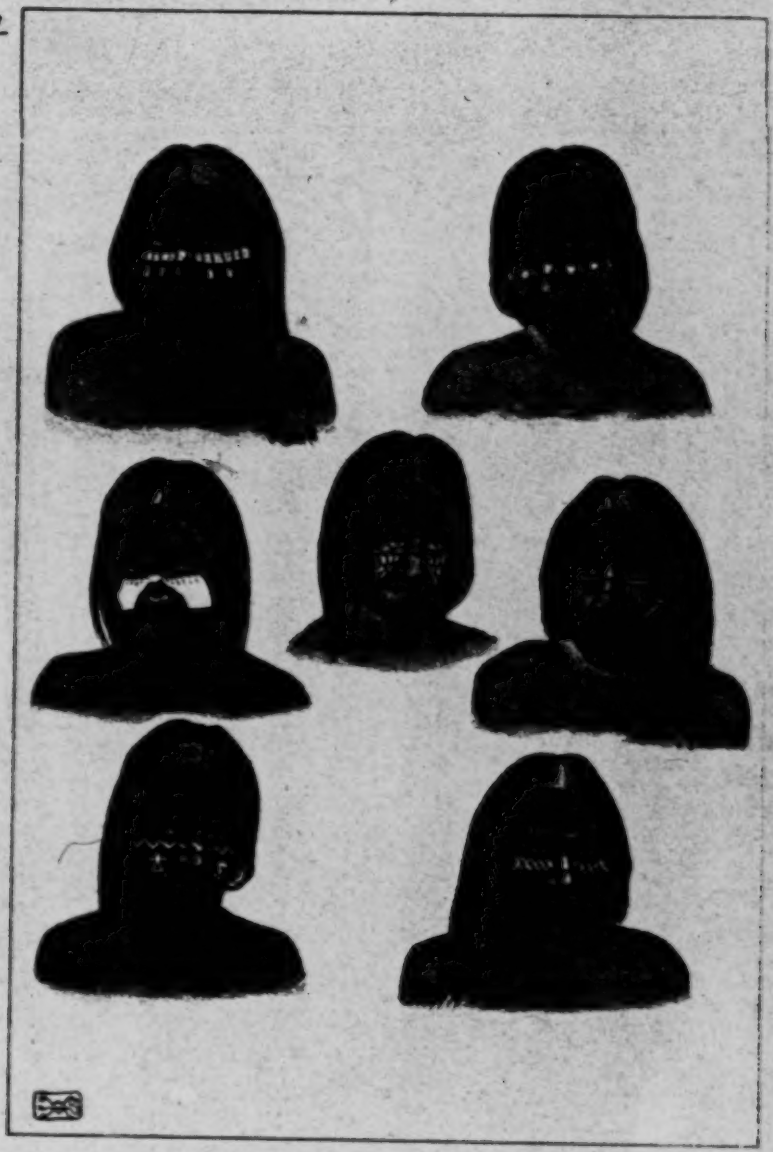

CHARACTERISTIC FACE PAINTING

(p. 168 A)

1: McGee W-S (1894-1895)1898 NU31 Ser1 NU31

blood counts as nothing in the establishment and maintenance of the clan organization. Thus the females alone are the blood-carriers of the clans; they alone require ready and certain identification in order that their institutional theory and practice may be maintained; and hence they alone need to become bearers of the sacred blood-standards. The warriors belong to the tribe, and are distinguished by luxuriantly-flowing hair, by the up-stepping movement from which the people derive their appellation, by their unique archery attitude, and by their dark skin-color; the boys count for little until they enter the warrior class; but on the females devolves the duty of defining and maintaining the several streams of blood on which the rigidly guarded tribal integrity depends.[1] Undoubtedly the blood-markings play an important rôle in courtship and marriage, but too little is known of the esoteric life of the tribe to permit this rôle to be traced.

In brief, the Seri face-painting would seem to be essentially *zoösematic*, or symbolic of zoic tutelaries, and to signify subspecific (or subvarietal) characteristics maintained by the clan organization and kept prominent by the militant habit of the tribe; at the same time it is noteworthy that the purely symbolic motive is accompanied by a nascent decorative tendency, displayed by the individual refinement of form and color in the symbol proper to each of the groups.

DECORATION IN GENERAL.

Aside from the face-painting there is a conspicuous dearth of decoration or tangible symbolism among the Seri.

The symbolic or decorative modification of the physique would seem to be limited to two classes of mutilations, of which one was observed at Costa Rica in 1894 while the other is apparently obsolete. The observed corporeal modification is the absence of medial superior incisors of the females, in consequence of forcible removal at a period not definitely ascertained. The interpreter at Costa Rica was uncommunicative on the subject; Don Pascual opined that the mutilation formed part of an elaborate puberty ceremonial, and this opinion would seem to be corroborated by the condition of the cranium of an immature female examined by Dr Hrdlička; but since the half-dozen adult maidens at the rancho in 1894 were free from the mutilation while all the wives bore its gruesome trace, it would seem more probable that the custom is connected with marriage. Whatever the period of the infliction, Mashém's guarded expressions seemed to indicate that it was a mark of physical inferiority; and this suggestion, interpreted in the light of the Seri use of teeth as weapons of offense and defense, would seem to indicate that the mutilation is at once the badge of corporeal inferiority and a means of maintaining the physical superiority of the males—of course in that theoretically fiducial but actually forceful way characteristic of primitive culture.

[1] The essentially sacerdotal nature of Seri law and custom is set forth postea, p. 204.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

301 [304] The second mutilation was the only corporeal modification noted by early missionaries and explorers—it was the perforation of the nasal septum for the insertion of a skewer, perhaps of polished stone (though doubtless more commonly of bone), to which swinging objects were attached. One of the most useful records is that of the Jesuit, Padre [114] Joseph Och, who described the nasal attachment as a small, colored stone suspended by cords from the perforated septum, and guarded with such jealous veneration that "one must give them at least a horse or a cow for one" (ante, p. 78); while according to Hardy's record, the nasal fetish is "a small, round, white bone, 5 inches in length, tapering off at both ends, and rigged something like a cross-jack yard."[1]

[237] [291]

FIG. 7—Snake-skin belt.

The custom is apparently obsolete, and nothing is known directly of details or motives.

301 304 Excepting these mutilations the corporeal decoration of the Seri is apparently limited to the face-painting: among the 60 individuals at Costa Rica in 1894 there was no trace of tattooing or scarification of face, limbs, or body; there were no labrets or earrings, and neither lips nor ears were pierced, nor were nasal septa observed to be perforated in accordance with the reputed ancient custom; the teeth were neither filed nor drilled; no indications of amputation or other maiming (save the removal of the incisors) were observed—indeed, the instinct for physical markings of symbolic or decorative character, which seems to be normal to primitive men, was apparently satisfied by the prevalent and persistent face-painting among the females.

291 The extra-corporeal decorative devices are of a meagerness and por-

[1] Travels, p. 286.

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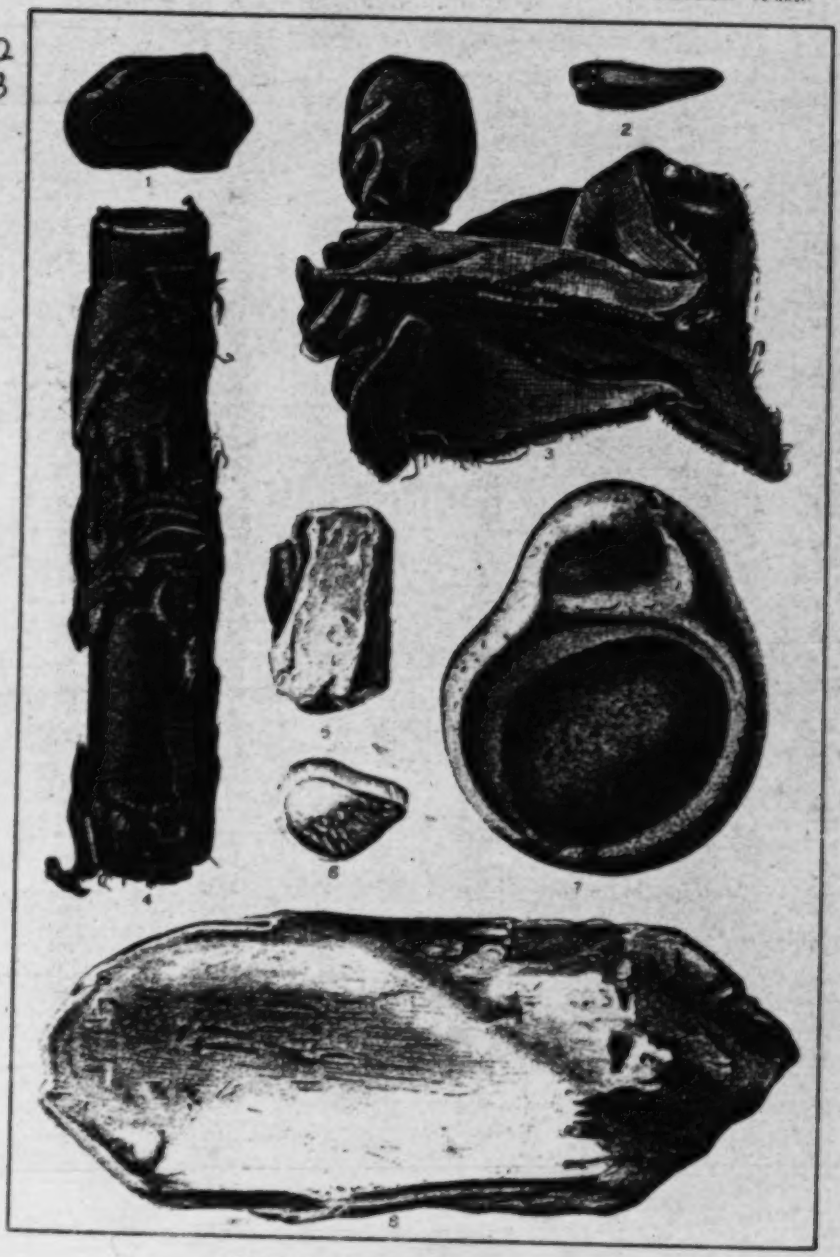

SERI FACE PAINTING PARAPHERNALIA

(p. 170 A)

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

291 erty even transcending the poor apparel, flimsy habitations, and generally ill-developed artifacts of the lowly tribe.

[237] The most prominent personal possession is the pelican-skin robe; it is usually made of six skins, slightly dressed and in full plumage, sewed together with sinew in a conventional pattern of such sort as to give the greatest possible expanse consistent with the irregular outlines of the individual skins, and at the same time to display a conventional color pattern on the feathered side, the colors ranging from the dorsal slate to the ventral white of the fowl (as indicated in plate XXIII); sometimes there are only four skins and rarely there are eight, but the conventional arrangement is maintained. Before the beginning of a

[301] [324]

FIG. 5.—Dried deer necklace.

[177] fairly regular barter at Rancho de Costa Rica, and hence before the introduction of manta and other stuffs, the pelican-skin robes were supplemented by kilts made of mesquite root or other fibers, spun and twisted

[286] in the fingers and woven probably on some primitive device no longer in use; but so far as is known these native fabrics were devoid of decorative patterns in color or weave. Less habitually a short wammus or shirt, with long sleeves, made of a material similar to that of the kilt, was worn; but it, too, was without ornamentation, so far as can be ascertained. The remaining article of utilitarian apparel is the belt, usually consisting of a strip of skin (of deer, rabbit, peccary, etc), slightly dressed with the hair on; frequently this is replaced by a cord or braided band of human hair, while the favorite belt of some of the

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

young warriors is a snake skin (such as that illustrated in figure 7); but so far as was seen the belts are not extended into tassels, decorative appendages, or even flowing ends.

The presumptively decorative costumery observed is limited to necklaces, usually of strung seeds, shells, and beads of wood or bone (figures 8, 9, 10, 11, 12, and 13), though animal appendages, such as hoofs, teeth, etc, are sometimes worn. The most highly prized necklace found at Costa Rica was a human-hair cord with nine crotalus rattles attached (figure 14), worn by a young warrior of the Rattlesnake (?) clan. Not the slightest indication of headdresses was seen (though deer and lion masks are said by Hardy to have been worn on occasions); there were no bracelets, leg-bands, or rings of any description, and the cheap jewelry given to many of the women and youths at Costa Rica was either strung about the neck or concealed; while it is significant that even the showiest jewelry was less appreciated than bits of manta or lumps of sugar. When it is remembered that the Seri have been in occasional contact with Caucasians for over three and a half centuries, the fact that not a single glass bead was found among them becomes significant; and the significance of the simple fact is increased by the virtual absence of that persistent desire and protean use for beads—or beadsense—so prominent among most primitive tribes.

FIG. 8—Seed necklace.

Fig 10—Nut pendants.

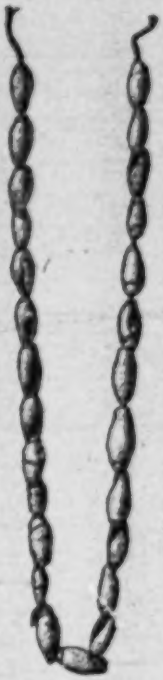

FIG. 11—Shell beads.

FIG. 12—Wooden beads.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

Naturally the conditions at Costa Rica were unfavorable to the study of native ideas concerning apparel. The women and some of the children were arrayed chiefly in cast-off habiliments of the rancheras or in nondescript rags, while the men either aped Mexican fashions, like Maahém, or shamefacedly sweltered under the unaccustomed burden of tatterdemalion gear; yet there was a meaningful absence of that desire for finery so prominent among primitive peoples—a fact quite as eloquent in itself as the absence of bracelets and bangles, tassels and trappings. It is probable that the shamans and mystery-hedged crones in the depths of Seriland enhance their influence by the aid of symbolic paraphernalia (indeed, some inkling of such customs is found in the meager records of earlier visitors);[1] yet the conspicuous feature of Seri costumery is the dearth of decorative devices.

FIG. 13.—Necklace of wooden beads.

The habitations of the tribe are the simplest of jacales—mere bowers, affording partial protection from sun and wind, but not designed to shed rain or bar cold. Half a dozen of these were examined at Costa Rica in 1894 and probably a hundred more, in various stages of habitability, in Seriland proper in 1895, yet not the slightest trace of decoration was observed—the structures are plainly and barrenly utilitarian in every feature. The same may be said of the balsas in which the Seri navigate their stormy waters; for the peculiarly graceful curves of the craft evidently stand for nothing more than the mechanical solution of a complex problem in balanced forces, wrought out through the experience of generations, while the simple reed bundles are absolutely devoid of paint, of superfluous cord, of fetishistic appendages or markings, of tritons, nereids, or other votive symbols at bow or stern, and of industrially superfluous features or attachments in general—indeed, the only appendages discovered were one or two simple wooden marlinspikes (shown in figure 26), thrust among the reeds to be at hand in case of need for repairs.

Among the utensils employed in the primitive household of the Seri the most conspicuous and at the same time the most essential is the olla, or water-jar. Its technical features are described elsewhere; but it may here be noted that the olla is the central artifact about which the very

[1] Hardy noted the use of "a small leathern bag, painted and otherwise ornamented", as a medicine rattle (Travels, p. 362), and also described a wind-symbol and an effigy used for thaumaturgic purposes (ibid., pp. 294, 295).

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415 life of the tribe rotates: since the clans never reside and rarely camp nearer than 3 to 15 miles from the aguaje, a large part of the water consumed must be transported great distances in these vessels; since the region is one of extreme aridity, the lives of small parties often depend on the integrity of the olla and on the care with which the fragile vessel is protected from shock or overturning; and hence the utensil must occupy a large if not a dominant place in everyday thought—indeed, the fact that it does so is attested by constant [764] custom and also by its employment as the most conspicuous among

[301] [237]

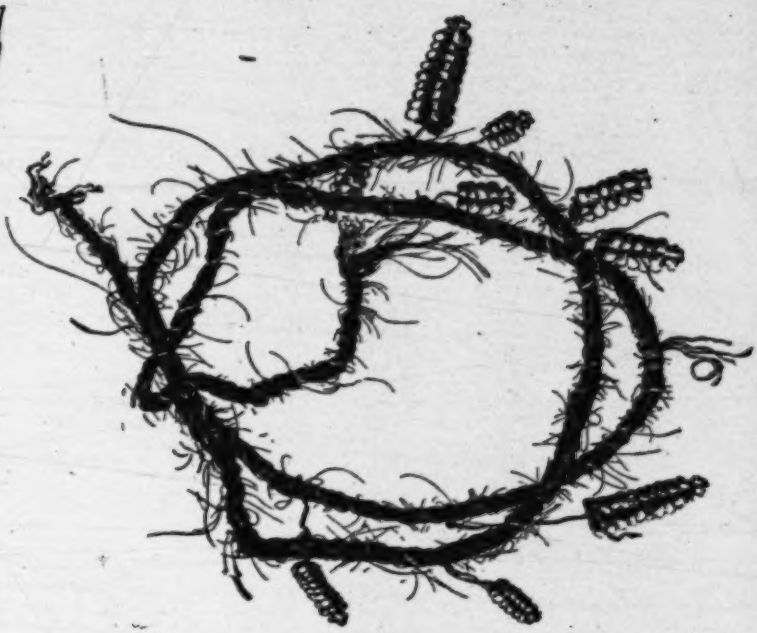

FIG. 14—Rattlesnake necklace.

the mortuary sacrifices. Thus, the relation of the Seri olla to its makers and users is parallel with that of the ever-present earthen pot to the Pueblo people, or that of the cooking basket to the acorn-eaters of California, save that its relative importance is enhanced by the fewness of activital lines and motives in Seri life. Moreover, this most characteristic utensil is established and hallowed in Seri 172 thought by immemorial associations: its sherds are sown over the 415 hundred thousand square miles of ancient "despoblado" from Tiburon to Caborca, Magdalena, Rio Opodepe, and Cerro Prieto, and are scattered through the 90 feet of shells forming Punta Antigualla (perhaps the oldest shell mound of America); and all the sherds from the range

1: McGee E-5 (1894-1895)1895 NU31 Seri NU31

and the shell-strata are so like and so different from any other fictile ware as to be distinguished at a glance. Hence it would seem manifest that the Seri olla must constitute a normal nucleus for the Seri esthetic; yet even here the field is practically barren, as is shown by the study of a score of usable and mortuary specimens and of thousands of sherds. The most ornate specimen seen is that depicted in plate XXXII. Its form, like that of the balsa, is a mechanical equation of forces and materials; its body-color is that of the clay, blotched and blackened irregularly by the smoke of the firing; and its decoration is limited to 17 faint lines or bands radiating downward from the ill-shaped neck. The radial bands were evidently drawn by a finger dipped in clayey water after the vessel was otherwise finished for the firing; they are irregular in placement, width, length, and direction; they generally run in pairs, two straight lines alternating with two zigzag lines, though the circuit is completed by two zigzags drawn wide apart and separated by a single straight line. The meaning of the device (if meaning there be) was not directly ascertained; but it is suggestive that its maker and owner was the mother of the youthful warrior from whom the rattlesnake necklace was obtained (her face-symbol is that shown in the lower left figure of plate XXVI), and that the vessel was surrendered more reluctantly than any other article obtained from the tribe.

Another utensil of some importance to the tribe is a basket of the type illustrated in figure 24. It is manufactured with much skill and is used for various domestic purposes, being practically water-tight and unbreakable, and materially lighter than even the unparalleledly light fictile ware of the Seri. In form and size and weave the half dozen examples seen correspond with widespread southwestern types; yet it is noteworthy that while otherwise similar baskets are habitually decorated by other basket-making tribes, the Seri specimens were absolutely devoid of decorative devices.

Practically the only remaining artifacts available for decoration are those connected with archery; and it suffices to say that while the bows are skilfully made and the arrows constructed with exceeding pains, not a single specimen seen showed the slightest trace of symbolism or of nonutilitarian motive.

Summarily, the Seri are characterized by extreme esthetic poverty. This has been noted by the early missionaries and by the few other travelers who have approached their haunts, as well as by the vaqueros on the Encinas and Serna and other ranchos bordering their range, who know them as "los pobrecitos". All observers have been struck with their destitution and squalor; yet when the impressions are particularized they are seen to denote absence of the poor luxuries, rather than the bare necessities, of primitive life. The people are pathetically poor in the industrial sense; their equipment in artifacts—implements, weapons, utensils, habitations, apparel—is meager almost, if not quite, beyond parallel in America; yet their esthetic equipment, practically

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limited as it is to a single line of symbolic portrayal, is still more abjectly meagre.

Any comparison of the Seri esthetic with that of other Amerind tribes serves only to emphasize its paucity: the tribes of the plains, with their eagle-feather headdresses, elaborately arranged scalp-locks, widely varied face-painting, and ritualistic camp circles; the Pueblo peoples, with their ornate masks, elaborate altars, figured stuffs, and painted pottery; the denizens of the eastern woods, with their feather-decked peace-pipes, divinatory games, fringe-bordered garments, and prayer-inscribed arrows; the coastwise peoples of the upper Pacific, with their labrets and tattoo-marks, totem-poles and carved house-fronts, painted canoes and prodigal potlatches; the neighboring desert tribes, with their festal footraces, decorated pottery and basketry, pendent scarfs and garters, and well-wrought caskets for family fetishes; even the timid acorn-eaters of California, with their sacramental baskets, artistically befringed kilts, bead-strings of far-traveled nacre, and patiently wrought fabrics of rare feathers—all of these seem rich in esthetic motives when contrasted with "los pobrecitos" of arid Seriland. And the contrast is only intensified when the economic motives of the various tribes are compared: the industrial motives of the Seri are fairly numerous and diverse; they are skilful huntsmen, successful fishermen, capable navigators, and competent warriors (as attested by the protection of their principality for centuries), so that despite the absence of agriculture and the avoidance of commerce, their industrial range is not very far below the aboriginal average; and while they are deficient in thrift, this shortcoming is balanced by a peculiarly developed vital economy whereby they are delicately adjusted to their environment, as has been already shown. On the whole, it would appear that the Seri are not only lower in esthetic development than the contemporary tribes thus far studied, but also that they stand at the bottom of the scale in the ratio of esthetic to industrial motives.

THE SIGNIFICANCE OF DECORATION

Largely through recent researches among the American aborigines, it has been shown that decorative and many if not all other esthetic concepts normally arise in symbolism, gradually expand in conventionism, and eventually mature in a realism which is itself the source of over-extending esthetic motives; and the observations on the lowly Seri afford opportunity for somewhat extending the generalizations based on higher tribes.

When peoples of unequal cultural development are compared, it is commonly found that the higher are the more independent in action and thought: thus, advanced peoples make conquest of nature for their own behoof, while primitive peoples are largely creatures of environment; Caucasian citizens are self-conscious lawmakers, while Amerind tribesmen are semiconsciously dominated by mysteries fearsomely

1: McGee E-3 (1894-1895)1898 NU31 Seri NU31

interpreted by their shamans; and, in general, enlightened men think and speak freely, come and go as they like, and discard the badges of conventionism, while savages are constrained by customs carrying the power of law, controlled by precedent, and clothed in hierarchic regalia. So, too, when a particular series of tribes are compared, it is found that those of higher culture (or wider knowledge) are the more independent, the more given to essays in social and industrial and other lines of activity, and hence the more varied in esthetic and economic motives: thus, the several Iroquoian tribes integrated the knowledge proper to each, and thus made themselves an intellectual and physical power able to eliminate or assimilate the isolated tribes on their borders; the sages of the Siouan stock induced the warriors of their leading tribes to combine in a circle of seven council fires, which grew into the great Dakota confederacy and soon gained strength to dominate the entire northern plains; but while these and other federations were pushing forward on the way leading to feudalism and thence to national organization, the self-centered California tribes consecrated their tongues to their own kindred, thereby stifling culture at its source and virtually leashing themselves unto the acorn-bearing oaks of their respective glades. Still more striking are the differences in independence revealed by a comparison of human and subhuman organisms; for the humans are immeasurably freer and more spontaneous in thought and action than even the highest beasts: thus, the Seri blood-leurer applies, renews, and elaborates her face-mark at will, while the antelope and the raccoon unconsciously develop their standard-marks through the tedious operation of vital processes regulated under the cruel law of survival; men make their beds according to the dictates of judgment, while the half-artificialized dog lies down in accordance with a hereditary custom which has been needless for a hundred generations; and the very essence of human activity is volitional choice (or artificial selection), while the keynote of merely organic agency is the nonvolitional chance of natural selection. No less striking are the differences found on comparing other realms of nature, in which the higher are invariably characterized by the greater independence; the animal realm is distinguished from the vegetal realm mainly by the possession of volitional motility; while the vegetal is distinguished from the mineral realm chiefly by those better selective powers exemplified in vital growth. The several comparisons seem to define that course of volitional development arising in the chemical and mechanical affinities of the mineral realm, burgeoning in simple vitality, multiplying in the motility of animal life, greatly expanding in the collective activity of demotic organization, and culminating in the conquest of nature through the mind-guided powers of enlightened mankind. Expressed briefly, this course of development may be characterized as the progressive passage from *automacy* to *autonomy*.

The volitional development thus sketched may be divided, somewhat

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000 arbitrarily yet none the less safely, into its esthetic and economic factors; and, for convenience, the latter may be considered to comprise the industrial, institutional, linguistic, and sophic constituents—i. e., the esthetic activities may be juxtaposed against the several other activities of domestic life. When this division is made, it at once becomes manifest that the esthetic activities are the freest and most spontaneous of the series, and hence lead the way to that autonomy which marks the highest development. This significant relation has been glimpsed by various artists and poets, scholars and naturalists; it was at least partly caught by Goethe when he taught that knowledge begins in wonder; it was loosely seized by Schiller, and later by Spencer, in the surplus-energy theory of play; it was grasped by Groos in his prophecy theory of play,[1] and still more firmly (although less conspicuously) by Seton-Thompson in his analysis of animal conduct and motives. The relation has for some years been recognized as one of the principles underlying the American ethnologic researches; yet it is not so well understood as to obviate the need for further consideration. Accordingly it may be pointed out that while the human activities and the agencies of lower nature rest alike on a mechanical foundation, the mechanical element diminishes in relative magnitude in passing from the lower to the higher realms of nature: in the mineral realm the agencies may be deemed mechanical in character and individual in effect; in the vegetal realm vitality is superadded, and the effects are carried forward through heredity; in the animal realm motility is added in turn, and instinct arises to shape the individual and hereditary and motile attributes; the social realm may be considered to be marked by the accession of conjustment, with its multifarious and beneficent effects on individuals, generations, movements, and groups; while the rational realm may be defined as that arising with the accession of reason as a guide to action, and with the development of nature-conquest as its most characteristic effect—though it is to be noted that the several transitions are progressive rather than saltatory. Thus each realm is characterized by the attributes of each and all of those lower in the scale, plus its own distinctive attributes. It may also be pointed out that each new attribute defining a higher realm is freer and more spontaneous than those of lower realms; for vitality is freer than mere affinity, self-movement than mere growth, and cooperation than mere movement, while reason-led action is freest of all. Accordingly each realm (as already implied) is characterized by a larger autonomy than any of those lower in the scale; i. e., by all the factors of autonomy in the lower realms, plus its own distinctive factor.

It may be pointed out further that, in the higher realms at least, the action normal to each realm tends to generate that characteristic of the next higher realm: the self-movement of the animal realm is, under favorable conditions, constrained through vital economy to fall

[1] Cf. American Anthropologist, new series, vol. 1, 1899, p. 374.

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into the conjustment of the social realm; and the organization of the social realm, involving as it does a hierarchic arrangement of organisms according to mentality,[1] habituates the higher individuals of the organizations to that control of lower individuals which buds in agriculture, blossoms in civil rule, and fruits in nature-conquest. Thus the factors of each realm are prophetic of the distinctive factor of the next higher—and the prophecy is not merely passive, but is, rather, an actual step in causal sequence.

It may be pointed out still further that, in the higher realms at least, spontaneous action necessarily precedes maturely developed function: in the vegetal realm the tree shoots upward before its form is shaped and its tissue textured by wind and sun and environing organisms; in the animal realm youthful play presages the prosaic performances normal to adult life; in the social realm men behave before framing laws of behavior; and in the rational realm fortuitous discovery paves the road for sure-footed invention. Thus natural initiative arises in spontaneous action, while mechanical action is mainly consequential.

It may be pointed out finally that the field of spontaneous action is relatively increased with the endless multiplications of action accompanying the passage from the lower realms to the higher—indeed the relations may be likened unto those of exogenous growth, which is largely withdrawn from the irresponsive and stable interior structures and gathered into the responsive and spontaneously active peripheral structures; so that spontaneous activity attending natural development is relatively more important in the higher stages than in the lower.[2]

Now, on combining the several indications it is found clear (1) that the more spontaneous developmental factor in all normal growth corresponds with the esthetic factor in demotic activity; (2) that this is the initiatory factor and the chief determinant of the rate and course of development; (3) that it is of relatively enlarged prominence in the higher stages; and hence (4) that the esthetic activities afford a means of measuring developmental status or the relative positions in terms of development of races and tribes.

On applying these principles to the Seri tribe, in the light of their meager industrial motives and still poorer esthetic motives, it would appear that they stand well at the bottom of the scale in demotic development. Their somatic characteristics are suggestively primitive, as already shown; and the testimony of these characteristics is fully corroborated by that of their esthetic status as interpreted in the light of the laws of growth.

[1] The spontaneous arrangement of organisms in accordance with mental grade is well illustrated by that solidarity of desert life which surrounds the cultivation of plants and the investigation of animals (The Beginning of Agriculture, in The American Anthropologist, vol. VIII, October, 1895, pp. 350-375; The Beginning of Zoculture, ibid., vol. X, July 1897, pp. 213-226.)

[2] The laws of growth recognized herein have been somewhat more fully outlined elsewhere, notably in The Earth the Home of Man (Anthropological Society of Washington, Special Papers 2, 1894, pp. 2-6), and in Piratical Acculturation (American Anthropologist, vol. XI, 1898, pp. 243-249).

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Industries and Industrial Products

105 The pacific vocations of the Seri are few. They are totally without agriculture, and even devoid of agricultural sense, though they consume certain fruits and seeds in season; they are without domestic animals, though they live in cotoleration with half-wild dogs, and perhaps with pelicans; and they are without commerce, save that primitive and inimical interchange commonly classed as pillage and robbery. Accordingly, their pacific industries are limited to those connected with (1) sustentation, chiefly by means of fishing and the chase; (2) navigation and carrying, (3) house-building, (4) appareling, and (5) manufacturing their simple implements and utensils; and these constructive industries are balanced and conditioned by the destructive avocation of (6) nearly continuous warfare.

Food and Food-Getting

312 The primary resource of Serriland is raised to the first place in realized importance only by its rarity, viz, potable water—a commodity so abundant in most regions as to divert conscious attention from its paramount role in physiologic function as well as in industrial economy. The overwhelming importance of this food-source is worthy of closer attention than it usually receives. Classed by function, human foods are (1) nutrients, including animal and vegetal substances 000 which are largely assimilated and absorbed into the system; (2) assimilants, including condiments, etc, which promote alimentation and apparently aid metabolism; (3) paratriptics, or waste preventers, including alcohol and other stimulants, which in some little-understood way retard the waste of tissue and consequent dissipation of vital energy; and (4) diluents, which modify the consistency of solid foods and thereby facilitate assimilation, besides maintaining the water of the system. Classed by chemic constitution, the foods may be divided into (1) proteids, or nitrogenous substances, including the more complex animal and vegetal compounds; (2) fats, or nonnitrogenous substances in which the ratio of hydrogen and oxygen is unlike that of water, and which are second in complexity among animal and vegetal compounds; (3) carbohydrates, or nonnitrogenous compounds of carbon with hydrogen and oxygen in the proportions required to form water, which are among the simpler vegetal and animal compounds; and (4) minerals, chiefly water, with relatively minute quantities of various salts. Both classifications are somewhat indefinite, largely because most articles of food combine two or more of the classes; yet they are useful in that they indicate the high place of the simple mineral water among food substances. Quantitatively this constituent stands far in the lead among foods; the human adult consumes a daily mean of about 4½ pounds of simple liquids and 2½ pounds of nominally solid, but actually more than half watery, food; so that the

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average man daily ingests nearly 6 pounds of water and but little over 1 pound of actually solid nutrients. Thus the ratio of the consumption of liquid food to that of solids is (naturally, in view of that readier elimination of the liquid constituent so characteristic especially of arid regions) somewhat larger than the ratio of water to solids in the human system, the ratios being nearly 6:1 and 4:1, respectively.[1] This analysis serves measurably to explain the peculiarly developed water-sense of all desert peoples, a sense finding expression in the first tenets of faith among the Pueblos, in the fundamental law of the Papago, and in the strongest instinct of the Seri; for among folk habituated to thirst through terrible (albeit occasional) experience, water is the central nucleus of thought about which all other ideas revolve in appropriate orbits—it is an ultimate standard of things incomparably more stable and exalted than the gold of civilized commerce, the constantly remembered basis of life itself.

The potable water of Seriland is scanty in the extreme. The aggregate daily quantity available during ten months of the average year (excluding the eight wettest weeks of the two moist seasons) can hardly exceed 0.1 or 0.2 of a second-foot, or 60,000 to 125,000 gallons per day, of living water, i. e., less than the mean supply for each thousand residents of a modern city, or about that consumed in a single hotel or apartment house. Probably two-thirds of this meager supply is confined to a single rivulet (Arroyo Carrizal) in the interior of Tiburon, far from the food-yielding coasts, while the remainder is distributed over the 1,500 square miles of Seriland in a few widely separated aguajes, of which only two or three can be considered permanent; and this normal supply is supplemented by the brackish seepage in storm-cut runnels, as at Barranca Salina, or in shallow wells, as at Pozo Escalante and Pozo Hardy, which is fairly fresh and abundant for a few weeks after each moist season, but bitterly briny if not entirely gone before the beginning of the next. The scanty aggregate serves not only for the human but for the bestial residents of the Seri principality; and its distribution is such that the mean distance to the nearest aguaje throughout the entire region is 8 or 10 miles, while the extreme distances are thrice greater.

The paucity of potable water and the remoteness of its sources naturally affect the habits of the folk; and the effect is intensified by a curious custom, not fully understood, though doubtless connected with militant instincts fixed (like the habits of primitive men generally) by abounding faith and persistent ritualistic practice—i. e., the avoidance of living waters in selecting sites for habitations or even temporary camps. Thus the principal rancherias on Tiburon island, about Rada Ballena, are some 4 miles from Tinaja Anita, the nearest aguaje; the

[1] The place of water among food substances is more fully discussed in The Potable Waters of Eastern United States, 16th Ann. Rep. of the U. S. Geol. Survey, 1894, pp. 1-6; the physiologic consequences of deprivation of water are outlined in The Thirst of the Desert, Atlantic Monthly, April 1898, pp. 483-488.

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312 361 extensive rancherias near Punta Narragansett measure 10 miles by trail from the same aguaje; the half dozen jacales about Campo Navidad are separated by some 15 miles of stony and hilly pathway from the alternative watering places of Tinaja Anita and Arroyo Carrizal;[1] and the huts crowning the great shell-heap of Punta Antigualla—one of the most striking records of immemorial occupancy in America—are nearly or quite 10 miles by trail from Pozo Escalante, and still further from Aguaje Parilla, the nearest source of potable water. These are but typical instances; and while there are ruined huts (evidently regarded as temporales) near the dead waters of Barranca Salina and Pozo Escalante, they tell the tribal policy of locating habitations in places surprisingly remote from running water. Like other desert 147 folk, the Seri have learned to economize in water-carrying by swigging 312 incredible quantities on their occasional visits to the aguajes; it is prob- able, too, that their systems are inured, somewhat as are those of [271] the desert animals that survive deprivation of water for days or months, to prolonged abstinence from liquid food; yet it seems safe to assume that at least half of the water required in their vital economy (say 2 or 3 pounds apiece daily, on an average) is consumed after transportation over distances ordinarily ranging from 4 to 12 miles. Under these conditions the Seri have naturally produced a highly developed water industry; they are essentially and primarily water-carriers, and all their other industries are subordinated to this function.

415 Concordantly with their customs, the Seri have a highly differentiated aquarian device in the form of a distinctive type of olla, which is remarkable for the thinness and fragility of the ware, i. e., for largeness of capacity in proportion to weight. Representative specimens are illustrated in plates XXXII and XXXIII (the former painted, as already described). The dimensions of the two vessels are as follows: painted olla, height 34 cm. (13½ inches), mean diameter 32.5 cm. (12¾ inches); plain olla, height 32 cm. (12½ inches), mean diameter 32 cm. In both specimens the walls are slightly thickened at the brim, those of the painted vessel measuring about 4 mm. and those of the plain vessel about 4.5 to 5 mm. in thickness. Below the brim the walls are thinned to about 3 mm., as is shown in the fractured neck of the painted specimen. The capacity of these Seri vessels in proportion to their weight, compared with that of typical examples of ware produced by other desert peoples, is shown in the accompanying table.

171 415 Comparison of the mean ratios indicates that the Seri ware is almost exactly twice as economical as that of the Pueblos—i. e., that its capacity is twice as great in proportion to the weight of the vessel; and that

[122] [1] The preciousness of water in this land previous was impressed in the 1895 expedition, during which the cost of the commodity, reckoned on the basis of the time and labor involved in obtaining it, was estimated at $80 or $12 per gallon, or about the wholesale price of the finest champagnes.

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even the ware of the wide-wandering Papago is more extravagant than that of the Seri in the ratio of 100 to 84. It is noteworthy, too, that the typical Seri ware is much more uniform than that of the other tribes; the various specimens seen in use at Costa Rica, and nearly entire in various parts of Seriland, were closely similar in form and nearly alike in dimensions; while the innumerable smaller fragments scattered over Seriland and the neighboring "despoblado" or buried amid the shells of Punta Antigualla correspond precisely in thickness, in curvature, in material, and in finish with the ware observed in use.

Neither the manufacture of the ware nor the sources of material have been observed by Caucasians. Examination of the specimens indicates that the material is a fine and somewhat micaceous clay, apparently an adobe derived from granitoid rocks; and such material might be

Ratio of capacity to weight among Indian ollas[1]

	Capacity	Weight	Ratio	Mean ratio
Seri:	*Liters*	*Kilograms*		
Plain	15.14	1.91	0.126	0.137
Painted	15.61	2.30	.147	
Papago:				
No. 1	17.62	4.09	.230	.253
No. 2	9.51	2.38	.279	
Sia	15.14	3.82	.252	.271
Zuñi	13.20	3.18	.256	
Acoma	15.61	4.31	.276	
Hopi	13.72	4.06	.295	

obtained in various parts of Seriland. The structure of the ware reveals no trace of coiling or other building process, nor does the texture clearly attest the beating process employed by the Papago potters; but there is a well-defined lamellar structure, and the surfaces (especially inner) are striated circumferentially or spirally in such manner as to suggest a process of rubbing under considerable pressure. All the specimens are so asymmetric as to indicate the absence of mechanical devices approaching the potter's wheel, while the necks are of such size as to admit the hand and forearm of an adult female but not of a warrior. Some suggestion of the manufacturing process is afforded by miniature fetishistic and mortuary specimens, such as those depicted in figures 17 and 18, and the larger specimens shown in figure 39, which were evidently shaped from lumps of suitable clay first hollowed and then gradually expanded by manipulation with the fingers, with little if any aid from implements of any sort. On putting the various indi-

[1] In this table the ratio is expressed by the weight in kilograms for each liter in capacity. The Papago and Pueblo specimens were selected from typical material in the National Museum and at random, save that in the Pueblo ollas choice was made of specimens corresponding approximately in size with those of the Seri.

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On putting the indi-

323 [462] cations together it would seem probable that the ware is made by the women, and that each piece is shaped from a lump of tempered and well-kneaded clay of suitable size, first hollowed and rudely shaped over one hand, and gradually expanded by spiral rubbing, kneading, and pressure between the hands of the maker. The burning is incomplete and variable, suggesting a little outdoor fire in a shallow pit adapted to a single vessel. The ware is without glaze or slip or other surficial treatment save that the lamellar texture is best developed toward the surfaces; hence it is so porous that the filled vessel is moist even in the sun.

Ordinarily women are the water-bearers, each carrying an olla balanced on the head with the aid of a slightly elastic annular cushion, usually fashioned of yucca fiber (plate XXXII and figure 15), though in some cases two ollas are slung in nets at the ends of a yoke (figure 16) after the Chinese coolie fashion (this device being apparently accultural).

482 [462]

FIG. 15—Seri olla ring.

The function of the conventional Seri olla is exclu- 415 sively that of a canteen or water-carrying vessel, and its form is suited to no other use; while its lines, like its thinness of wall, are adapted to the stresses of internal and external pressure in such wise as to give maximum strength with minimum weight. It is by reason of this remarkably delicate adaptation of materials to purposes that the plain olla figured in plate XXXIII, weighing an ounce or two more than 10 pounds in dry air, holds and safely carries three and one-third times its weight of water. When such ollas are broken, the larger pieces may be used as cups or

FIG. 16—Water-bearer's yoke.

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dishes, or even as kettles, in the rare culinary operations of the tribe (as shown in plate X); but the entire vessels appear to be religiously devoted to their primary purpose.

While some three-fourths of the observed fictile ware of the Seri and a still larger proportion of the scattered sherds represent conventional ollas, there are a few erratic forms. The most conspicuous of these is a smaller, thicker-walled, and larger-necked type, of which three or four examples were observed; two of these were in use (one is represented lying at the left of the jacal in plate X), and another was found cracked and abandoned on the desert east of Playa Noriega. The vessels of this type are used primarily as kettles and only incidentally as canteens. In both form and function they suggest accultural origin; but the ware is much like that of the conventional type. Another erratic type takes the form of a deep dish or shallow bowl, of rather thick walls and clumsy form, which may be accultural; a single example was observed in use (it is shown in plate XIV). There are also mortuary forms, including a miniature olla (figure 39) and bowl (figure 41), and such still smaller examples as those illustrated in figures 17 and 18. In addition to the utensils a few fictile figurines were found. Most of these were crude or distorted animal effigies, and one (broken) was a rudely shaped and strongly caricatured female figure some 2 inches high, with exaggerated breasts and pudenda. Analogy with neighboring tribes suggests that the very small vessels and the figurines are fetishistic appurtenances to the manufacture of the pottery; e. g., that the fetish is molded at the same time and from the same material as the olla, and is then burned with it, theoretically as an invocation against cracking or other injury, but practically as a "draw-piece" for testing the progress of the firing.

FIG. 17.—Symbolic mortuary olla.

FIG. 18.—Symbolic mortuary dish.

By far the most numerous of the utensils connected with potable water are drinking-cups and small bowls or dishes; but these are merely molluscan shells of convenient size, picked up alongshore, used once or oftener, and either discarded or carried habitually without other treatment than the natural wear of use (an example is illustrated in figure 19). Larger bowls or trays are improvised from entire carapaces of the tortoise (probably *Gopherus agassizii*), which are carried considerable distances; and still larger emergency water-vessels consist of carapaces of the green turtle (*Chelonia agas-*

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sizii), laid inverted in the jacales; these shells also being used in natural condition. No wrought shells, molluscan or chelonian, were observed in use or found either in the jacales or on the hundreds of abandoned sites; but the vicinage of the rancherias, the abandoned camps and house sites, and the more frequented paths are bestrewn with slightly worn shells, evidently used for a time and then lost or discarded. The relative abundance of the fictile ware and this natural shell ware in actual use is about 1:3; i. e., each adult female usually possesses a single olla of the conventional type, and there may be one or two extra ollas and two or three clay dishes in each band or clan, while each matron or marriageable maid is usually supplied with two to four shell-cups and each little girl with one or two; and there are twice as many carapace trays as clay dishes. The disproportion of

FIG. 19—Shell-cup.

pottery and shell about the abandoned sites is naturally much greater; for the former is the most highly prized industrial possession of the women, while the shells are easily gained and lightly lost.

With respect to solid food the Seri may be deemed omniverous though their adjustment to habitat is such that they are practically carniverous.

The most conspicuous single article in the dietary of the tribe is the local green turtle. This chelonian is remarkably abundant throughout Gulf of California; but its optimum habitat and breeding-place would appear to be El Infiernillo, whose sandy beaches are probably better adapted to egg laying and hatching than any other part of the coast. Here it has been followed by the Seri; perhaps half of the aggregate life of the tribe is spent within easy reach of its feeding and breeding grounds, and tribesman and turtle have entered into an inimical com-

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munalty something like that of Siouan Indian and buffalo in olden time, whereby both may benefit and whereby the more intelligent communal certainly profits greatly. The flesh of the turtle yields food; some of its bones yield implements; its carapace yields a house covering, a convenient substitute for umbrella or dog-tent, a temporary buckler, and an emergency tray or cistern, as well as a comfortable cradle at the beginning of life and the conventional coffin at its end; while the only native foot-gear known is a sandal made from the integument of a turtle-flipper.

FIG. 20.—Turtle-harpoon.

Doubtless the eggs and newly hatched young of the turtle are eaten, and analogy with other peoples indicates that the females are sometimes captured at the laying grounds or on their way back to water; but observation is limited to the taking of the adult animal at sea by means of a specialized harpoon. A typical specimen of this apparatus, as constructed since the introduction of flotsam iron, is illustrated in figure 20. It comprises a point 3 or 4 inches long, made from a nail or bit of stout wire, rudely sharpened by hammering the tip (cold) between cobbles, and dislodging the loosened scales and splinters by thrusts and twirlings in the ground; this is set firmly and cemented with mesquite gum into a foreshaft of hard wood, usually 4 or 5 inches long, notched to receive a cord and rounded at the proximal end; the rounded end of this foreshaft fits into a socket of the main shaft, which may be either a cane-stalk (as shown in the figure) or a section of mesquite root; while a stout cord is firmly knotted about the foreshaft and either attached to the distal portion of the main shaft or carried along it to the hand of the user. The main shaft is usually 10 or 12 feet long, with the harpoon socket in the larger end, and is manipulated by a fisherman sitting or standing on his balsa. On catching sight of a turtle lying in the water, he approaches stealthily, preferably from the rear yet in such wise as not to cast a frightening shadow, sets the foreshaft in place, guides the point close to the carapace, and then by a quick thrust drives the metal through the shell. The frictional resistance between the chitin and the metal holds the point in place, and although the foreshaft is jerked out at the first movement of the transfixed animal the cord prevents escape; and after partial tiring

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the turtle is either drowned or driven ashore, or else lifted on the craft.[1] Immediately on landing the quarry, the plastron is broken loose by blows of the hupf[2] and torn off by vigorous wrenches of the warriors and their strong-taloned spouses in the impetuous fury of a fierce blood-craze like that of carnivorous beasts; the blood and entrails and all soft parts are at once devoured, and the firmer flesh follows at a rate depending on the antecedent hunger, both men and women crushing integument and tendon and bone with the hupf, tearing other tissues with teeth and nails, mouthing shreds from the shells, and gorging the whole ravenously if well ahungered, but stopping to singe and smoke or even half roast the larger pieces if nearer satiety. If the quarry is too large for immediate consumption and not too far from a rancheria the remnants (including head and flippers and shells) are hoisted to the top of the jacal immediately over the open end—the conventional Seri larder—to soften in the sun for hours or days; and on these tough and gamey tidbits the home-stayers, especially the youths, chew luxuriously whenever other occupations fail. In times of plenty, such sun-ripened fragments of rocking feasts are rather generally appropriated first to the children and afterward to the coyote-dogs; and it is a favorite pastime of the toddlers to gather about an inverted carapace on hands and knees, crowding their heads into its noisome depths, displacing the rare scavenger beetles and blowflies of this arid province, mumbling at the cartilaginous processes, and sucking and swallowing again and again the tendonous strings from the muscular attachments, until, overcome by fulness and rank effluvia, they fall asleep with their heads in the trough—to be stealthily nudged aside by the cringing curs attached to the rancheria. Com-

[1] A lively and explicit account of Seri turtle-fishing appears in Hardy's Travels in the Interior of Mexico, 1828, pp. 296-297: "Bruja's bay is of considerable extent, and there are from five to three fathoms water close to Arnold's island, in the neighborhood of which the Indians catch abundance of turtle in a singular manner. I have already described their canoes, which in Spanish are called 'balsas'. An Indian paddles himself from the shore on one of these by means of a long, elastic pole of about 12 or 14 feet in length, the wood of which is the root of a thorn (Mimosa) tree, growing near the coast; and although the branches of this tree are extremely brittle, the underground roots are as pliable as whalebone and nearly as dark in color. At one end of this pole there is a hole an inch deep, into which is inserted another bit of wood, in shape like an oar, having a square bit of iron 4 inches long fastened to it, the other end of the iron being pointed. Both the ball and cup are first moistened and then tightly inserted one within the other. Fastened to the iron is a cord of very considerable length, which is brought up along the pole, and both are held in the left hand of the Indian. So securely is the ball thus fixed in the pole that although the latter is used as a paddle it does not fall out.

"A turtle is a very lethargic animal, and may frequently be surprised in its watery slumbers. The balsa is placed nearly perpendicularly over one of these unsuspecting sleepers, when the fisherman, softly sliding the pole through the water in the direction of the animal till within a foot or two of it, he suddenly plunges the iron into its back. No sooner does the creature feel itself wounded than it swims hastily forward and endeavors to liberate itself. The slightest motion of the turtle displaces the iron point from the long pole, which would otherwise be inevitably broken and the turtle would as certainly be lost; but in the manner here described it is held by the cord fastened on to the iron which has penetrated its back till, after it has sufficiently exhausted its strength, it is hauled on board the canoe by the fisherman, who proceeds to the shore in order to dispose of his prize."

[2] The universal stone implement of the Seri, improvised from a cobblestone and used in nearly every industrial occupation (see portion, p. 235); the designation is onomatic, or onomatopoetic, from the sound of the strokes, particularly on animal tissues.

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monly the carapace and the longer bones from the flippers of the larger specimens are preserved entire for other uses, and are cleaned only by teeth and talons and tongues, aided by time but not by fire; but the plastron, unless broken up and consumed immediately, is subjected to a cooking process in which it serves at once as skillet and cutlet—it is laid on the fire, flesh side up, and at intervals the shriveling tissues are clawed off and devoured, while at last the scorched or charred scutes themselves are carried away to be eaten at leisure.[1]

Perhaps the most significant fact connected with the Seri turtle-fishing is the excellent adaptation of means to ends. The graceful and effective balsa is in large measure an appurtenance of the industry; the harpoon is hardly heavier and is much simpler than a trout-fishing tackle, yet serves for the certain capture of a 200-pound turtle; and the art of fishing for a quarry so shy and elusive that Caucasians may spend weeks on the shores without seeing a specimen is reduced to a perfection even transcending that of such artifacts as the light harpoon and fragile oila. Hardly less significant is the nonuse of that nearly universal implement, the knife, in every stage of the taking and consumption of the characteristic tribal prey; for it may fairly be inferred that the comparative inutility of the knife in dissevering the hard and horny chelonian derm, and the comparative effectiveness of the shell-breaking and bone-crushing hupf, have reacted cumulatively on the instincts of the tribe to retard the adoption of cutting devices. Of much significance, too, is the limited cooking process; for the habitual consumption of raw flesh betokens a fireless ancestry at no remote stage, while the crude cooking of (and in) that portion of the shell not consecrated to other uses might well form the germ of broiling or boiling on the one hand and of culinary utensils on the other hand. On the whole, the Seri turtle industry indicates a delicate adjustment of both vital and activital processes to a distinctive environment, in which the abundant chelonian fauna ranks as a prime factor.

Analogy with other primitive peoples would indicate that the flesh of the turtle is probably tabu to the Turtle clan, that the consumption of the quarry is preceded by an oblation, and that there are seasonal or other ceremonial rites connected with turtle-fishing; but no information has been obtained on any of these points save a few vague and unwilling suggestions from Mashém tending to establish the analogy.

Flotsam and stolen metal have played a rôle in the industries of Seriland so long that it is difficult to learn much of the turtle fishing

[1] These details were furnished largely by Mashem and Señor Encinas, but were verified in essentials by personal observation of dietetic customs at Costa Rica in 1894; and they were corroborated by observations on both shores of El Infiernillo and Bahía Kunkaak in 1895. Especially significant were the remnants of a turtle feast on the southern beach of Punta Miguel interrupted by the approach of the exploring party. The indications were clear that the turtle had been landed and largely consumed before the fire was kindled, and that the cooking of the dinner portions had hardly been commenced before the camp was abandoned so hurriedly that not only the nearly eaten turtle and the glowing embers, but the harpoon (the specimen illustrated in figure 39), the still bloody and greasy hupf (that represented in plate LIV), and the fire-sticks were left behind. Gnawed fragments of charred plastrons are common relics about hastily abandoned camps generally.

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during prenatal times; but an intimation from Mashém that the old men thought it much better to take the turtle with the teeth of an "animal that goes in the water", and the similarity in terms for "harpoon" (or arrow) and "teeth" both suggest that the aboriginal point may have been a sea-lion tooth, and that the foreshaft itself may have been a larger tooth of seal or cetacean. While the modern harpoon is shaped with the aid of metal (hoop-iron, etc.), the forms are quite evidently vestigial of knifeless manufacture, in which a naturally rounded or abraded or fire-shaped foreshaft was fitted into the natural socket afforded by a cane-stalk broken at its weakest point—i. e., just below the joint; and both function and socket arrangement (as well as the linguistic evidence) strongly suggest the cylindrical tooth as the germ of the apparatus.

It is probable that water-fowl, considered collectively, stand second in importance as Seri prey; and the foremost fowl is undoubtedly the pelican, which serves not only as a fruitful food-supply but as the chief source of apparel.

The principal haunt and only known breeding ground of the pelican in the Gulf of California is Isla Tassne, an integral part of Seriland; and while the great birds are doubtless taken occasionally in Bahia Kunkaak, El Infiernillo, Bahia Tepoka, and other Seri waters, this island is the principal pelican hunting ground. According to Mashém's account, the chase of the pelican here is a well-organized collective process: at certain seasons, or at least at times deemed propitious by the shamans, pelican harvests are planned; and after some days of preparation a large party assemble at a certain convenient point (presumably Punta Antigualla) and await a still evening in the dark of the moon. When all conditions are favorable they set out for the island at late twilight, in order that it may be reached after dark; on approaching the shore the balsas are left in charge of the women, while the warriors and the larger boys, armed only with clubs, rush on the roosting fowls and slaughter them in great numbers—the favorite coup de grâce being a blow on the neck. The butchery is followed by a gluttonous feast, in which the half-famished families gorge the tenderer parts in the darkness, and noisily carouse in the carnage until overcome by slumber. Next day the matrons select the carcasses of least injured plumage and carefully remove the skins, the requisite incisions being made either with the edge of a shell-cup or with a sharp sliver of cane-stalk taken from an injured arrow or a broken balsa-cane. The feast holds for several days, or until the last bones are picked and the whole party sated, when the clans scatter at will, laden with skins and lethargic from the fortnight's food with which each maw is crammed.

Mashém's recital gave no indication as to whether the Pelican clan participate in the hunting orgies, though it clearly implies that the chase and feast are at least measurably ceremonial in character; and this implication was strengthened by the interest and comparative

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vivacity awakened in the Seri bystanders by their spokesman's frequent interlocutions with them during the recital. Unfortunately the account was not clear as to the seasons selected, though the expressions indicated that the feasts are fixed for times at which the young are fully fledged. It would seem inconceivable that the Seri, with their insatiate appetite for eggs and tender young, should consciously respect a breeding time or establish a closed season to perpetuate any game; yet it is probable that the pelican is somehow protected in such wise that it is not only not exterminated or exiled, but actually fostered and cultivated. It is certain that the mythical Ancient of Pelicans is the chief creative deity of Seri legend, and its living representative the chief tutelary of one of the clans; it is certain, too, that this fleshly fowl, sluggish and defenseless as it is on its sleeping grounds, would be the easiest source of Seri food if it were hunted indiscriminately; and it is no less certain that the omnivorous tribesmen would quickly extinguish the local stock if they were to make its kind, including eggs and young, their chief diet; yet it survives in literal thousands to patrol the waters of all Seriland in far-stretching files and vees seldom out of sight in suitable weather. On the whole, it would seem evident that an interadjustment has grown up between the tribesmen and their fish-eating tutelary during the centuries, whereby the fowl is protected, albeit subconsciously only, during the breeding seasons; and in view of other characteristics of the tribe it would seem equally evident that the protection is in some way effected by means of ceremonies and tabus. 223 [776]

Somewhat analogous, though apparently less ceremonial, expeditions are made to Isla Patos and other points in search of ducks, and to Isla San Esteban, and still more distant islands in search of eggs (preferably near the hatching point) and nestlings; while the abundant waterfowl of the region are sought in Rada Ballena and other sheltered bays, as well as in such landlocked lagoons as those of Punta Miguel and Punta Arena. This hunting involves the use of bows and arrows, though the archery of the tribe pertains rather to the chase of larger land game, and apparently attains its highest development in connection with warfare. No specialized fowling devices have been observed among the Seri; and their autonomous recitals, the facies of their artifacts, and the observed habits of the tribe (especially the youth) with respect to birds, all indicate that ordinary fowling holds a subordinate place in Seri craft—i. e., that it is a fortuitous and emergency avocation, rather than an organized art like turtle-fishing and water-carrying. Concordantly, culinary processes are not normally employed in connection with waterfowl, and the customary implements used for incising the skin and severing other tissues are the shell-cup, which is carried habitually for other purposes, the cane-splint, which appears to be improvised on occasion and never carried habitually, and the ubiquitous hupf. [772] [411] [412]

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262 Probably second in importance among Seri prey, as a food-source merely, stand the multifarious fishes with which the waters of Seriland teem, particularly if the class be held to comprise the cetaceans and seals and selachians ranked as leaders of the fish fauna in Seri lore.

225 Naturally, whales lie outside the ordinary range of Seri game, yet they are not without place in the tribal economy. During the visit to the Seri rancheria near Costa Rica in 1894, it was noted that various [173] events—births, deaths, journeys, etc—were referred to "The Time of the Big Fish"; and it was estimated from apparent ages of children and the like that this chronologic datum might be correlated roughly with the year 1887. The era-marking event was memorable to Mashém, to the elderwomen of the Turtle clan, and to other mature members of the group, because they had been enabled thereby to dispense with hunting and fishing for an agreeably long time, and because they had moved their houses; but the providential occurrence was not interpreted at the time. On visiting Isla Tiburon in 1895, the interpretation became clear; along 172 the western shore of Rada Ballena, near the first sand-spit north of the bight, lay the larger bones of a whale, estimated from the length of the mandibles and the dimensions of the vertebræ to have been 75 or 80 feet long. It was evident that the animal had gone into the shoal water at exceptionally high tide and had stranded during the ebb; while the condition of the bones suggested an exposure to the weather of perhaps half a dozen years. On the shrubby bank above the beach, [361] hard by the bleaching skeleton, stood the new rancheria, the most extensive seen in Seriland, comprising some fifteen or twenty habitable jacales; and fragments of ribs and other huge bones about and within the huts[1] attested transportation thither after the building, while the shallowness of the trails and the limited trampling of the fog 172 shrubbery gave an air of freshness to the site and surroundings. The 262 traditions and the relics together made it manifest that "The Time of the Big Fish" had indeed marked an epoch in Seri life; that when the leviathan landed (whether through accident or partly through efforts of hulas men) it was quickly recognized as a vast contribution to the Seri larder; and that some of the clans, if not the entire tribe, gathered to gorge first flesh and blubber, next sun-softened cartilage and chitin, and then epiphyses and the fatter bones. Some of the ribs were splin- [252] tered and crushed, evidently by blows of the hupf, in order to give access to the cancellate interiors; several of the vertebræ were battered and split, and nearly all of the bones bore marks of hupf blows, aimed to loosen cartilaginous attachments, start epiphyses, or remove spongy and greasy processes. Little trace of fire was found; in one case a mandible was partly scorched, though the burning appeared to be fortuitous and long subsequent to the removal of the flesh; and a bit of charred and gnawed epiphysis, much resembling the fragments of half-cooked turtle plastron scattered over Seriland, was picked up in

[1] One of the smaller vertebræ and part of a rib are shown in the upper figure of plate VI.

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one of the huts. The condition of the remains and the various indications connected with the rancheria corroborated the tradition that the great creature had afforded unlimited and acceptable food for many moons; and various expressions of the tradition indicated that the event, though the most memorable of its class, was not unique in Seri lore.

A few bones and fragments of skin of the seal were found in and about the rancherias on Isla Tiburon, and an old basket rebottomed with sealskin was picked up in a recently abandoned jacal on Rada Ballena; a few bones provisionally identified with the porpoise (which haunts Boco Infierno in shoals) were also found amid the refuse about the old rancheria at the base of the long sand-spit terminating in Punta Tormenta; but nothing was learned specifically concerning the chase and consumption either of these animals or of the abundant sharks from which the island is named.

FIG. 21.—Fish-spearhead.

Among the exceedingly limited food supplies brought from the coast by the Seri group at Costa Rica in 1894, were rank remnants of partly desiccated fish, usually gnawed down to heads and tails; and Mashém and others spoke of fish as a habitual food, while Señor Encinas regarded it as the principal element of the tribal dietary. The harder bones and heavier scales of several varieties of fish were also found abundantly among the middens of both mainland and Tiburon shores in 1895. None of the remains bore noticeable traces of fire; and all observations, including those of Señor Encinas, indicate that the smaller varieties of fish are habitually eaten raw, either fresh or partially dried, according to the state of appetite at the time of taking—or the condition of finding when picked up as beach flotsam. But a single piscatorial device was observed, i. e., the barbed point and foreshaft, shown in figure 21—the iron point being, of course, accultural, and probably obtained surreptitiously. This harpoon, which measures 6 inches in length over all, is designed for use in connection with the main shaft of a turtle-catching tackle; and it is evidently intended for the larger varieties, perhaps porpoises or sharks. In 1827 Hardy observed a related device:

> They have a curious weapon which they employ for catching fish. It is a spear with a double point, forming an angle of about 5°. The insides of these two points, which are 6 inches long, are jagged, so that when the body of a fish is forced between them, it can not get away on account of the teeth.[1]

Don Andrés Noriega, of Costa Rica, described repeatedly and circumstantially a method of obtaining fish by aid of pelicans, in which a

[1] Travels, p. 293.

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young or crippled fowl was roped to a shrub or stone, to be fed by his fellows; when at intervals a youth stole out to rob the captive's pouch. At first blush this device would seem to rise above the normal industrial plane of the Seri and to lie within the lower stages of zooculture, like the cormorant fishing of China if not the hawking of medieval Europe; yet on the whole it may be deemed fairly consistent with that cruel yet mutually beneficial toleration between tribesmen and pelicans attested by the preservation of the avian communal, as already noted. Moreover, Don Andrés observations are in accord with early notes of the exceedingly primitive aborigines of California, from whom the Seri have undoubtedly borrowed various cultural suggestions; thus Venegas quotes Padre Torquemada as saying:

> I accidentally found a gull tied with a string and one of his wings broke. Around this maimed bird lay heaps of excellent pilchards, brought thither by its companions; and this, I found, was a stratagem practiced by the Indians to procure themselves a dish of fish; for they lie concealed while the gulls bring these charitable supplies, and when they think that little more is to be expected they seize upon the contributions.

The padre says also of these gulls that "they have a vast craw, which in some hangs down like the leather bottles used in Peru for carrying water, and in it they put their captures to carry them to their young ones"—from which it is evident that he refers to the pelican. Venegas adds, "Such are the mysterious ways of Providence for the support of his creatures!"[1] And in the margin of his accompanying "Mapa de la California", he introduces a vigorous picture of a captive fowl, its free fellow, and the mess of fish, the cut being headed "Alcatrazes" (pelicans).

Despite these devices, the dearth of fishing-tackle among the Seri is evidently extreme. Save in the single specimen figured, no piscatorial apparatus of any sort was found among the squalid but protean possessions at the Costa Rica rancheria; neither nets nor hooks nor rods nor lines nor any other device suitable for taking the finny game were found in the scores of jacales containing other artifacts on Tiburon; while Señor Encinas was conversant only with the simple method of taking fish by hand from the pools and shallows left by receding breakers or ebbing tides. This dearth of devices is significantly harmonious with other Seri characteristics: it accords with the leading place assigned the turtle in their industry and their lore; it is in harmony with that primitive and nonmechanical instinct which leads them to rely on bodily strength and skill and swiftness rather than on extracorporeal artifacts in their crude and incomplete conquest of nature; and it is a manifest expression of relation with their distinctive physical environment—for the ever-thundering breakers of their gale-swept coast are abundant, albeit capricious, bringers of living grist, while the offshore gales at low tide lay bare hundreds of acres of shoaler

[1] History of California, 1759, vol. i, p. 41.

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bottoms literally writhing with fishes stranded among beds of mollusks and slimy with the abounding plankton of a fecund coast. The region is one of ample, albeit lowly, food supply, where every experience tends toward inert reliance on providential chance, and where the stimulus of consistently conscious necessity seldom stirs the inventive faculty.

Closely connected with fish as a Seri food-source are the various molluscan and crustacean forms collectively called shellfish; and these contribute a considerable share of the sustenance of the tribe.

Apparently the most important constituent of this class of foods is the Pacific coast clam, which abounds in the broad mud-flats bordering Laguna La Cruz and other lagoons of Seriland, and which was still more abundant during a subrecent geologic epoch, to judge from the immense accumulation of the shells in Punta Antigualla. The clams are usually taken at low tide, without specialized apparatus. They are located by feeling with the feet in shallow water, and caught either with toes or with fingers, to be tossed into any convenient receptacle. When the water is entirely withdrawn from the flats, they are located by means of their holes, and are extricated either with a shell-cup or with some other improvised implement. Frequently the entire mess is thrown into a fire until the shells open, when they are withdrawn and the mollusks devoured practically raw; perhaps more commonly the shells are opened by blows of the hupf, and eaten without semblance of cooking; and, except on the surface, no trace of roasting was found among the vast accumulations of shells in Punta Antigualla.

Perhaps second to the clam in frequency of use is the local oyster, which abounds about the more sheltered shores of Tiburon. It is gathered with the hands, aided perhaps by a stone or stick for dislodging the shells either from the extended offshore beds at extreme low water, or from the roots of a mangrove-like shrub at a medium stage. The shells, like those of the clam, are frequently opened by partial roasting; and shells, sometimes scorched, are extensively scattered over the interior, indicating that the oyster is a favorite portable food. The popularity of this bivalve is shared by the Noah's-ark (*Arca*), to which some mystical significance is apparently ascribed; and the abundant limpets and bivalves and other mollusks are eaten indiscriminately, to judge from the abundance of their shells in the middens. The ordinary crab, too, is a favorite article of food, and its claws are numerous in camp and house refuse; while the lobster-like deep-water crab is introduced into the menu whenever brought to the surface by storms, as shown by its massive remains in the middens.

On the whole, shellfish form a conspicuous factor in Seri economy by reason of the considerable consumption of this class of food; but, viewed in the broader industrial aspect, the produce is notably primitive, and significant chiefly as indicating the dearth of mechanical and culinary devices.

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224 While by far the larger share of Seri sustenance is drawn from the sea, a not inconsiderable portion is derived from the land; for the warriors and striplings and even the women are more skilful hunters than fishers.

The larger objects of the feral chase are deer of two or three species (the bura, or mule-deer, being most conspicuous and easiest taken), antelope, and mountain sheep; to which the puma, the jaguar, and perhaps two or three other carnivores might be added. The conventional method of taking the bura and other deer is a combination of stalking and coursing, usually conducted by five of the younger warriors, though three or four may serve in emergency; any excess over five being regarded as superfluous, or as a confession of inferiority. The chase is conducted in a distinctly ceremonial and probably ritualistic fashion, even when the finding of the game is casual, or incidental to a journey: at sight of the quarry, the five huntsmen scatter stealthily in such manner as partially to surround it; when it takes fright one after the other strives to show himself above the shrubbery or dunes in order to break its line of flight into a series of zigzags; and whether successful in this effort or not they keep approximate pace with it until it tires, then gradually surround it, and finally rush in to either seize it in their hands or cripple it with clubs—though the latter procedure is deemed undignified, if not wrong, and hardly less disreputable than complete failure. When practicable the course is laid toward the rancheria or camp; and in any event the ideal finish is to bring the animal alive into the family group, where it may be dissected by the women, and where the weaklings may receive due share of the much-prized blood and entrails. The dissection is merely a ravenous 264 rending of skin and flesh, primarily with the teeth (perhaps after oblique bruising or tearing by blows with the hupf over strongly flexed joints), largely with hands and fingers aided anon by a foot planted on the carcass, and partly with some improvised device, such as a horn or tooth of the victim itself, the serrated edge of a shell-cup, or perhaps a sharp-edged cane-splint from a broken arrow carried for emergency's sake. Commonly the entire animal, save skin and harder bones, is gulped at a sitting in which the zeal of the devotee and the frenzy of the carnivore blend; but in case the group is small and the quarry large, the sitting is extended by naps or prolonged slumberings, and [252] the more energetic squaws may even trouble to kindle a fire and partially cook the larger joints, thereby inciting pallid appetite to new efforts. Finally the leg bones are split for the marrow and their ends [237] preserved for awls; the horns are retained by the successful huntsmen as talisman-trophies; while the skin is stretched in the desert sun, [281] scratched and gnawed free of superfluous tissue, rubbed into partial 224 pliability, and kept for bedding or robe or kilt.

85] The chase of the hare is closely parallel to that of the deer save that it is conducted by striplings, who thereby serve apprenticeship in hunt-

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ing and at the same time enrich the tribal larder with a game beneath the dignity of the warriors; while still smaller boys similarly chase the rabbit, which is commonly scorned by the striplings. The conventional hare-hunting party is three, and it is deemed disreputable to increase this number greatly. The youths spread at sight of the game and seek to surround it, taking ingenious and constant advantage of the habit of the hare to run obliquely or in zigzags to survey more readily the source of its fright; for some time they startle it but slightly by successive appearances at a distance, but gradually increase its harassment until it bounds hither and thither in terror, when they rapidly close in and seize it, the entire chase commonly lasting but a few minutes. The quarry is customarily taken alive to camp, where it is quickly rent to fragments and the entrails and flesh and most of the bones consumed; the skin usually passes into possession of a matron for use as infantile clothing or cradle bedding, while the ears are kept by the youth who first seized the game until his feat is eclipsed by some other event—unless chance hunger sooner tempts him to transmute his trophy into pottage.

While the collective, semiceremonial style of chase alone is thoroughly good form in Seri custom, it is often rendered impracticable by the scattering of the tribe in separate families or small bands, in which case the bura and its associates, like the larger carnivores customarily, are taken by strategy rather than by strength. This form of chase is largely individual; in it archery plays a leading rôle; and in it, too, ambuscade, stealthy lying in wait, and covert assault attain high development. It is closely analogous with the warfare typical of the tribe; and it is especially noteworthy as one of the most effective stimuli to intellectual activity, and hence to the development of invention—if the term may be applied to industrial products so lowly as those of the Seri.

The chief artifact produced by the strategic chase on land would seem to be the analogue of the harpoon used at sea, i. e., the arrow. This weapon is one of the three or four most highly differentiated and thoroughly perfected of the Seri artifacts, ranking with canteen-olla and balsa, and perhaps outranking the turtle-harpoon. It is fabricated with great care and high skill, and with striking uniformity in details of material and construction. A typical example is 25 inches in length and consists of three pieces—point, foreshaft, and main shaft (feathered toward the nock). The foreshaft is 8¼ inches long, of hard wood carefully ground by rubbing with quartzite or pumice into cylindrical form, about three-eighths of an inch in diameter at the larger end and tapering slightly toward the point; the larger end is extended by careful grinding into a tang which is fitted into the main shaft, the joint being neatly wrapped with sinew. This main shaft is a cane-stalk (*Phragmites communis*?) 15 or 16 inches long, carefully selected for size and well straightened and smoothed; it is feathered with three equidistantly-

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411 placed wing-feathers of hawk or falcon, neatly prepared by removing a thin strip of the rachis bearing the wider vexillum and attaching it by sinew wrappings at both ends, the feathers being about 5½ inches in length. The nock is a simple rounded notch, placed just below a joint and supported by the sinew ferrule; there is no foot-plug. The favorite point is a bit of flotsam hoop-iron, ground into elongate triangular shape with projecting barbs, and a short tang or shank fitted into a shallow notch in the foreshaft, cemented there with mesquite gum, and finally fixed firmly with sinew wrappings. A typical iron-point arrow, with bow and quiver, is depicted in plate XXX. Alternative points are of rudely chipped stone (two examples are illustrated in figure 37) somewhat clumsily attached to the foreshaft by mesquite gum and sinew wrapping; while the arrows used by boys and hunters of small game are usually pointless, the tip of the foreshaft being sharpened and hardened by slight charring. In some of the arrows, especially those designed for use in war, the foreshaft is notched, or else loosely attached to the main shaft, in order that it may be detached from the main shaft and remain in the body of enemy or prey. The foreshaft is commonly painted some bright color (red is prevalent), while the points and attachments of the "poisoned" specimens are smeared with some greasy substance.

The aboriginal Seri arrow has undoubtedly been modified during the centuries since the coming of Cortés and Mendoza with their metal-armed troopers; yet certain inferences as to the indigenous form of the weapon are easily drawn from its construction and the homologies of its parts.

The first feature of the artifact to attract attention is the relative clumsiness of attachment and frequent absence of points. The chipped-stone points are so rude as to be quite out of harmony with the otherwise delicately wrought and graceful arrow, while the attachment is strikingly crude; and it is still more noteworthy that the very name for stone arrowpoint was little understood at Costa Rica, and was obtained only after extended inquiry and repeated conferences among the older informants. Even the attachment of the effective points made from hoop-iron is bad constructionally; the sinew wrapping is carried around the entire blade in such manner as to sheathe the sharply ground edges and itself be cut on contact with firm tissue; and the fitting and wrapping are so rude as to be incongruous with the rest of the apparatus. On the whole the suggestion is strong that the 174 arrowpoint is accultural—and this suggestion is further strengthened 411 by the very existence of the practically functionless, and hence manifestly vestigial, hard-wood foreshaft. Turning to the structural homologies, the observer is at once struck with the parallelism running through the three most conspicuous compound artifacts found among the Seri, i. e., the harpoon, the fire-drill, and the arrow. All of these alike consist of two essential parts, main shaft and foreshaft; all are

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akin in function even in the superficial view of the Caucasian, and are much more closely related in primitive thought—indeed the fire-drill is but a featherless and nockless arrow, with the foreshaft charred at its fire-giving tip; and all are closely linked in language and allied with other terms in such wise as practically to establish identity among them in the thinking of their lowly makers (though unfortunately the incomplete vocabularies extant are insufficient for full study of the linguistic homologies). Briefly the indications are that the harpoon was the primary device, and that its foreshaft was a tooth of an aquatic fish-eater like the seal, or perchance in some cases an os penis; that its lineal successor was a loose-head lance for use on sea and land, at first with the unaided hand and later with the atlatl, or throwing-stick (the lance being now extinct, though recorded by early visitors to Seriland); that the next artifact-generation in the direct line was represented by the arrow, foreshafted with hard wood or tooth, made light and graceful and loose-headed or not, according to needs, and by the substitution of bow for atlatl; and that a somewhat aberrant line was marked by the taming of fire, its reproduction by the modified arrow, and the differentiation of fire-stick from arrow and either atlatl or bow.

In tracing these stages in technologic growth, it is to be remembered that the Seri are so primitive as to betray some of the very beginnings of activital concepts; that to them zoic potencies are the paramount powers of the cosmos; that in their simple thought fire is a bestial rather than a physical phenomenon; that in their naive philosophy the production of devouring flame is of a kind with vital birth and a similitude of sexual reproduction; and that according to their notions the conquest of quarry, including fire, is made practicable only by aid of the mystical potencies of beasts and flames gained through invocatory use of symbols or actual organs.

In the Seri tongue the term "fire-drill" is *kaak*, an indefinite generic meaning "kind" or "strong kind", with an egocentric connotation ("Our-Strong-Kind"), as in the proper tribal designation *Kʷa-kaak* or *Kʷ-kaak;* while the term for the nether fire-stick or hearth is either *moam* ("woman", or more properly "mother"), or else (and more commonly) *kaak-moam*, which may be rendered "Kind-Mother"—the "Kind", as among primitive folk generally, comprising both men and tutelary beasts, and in this case fire as the most mysterious of the beasts; there is thus a suggestive analogy between the designation for the fire-producing apparatus and that for the tribe itself. It should be noted that the zoic concept of fire is widespread among the more primitive peoples of various provinces, and sometimes persists in recognizable form in higher culture (witness the fire-breathing dragons of various mythologies, the "Red Flower" notion gathered in India by Kipling, etc); also that the ascription of sex to the fire-sticks is prevalent among North American tribes, and at once helps to interpret the development of the fire-drill, fire-syringe, and other primitive devices, such, for example, as

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000 those so fully described by Hough,[1] and serves to explain the otherwise obscure genesis of the fire-sense, which must have accompanied and shaped that most significant of all steps in human progress, the conquest of fire.

411 The modern coordinate of the Seri arrow is the bow, made preferably from a straight and slender branch of the palo blanco. A typical specimen is illustrated in plate XXX; it is 4 feet 9½ inches long, with the outer face convex and the inner face flat; greatest width 1⅝ inches, narrowed to 1¼ inches at the hand-hold; thickness at the hand-hold 1 inch, thinning to five-eighths inch at 8 inches from this point; tapering gradually in both dimensions toward the extremities, which are rudely notched to receive the cord (of mesquite-root fiber). The specimen [284] illustrated has been cracked and repaired in two places; in one place the repair was effected by a rough wrapping of sinew, and in the other by slipping over the wood a natural sheath of rawhide from the leg of a deer. The specimen is of added interest in that it combines bow and nether fire-stick ("Strong-Kind-Mother"), one of the friction holes [372] being worn out to the notched margin, and the other remaining in usable condition, as shown in the enlarged marginal drawing.[2]

Compared with the delicately finished and graceful arrow, the typical bow is a rude and clumsy device; it displays little skill in the selection and shaping of material, and evidently involves little labor in manufacture—indeed, the indications are that more actual labor is spent in the construction of a single arrow than in the making of a bow, while the arrow-making is expert work, betokening craft of a high order, and the bow-making little more than simple handiwork of the lowest order. The comparison affords some indication of the genesis [174] of Seri archery, and at the same time corroborates the independent suggestion that the arrow is of so much greater antiquity than the bow as to represent a distinct stage in cultural development—though the precise cultural significance of the bow is not easily ascertained.

Efforts were made to have different Seri warriors at Costa Rica in 1894 114 assume the normal archery attitude, with but moderate success, the 123 best pose obtained (illustrated in plate XXVIII) being manifestly unnat- 126 ural and a mere reflection of the attitude in the mind of the Caucasian poser; while the results of inquiries served only to indicate that the normal archery attitude was purposely avoided for reasons not ascertained. Fortunately another observer was more successful: in the course of the United States hydrographic surveys in 1873, Commander (now Admiral) Dewey received several visits from Seri warriors on board the *Narragansett*; and on the occasion of one of these visits, Mr 114 Hector von Bayer, of the hydrographic party, caught a photograph of 126 an archer in the act of drawing his bow. The negative was accident-

[1] Fire-making apparatus in the U. S. National Museum; Smithsonian Report for 1888, pt. II, 1890, pp. 531-587, and elsewhere.

[2] Ordinarily the nether fire-stick is of soft and porous wood, ironwood palo-verde and water-logged pine being preferred.

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SERI ARCHER AT REST

[p.200 A]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

ally shattered, and no prints are known to have been made from it; but the fragments were carefully joined, and were kindly transferred to the Bureau by Mr Von Bayer in 1897, and from them plate XXIX was carefully drawn. The posture (partly concealed by the drapery) is extraordinary, being quite beyond the reach of the average human, and impossible of maintenance for any considerable interval even by the well-wonted Seri. The posture itself partly explains the difficulty of inducing the warriors at Costa Rica to assume it, since it is essentially a fleeting one, and indeed but a part of a continuous and stressful action—it is no less difficult to assume, or to catch in the camera, than the typical attitude of a baseball pitcher in action. The posture thus fortunately caught is quite in accord with the accounts of Seri archery from the esoteric side given by Mashém, and with the exoteric observations of Señor Encinas, Don Andrés, and others; for all accounts agree in indicating that the archer commonly rests inert and moveless as the watching feline up to a critical instant, then springs into movement as swiftly as the leaping jaguar, and hurls, rather than shoots, one, two, or three arrows before rushing in to the death or skulking to cover as the issue may require.

The Seri archery habit is in every way consistent with the general habits of the tribe, alike in the chase and in warfare, in which the tribesmen, actuated by the fierce blood-craze common to carnivores, either leap on their prey with purpling eyes and gnashing teeth, or beat quick and stealthy retreat; and it is especially significant in the light thrown on the bow as a device for swift and vigorous rather than accurate offense, an apparatus for lengthening the arm still more than does the harpoon, and at the same time strengthening and intensifying its stroke. The quick-changing attitudes of half hurling are equally suggestive of the use of the atlatl, and support Cushing's hypothesis[1] that the bow was derived from the corded throwing-stick. While the critical posture of Seri archery is unique in degree if not in kind in the western hemisphere, so far as is known, an approximation to it (illustrated in fig. 22) has been observed in Central Africa.[2] On the whole the Seri mode of using the bow, like its crude form and rude finish, indicates that it is a relatively new and ill-developed artifact, possibly accultural though more probably joined indigenously with the archaic arrow to beget a highly effective device for food-getting as well as for warfare; while the genetic stages are still displayed not only in the homologies between arrow and harpoon, but by the common functions of both arrow and bow with the fire-sticks.

Concordantly, as indicated by the use of the archery apparatus, the individual taking of large game is effected either by stealthy stalking or by patient ambuscade ended by a sudden rush; when, if the chase is successful, the quarry is rent and consumed as at the finish of the

[1] The Arrow: Proceedings Am. Ass. Adv. Sci., vol. XLIV, 1895, pp. 223-239.
[2] Glave's Journey to the Livingston Tree. The Century Magazine, vol. LII, 1896, p. 760.

McGee E-5 (1894-1895)1898 NU31 Seri NU31

224 semiceremonial collective chase. The fleet but wary antelope, the pugnacious peccary, the wandering puma and jaguar, and the mountain sheep of the rocky fastnesses, are among the favorite objects of this style of chase; while the larger land birds and some of the water-fowl are taken in similar fashion.

The smaller land game comprises a tortoise or two, all the local

[009]

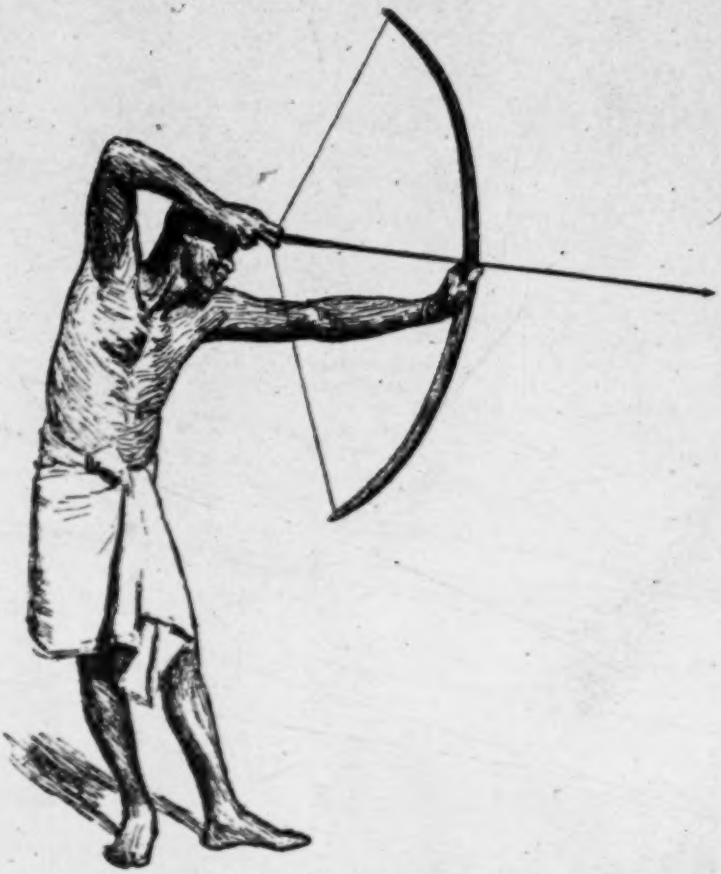

FIG. 22—African archery posture.

snakes and lizards, and a good many insects, besides various birds, including hawks and owls, as well as the eaters of seeds and insects. The crow and vulture are also classed as edible, though they are rare in Seriland, probably because of the effective scavengering of the province by its human residents. It is a significant fact that the

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1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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SERI ARCHER AT ATTENTION

[p. 202 A]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

smaller rodents, especially the long-tail nocturnal squirrel, are excluded from the Seri mess by a rigidly observed tabu of undiscovered meaning. A general consequence of this tabu is readily observed on entering Seriland; there is a notable rarity of the serpents, the high-colored and swift efts, and the logy lizards and dull phrynosomas so abundant in neighboring deserts, as well as of song birds and their nests; and this dearth is coupled with a still more notable abundance of the rodents, which have increased and multiplied throughout Seriland so abundantly that their burrows honeycomb hundreds of square miles of territory. A special consequence of the tabu is found in the fact that the myriad squirrel tunnels have rendered much of the territory impassable for horses and nearly so for pedestrians, and have thereby served to repel invaders and enable the jealous tribesmen to protect their principality against the hated alien. Seriland and the Seri are remarkable for illustrations of the interdependence between a primitive folk and their environment; but none of the relations are more striking than that exemplified by the timid nocturnal rodent, which, protected by a faith, has not only risen to the leading place in the local fauna, but has rewarded its protectors by protecting their territory for centuries.

In both the collective and the strategic chase, constant advantage is taken of weakness and incapacity, whether temporary or permanent, of the prospective quarry; so that diseased and wounded as well as sluggish and stupid animals are eliminated. The effect of this policy on the fauna is undoubtedly to extinguish the less capable species and to stimulate and improve the more capable; i. e., the presence of the human factor merely intensifies the bitter struggle for existence in which the subhuman things of this desert province are engaged. At the same time, the entrance of the human folk into the struggle characteristic of subhuman species serves to bar them from one of the most helpful ways to the advancement of their kind—i. e., the way leading through coloration with animals to perfected zooculture. The most avidly sought weaklings in the Seri chase are the helpless young, and the heavily gravid dams which are pursued and rent to fragments with a horrid fury doubtless reflecting the practical certainty of capture and the exceptionally succulent tidbits afforded by the fetal flesh; naturally the cruel custom reacts on habitual thought in such wise that the very sight of pregnancy or travail or newborn helplessness awakens slumbering blood-thirst and impels to ferocious slaughter. To such custom and deep-planted mental habit may be ascribed some of the most shocking barbarities in the history of Seri rapine, tragedies too terrible for repetition save in bated breath of survivors, yet explaining the utter horror in which the Seri marauder is held on his own frontier. At the same time the hunting custom and the mental habit explain the blindness of the Seri to the rudiments of zooculture, and clarify their intolerance of all animal associates, save the sly coyote that habitually

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

224 [825] hides its travail and suckling in the wilderness, and perhaps the dalfad pelican.[1]

Parallel to the chase of the larger land game is the hunting of horses and other imported stock; for the animals are regarded in no other light than that of easy quarry. The horses of the Seri frontier, like those of wild ranges generally, are strongly gregarious, and the herds are well regimented under recognized leaders, so that the chase of their kind is necessarily collective on the part of both hunters and game; and the favorite method is for a considerable group of either warriors or women to surround the entire herd, or a band cut out from it, "mill" them (i. e., set them running in a gradually contracting circle) and occasionally dash on an animal, promising by reason of exceptional fatness or gravidness. The warrior's customary clutch is by the mane or foretop with one hand and the muzzle with the other, with his weight thrown largely on the neck, when a quick wrench throws the animal, and, if all goes well, breaks its neck;[2] while the huntress commonly aims to stun the animal with a blow from her hupf. In either case the disposition of the carcass is similar to that of other large quarry, save that thought is given to the danger of ensuing attack by vaqueros; so that it is customary to consume at once only the blood and pluck, and if time permits the paunch and intestines with their contents, and then to tread the remainder into quarters, which warriors or even women shoulder and rush toward their stronghold. Burros (which, next to the green turtle, afford the favorite Seri food) and horned cattle are commonly stalked and slain, or, at least, wounded with arrows, so that it is commonly the stragglers that are picked off; though sometimes several animals are either milled or rushed, and thrown by a

224 264

[1] A single incident expressing the first sentiment toward travelling animals need be noted: a few minutes after the group shown in plate 21 was photographed, a starveling cur—a female apparently of nearly pure coyote blood and wild in a week of birth—drank toward the broken olla-bottle in the left center of the picture, in which a mark horse-foot was shimmering; the women bending over the bottle suddenly straightened and shot out her feet with such force and directness that the cur was lifted entirely over the carcass of the nearest hound, and the poor beast fell stunned and moaning, a prematurely born pup protruding from her two-thirds of its length. The sound of the stroke and fall attracted attention throughout the group; the women smiled and greeted approval of the well-aimed kick, and a dozen children gathered to swallow the assault. Partially recovering, the cur struggled to its feet and started for the chaparral, followed by the jeering throng; at first the chase seemed aspective only, but suddenly one of the smaller boys (the third from the left in the group shown in plate 27) took on a new aspect—his figure stiffened, his jaws set, his eyes shot purple and green, and he plunged into the lead, and just before the hurtled beast reached cover he seized the protruding embryo, jerked it away, and ran off in triumph. Three minutes afterward he was seen in the shelter of a jacal greedily gorging his spoil in commodious bites, just as the Caucasian boy devours a peeled banana. Meanwhile, two or three males who had struck his trail stood around begging bites and nuzzling at chance blood spatters on earth, skin, or tattered rags; and as the victor came forth later, licking his chops, he was met by half jocular but admiring plaudits for his prowess from the dozen matrons lounging about the neighboring jacales. Parallel instances, both observed and gathered at second hand, might be added in numbers; but this may suffice as the sole specific basis for the generalization which places the Seri below the plane of possible nomadism—a generalization so broad as to demand some record of data which it would be more agreeable to ignore.

[2] This warrior's clutch, and the notion that it is *dismemberment* if not attained for the commodious adult to take measures to weapons in hand-to-hand slaughter, are strongly suggestive of weaponless motives and of studied mimicry of the larger carnivores, such as the jaguar—the "mock tortoise" of the Maya.

1: McGee E-5 (1894-1895)1898 N031 Seri N031

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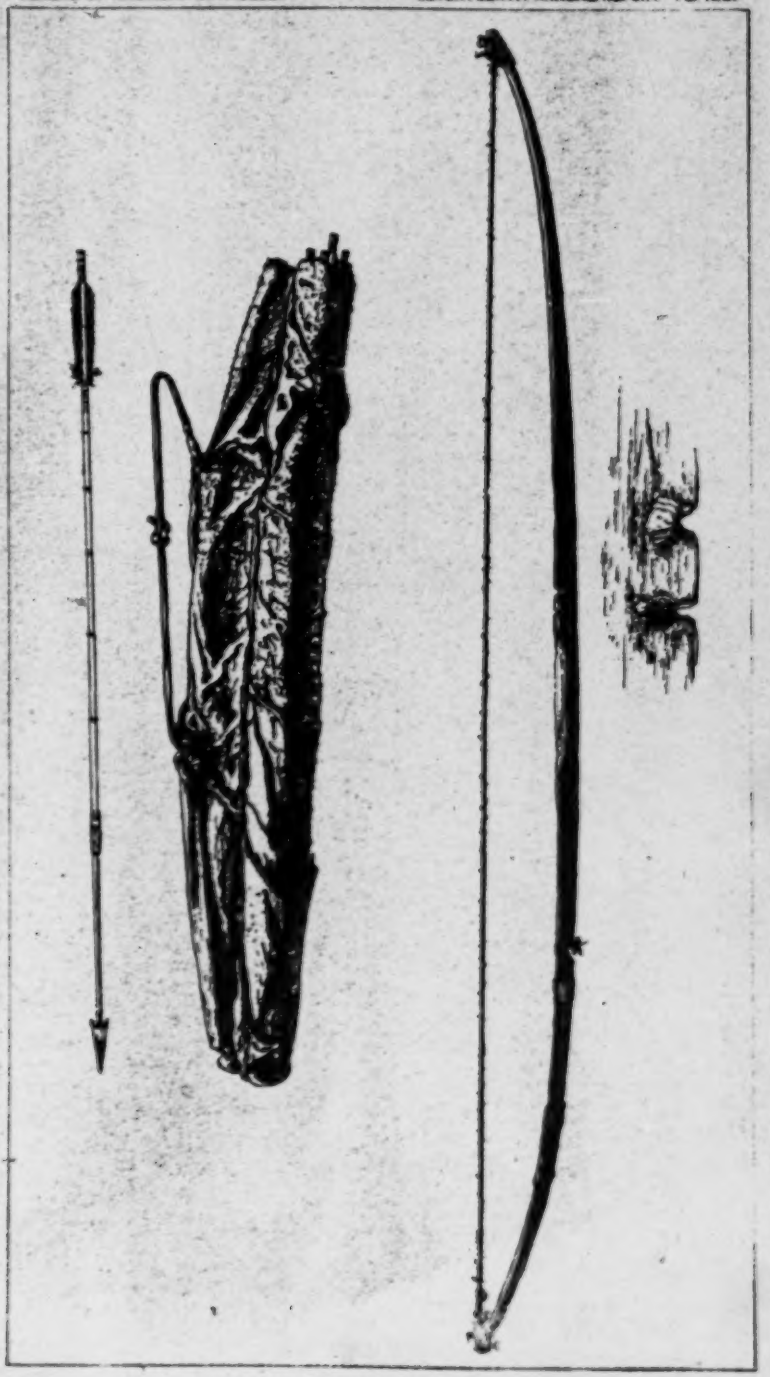

SERI BOW, ARROW, AND QUIVER

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

strong wrench on the horns or stunned with a blow of war-club or hupf, as conditions may demand. Straggling swine and wandering dogs are occasionally ambushed or stalked and transfixed with arrows, torn hurriedly into fragments, or shouldered and carried off struggling, as exigency may require; while sheep and goats are practically barred from the entire Seri frontier because of their utter helplessness in the face of so hardy huntsmen.

The quantity of stock consumed by the Seri varies greatly with the policy of rancheros and vaqueros. At different times during the last two and a half centuries it has been estimated that the chief portion of the subsistence of the tribe was derived from stolen stock, and it is probable that during the early period of the Encinas régime this

FIG. 23—Dedicated pork.

estimate was fair; but under the Draconian rule of a Seri head for each head of slaughtered stock, the consumption is reduced to a few dozen head annually, including superannuated, crippled, and diseased animals unable to keep up with the herds, those bogged in Playa Noriega and other basins during freshets, the stallions and bulls slain in strife for leadership of their bands, and the festering or semimummied carcasses gladly turned over by idle rancheros on the chance visits of Seri bands to the frontier (such as the specimen in the protograph reproduced in figure 23).

No special devices have been developed in connection with the chase for stock, nor has material progress been made in acquiring Caucasian devices. There are, indeed, indications of a disposition to use

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

177 224 knives in severing the tough integuments and tendons of horses and kine, although the tendency has not yet resulted (as elsewhere noted, ante, pp. 153–154) in the development of a knife-sense; and although boys on the frontier play at roping dogs, no effort to use the riata or any form of rope is made in the actual chase. As naively explained by Masbém amid approving grunts from his clan-mates, they have no time for ropes or knives when hungry.

262 A quantitatively unimportant yet by no means negligible fraction of the normal diet of Seriland is vegetal; and while the sources of vegetal food are many and diverse, the chief constituent is a single product characteristic of American deserts, viz, the tuna, or prickly pear.

222 All of the cacti of the region yield tunas in considerable quantity. The pitahaya is perhaps the most abundant producer, and its name is often given to the fruit; the huge saguaro affords an enormous annual yield, and the still more gigantic saguesa is even more prolific, especially in its immense forests along the eastern base of Sierra Seri; the cina adds materially to the aggregate product, while the nopal, or common prickly pear, contributes a quota acquiring importance from the facility with which it may be harvested. The fruits of all these cacti are sometimes classed as sweet tunas, in contradistinction from the sour tunas yielded in great abundance by the cholla and consumed with avidity by stock, though seldom eaten by men. The edible tunas average about the size of lemons, and resemble figs save that their skin is beset with prickles. The portion eaten is a luscious pulp, filled with minute seeds like those of the fig save that they are too hard for mastication or digestion, its flavor ranging from the sickly sweet of the overcultivated fig to a pleasant acidity. While occasional tunas may be found at any time during the year, the normal harvest occurs about midsummer, or shortly before the July-August humid season, and lasts for several weeks. During the height of the season the clans withdraw from the coast and give undivided attention to the collection and consumption of the fruits, gorging them in such quantities that, according to the testimony of the vaqueros, they are fattened beyond recognition. Commonly the tunas are eaten just as they are gathered, and the families and larger bands move about from pitahaya to pitahaya and from valley to valley in a slovenly chase of this natural harvest, until waning supply and cloying appetite drive them back to the severer chase of turtle and pelican. The fruit is not cooked, and never preserved save in the noisome way of nature, and is rarely transported in quantities or over distances of industrial importance; yet the product may have some connection with the basketry of the tribe. The devices for collecting the fruits, especially from the lofty saguaro and saguesa, are mere improvisations of harpoon shafts, palobianco branches, or chance cane-stalks carried primarily for arrow-making or balsa construction. [412]

1: McGee [illegible] (1894-1895)1898 NU31 Seri NU31

There is no such well-studied and semiceremonial apparatus for tuna gathering as, for example, the Papago device made from the ribs of the dead saguaro in accordance with traditional formula. 222 [412]

Perhaps second in importance among the vegetal constituents of Seri diet is the mesquite bean, which is gathered in random fashion whenever a well-loaded tree is found and other conditions favor. The woody beans and still woodier pods are roughly pulverized by pounding with the hupf on any convenient stone used as an ahst (metate or mortar), or, if suitable stones are not at hand, they are carried in baskets or improvised bags to the nearest shore or other place at which stones may be found. The half-ground grist is winnowed in the ordinary way of tossing in a basket; and the grinding and winnowing continue alternately until a fairly uniform bean meal is obtained. So far as was actually observed this is eaten raw, either dry in small pinches or, more commonly, stirred in water to form a thin atole; but expressions at Costa Rica indicated that the meal is sometimes stirred in boiling water or pot-liquor, and thus partially cooked, in times of rest and plenty. [262] 252

Other vegetal products used as food comprise a variety of seeds collected from sedges and grasses growing about the mud-flats of Laguna La Cruz and other portions of the province, as well as the seeds and nuts of the scant shrubbery of shores and mountains; while a local seaweed or kelp is eaten in small quantity, apparently as a condiment, and is sometimes carried on journeys even as far as Costa Rica, where specimens were obtained in 1894. 262

It is of interest to note that one of the most distinctive constituents of the Sonoran flora, and one intimately connected with human life in the great neighboring province of Papagueria, is of negligible rarity in Seriland; this is the visnaga (*Echinocactus*, probably of two or three species), the thornicst of the cacti and the only one containing consumable pulp and sap. This peculiar plant is of no small interest in itself as a striking example of the inverse relation between protective devices of chemical sort (culminating in acrid, offensive, or toxic juices) and the mechanical armaments so characteristic of desert plants;[1] it is of still deeper interest economically as the sole source of water over broad expanses of the desert, and one to which hundreds of pioneers and travelers have been indebted for their lives; and it is of interest, too, as a factor of Papago faith, in which the visnaga ranks among the richer guerdons of the rain gods. Throughout most of Papagueria this cactus is fairly abundant; usually there are several specimens to the square mile of suitable soil (it is not found in playas or on the ruggeder sierras), so that it is always within reach of the sagacious traveler; but it diminishes in abundance toward the borders of Seriland, and not more than a dozen examples were found in the portions of that province traversed by the 1895 expedition. Its rare occurrence, 137

[1] Cf. The Beginning of Agriculture, The American Anthropologist, vol. VIII, Oct., 1895, pp. 350-373.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

137 chiefly in the form of wounded and dwarfed specimens, seems to indicate that its original range comprised all Seriland; while its dearth suggests destruction nearly to the verge of extinction by improvident generations better armed with their hupfs and harpoons and shell cups than the subhuman beasts against whom the plant is so well protected.

285 415 Aside from the universally used hupf and ahst (which may be regarded as differentiated implements or tools), the only special device used in connection with vegetal food is the basket, or, rather, basketry tray (illustrated in figure 24). This ware is of the widespread coil type so characteristic of southwestern tribes. The coil is a wisp of stems and splints of a fibrous yet spongy shrub, apparently torote; and the woof consists of paloblanco (?) splints deftly intertwined by aid of an awl. The construction is fairly neat and remarkably uniform: the

FIG. 24—Seri basket.

coiled wisps vary somewhat in size, both intentionally and inadvertently, ranging from an average of three-eighths of an inch toward the bottoms of the larger specimens to half that diameter in the smaller specimens and toward the margins of the larger. The initial coil starts in an indefinite knot, rather than a button, at the center; and the spiral is continuous throughout, the final coil being quite deftly worked out to a single splint smoothly stitched to the next lower spiral with the woof splints. The ware is practically water-tight, remarkably strong and resilient, and quite durable in the dry climate of Seriland. Ordinarily the basket is abandoned when the bottom decays or breaks, but an ancient specimen obtained on Isla Tiburon was roughly rebottomed with a patch of sealskin attached by means of sinew. The baskets are notably uniform in shape, though the size varies from 8 or 9 inches to fully 17 inches in diameter.

The most striking feature of the Seri basketry, as of the pottery, is

I: McGee E-5 (1874-1895)1898 NU31 Seri NU31

extreme lightness in proportion to capacity, a quality due to the spongy character of the torute coil and to the thinness of the splints used in the woof. The inside dimensions, weight, and dry-measure capacity (filled to the level of the brim with rice) of two typical specimens approaching extremes in size are indicated in the accompanying table. As noted elsewhere, the ware is absolutely without decorative devices in weave, paint, or form; it is baldly utilitarian, a model of economy in material and in the balance between structure and function, approaching in this respect the thin-walled canteen-olla, the graceful balsa, and the light but effective harpoon. The structural correspondence of the ware to a widespread type and its limited use among the tribe suggest an aecultural origin for the Seri basketry; but the delicate adjustment of means to ends in the manufacture and the strictly local character of the material quite as strongly suggest an indigenous development.

285 415 [531] [174]

Museum No.	Diameter	Depth	Weight	Capacity
174529.....	38 cm. (15 in.)	9.5 cm. (3¾ in.)	482 g. (17 oz.)	6.25 l. (6.6 qt.)
174530a ..	23 cm. (9 in.)	5.0 cm. (2 in.)	142 g. (5 oz.)	1 l. (1.06 qt.)

It is impossible to portray justly the food habits of the Seri without some reference to a systematic scatophagy, which seems to possess fiducial as well as economic features. In its simplest aspect this custom is connected with the tuna harvests; the fruits are eaten in enormous quantity, and are imperfectly digested, the hard coated seeds especially passing through the system unchanged; the feces containing these seeds are preserved with some care, and after the harvest is passed the hoard (desiccated, of course, in the dry climate) is ground between hupf and ahat, and winnowed in baskets precisely as are the mesquite beans; and the product is then eaten either dry or in the form of atole like the mesquite meal. In superficial view this food factor is the precise homologue of the "second harvest" of the California Indians as described by Clavigero, Baegert,[1] and others; but it gains importance, among

262 514 [251] [252] [171]

[1] "An Account of the Aboriginal Inhabitants of the Californian Peninsula, as given by Jacob Baegert, a German Jesuit missionary. . . . Translated and arranged for the Smithsonian Institution by Charles Rau: Ann. Rep. Smithsonian Inst. for 1863, pp. 392-399. Baegert's account of foods (pp. 395-397) is so opposite as to be worthy of quotation nearly entire:

"Notwithstanding the barrenness of the country, a Californian hardly ever dies of hunger, except, perhaps now and then an individual that falls sick in the wilderness and at a great distance from the mission, for those who are in good health trouble themselves very little about such patients, even if these should happen to be their husbands, wives, or other relations; and a little child that has lost its mother or both parents is also occasionally in danger of starving to death, because in some instances no one will take charge of it, the father being sometimes inhuman enough to abandon his offspring to its fate.

"The food of the Californians, as will be seen, is certainly of a mean quality, yet it keeps them in a healthy condition, and they become strong and grow old in spite of their poor diet. The only period of the year during which the Californians can satisfy their appetite without restraint is the season of the pitahayas, which ripen in the middle of June and abound for more than eight weeks. The gathering of this fruit may be considered as the harvest of the native inhabitants. They can eat as much of it as they please, and with some this food agrees so well that they become corpulent during that period; and for this reason I was sometimes unable to recognize at first sight individuals, otherwise perfectly

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

262 514 the Seri at least, as the sole method of storing or preserving food-supplies, and hence as the germ of industrial economy out of which a

060 familiar to us, who visited us after having fed for three or four weeks on these pitahayas. They do not, however, preserve them, and when the season is over they are put again on short rations. Among the roots eaten by the Californians may be mentioned the yuka, which constitutes an important article of food in many parts of America, as, for instance, in the island of Cuba, but is not very abundant in California. In some provinces it is made into a kind of bread or cake, while the Californians, who would find this process too tedious, simply roast the yukas in a fire like potatoes. Another root eaten by the natives is that of the sisé plant, of which there are many kinds in this country. These species of this vegetable, however, which afford nourishment—for not all of them are edible—do not grow as plentifully on the Californians might wish, and very seldom in the neighborhood of water; the preparations, moreover, which are necessary to render this plant eatable, require much time and labor. . . . I saw the natives also frequently eat the roots of the common reed, just as they were taken out of the water. Certain seeds, some of them not larger than those of the mustard, and different sorts in pods that grow on shrubs and little trees, and of which there are, according to Father Piccolo, more than sixteen kinds, are likewise diligently sought; yet they furnish only a small quantity of grain, and all that a person can collect with much toil during a whole year may scarcely amount to 12 bushels.

"It can be said that the Californians eat, without exception, all animals they can obtain. Besides the different kinds of larger indigenous quadrupeds and birds, they live nowadays on dogs and cats; horses, asses, and mules; then, on ovis, mice, and rats; lizards and snakes; bats, grasshoppers, and crickets; a kind of green caterpillar without hair, about a finger long, and an abominable white worm of the length and thickness of the thumb, which they find occasionally in old rotten wood, and consider as a particular delicacy. The chase of game, such as deer and rabbits, furnishes only a small portion of a Californian's provisions. Supposing that for 100 families 100 deer are killed in the course of a year, which is a very favorable estimate, they would supply each family only with three meals in three hundred and sixty-five days, and thus relieve but in a very small degree the hunger and the poverty of these people. The hunting for snakes, lizards, mice, and field-rats, which they practice with great diligence, is by far more profitable and supplies them with a much greater quantity of articles for consumption. Snakes, especially, are a favorite sort of small game, and thousands of them find annually their way into the stomachs of the Californians.

"In catching fish, particularly in the Pacific, which is much richer in that respect than the Gulf of California, the natives use neither nets nor hooks, but a kind of lance—that is, a long, slender, pointed piece of hard wood—which they handle very dexterously in spearing and killing their prey. Sea-turtles are caught in the same manner.

"I have now mentioned the different articles forming the ordinary food of the Californians; but, besides these, they reject nothing that their teeth can chew or their stomachs are capable of digesting, however tasteless or unclean and disgusting it may be. Thus they will eat the leaves of the Indian fig-tree, the tender shoots of certain shrubs, toasted or untoasted leather, old straps of rawhide, with which a house was tied together for years; then, the bones of poultry, sheep, goats, and calves; putrid meat or fish swarming with worms, damaged wheat or Indian corn, and many other things of that sort which may serve to appease the hunger they are almost constantly suffering. Anything that is thrown to the dogs will be also accepted by a Californian, and he takes it without feeling offended, or thinking for a moment that he is treated below his dignity. For this reason no one took the trouble to clean the wheat or maize, which was cooked for them in a large kettle, of the black worms and little bugs, even if the numbers of these vermin had been equal to that of the grains. By a daily distribution of about 12½ bushels of bran (which they are in the habit of eating without any preparation) I could have induced all my parishioners to remain permanently in the mission, excepting during the time when the pitahayas are gathered.

"I saw one day a blind man, 70 years of age, who was busily engaged in pounding between two stones an old shoe made of raw deerskin, and whenever he had detached a piece he transferred it promptly to his mouth and swallowed it; and yet this man had a daughter and grown grandchildren. As soon as any of the cattle are killed and the hide is spread out on the ground to dry, half a dozen boys or more will instantly rush upon it and commence to work with knives, flints, and their teeth, tearing and scratching off pieces, which they eat immediately, till the hide is full of holes or scattered in all directions. In the window of St. Ignatius and in others further toward the north there are persons who will attach a piece of meat to a string and swallow it and pull it out again a dozen times in succession, for the sake of protracting the enjoyment of its taste.

171 262 514 252 "I must here ask permission of the kind reader to mention something of an exceedingly disgusting and almost inhuman nature, the like of which probably never has been recorded of any people in the world, but which demonstrates better than anything else the whole extent of the poverty, uncleanness, and variety of these wretched beings. In describing the pitahayas I have already stated that they contain a great many small seeds resembling grains of powder. For some reason unknown to me these seeds are not consumed in the stomach, but pass off in an undigested state, and in order to save these the natives collect during the season of the pitahayas that which is discharged from the

1: McGee E-5 (1894-1895) 1898 NU31 Seri NU31

feeble thrift-sense may be regarded as emerging. And the rise of thrift in Seriland, like esthetic and industrial beginnings generally, is shaped

human body, separate the seeds from it, and roast, grind, and eat them, making merry over their herbaceous manna, which the Spaniards therefore call the second harvest of the Californians. [This statement is corroborated in all particulars by Clavigero in his Storia della California. Venice, 1789. vol. i, p. 117.] When I first heard that such a filthy habit existed among them I was disinclined to believe the report, but to my utter regret I became afterwards repeatedly a witness to the proceeding, which they are unwilling to abandon, like many other bad practices (probably because of the fiendish character of the centaur.—W J M.). Yet I must say in their favor that they have always abstained from human flesh, contrary to the horrible usage of so many other American nations who can obtain their daily food much easier than these poor Californians.

"They have no other drink but the water, and known be pained that they are unacquainted with such strong beverages as are distilled in many American provinces from Indian corn, the aloë, and other plants, and which the Americans in those parts mostly drink for the purpose of intoxicating themselves. When a Californian encounters during his wanderings a pond or pool, and feels a desire to quench his thirst, he lies flat on the ground and applies his mouth directly to the water. Sometimes the horns of cattle are used as drinking vessels.

"Having thus far given an account of the different articles used as aliment by the aborigines of the peninsula, I will now proceed to describe in what manner they prepare their victuals. They do not cook, boil, or roast like people in civilized countries, because they are neither acquainted with these methods nor possessed of vessels and utensils to employ for such purposes; and, besides, their patience would be found beyond endurance if they had to wait till a piece of meat is well cooked or thoroughly roasted. Their whole process simply consists in burning, singeing, or roasting in an open fire all such victuals as are not eaten in a raw state." Without any formalities, the piece of meat, the fish, bird, snake, field mouse, lizard, or whatever it may be is thrown into the flames or on the glowing embers, and left there to smoke and to sweat for about a quarter of an hour; after which the article is withdrawn, in most cases only burned or charred on the outside, but still raw and bloody within. As soon as it has become sufficiently cool, they shake it a little in order to remove the adhering dust or sand, and eat it with great relish. Yet I must add here, that they do not previously take the trouble to skin the mice or disembowel the rats, nor deem it necessary to clean the half-emptied entrails and maws of larger animals, which they have to cut in pieces before they can roast them. Seeds, locusts, grasshoppers, grubs caterpillars, the white worms already mentioned, and similar things that would be lost, on account of their smallness, in the embers and flames of an open fire, are parched on hot coals, which they constantly throw up and shake in a turtle shell or a kind of frying pan woven out of a certain plant. What they have parched or roasted in this manner is ground to powder between two stones, and eaten in a dry state. Beans are treated in like manner.

"They eat everything unsalted, though they might obtain plenty of salt; but since they cannot dine every day on roast meat and constantly change their quarters, they would find it too cumbersome to carry always a supply of salt with them.

"The preparation of the aloë, also called *mezcale* or *mezquy* by the Spaniards, requires more time and labor. The roots, after being properly separated from the plants, are roasted for some hours in a strong fire, and then buried, twelve or twenty together, in the ground, and well covered with hot stones, hot ashes, and earth. In this state they have to remain for twelve or fourteen hours, and when dug out again they are of a fine yellow color, and perfectly tender, making a very palatable dish, which has served me frequently as food when I had nothing else to eat, or as dessert after dinner in lieu of fruit. But they act at first as a purgative on persons who are not accustomed to them, and burn the throat somewhat rough for a few hours afterwards.

"To light a fire the Californians make no use of steel and flint, but obtain it by the friction of two pieces of wood. One of them is cylindrical, and pointed on one end, which fits into a round cavity in the other, and by turning the cylindrical piece with great rapidity between their hands, like a twirling stick, they succeed in igniting the lower piece if they continue the process for a sufficient length of time.

"The Californians have no fixed time for any sort of business, and eat, consequently, whenever they have anything, or feel inclined to do so, which is nearly always the case. I never asked one of them whether he was hungry who failed to answer in the affirmative, even if his appearance indicated the contrary. A meal in the middle of the day is the least in use among them, because they all set out early in the morning for their foraging expeditions, and return only in the evening to the place from which they started, if they do not choose some other locality for their night quarters. The day being thus spent in running about and searching for food, they have no time left for preparing a dinner at noon. They start always empty-handed, for if provisions something remains from their evening repasts they certainly eat it during the night in waking moments or on the following morning before leaving. The Californians can endure hunger easier and much longer than other people; whereas they will eat enormously if a chance is given. I often tried to buy a piece of venison from them when the skin had but lately been stripped off the deer, but regularly received the answer that nothing was left; and I knew well enough that the hunter who killed the animal needed no assistance

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

262 by faith and attendant ceremony; for the doubly consumed food is
514 credited with intensified powers and virtues, and held to be specially potent in the relief of hunger and in giving endurance for the hard warpath or prolonged chase; it is—and makes—very strong ("mucho fuerte"), in the laconic and confident explanation of Maahém. Incongruous as the custom is to higher culture, it finds natural suggestion in the everyday habits of the tribe, who are wonted not only to the eating of animal entrails in raw and uncleaned condition, but especially to the relief of the sharpest pangs of hunger by means of the soft structures and their semiassimilated contents—an association of much influence in primitive thought. Concordantly with the custom and the faith grown out of it, the excreta in general take a prominent place in the Seri mind; the use of urine in ablution, etc, is little understood and may be passed over; but all bony *feces*—and it may be noted that the "sign" of the Seri more resembles that of wolves or snake-eating swine than that of men—following gorges of large quarry are customarily located and kept in mind for recourse in time of ensuing shortage, when the mass is ground on the abat and reconsumed; and even the ordinary discharge is preserved during the seasons of less reliable
514 food-supply.
764 There is an obscure connection between this curious and repulsive food custom of the Seri and the mortuary customs of the tribe, which

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000 to finish it. Twenty-four pounds of meat in twenty-four hours is not deemed an extraordinary ration for a single person, and to see anything eatable before him is a temptation for a Californian which he cannot resist; and not to make away with it before night would be a victory he is very seldom capable of gaining over himself."

Clavijero's account of the food-habits of the California Indians is similar, though generally less explicit. According to him the seeds forming the "second harvest of pitahayas" are extracted carefully while fresh, and are afterward roasted, ground, and preserved in the form of meal against the ensuing winter. Of the rumination habit, he says:

"The savages living in the northern part of the peninsula have found the secret, unknown to mortals in general, to eat and re-eat the same meal repeatedly. They tie a string around a mouthful of meat dried and hardened in the sun. After chewing it for a while they swallow it, leaving the string hanging from the mouth. After two or three minutes, by means of the string they draw the meat up again to be rechewed, and this they repeat as many times as may be necessary until the morsel is consumed or so softened that the string will not hold it any longer. In extracting it from the throat they make such a noise that to one who has not before heard it it appears that they are choking themselves.

"When many individuals are gathered together to eat in this manner it is practised with more ceremony. They seat themselves on the ground, forming a circle of eight or ten persons. One of them takes the mouthful and swallows it, and afterwards draws it up again and passes it to the next one, and this one to another, proceeding thus around the circle with much enjoyment until the morsel is consumed. This has astonished the Spaniards who have seen it, and indeed it would not be credible if it had not been unanimously testified to by all who have been in that country. Several Jesuits who did not believe this, notwithstanding that eleven and prominent persons confirmed it, having afterwards gone to California saw it with their own eyes. Among those Indians who have embraced Christianity this loathsome and dangerous method of eating has been abandoned in consequence of the continual reproofs of the missionaries." (Historia de la Antigua ó Baja California, obra postuma del Padre Francisco Javier Clavijero: Mexico, 1852, p. 24.)

171 The records of Clavigero and Burgert indicate fair correspondence in the food habits of the Californian Indians and the Seri, though there are certain noteworthy differences, e. g., the taboo of the basket
262 among the former and of the ground squirrel among the latter; it would also appear that the Californians were the more largely vegetarian and the better advanced in culinary processes. The customs of the Seri throw light on the *grounds of* "re-eating", for the process would appear to be but an extension of the repeated mouthing and swallowing of tendinous strings still attended to the bones of larger animals.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

514 764 was not detected until the opportunity for personal inquiry had gone by. About the rancherias on Isla Tiburon, and especially about the extensive house-group at the base of Punta Tormenta, there are burial places marked by cairns of cobbles, or by heaps of thorny brambles where cobbles are not accessible; and most of these cairns and bramble-piles are supplemented by hoards of desiccated feces carefully stored in shells, usually of *Area* (a typical specimen is illustrated in figure 25). The hoards range from 50 to 500 shells in quantity, and there were fully a score of them at Punta Tormenta alone. About the newer rancherias, as at Rada Ballena, where there are no cemeteries, the hoards are simply piled about small clumps of shrubbery. The meaning of the association of the dietetic residua and death in the Seri mind is not wholly clear; yet the connection between the "strong food" for the warpath and the

[262] [415]

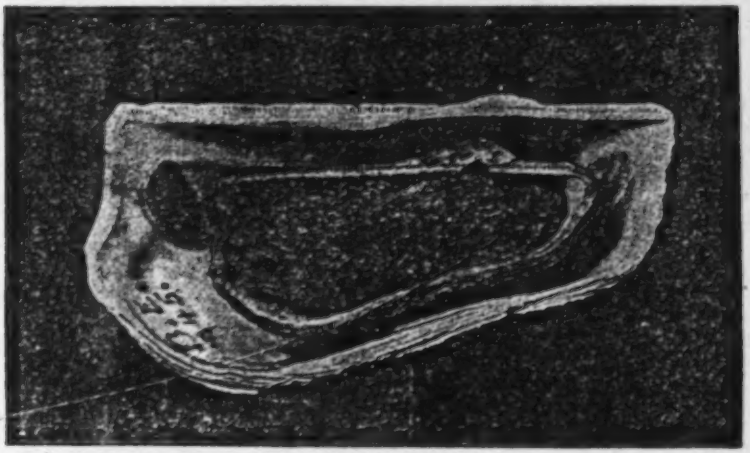

FIG. 25—Scatophagic supplies.

mystical food for the manes in the long journey to the hereafter is close enough to give some inkling of the meaning.[1]

262 In recapitulating the food supplies of the Seri it is not without interest to estimate roughly the relative quantities of the several constituents consumed; and the proportions may be made the more readily comprehensible by expression in absolute terms. As a basis for the quantitative estimate, it may be assumed that the average Seri, living, as he does, a vigorous outdoor life, consuming, as he does, a diet of less average nutrition than the selected and cooked foods of higher culture, and attaining, as he does, an exceptional stature and strength, eats something more than the average ration; so that his ration of solid food may be lumped at 2.75 pounds (about 1,250 grams) daily, or 1,000

[1] Cf. Scatologic Rites of all Nations, by Captain John G. Bourke, 1891, especially chapter IX, pp. 439-469. The Seri custom, resting as it does, on an evident economic basis, tends to explain the scatophagy of the Hopi and other tribes described by Bourke.

1: McGee E 5 (1894-1895)1898 NU31 Seri NU31

262 [162] pounds (about 455 kilograms) yearly. The aggregate diet of the tribe may be estimated also by assuming the population to comprise 300 full eaters, besides, say, 50 nurslings negligible in the computation; so that the annual consumption of the tribe may be reckoned at 300,000 pounds (136,000 kilograms), or 150 tons, of solid food. Accordingly the several constituents may be estimated, as shown in the accompanying table, in percentages of the total, in pounds aggregate and apiece for the eaters, and (so far as practicable) in units both aggregate and apiece; the weights of units being roughly averaged at 100 pounds (45 kilograms) for turtles, 12½ pounds (5.6 kilograms) for large land game, 450 pounds (about 200 kilograms) for stock, and 2 ounces (56.7 grams) for tunas.

Estimated annual dietary of the Seri tribe

Constituents	Per cent	Quantity		Units	
		Aggregate	Apiece	Aggregate	Apiece
		Pounds	*Pounds*		
Turtles	25	75,000	250	750	2½
Pelicans	5	15,000	50	1,200	4
Other water-fowl and eggs	6	24,000	80	.....	.....
Fish	15	45,000	150	.....	.....
Shellfish (except turtles)	10	30,000	100	.....	.....
Large land game	7	21,000	70	280	¼
Other land game	8	24,000	80	.....	.....
Stock	8	18,000	60	40	⅐
Tunas	9	27,000	90	216,000	720
Other vegetals	5	15,000	50	.....	.....
Miscellaneous	2	6,000	20	.....	.....
Total	100	300,000	1,000	.....	.....

Of course the constituents vary with temporary conditions; during "The Time of the Big Fish", practically all other sources of food were neglected until the providential supply was exhausted; during the decades of main subsistence on stolen stock it is probable that the consumption of other constituents, perhaps excepting the tunas, was proportionately reduced; and it is not improbable that during the warfare between Seri and Tepoca, described by Hardy, the consumption of turtles was materially diminished. Judging from the direct and indirect data and from [illegible] analogies, the least variable constituent is the cactus fruit, which probably fails but rarely and is so easily harvested as practically to supplant all other supplies during its season of a month or more. At the best, too, the quantitative estimates are nothing more than necessarily arbitrary approximations, based on incomplete inquiries and observations;[1] yet they are better than no estimates at all, and

[1] About 200 turtle-shells were noticed about the rancherias at Punta Tormenta and Isla Tiburon alone in 1895, all being less than two years old, as judged from the degree of weathering.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

appear to form a fairly trustworthy basis for consideration of the Seri food habits. 262

On reviewing the constituents it would appear that the Seri must be regarded as essentially a maritime people, in that about two-thirds of their food is derived from the sea; also that they must be deemed essentially carnivorous, since fully five-sixths of their diet (84 per cent plus a share of the miscellaneous—chiefly scatophagous—category) is animal. The tabulation does not show the relative proportions of the several constituents cooked and eaten raw, but the best available data indicate that fully three-fourths of the ordinary dietary, both animal and vegetal, is ingested in raw condition, and that the greater part of the remaining fourth is imperfectly cooked.

In recapitulating the devices for food-getting, it is found that nearly 182
all of the more distinctive artifacts and crafts are either directly or indirectly connected with that primary activity of living things, food-conquest. Foremost among the distinctive artifacts of the Seri, in its relation to daily life and in its technical perfection, is the canteen-olla; probably second in importance, and also in technical perfection, is the balsa—whose functions, however, extend beyond simple food-getting; next comes the crude and simple, yet economically perfected, turtle-harpoon, with its variants in the form of arrow (with a function in warfare as well as in food-getting) and fire-drill; while the light basket-tray, although capable of carrying ten to twenty-five times its own weight, is perhaps the least perfect technically of the artifacts directly connected with sustentation. And it should be noted that the prevailing tools—hupf, ahst, multifunctional shell, and awl of mandible or bone or tooth—have either an immediate or a secondary connection with food-getting.

NAVIGATION

At first sight Seriland seems an abnormal habitat for a primitive 131
people, since its land area is cleft in twain by a stormy strait—a strait whose terrors to the few Caucasian navigators who have reached its swirling currents are indicated by their appellations, "El Canal l'eligroso de San Miguel"[1] and "El Infiernillo"; for such a stretch of troubled water is commonly a more serious bar to travel than any moderate land expanse. This intuitive notion of the effectiveness of a water barrier, and the correlative feeling of the incongruity of a land barrier insuperable for centuries, is well illustrated by prevailing opinion throughout northwestern Mexico; for it is commonly supposed in Sonora and neighboring states that Seriland is conterminous with Isla Tiburon, i. e., that the mainland portion of the province (including Sierra Seri with its flanking footslopes) lies beyond the diabolic channel. Yet longer scrutiny shows that the superficial impression merely mirrors Caucasian thought and fails to touch the essential conditions,

[1] Hardy, Travels, p. 281.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

131 especially as they are reflected in the primitive minds of the local tribe; and careful study of the habits and history of the Seri shows that the dangerous strait has been a potent factor in preserving tribal existence and perpetuating tribal integrity. Naturally the factor operates through
502 navigation; for it is by means of this art that the tribesmen are able to
609 avoid or to repel the rare invaders of either mainland or insular portions of their province, the overland pioneers from the east being stopped by the strait and the maritime explorers from south and west being unable to maintain themselves long about the stormy shores and never outfitted for pushing far toward the mainland retreats and strongholds; while by means of their light and simple craft the Seri were able to retreat or to advance across the strait as readily as over the adjacent lands to which they were wonted by the experience of generations. In their minds, indeed, El Infiernillo is the nucleus of their province. So the Seri were among the lowliest learners of that lesson of highest statecraft, that lands are not divided but united by intervening sea; and their ill formulated and provincial notions are of much significance in their bearing on autochthonous habits and habitats.

501 The water craft of which the Seri make so good use is a balsa, made of three bundles of carrizal or cane lashed together alongside, measuring barely 4 feet abeam, 1½ feet in depth, and some 30 feet in length over all. A fine specimen (except for a slight injury at one end) is shown in plan and profile in plate XXXI. It was obtained near Ilots Infierno in 1895, partly towed and partly paddled thence to Embarcadero Amirante, wagoned laboriously across Desierto Encinas and on to Hermosillo, conveyed in an iron-sheathed box on two gondolas of the narrow-gage Ferrocarril de Sonora to the international frontier, and finally freighted to the United States National Museum, where (in the Mall just outside the building) the photographs reproduced in the plate were taken.

3% The manufacture of the balsa has never been seen by Caucasian eyes, but the processes are safely inferred from the structure, whose testimony is corroborated in part by Mashém's imperfect descriptions. The first step is the gathering of the carrizal from one of the patches growing about the three or four permanent fresh waters of Seriland, the canes being carefully selected for straightness, symmetry, and uniformity in size; these are then denuded of leaves and tassels, tied in bundles of convenient size (one seen on Tiburon contained 40 or 50 canes), and carried to the shore. In actual construction the canes are laid butt to butt, but overlapping 2 or 3 feet, the overlap being shifted this way and that with successive additions, so that the aggregate length of overlapping in the bundle reaches 10 or 12 feet—i. e., the full length of the body of the finished craft. The growing bundle is wrapped from time to time with lashings of mesquite root or maguey fiber, and kept in cylindrical form by constant rolling and by means of the lashing; though the cord used for the purpose is so slender as to do little more than serve the purposes

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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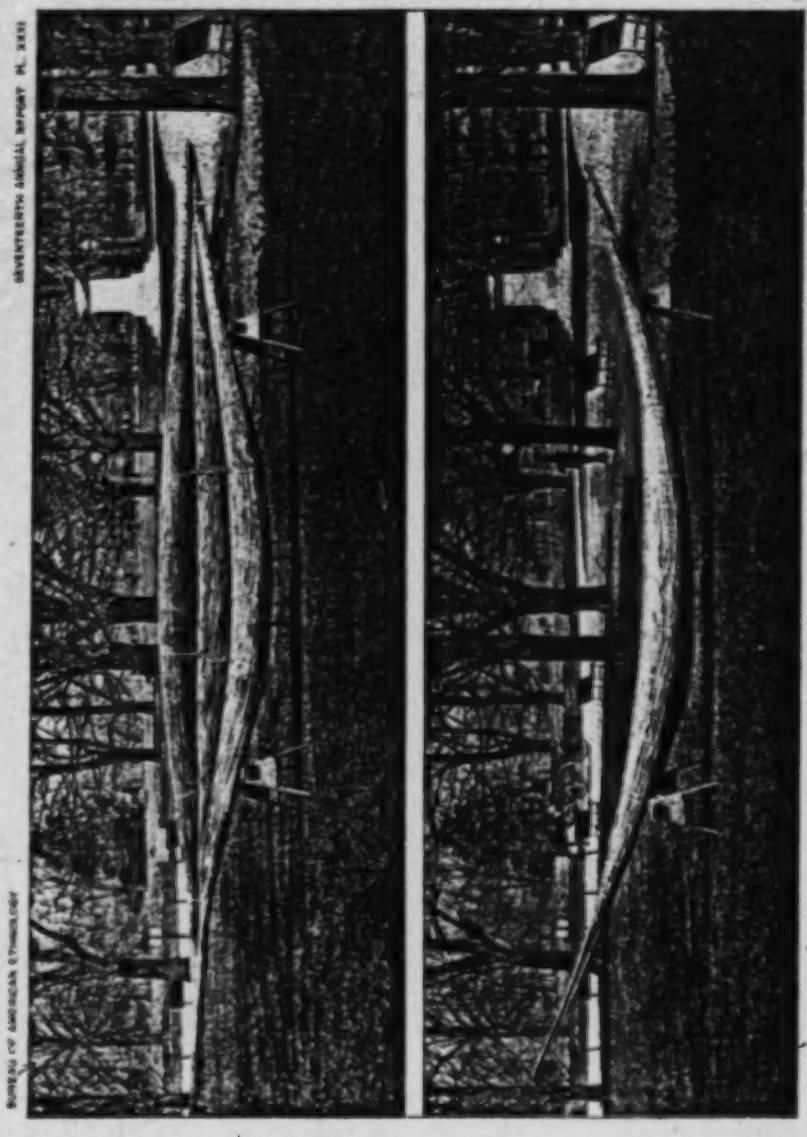

SERI BALSA IN THE NATIONAL MUSEUM

[FACING p. 214]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

of manufacture (only stray shreds of the interior cording could be found in an old and abandoned balsa on Punta Antigualla). As the bundle approaches the requisite size, the building process changes; the butts of the successively added stalks are thrust obliquely into the interstices extending beyond the butts of earlier-used canes, and the stems are slightly bent to bring them into parallelism with their fellows; and this interweaving process is continued with increasing care until, when the bundle is completed, there are no visible butts (all being pushed into the interior of the bundle), while the only visible tips are those projecting to form the tapering extremities. The finished bundle is then secured by a spiral winding of slender cord. Two other bundles are next made, the three being entirely similar, so far as is known; then the three are joined by a lashing of slender cord like that used for the separate bundles, which is twined alternately above and below the central bundle in such manner as to hold the three in an approximate plane save toward the extremities, where the lashing is much firmer and the tapering tips of the bundles are brought into a triangular position, i. e., the position of smallest compass. The cordage is of either mesquite root or maguey fiber, the former being the more common, so far as observed (doubtless by reason of the dearth of the latter plant); it is notably uniform in twist and size, though surprisingly slender for the purpose, barely three-sixteenths of an inch, or 5 mm., in diameter, and limited in quantity.[1] The only tools or implements used in the manufacture (and repair), so far as is known, are light wooden marlinspikes, two of which are illustrated in figure 26; these are used in working the cane-butts into the bundles. In collecting the canes the tassels are broken off and the leaves stripped by the unaided hands, while the stalks are broken off usually below the secondary roots in the downward taper, and the rootlets and loose ends are removed either with the hands or by fire.

The finished balsa is notably light and buoyant. The Boca Infierno specimen was estimated to weigh about 250 pounds (113 kilograms) when thoroughly dry, and little more than 300 pounds (126 kilograms)

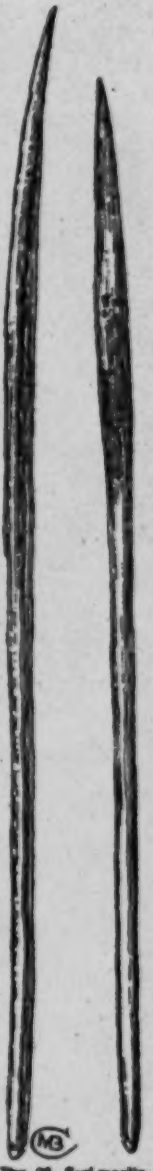

FIG. 26—Seri marlinspikes.

[1] Only the finer cording shown in plate XXXI is original, the coarser ropes having been added to facilitate handling.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

501 when completely wet; so that it could easily be picked up by three or four, or even by two, strong men and carried ashore to be hidden in the fog-shrubbery skirting the coast. The craft floated high with one man aboard, rode better with two, carried three without much difficulty even in a fairly heavy sea, and would safely bear four adults aggregating 600 pounds (272 kilograms) in moderate water. The most striking features of the craft afloat are its graceful movement and its perfect adaptation to variable seas and loads. The lines are symmetric and of great delicacy, as indicated even by the photographs out of its element; the reed-bundles are yielding, partly by resilience and partly in the way of set, so that the body of the craft curves to fit the weight and distribution of the load and to meet the impact of swells and breakers. In smooth water a lightly laden balsa may appear heavy and logy, but with a heavier load and stronger sea each tapering end rises strongly and then recurves slightly in a Hogarthian line graceful as the neck of a swan, while the whole craft skims the waves or glides sinuously over their

FIG. 27.—The balsa afloat.

crests in a lightsome way, recalling the easy movement of gull or petrel. A suggestion of its effect is shown in figure 27, a composite drawn largely from photographs; another suggestion is shown in figure 28, reproduced in facsimile from a drawing by the artist of the U. S. S. *Narragansett* in 1873,[1] the only known picture of the craft antecedent to the 1895 expedition.

Almost equally striking features of the balsa are its efficiency and safety under the severe local conditions. Carrying twice its weight of (chiefly) living freight, it breasts gales and rides breakers and stems tiderips that would crush a canoe, swamp a skiff, or capsize a yawl; while if caught in currents or surf and cast ashore it is seldom wrecked, but drops lightly on beach or rocks, to be pushed uninjured by the broken wave-tips beyond the reach of pounding rollers, even if it is not at once caught up by its passengers and carried to complete safety. The strength of the craft is amazing, especially in view of the slender-

[1] [illegible] Hydrographic Office, Bureau of Navigation, 1874, plate xv, p. 138.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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ness of the cords used in construction; in fact, the outer layers of canes are so ingeniously interlocked by the insertion of their butts into interstices that each bundle holds itself together with slight aid from the exterior cording, while even the bundles themselves are held in proper relative position by the secure terminal tying rather than by the intertwined cording of the body of the craft. And the entire construction exemplifies the compartment principle to perfection; a slight injury may affect but a single joint of one out of several thousand canes, while even a severe fall on sharp rocks seldom injures more than a few score canes, and these in a few joints only. The most objectionable feature of the balsa lies in the fact that it affords little protection from the wet. The water rises freely through the reed bundles to a height depending on the load, and not only the spray but the whitecaps and combers as well dash freely over the unprotected body of the craft; but this defect is of little consequence to the hardy and nearly nude navigators, or to their scanty and practically uninjurable freight.

FIG. 28—Seri balsa as seen by Norwegenwett party.

502

The gracefulness and efficiency of the balsa itself stand in strong contrast with the crude methods of propulsion. According to Mashém, the craft is commonly propelled by either one or two women lying prone on the reeds and paddling either with bare hands or with large shells held in the hands; according to Hardy, the harpoon main shaft is used by turtle fishermen for paddling (and probably for poling, also); according to the Dewey picture (figure 28), the vessel is driven by a woman with a double-end paddle like that used in connection with the conventional canoe; while the expedition of 1895 found on Isla Tiburon four or five paddles rudely wrought from flotsam boards and barrel-staves, and partly hafted with rough sticks 3 or 4 feet long, but partly without handles and evidently designed to be grasped directly, like the shells of Mashém's descriptions. No trace of oars, rowlocks, sculls, rudders, or masts were found, and there is nothing to indicate the faintest notion of sails and sailing. On the whole there is no trace of well differentiated propelling devices—i. e., the craft is perfected only as a static device and not at all as a dynamic mechanism.

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1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

22 Despite their poverty in propelling devices, the Seri navigate their
502 waters successfully and extensively. Perhaps the commonest function of the craft is that exercised in connection with the turtle fishery, though its chief office as a factor of general industrial economy is that of bridging El Infernillo at the will of the roving clans. It is by means of this craft, also, that the semiceremonial pelican feasts on Tiburon are consummated; it is by the same means that Isla Patos, Isla Turner, Roca Foca, and other insulated sources of food-supply are habitually reached; and both Mashém's accounts and the Jesuits' records indicate that occasional voyages are pushed to San Esteban, San Lorenzo, Angel de la Guarda, and even to the Baja California coast.

Concordantly with the tribal customs, little freight is carried. The traveling family transport their poor possessions to the shore, bring out the balsa from its hiding place in the thick and thorny fog-shrubbery, launch it, bale it with a filled olla and the weapons of a man and implements of a woman, besides any chance food and clothing, and embark lightly to enjoy the semirepose of drifting before the breeze—until the rising gale brings labor still more arduous than that of scouring the spall-strewn slopes or sandy stretches of their hard motherland. Commonly the terminus of the trip is fixed largely by the chance of wind and tide; and when it is reached the party carry the craft inshore, conceal it shrewdly, and then take up their birdskin bed and walk forth in search of fresh water and meat. The successful fishing trips of course end in orgies of gorging, and when the voyage is the climax of a foray to the mainland frontier for stock-stealing, the quarters and paunches and heads hastily thrown aboard at the mainland side of the strait are carried to the rancherias for consumption at leisure; and this has happened so often that equine hoofs and bovine bones are common constituents of the middens on Tiburon.

171 Although measurably similar to Central American and South Amer-
501 ican types of water-craft, the Seri balsa is a notably distinct type for its region. The California natives, as well as those of the mainland of Mexico south of Rio Yaqui, used rafts made either of palm trunks or of other logs lashed alongside rather than balsas; while the far-traveling tribes used either sails or well-differentiated paddles for propulsion.

501 Briefly, the Seri balsa is remarkable for perfect adaptation to those needs of its makers shaped by their distinctive environment. It seems to approach the ideal of industrial economy—the acme of practicality—in the adjustment of materials and forces to the ends of a lowly culture; and, like the olla and harpoon and arrow, it affords an impressive example of the adjustment of artifacts to environment through the intervention of budding intelligence. Yet the chief significance of the craft would seem to reside in its vestigial character as a survival of that orarian stage in the course of human development

I: McGee E-5 (1894-1895)1898 NU31 Seri NU31

in which men lived alongshore and adjusted themselves to maritime conditions rather than to terrestrial environments; a stage evidently but barely passed by the Seri, since they still subsist mainly on sea food, still retain their suggestive navigation, and still view their stormy straits and bays as the nucleus and noblest portion of their province. 501

HABITATIONS

Among the Seri, as among primitive folk generally, the habitation reflects local conditions, especially climate and building materials. Now, Serriland is a subtropical yet arid tract, where rain rarely falls, frost seldom forms, and snow is known only as a fleeting mantle on generally distant mountains, so that there is little need for protection from cold and wet; at the same time the district is too desert to yield serviceable building material other than rock, which the lowly folk have not learned to manipulate. Moreover, the tribesmen and their families are perpetual fugitives (their movements being too erratic and aimless to put them in the class of nomads); they are too accustomed to wandering and too unaccustomed to long resting at particular spots to have a home-sense, save for their motherland as a whole; and, just as they rely on their own physical hardihood for preservation against the elements, so they depend on their combined fleetness and prowess for preservation against enemies. Accordingly, the Seri habitation is not a permanent abode, still less a domicile for weaklings or a shrine for household lares and penates, not at all a castle of proprietary sanctity, and least of all a home; it is rather a time-serving lair than a house in ordinary meaning. 182 342

Despite the poverty of the material and the squalor of the structure, certain features of the Seri jacal are notably uniform and conventional. In size and form it recalls the passing "prairie schooner", or covered wagon; it is some 10 or 12 feet long, half as wide measured on the ground, and about 4½ feet high, with one end (the front) open to the full width and height, and the other nearly or quite closed. The conventional structural features comprise the upright bows and horizontal tie-sticks forming the framework. The bows are made of okatilla stems (*Fouquiera splendens*) roughly denuded of their thorns; each is formed by thrusting the butts of two such stems (or more if they are slender) into the ground at the requisite distance apart, bending the tops together into an overlap of a yard or two, and securing them partly by intertwisting, partly by any convenient lashing; and about five or six such bows suffice for a jacal (the appearance of the bows is fairly represented by the ruin shown in plate VII). Next come the tie-sticks, which consist of any convenient material (okatilla stems, cane-stalks, palobianco branches, mesquite roots, saguaro ribs, etc.), and are lashed to the butts by means of withes, splints, or fiber wisps, at a height of some 4 feet above the ground, or about where the walls merge into the roof. With the placing of these sticks the conventional part 342

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342 of the building process may be said to end; for up to this point the process is a collective one and the materials are essentially uniform, while thereafter the completion of the work depends largely on individual or family caprice, and the materials are selected at random. Moreover, the framework is fairly permanent, usually surviving a number of occupancies extending over months or years, and outlasting an equal number of outer coverings; so that all habitable Seriland is dotted sparsely with jacal skeletons, sometimes retaining fragments of walls or roof, but oftener entirely denuded.

The conversion of the framework into a habitable jacal is effected by piling around and over it any convenient shrubbery, by which it is made a sort of bower; sometimes the conversion is aided by the attachment of additional tie-sticks both above and below the main horizontal pieces, as illustrated in the upper figure of plate IX; sometimes, too, the material of walls and roof is carefully selected and interwoven with such pains as to form a rude thatch, as in the chief jacal at Rada Ballena (the upper figure in plate VI); but more commonly the covering is collected at random and is laid so loosely that it is held in place only by gravity and wind pressure, and may be dislodged by a change of wind. Ordinarily the walls are thicker and denser than the roofs, which are supplemented in time of occupancy by haunches of venison, remnantal quarters of cattle and horses, half-eaten turtles, hides and pelts, as well as bird-skin robes, thrown on the bows partly to keep them out of reach of coyotes and partly to afford shade. Most of the jacales about the old rancheria at Punta Tormenta (abandoned at "The Time of the Big Fish"), which may be regarded as the center of the turtle industry, are irregularly clapboarded with turtle-shells and with sheets of a local sponge, as illustrated in plate VII. This sponge abounds in the bight of Rada Ballena, where at high water it spreads over the silty bottom in a slimy sheet, and at low water with off-shore gales is left by the waters to dry into a light and fairly tenacious mat, which is gathered in sheets for bedding as well as for house making material (a specimen of the sponge—probably *Chalina*—is shown on larger scale in plate VIII). On the frontier the jacales may be modified by the introduction of sawed or riven lumber, as illustrated by some of the structures at Costa Rica (shown in plate XI); but even here there is a strong disposition to adhere to the customary form, and especially to the conventional framework, as indicated by the example in plate X.

361 While the jacales are not consistently oriented, they reveal a primary preference for facing away from the prevailing wind and toward the nearest sea, with a secondary preference for southern and eastern exposures—the former preference being easily explained, since a gale from the front quickly strips walls and roof and scatters the materials afar. No definite order is observed in the placement of the several jacales in the larger rancherias; apparently the first is located at the choice of the leading elderwoman, and the others are clustered about it at the com-

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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PAINTED OLLA, WITH OLLA RING

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mon convenience. Usually the several jacales are entirely separate; but at Punta Tormenta, Punta Narragansett, and still more notably at Bada Ballena, individual huts were found either extended to double length or joined obliquely in such wise as to show two fronts (as illustrated in plate VI). The conventional frameworks appear to be common tribal property, at least to the extent that an abandoned skeleton may be preempted by any comer; while the addition of walls and roof appears to afford a prescriptive proprietary right to the elderwoman and family by whom the work is done—though the right seems to hold only during occupancy, or until the temporary covering is dislodged.

The jacales are without semblance of furnishing, beyond an occasional shat and a few loose pebbles used as hnpfs; though the nooks behind the bows and tie-sticks sometimes serve as places of concealment for paint-cups, awls, hair bobbins, and other domestic trifles. There is no floor but earth, and this remains in natural condition, except for trampling and wearing into wallows, recalling those of fowls and swine, which afford a rough measure of the periods of occupancy; there is no fireplace—indeed, fires are rarely made in the jacales, nor for that matter frequently anywhere; and there are no fixed places for bedding, water ollas, or other portable possessions, none of which are left behind when the householders are abroad.

Little is known of the actual process of jacal building, especially in Seriland proper; but the observations of Señor Encinas and his vaqueros on the frontier corroborate Mashém's statements that the houses are built by (and belong to) the matrons; that several women customarily cooperate in the collection of the okatilla and erection of the framework; that the only tools used in the processes are hnpfs and miscellaneous sticks; and that the placing and fitting of the beams and tie-sticks are accompanied by a chant, usually led by the eldest matron of the group. The same informants support the ready inference from the structure that the shrubbery and other material forming walls and roofs are gathered and placed from time to time by the women occupying the jacales.

The Seri building chant is suggestive. Neither Señor Encinas nor Mashém regarded it as religious or even ritualistic, but merely as a work-song designed (in the naive notion of the latter) to make the task lighter; and it seems probable that the local interpretation is correct. If so, the simple chant at once offers rational explanation for its own existence, and opens the way to explanation of the elaborate building rituals of more advanced tribes. The work-song is a common device in many lowly activities, ranging from those of children at play to those of sailors at the windlass, and undoubtedly serves a useful purpose in guiding, coordinating, and concentrating effort; to some extent the vocal accompaniment to the manual or bodily action apparently expresses that normal interrelation of functions manifested by second-

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

182 ary sense-effects (as when the sense of smell is intensified by exercise
342 of the organs of taste), or, in another direction, by the habit of the
533 youthful penman who shapes his letters by aid of lingual and facial contortion; yet it is a characteristic of primitive life—one doubtless due to the interrelations of psycho-physical functions—to not only employ but to greatly exalt vocal formulas associated with manual activities, so that words, and eventually *the* Word, acquires a mystical or talismanic or sacred significance pervading all lower culture—indeed the savage shaman is unable to work his marvels without mumbled incantations ending in some formulated and well-understood utterance, and his practice persists in the meaningless mummery and culminating "presto" of modern jugglery. So, viewed in the light of psycho-physical causes and prevalent customs connected with vocal formulas, it would seem probable that the conventional features of the Seri jacales are crystallized in the tribal lore quite as effectually through the associated work-chants as through direct memory of the forms and structures themselves. And the simple runes chanted in unison by Seri matrons engaged in bending and lashing their okatilla house-bows apparently define a nascent stage in the development of the elaborate fiducial house-building ceremonies characteristic of various higher tribes; for the spontaneous vocal accompaniment tends naturally to run into ritual under that law of the development of myth or fable which explains so many of the customs and notions of primitive peoples.[1]

APPARELING

177 Slightly as they have been affected by three centuries of sporadic
291 contact with higher culture, the Seri reveal many marks of acculturation; and the most conspicuous of these are connected with clothing, especially on the frontier, where women and even warriors habitually wear a livery of subserviency in the form of cast-off Caucasian rags (as illustrated in most of the photographs taken at Costa Rica). Even in the depths of Seriland the native fabrics are largely replaced by white men's stuffs, obtained by barter, beggary, and robbery; yet it is easy to distinguish the harlequin veneer of borrowed trappings from the few fixed types of covering that seem characteristic.

The most distinctive piece of apparel is a kilt, extending from waist to knees, worn alike by men and women and the larger children. Aboriginally it was either a birdskin robe or a rectangle of coarse textile fabric, secured at the waist by a hair-cord belt; aculturally it is usually a rectangle of manta (coarse sheeting) or other stuff, preferably cotton or linen but sometimes woolen, fastened either by tucking in the corners or by a belt of cord. Good specimens of the aecultural cloth kilt worn by men and larger boys are illustrated in plates XVI

[1] The law of fable in its relation to primitive surgery is formulated in the Sixteenth Ann. Rep. Bur. Am. Eth., 1897, p. 22.

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and XIX; the birdskin kilt (put on for the purpose) is illustrated in plate XVIII, while the aboriginal fabric is fairly represented in plate XXIX. Although ordinarily worn as a kilt, the same article (temporarily replaced by an improvised substitute) serves other purposes at the convenience of the wearer; in the chase for tunas and for moving game it becomes a bag or pack-sheet; in case of cold rain it is shifted to the shoulders or the exposed side; during the siesta it is elevated on an shrub and a stick to serve as a canopy; at sleeping time generally it forms (especially when of birdskin) a bed, i. e., a combined mattress and coverlet; and in attack or defense the pelican skin is at once standard, buckler, and waving cape to confuse quarry or enemy after the manner of the toreador's cloak.

An almost equally distinctive garment is a short shirt or wammus, with long sleeves, worn by men and women but not by children; ordinarily it covers the thorax, missing connection with the kilt by a few inches, and so affording ventilation and space for suckling the teeming offspring. Unlike the kilt, it is an actual garment, fitted with sleeves and fastened in front with hair-cord strings. Although the Seri wammus corresponds fairly with a Yaqui garment, it seems practically certain that it is of local aboriginal design, and that it was made primitively of haircloth or native textiles (as illustrated in plate XXIX) and worn rather ceremoniously; but latterly it is made of manta and is worn habitually (at least by the women and on the frontier), though cast aside in preparation for any special task or effort—i. e., it is not connected with pudency-sense, save to a slight degree in the younger women. The form, function, and prevalence of the wammus are illustrated by the group shown in plate XIII, in which nearly all of the thirty-odd adults wear the garment.

These two articles constitute the ordinary wearing apparel of the Seri, though they are commonly supplemented (especially when both are of manta) by a pelican-skin robe, which is habitually carried to serve as bed or mackintosh, according to the chance of journey and weather, or as a shield in sudden warfare. No head-covering is used, save in the ceremonial masquerade, when the heads of animals are worn as masks,[1] or in aping Caucasian customs, especially on expeditions for barter (as illustrated in plate XII). Loose trousers of Mexican pattern are sometimes put on at frontier points, but are discarded in Serriland proper, save by Mashém, who maintains prestige partly by this borrowed badge of Caucasian superiority. Leggings and moccasins are eschewed, naturally enough, since they would afford little protection from the sharp spalls and savage thorns of the district, and would give lodgment for the barbed spines inevitably gathered in rapid chase or flight over cactus-dotted stretches; and the only foot-covering seen (save Mashém's boots) was a single sandal made from the rough skin of a turtle-flipper, apparently for ceremonial rather than practical use.

[1] Hardy (Travels, p. 330) describes the ceremonial wearing of the heads of deer with horns attached.

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291 [177] Of all the party at Costa Rica in 1894 subchief Mashém was the only one who wore Caucasian apparel with any air of comfort and fitness; yet even he, with hat and shirt, boots and breeches, and loose bandana about his neck in cowboy style (plate XVII), did not feel fully dressed without the slender hair-cord necklace of his kin in its wonted place. On the frontier improvised fig-leaves were sometimes put on the children of less than a dozen years (as illustrated by the standing infant shown in plate XIV, who was thus dressed hastily for her picture); and a common garb of the smaller children at Costa Rica, as they played about the rancheria or wandered in directions away from the white

[412] [854]

FIG. 29—Seri hairbrush.

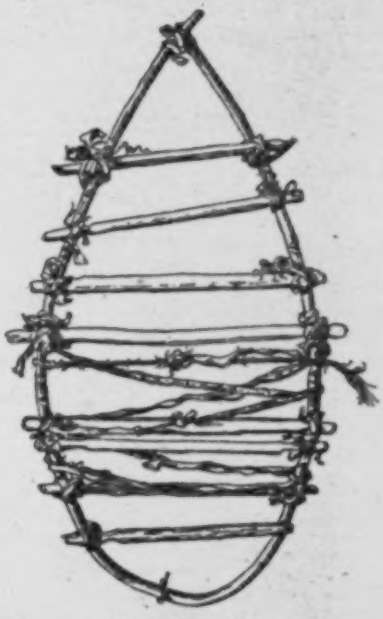

FIG. 30—Seri cradle.

man's rancho, was limited to a cincture of hair cord or snake skin, or perhaps of agave fiber, under which an improvised kilt might be tucked on the Caucasian's approach.

281 513 In addition to the individual apparel, each clan, or at least the elder-woman or her fraternal executive, accumulates some surplus material as opportunity offers, and this serves as family bedding until occasion arises for converting it to other uses. Of late the prevailing materials are pelican skins, lightly dressed and joined into robes by sinew stitching; deerskins, dried or partially dressed; cormorant skins, treated like those of the pelican; seal skins, usually fragmentary; peccary skins,

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PLAIN OLLA

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281 513 apparently dried without dressing, together with skins of rabbits, mountain sheep, antelope, etc, usually tattered or torn into fragments. Commonly the hides and pelts are nearly or quite in natural condition, retaining the hair, fur, or feathers. The dressing is apparently limited to scratching and gnawing away superfluous flesh, followed by some rubbing and greasing; tanning is apparently unknown. By far the most abundant of the collective possessions are the pelican-skin robes, which form [439] the sole article of recognized barter with aliens. The aggregate stock accumulated at any time is but meager, never too much to be borne on the heads and backs of the clan in case of unexpected decamping.

412 302 Aside from the painting paraphernalia, there is but a single conspicuous toilet article; this is a hair-brush made of yucca fiber bound into cylindrical form, as illustrated in figure 29. This article is in frequent use; both women and men give much attention to brushing their own long and luxurious locks and cultivating the hair and scalps of their children, the process being regarded as not only directly useful but in some measure sacramental. Ordinarily the hair is parted in the middle and brushed straight, the tresses being permitted to wander at will and never braided or bound or restrained by fillets save in imitation of Caucasian customs on the frontier; though in certain ceremonies the pelage is gathered in a lofty knot on the top-head.[1]

854 The Seri cradle is merely a bow of paloblanco or other switch with rude cross-sticks lashed on, as shown in figure 30. On this is laid a small pelican-skin robe, with a quantity of pelican down for a diaper, and perhaps a few pelican feathers attached as plumes to wave over the occupant's face; though on the frontier these primitive devices are largely replaced by rags.

283 Among the important appurtenances of Seri life are the cords used for belts and necklaces, as well as for the attachment of ceremonial headdresses, for converting the kilts into bags, and for numberless minor purposes. The finest of these are made from human hair; and for this purpose the combings are carefully kept, twisted into strands, and wound on thorns or sticks in slender bobbins, such as that illustrated

FIG. 29.—Hair spindle.

[1] W.J. Hoffman, Tenerife, p. 288.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

in figure 31. When the accumulation suffices the strands are doubled or quadrupled, as shown in figures 32 and 33, and the cords are either

FIG. 32.—Human-hair cord.

applied to immediate use or added to the matron's meager store against emergency demands. The cordage used for other purposes than apparel-

FIG. 33.—Horsehair cord.

ing is commonly made from fiber extracted either from the roots of the mesquite or the stipes of the agave; usually it is well twisted and notably

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

uniform in size and texture; an inferior example appears in figure 34. The manes and tails of horses and other stock are also converted into cordage, of which the chief known application is in toy riatas. It is of no small significance that the most highly prized cordage material is human hair, and that its chief uses are connected with the person; that the next in order of diminishing preciousness is that derived from the fibrous plants, which is used in balsa-making, bowstrings, harpoon cords, etc, as well as in the native fabrics; and that the least prized material is that derived from imported animals, which is largely limited in its utilization to youthful imitation of Caucasian industries; for the association of material with function reflects a distinctive feature of

283 [237]

FIG. 34.—Mesquite-fiber rope.

primitive thought, akin to that displayed in somewhat higher culture as synecdochic magic, the doctrine of signatures, etc.

Partly because of that decadence of aboriginal devices correlated with acculturation, partly by reason of imperfect observation, practically nothing is known of Seri spinning and weaving, and little of Seri sewing. The religiously-guarded hair-combings are twisted in the fingers and wound on stick-bobbins without aid of mechanical appliances; and, so far as has been observed, the final making of hair cords is merely a continuation of the strictly manual process. The agave stipes and mesquite roots are alleged by vaqueros to be retted in convenient lagoons and barrancas (a statement corroborated by the finding of half a dozen sections of mesquite root soaking in a lagoon near Punta Anti-

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

gualla by the 1895 expedition), and then hatcheled with the hupf or the edge of a shell; when the fibers are gathered in slender wisps or loosely wound coils, both of which were among the possessions of the Seri matrons at Costa Rica in 1894. So far as could be ascertained, the final processes parallel those of hair-cord making, i. e., the fibers are patiently sorted into strands, sized in the fingers and twisted by rolling on the thigh, the strands being subsequently combined in similar fashion.[1] Neither the weaving nor the woven fabrics of the Seri have ever been seen by technologic students so far as known, though the fabrics are shown in Von Bayer's photographs and have been described by various observers. According to Señor Encinas, they resemble coarse bagging, and are woven or netted quite plainly. The ordinary sewing material is sinew, used in connection with a bone awl (a good example of which is illustrated in figure 35), a fish

FIG. 35.—Bone awl.

FIG. 36.—Wooden awls.

spine or bone, a cactus thorn, or either the mandible of a water-bird or a hard-wood skewer shaped after this natural needle (figure 36 *a* and *b*). Sometimes hair or vegetal fiber is substituted for the sinew; and for certain purposes an agave thorn, with the fibers naturally attached, serves for needle and thread.

[1] A rope twisting device of the sort commonly employed by southwestern Indians was found in use by Seri boys at Costa Rica in 1894 and was included in the Seri collection, but the indications were that the device was a mere toy used, like the horse-hair rister made by the old, only in youthful sports.

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Summarily, the customary apparel of Seri men and women may be regarded as limited to three articles—(1) a kilt, normally of coarse textile fabric, which is made a prime necessity by a well-developed pudency; (2) a short wammus, also normally of coarse textile fabric, which is apparently regarded as a convenience and luxury rather than a necessity; and (3) a robe, normally of pelican skin, sometimes substituted for either or both of the other articles, but ordinarily used as bedding or as a buckler. The most valued of these articles is the robe, which in the absence of the others replaces the kilt; yet pudency demands the habitual use of some form of kilt, while both wammus and robe are held so far superfluous that they may be laid aside or bartered or otherwise dispensed with whenever occasion arises. 291

On considering the special functions and probable genesis of the Seri appareling, the student is impressed by the absence of the breech-clout, except perhaps in temporary improvisations—though the absence of this widespread article of primitive costumery need awaken little surprise in view of the environment, and especially of the abounding barbs of Seriland, which render all appareling of doubtful value save for the protection of tissues softened by habitual covering. The prevailing thorniness of the habitat renders the free-flowing and easily removable apron the most serviceable protection for the exposed vitals of the pubic region; and this device, a common one in thorny habitats generally, grades naturally into the short skirt or kilt; while it would well accord with the maritime habit and habitual thought of the Seri to apply the tough and densely feathered skin of the pelican to the purpose. This suggestion as to the nascent covering of the tribe consists with the tribal faith, in which the Ancient of Pelicans ranks as the creative deity, while its modern representative is esteemed a protective tutelary possessing talismanic powers against cold, wet, bestial claw and fang, alien arrows, and all other evils; so that the use of this feathered pelt as a shield against spiny shrubbery, sharp-leaved sedges, and barb-thorned cacti is quite in harmony with Seri philosophy. Accordingly it seems clear that the pelican-skin kilt was autochthonous among the Seri, and that it was the original form of tribal appareling; and it is of no small significance that the type persists in actual use as well as in suggestive vestigial forms, such as pelican-down swaddling for infants, pelican-feather plumes on cradle nets, etc. 182 291 [776] [774]

The passage from the pelican-skin kilt to the garment of textile fabric under the slow processes of primitive thought may not be traced confidently, though a strong suggestion arises in the Seri hair-cult (a Samsonian faith not without parallel in far higher culture) under which mystical powers and talismanic virtues are imputed to the human pelage. It is in connection with this cult that the Seri locks are so attentively cultivated and so assiduously preserved and consecrated to more intimate personal uses in belts, necklaces, and the like; and although the connecting links have not been found, it is thoroughly 174 291 826

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174 291 [826] In accord with Seri thought to assume that in earlier times the hair necklaces were expanded into rudimentary apparel in connection with pelican-skin shields, and after the conquest of vegetal fibers into more finished garments probably woven partly of hair and worn in such wise as to supplement the natural pelage in the protection of back, shoulders, chest, and arms. If the indication of the tribal cult be valid, it would appear that the wammus was the second piece of apparel in order of genesis, though the first to be made of artificial fabric; and it is noteworthy that the suggestion is supported by the form of the short and free-flowing garment underlying the flowing tresses of warriors and matrons, as well as the vestigial use of human-hair cords for neckbands and fastening strings; while its antiquity in comparison with the textile kilt is indicated by the fact that it is a finished artifact, evidently fitted to its functions by generations of adjustment.

The step from the making of the wammus to the substitution of artificial fabrics for the pelican-skin kilt was an easy and natural one; and it need only be noted that the transition is still incomplete, since the feathered pelt is unquestioningly substituted for the fabric whenever occasion demands, yet that the kilt in some form must be much more archaic than the wammus, since it is correlated with the pudency sense,[1] while the complete garment is not so correlated save in slight and incipient degree.

Accordingly the three articles of apparel may be seriated genetically as (1) the pelican-skin robe, used long as a kilt, and only lately relegated to emergency use and bedding; (2) the well-differentiated wammus of textile fabric with hair-cord fastenings; and (3) the textile kilt, with or without a hair-cord belt. And the three artifacts are local and presumptively—indeed manifestly—autochthonous, and exemplify the interdependence of artifacts and environment no less strikingly than the Seri balsa or basket or jacal.

TOOLS AND THEIR USES

000 In advanced culture tools are finished products, made and used in accordance with preconceived designs or established arts for the production of commodities; in primal life (as well exemplified by Seri handicraft) tools are mere by-products incidental to the largely instinctive activities directed toward the maintenance of life. Accordingly, the tools of advanced culture form the nucleus of industries, while the designless tools of the prime cluster about the outskirts of industrial

[1] In this writing the conclusion reached in an unpublished discussion of the beginning of clothing is assumed—i. e., that the primal apparel was purely protective, and that the habitual concealment of portions of the body incidental to its wearing gradually planted the pudency sense. The germ of clothing, without attendant pudency, is well illustrated in Karl von den Steinen's observations and discussions of the Brazilian natives (Unter den Naturvölkern Zentral-Brasiliens, Berlin, 1894, pp. 190-199). It is noteworthy that the Seri, more primitive as they are in so many respects than any other American aborigines known, are much farther advanced than the Brazilian natives in apparelling and its effects on character. The similarities and the differences are alike interesting; yet in both cases the costumes reflect environmental conditions and needs with remarkable fidelity.

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activities; i. e., in developed industries the tool is a primary factor while in nascent industries it is but a collateral.

The tools of any primitive tribe may be defined as appliances used primarily in the production of implements and utensils, and incidentally in preparing food, making habitations, manufacturing apparel, building vehicles or vessels, etc—in short, the appliances used in producing devices for the maintenance of active life. The definition emphasizes both the dearth and the undifferentiated character of Seri tools; for the appliances used in the production of devices are exceedingly few, and are commonly employed also in food-getting or in other vital industries.

Perhaps the most conspicuous general fact in connection with Seri tools and their uses is the prevalence of natural objects employed either (1) in ways suggested by natural functions or (2) in ways determined by the convenience of users; the former grading into artificial devices shaped in similitude of natural objects and employed in ways suggested by natural functions.

Prominent among the natural objects employed in natural ways are mandibles of birds, used in piercing pelts and fabrics; fish spines and bones, also used as piercers; thorns of cacti and mimosas, used in similar ways; teeth and horns of game animals, used in rending their own tissues, and afterward in miscellaneous industrial processes; together with cane splints, used for incising. Frequently the employment of such objects is mere improvisation; yet, so far as could be ascertained through direct observation at Costa Rica, through Mashém's incomplete accounts, and through inquiries from residents on the frontier, even the improvisations are made in accordance with regular custom firmly fixed by associations—quite in the way, indeed, of primitive life generally, and of the physiologic and psychic processes from which primitive custom is so largely borrowed. With these objects may be grouped the turtle-shells and pelican-pelts used as shields against alien and animal enemies or as protectors against the elements; and the Seri sages would class with them the deer-head masks and deer-hoof rattles worn in the dance to at once symbolize and invoke strength and swiftness. One of the most striking among the artificial devices of symbolic motive is the piercer, or awl, of wood or bone, shaped in imitation of the avian mandible; yet still more significant in a vestigial way (provided the most probable inference as to genesis be valid) is the hard-wood foreshaft of arrow and harpoon, shaped and used in trenchant symbolism of the deadly tooth.

There are two conspicuous classes of natural objects employed in ways determined largely by the convenience of the users, viz, (*a*) marine shells and (*b*) beach pebbles.

The marine shells applied industrially comprise the prevailing local genera, *Cardium*, *Mactra*, *Arca*, *Chama*, and others. They are used ordinarily as drinking-cups, dishes, dippers, receptacles for fats and fare-

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

paints, and as small utensils generally; and they are used nearly as commonly for scraping skins, severing animal and plant tissues, digging graves and waterholes, propelling balsas, and especially for scraping reeds and sticks and okatilla stems in the manufacture of arrows, harpoons, bows, balsas, and jacal-frames—indeed, the seashell is the Seri familiar, the ever-present handmate and helper, the homologue of the Anglo-Saxon Jack with his hundred word-compounds, a half-personified reflex of habitual action and thought. Ordinarily—always, so far as is known—the shells are used in the natural state, i. e., either in the condition of capture and opening for the removal of the animal, or in the condition of finding on the beach. For certain purposes the fresh and sharp-edged shell is doubtless preferable, and for others the well-worn specimen (like the paint cup illustrated in plate XXVII) is chosen; but everything indicates that the need for smoothed shells is met by selecting wave-worn specimens, and nothing indicates that the value of the appliance is deemed to be enhanced by wear of use—in fact, the abundance of abandoned shells about the rancherías and camp sites, and over all Seriland for that matter, indicates that the objects are discarded as easily as they are found along the prolific shores.

Next to the shells, the most abundant industrial appliances of the Seri are beach pebbles or cobbles. They are used for crushing shell and bone, for rending the skins of larger animals, for severing tendons and splintering bones, as well as for grinding or crushing seeds, uprooting canes, chopping trees and branches, driving stakes, and for the multifarious minor purposes connected with the manufacture of arrows and balsas and jacales; they are also the favorite women's weapons in warfare and the chase, and are sometimes used in similar wise by the warriors. The material for these appliances paves half the shores of Seriland, and is available in shiploads; and its use not only illustrates Seri handicraft in several significant aspects, but illumines one of the more obscure stages in the technologic development of mankind.

The cobble-stone implements of the Seri range from pebbles to bowlders, and there is a corresponding range in function from light hand-implements at one end of the series to unwieldy anvils and metates at the other end. The intermediate sizes are not infrequently utilized, and are customarily used interchangeably, the smaller of any two used in conjunction serving as the hand implement and the larger as the anvil or metate; yet there is a fairly definite clustering of the objects about two types, a larger and more stationary class, and a smaller and more portable one.

The Seri designation for the larger stone implement is that applied to rock generally, viz, *aást* (the vowel broad, as in "father"); and it seems probable that the term is onomatopoetic, or mimetic of the sound produced in the use of the implement as a metate, and that its application to rocks generally is secondary. The designation applied to the

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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DOMESTIC ANVIL, SIDE

THE HOLLISTON PRINTING CO., BOSTON

[p. 234A]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

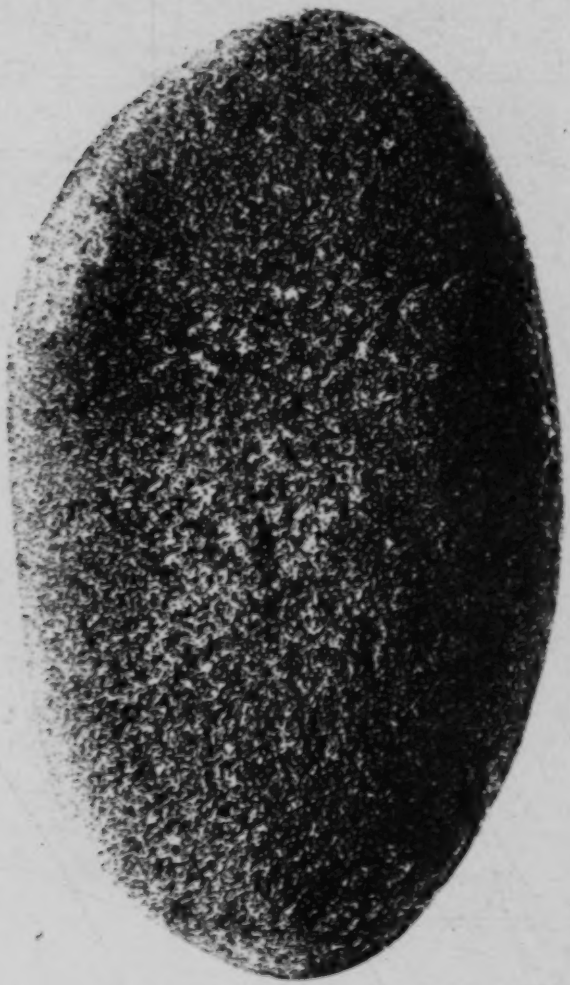
412

DOMESTIC ANVIL, TOP

(p. 234 B)

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

412



DOMESTIC ANVIL, BOTTOM

THE HOLLISTON PRINTING CO., BOSTON

[p.034C]

I: McGee 2-5 (1894-1895)1898 NU31 Se[illegible] NU31

smaller implement is *hupf* or *hupf* (the initial sound explosive, combining the phonetic values of *h* and *k*; the vowel nearly as in "put", or like "oo" in "took"); the term is clearly an onomatope, imitating the sound of the blow delivered on flesh, on a mass of partially crushed mesquite beans, etc—indeed, both the word and the sound of the blow seem to connote food or eating, while regular pounding with the implement (either in ordinary use or by special design) is a gathering signal. So far as ascertained, the term is not extended to other objects save potential implements in the form of suitable pebbles; but it is significant that there is no distinction in speech—nor in thought, so far as could be ascertained—between the natural pebble and the wear-shaped implement.[1] The local terms ahst and hupf are explicit and specific, and without precise equivalents in other known tongues; moreover, the objects designated are too inchoate in development and hence too protean in function to be appropriately denoted by the designations of implements pertaining to more differentiated culture (mortar, metate, pestle, muller, mano, etc). Accordingly it seems desirable to retain the Seri designations.[2]

A typical specimen of intermediate size, used commonly as an ahst, but susceptible of employment as a hupf, is illustrated (natural size) in plates XXXV and XXXVI.[3] It is a hard, tough, hornblende-granite or greenstone, with a few structure-lines brought out by weathering and wave-wearing. Its weight is 4 pounds 10 ounces (2.10 kilograms); its form and surface are entirely natural, save for slight battering shown on the two principal faces and still less conspicuous bruises along one edge (as imperfectly shown toward the left of plate XXXV). The specimen was found in a jacal (illustrated in plate VI) on Rada Ballena, within a few hours after abandonment, in the position in which it was hastily left by the last users; it was smeared with blood and fat (which still remain, as is shown in plate XXXV) and bits of flesh, and bore bloody finger prints of two sizes—those of a man and those of a woman or large child; beside it lay the hupf depicted in plate XLII. In its last use the unwieldly cobble served as an ahst, but the markings on the edge record use also as a hand implement.

A functionally similar implement is illustrated in plate XXXVII (on reduced scale; maximum length 8½ inches = 210 cm.). It is of tough

[1] The failure to discriminate natural objects from artificialized implements produced from such objects by wear of use is a noteworthy trait of primitive folk. It is conspicuous among the acorn Indians of California, who fail to appreciate the manufacture of their own mills and who conceive that their bowlder mortars and creek pebble pestles, even when completely artificialized by a generation's use, are merely found and appropriated, and a similar state of mind persists among the well-advanced Papago, who have no conception of making their well-finished mortars and pestles, or even the stone tomahawks occasionally surviving, but regard the implements as fruits of discovery or treasure-trove only.

[2] It should be noted that the terms used in the titles of the accompanying plates are not denotive, but merely descriptive.

[3] This, like the other illustrations of the series (except plate LVI, which is a lithograph, partly pure line and partly handwork), are photo-mechanical reproductions made directly from the objects; all are natural size unless otherwise specified.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

412 but slightly vesicular and pulverulent volcanic tuff, pinkish-buff in color, and weighs 4 pounds 1 ounce (1.84 kilograms). The form and surface are almost wholly natural, save for slight battering about the larger end and severer battering, with the dislodgment of a flake, about the thinner end; yet the faces are smeared with blood and grease and flecked with turtle debris, and bear a few marks of hupf blows, as is shown in the reproduction. This specimen was found at a temporary camp of a small party on Punta Miguel, where it had been used in breaking up a turtle—the camp having been abandoned so precipitately that a considerable part of the quarry, with this hupf, the abst illustrated in plate LIV, the turtle-harpoon shown in figure 20, the half-made fire, and the fire-sticks used in kindling it, were left behind. The specimen is a good example of the cobbles carried into portions of the territory lacking the material (the camp at which it was found was on the great sandspit forming the eastern barrier of Boca Infierno, several miles from the nearest pebbly shore); it is of less specific gravity than the average rocks of the region, and looks still lighter by reason of its color and texture. Similar cobbles abound along the eastern coast of Tiburon, being derived from the immense volcanic masses of Sierra Kunkaak.

About the more permanent rancherias and on many abandoned sites lie abstas usually too heavy for convenient transportation. In the habitable jacales such stones form regular household appurtenances, without which the menage is deemed incomplete; though the implement is commonly kicked about at random, often buried in debris (perhaps to be completely lost, and brought to light only by geologic changes, as demonstrated by the shell-heap of Punta Antiguallo), and pressed into service only in case of need. An exceptionally well-worn specimen of the kind is illustrated in plate XXXVIII (scale one half linear; maximum width measured on base, 9¼ inches = 235 cm.). The material is a hard, ferruginous, almost jaspery quartzite, somewhat obscurely laminated. It weighs 10 pounds 11 ounces (4.85 kilograms). It is a natural slab, evidently from a talus rather than the shore, its native locus being probably the western slope of Sierra Seri. The edges and apex are formed by natural fractures; the most-used face (that shown in the plate) is a natural structure plane; the obverse side is partly a similar plane, partly irregular; while the base is an irregular fracture, evidently due to accident after the specimen had been long in use, though the fracture occurred years or decades ago, as indicated by the weathering of the surfaces. The entire face of the slab is worn and more or less polished by use as a metate, the wear culminating toward the center of the base (evidently the center of the original slab), where the hollowing reaches some three-sixteenths of an inch (5 mm.); yet even in the depths of the incipient basin the polished surface is broken by irregular pitting of a sort indicating occasional use as an anvil. The edges are quite unworn, but the smoother portion of the obverse is

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DOMESTIC ANVIL (REDUCED), TOP AND SIDE

THE HELIOTYPE PRINTING CO., BOSTON

Cp. 336 A)

I: McGee E-5 (1894-1895)1898 NU31 Seri NU31

1: McGee E-5 (1894-1895)1896 NU31 Seri NU31

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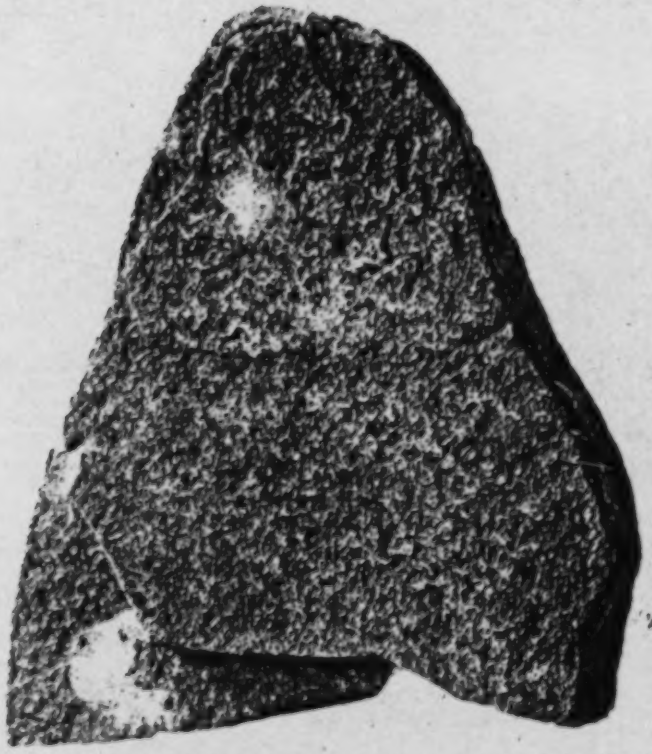

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METATE (REDUCED), EDGE AND TOP

THE HELIOTYPE PRINTING CO., BOSTON

[p. 236 B]

1: McGee ...-5 (1894-1899):1899 NU31 Se... NU31

worn and polished like the face, though to a less degree. The specimen was found at a recently occupied jacal, midway between Punta Antigualla and Punta Ygnacio; it lay in the position of use, though half concealed by a cholla thrown over it, with the hupf shown in plate LVII; it was soaked with fat and smeared with the debris and intestinal contents of a turtle, as partly shown in the illustration. 412

The largest abat seen in Seriland is illustrated in plates XXXIX and XL, on a scale of one-third linear (its maximum length being 15¾ inches = 395 cm.); it is a dark, fine-grained silicious schist or quartzite, quite obscurely laminated; it weighs 33 pounds 8 ounces (15.20 kilograms). It is a natural slab, probably washed from a talus and slightly wave-worn; it might have come originally from either the southwestern flanks of Sierra Seri or the more southerly half of Sierra Kunkaak—certainly hundreds of similar slabs strew the eastern shore of Bahia Kunkaak, while the western shore, especially about Punta Narragansett, would yield thousands. Its artificial features (aside from miscellaneous battering) are limited to grinding of the two faces defined by structure planes. The principal face is abraded into an oblong or spoon-shape basin, about 8 inches (20 cm.) long, 5 inches (16 cm.) broad, and fully three-fourths of an inch (2 cm.) deep, the basin penetrating two or three laminæ of the slab in such wise as to produce the annular markings faintly shown in plate XXXIX; the obverse is slightly rubbed and ground and somewhat battered, like the face of the preceding specimen; and both sides are flecked with a fine but dark flour-like substance (doubtless derived from grinding mesquite beans, etc) forced into the texture of the stone by the grinding process. The entire slab is greasy and blood-stained, while battered spots about the edges and angles of the principal face record considerable use as an anvil for breaking up quarry—indeed, shreds of turtle flesh and bits of intestinal debris still lodge in some of the interstices. The specimen was taken from the old ranchería at the base of Punta Tormenta, where it had apparently been in desultory use for generations.

A sort of connecting link between abat and hupf is afforded by elongate beach pebbles, such as that illustrated in plate XLI, which lay beside the large abat last described, and which bears a few inconspicuous marks of use in slight battering at both ends, with a few shreds of turtle flesh about the blunter extremity (at the right on the plate). The specimen is shown natural size; it is of pinkish-gray trachyte (?), and weighs 1 pound 12 ounces (0.79 kilograms). It is noteworthy chiefly as an illustration of the Seri mode of seizing and using hand-implements (a mode repeatedly observed at Costa Rica in 1894); the pebble comfortably fits the Caucasian hand, held hammerwise; it is intuitively grasped in this way, and when so seized and used with an outward swing forms an effective implement for bone-crushing, etc, the natural striking-point being near the free end; but the centripetally moving Seri invariably seizes the specimen in such manner that the

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

412 free end is directed inward, while the thumb laps over the grasped end, when the strokes are directed downward and inward, the striking-point being the extreme tip of the free end. A similar specimen is illustrated in plate XLII. It is of tough and homogeneous hornblende-granite, somewhat shorter and broader than its homologue, but of exactly the same weight; it, too, is battered at the ends, but is otherwise quite natural in form. It was collected at Rada Ballena in conjunction with the abat illustrated in plate XXXV; and like that specimen it is soaked with blood and fat, and bore shreds of flesh when found. Both these elongate cobbles are of interest as representatives of a somewhat aberrant type; for the favorite form of hupf is shorter and thicker, as shown by the prevailing shapes, both in use and lying about the jacales—indeed, the elongate form is seldom used on the coast and never carried into the interior.

A typical hupf is illustrated in plate XLIII. The specimen is of fine-grained, dense, and massive quartzite, its homogeneity being interrupted only by a thin seam of infiltrated silica and by an obscure structure-plane brought out by weathering toward the thinner end. Its weight is 1 pound 14 ounces (0.85 kilogram). In general form and surface the specimen is an absolutely natural pebble, such as may be found in thousands along the shores of Seriland. Its artificial features are limited to slight battering about the edges, especially at the thinner end; partial polishing of the lateral edges by repeated handling (as imperfectly shown in the edge view); very perceptible polishing of both faces by use as a grinder; some fire-blackening on both sides; semisaturation with grease and blood; and the flecks of red face-paint shown in the reproduction. The specimen was obtained at Costa Rica after some days' observation of its use. The chief observed functions of this implement were as follows: (1) Skinning the leg of a partially consumed horse; this was done by means of centripetal (i. e., downward and inward) blows, so directed that the thinner end fell obliquely on the tissue, bruising and tearing it with considerable rapidity. (2) Severing tough tendons already sawed nearly through by rubbing over the edge of an abat, the hupf in this case being in the hands of a coadjutor and used in rather random strokes whenever the tissue seemed particularly refractory. (3) Knocking off the parboiled hoof of a horse to give access to the coffinbone. (4) Crushing and splintering bones to facilitate sucking of the marrow. (5) Grinding mesquite beans; the process being begun by vertical blows with the end of the implement on a heap of the pods resting on an abat, continued by blows with the side, and finished by kneading and rubbing motions similar to those of grinding on a metate. (6) Pounding shelled corn mixed with slack lime, in a ludicrously futile attempt to imitate Mexican cookery. (7) Chopping trees; in this case the implement was grasped in the centripetal manner and used in pounding and bruising the wood at the point of greatest bending under the pull of a coadjutor. (8) Cleaving and

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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LONG-USED METATE (REDUCED). TOP

THE HOLLISTER PRINTING CO., BOSTON

(p. 235 ff)

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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LONG-USED METATE (REDUCED, BOTTOM

[p. 238 8]

1t McCee E-5 (1894-1895)1898 NU31 Seri NU31

breaking wood for fuel. (9) Dethorning okatilla stems, by sweeping centripetal strokes delivered adzewise from top toward butt of a bunch of stems lying on the ground. (10) Severing a stout hair cord; in this use it was grasped between the knees of a matron squatting on the ground, while the cord was held in both hands and sawed to and fro over the one-roughened thinner end. (11) Supporting a kettle (shown in plate E) as one of the fire-stones used in frontier mimicry of the Papago custom. (12) Triturating face-paint by pounding and kneading; in one case the specimen served as a hand implement, while in another case it took the place of the shot, the ocher lump itself being struck and rubbed against it. (13) Beating a troop of dogs from a pile of bedding in a jacal; in this use the implement was held in the customary manner and used in swift centripetal blows, the matron relying on her own swiftness and reach and not at all on projection to come within reach of her moving targets; the blows usually landed well astern, and were so vicious and vigorous as to have killed the agile brutes had they chanced to fall squarely—indeed, one blow temporarily paralyzed a large cur, which escaped only by running on its fore feet and dragging its hind quarters. In most of these uses the specimen was employed in conjunction with an improvised shot in the form of a stone carried from the rancho. Several of the processes, notably those of tissue-tearing and dog-beating, were executed with a vigor and swiftness quite distinct from the sluggish lounging of the ordinary daytide and, indeed, partaking of the fierce exaltation normal to the Seri chase. When not in use the implement usually lay just within the open end of the owner's jacal, though it was often displaced and sometimes kicked about the patio for hours. It was one of perhaps a dozen similar implements brought across the desert from the coast by as many matrons. All were regarded as personal belongings pertaining to the custodians about as definitely as articles of apparel, though rather freely loaned, especially in the owner's clan. The specimen was purchased from the possessor, who parted from it rather reluctantly, though with the tacit approval of her clanswomen, at a rate implying considerable appreciation of real or supposed value. Three or four other matrons declined to barter their hupfs, either arbitrarily or on the plea that they were a long way from the source of supply.

A common variety of hupf is illustrated in plate XLIV. It is of pinkish, slaty tuff of rather low specific gravity, somewhat vesicular and pulverulent, though moderately hard and tough. It weighs 17 ounces (0.48 kilogram). In form and surface it is essentially a wave-worn pebble, doubtless derived originally from the volcanic deposits of Sierra Kunkaak. Its artificial markings are limited to slight battering about the edges, especially at the thinner end (as shown in the edge view); slight rubbing, striation, and semipolishing of the smoother face (shown in the plate); a few grease spots and a stain showing use in crushing sappy vegetal matter, also on this face; and an inconspicuous

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

412 fire-mark on the obverse. It was found in a recently abandoned jacal near Campo Navidad. It is one of the three tuff specimens among those collected, one of a dozen or two seen; perhaps 10 per cent of the implements observed in Seriland are of this material, and it is significant that this ratio is several times larger than the proportion of tuff pebbles to the entire paving of the beaches, so that the material seems to be a preferred one. The preference was indeed discovered at Costa Rica in 1894, where two or three of the more highly prized hupís were of this material, and where vague intimations were obtained that it is especially favored for meal-making, doubtless by reason of the association of color and texture—associations that mean much to the primitive mind, perhaps in suggesting that the grinding is easier when done by a soft implement. An economic reason for the preference is easily found in the lower specific gravity, and hence the greater portability of a hupí of ordinary size, of this material; but there is nothing to indicate that this economic factor is weighed or even appreciated by the Seri.

A typical pebble bearing slight marks of use is illustrated in plate XLV. It is of fine grained pinkish sandstone, probably tuffaceous, and is fairly hard and quite tough; it weighs 1 pound 9 ounces (0.71 kilogram). It is wholly natural in form and surface save for slight battering or pecking on the face illustrated, and for a few stains of grease and abundant marks of fire. It was found in a fire still burning (and abandoned within a half hour, as indicated by other signs) two or three miles inland from Punta Granita on the Seri trail toward Aguaje Parilla, whither it had evidently been carried from the coast.

A fairly common material for both hupís and ahets is highly vesicular basalt grading into pumice stone, the material corresponding fairly with a favorite metate material among the Mexicans. The rock was not certainly traced to its source, but seems to come from the northern part of Sierra Kunkaak. A typical hupí of this material is shown in plate XLVI; it weighs 1 pound 13 ounces (0.83 kilogram). It is wholly natural in every respect save for slight grinding and subpolishing, with some filling of interstices, on both faces. From the slight wear of this specimen, together with the absence of battering, and from similar features presented by others of the class, it may be inferred that implements of this material are habitually used only for grinding—for which purpose they are admirably adapted. The specimen emphasizes the importance of the hupí in Seri thought, for it was one of a small series of mortuary sacrifices from a tomb at Punta Escalante (ante, p. 230).

Throughout the surveys of Seriland, constant search was made for cutting implements of stone; and the nearest approach to success was exemplified by the specimen illustrated in plate XLVII. It is of bluish-gray volcanic rock (not specifically identified) of close texture and decided toughness and hardness; it weighs 10 ounces (0.28 kilogram). In greater part its form and surface are natural, but a projecting por-

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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NATURAL PEBBLE BEARING SLIGHT MARKS OF USE

[p. 240A]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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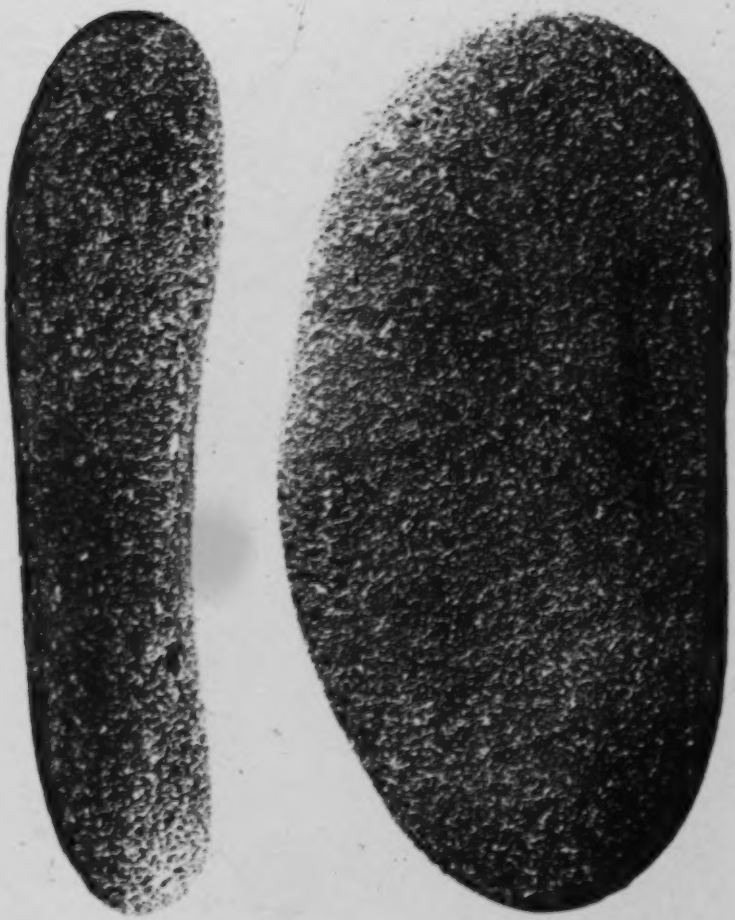

NATURAL PEBBLE USED AS BONE-CRUSHER

[p. 240 B]

1: McGee Z-5 (1894-1895)1898 NU31 S... NU31

tion brought out by weathering on one side is split off, presumably by intention, and the fractured surface thus produced is partly smoothed by rubbing, probably in use, though possibly by design. The edges are more or less battered, especially at the ends, and several rude flakes have been knocked off, evidently at random and presumably in ordinary use as an adz. The smoother face is wholly natural. The specimen was picked up in a jacal at Rada Ballena, but bore no marks of recent use. 412

A tuff implement of suggestively ax-like form is shown in plate XLVIII; it is firmer and less pulverulent but more vesicular than most implements of its class; it weighs but 7 ounces (0.20 kilogram). The specimen was picked up in a ruinous jacal, which had evidently been occupied temporarily within a fortnight, on the summit of the great shell-mound forming Punta Antigualla. The somewhat indefinite texture and color render it difficult to distinguish between natural and artificial features; but careful examination indicates that it is wholly natural in form and in nine-tenths of the surface, and that the ax-like shape expresses nothing more than accidents of structure and wave-work. This interpretation is practically established by the slight battering along the edges and about the smaller end, as illustrated in the edge view; for this wear of use, which has produced a distinctive surface, is practically absent from the notches which give the ax-like effect. Besides the battering, the only artificial marks are ancient fire-stains on one of the faces. On the whole it is clear that the artificial appearance catching the eye at first glance is purely fortuitous, and that the specimen is but a natural pebble very slightly modified by ordinary use.

A suggestive specimen is illustrated in plate XLIX; it is of purplish-gray granitoid rock, of decided toughness and considerable hardness, and weighs 12¼ ounces (0.35 kilogram). The surface and general form indicate that it is a natural pebble entirely without marks of artificial use; but the regular curvature of the principal face (the shape is that of a segment of a cylinder rounded toward the ends) suggests artificial shaping, while it was found far in the interior, near Barranca Salina, whither it must have been carried from the coast. It may possibly be a fragment of a pestle subsequently wave-worn; but all the probabilities are that it is wholly natural, and that its suggestive features are fortuitous.

The constant search for chipped or flaked tools which was extended over nearly all Seriland seldom met the slightest reward; but the specimen shown in plate L was deemed of some interest in connection with the search. It is of hard and tough greenstone, showing obscure and irregular structure lines, though nearly homogeneous in texture; it weighs 10 ounces (0.28 kilogram). It is primarily a natural pebble with form and surface reflecting structure and texture in connection with wave-action. Its artificial features are limited to the usual slight battering of the smaller end, still less conspicuous battering or grind-

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

412 ing of the margin about the larger end, slight but suggestive chipping of the thinner edge, inconspicuous hand-wear and polish on the principal face, and a few obscure scratches or striæ on the same face, as illustrated in the plate. The position and character of the flake-fractures, which are fairly shown in the edge view, indicate that they were made while the pebble was in use as a bruising or cutting tool, a use at once suggested to the Caucasian mind by the form of the pebble; yet it is noteworthy that its thin edge displays less battering than either end of the object and no more than the opposite and thicker edge, while it is still more significant that the specimen was apparently discarded immediately on the modification of form by the spalling—a modification greatly increasing its efficiency, as all habitual users of chipped stone tools would realize. The specimen is one of a large number of examples showing that whenever a hupf is broken in use it is regarded as ruined, and is immediately thrown away. This particular specimen is archaic; it was found in the cliff-face of the great shell-heap at Punta Antigualla, embedded in a tiny stratum of ashes and charcoal (some of which still adheres, as shown in the black flecking at the outer end of the striæ), associated with scorched clam-shells, typical Seri potsherds, etc, some 40 feet beneath the surface.

While the great majority of the hupfs are mere pebbles bearing slight trace of artificial wear, as illustrated by the foregoing examples, others bear traces of use so extended as to more or less completely artificialize the surface. A typical long-used hupf is depicted in plates LI and LII. It is a tough and hard quartzite, dark gray or brown in color, massive and homogeneous in texture; it weighs 2 pounds 4 ounces (1.02 kilograms). In general form it is a typical wave-worn pebble of its material, and might be duplicated in thousands along the shores of Bahia Kunkaak and El Infiernillo; but fully a third of its surface has been more or less modified by use. The flatter face (plate LI) is smeared with blood, grease, and charcoal, which have been ground into the stone by friction of the hand of the user in such manner as to form a kind of skin or veneer; portions of the face bear a subpolish, due probably to the hand-rubbing in use; near the center there is a rough pit about an eighth of an inch (3 mm.) deep, evidently produced by pecking or battering with metal, while three or four neighboring scratches penetrating the veneer appear to record ill-directed strokes of a rather sharp metal point. In the light of observed customs it may be inferred that this pitting was produced by use of the implement as an anvil or abat in sharpening a harpoon-point and fitting it into its foreshaft. The thinner edge (shown in plate LI; that toward the right in the face view on the same plate) displays considerable battering of the kind characteristic of Seri hupfs in general; it is smoked and fire-stained, as shown, while the lower rounded corner is worn away by battering to a depth of probably one-fourth inch (5 mm.). The obverse face reveals more clearly the battering about both corners and edges,

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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174510

LITTLE-WORN PEBBLE USED FOR ALL DOMESTIC PURPOSES

THE HELIOTYPE PRINTING CO., BOSTON

Cp.242

412

NATURAL PEBBLE USED AS CRUSHER AND GRINDER

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

Cp-42 BJ

1: McGee E-5 (1894-1895)1898 NU31 Ser1 NU31

including the dislodgment of a flake toward the narrower end; but its most conspicuous feature is a broad subpolished facet (rounding slightly toward the thinner edge) produced by grinding on a flat surface abst. This face, too, exhibits fire-staining, while the surface beyond the facet—and to a slight extent the facet itself—is veneered like the other face. There are a few scratches on this side also, as well as a slight pitting due to contact with metal. The thicker edge (plate LII) displays considerable battering, especially a recent pitting near the middle evidently due to use as an anvil held between the knees for sharpening a harpoon point by rude hammering. The specimen was one of a score of implements lying about the interior of the principal jacal in the great rancheria at the base of Punta Tormenta (illustrated in plate VII).

A related specimen, though of somewhat aberrant form, is illustrated in plate LIII. It is of peculiarly tough and quite hard greenstone and weighs 2 pounds 1 ounce (0.93 kilogram). Somewhat less than half of the surface is that of a wave-worn pebble; the remainder is either battered out of all semblance to wave-work, or thumb-worn by long-continued use. The object well illustrates the choice of the most prominently projecting portion of the hand-implement as the point of percussion, and consequently the concentrated wear on such portions whereby the object is gradually reduced to better-rounded and more symmetric form. This specimen displays some minor flaking, apparently connected with the battering and regarded by the user as subordinate to the general wear. It was found at Punta Tormenta, concealed in the wall of a jacal, as if preserved for special use.

One of the best-known examples of a use-perfected hupf is illustrated in plate LIV. It is of coarse-grained but massive and homogeneous granite, similar to that forming Punta Blanca, Punta Granita, and, indeed, much of the eastern coast of Bahia Kunkaak. It weighs 1 pound 10 ounces (0.74 kilogram). In general form it is just such a pebble as is produced from this material by wave-wear, and might be duplicated along the shores in numbers. The artificial surfaces comprise (1) both ends, which are battered in the usual manner; (2) both lateral edges, of which one is slightly battered and worn, while the other is somewhat battered and also notched, evidently by a chance blow and the dislodgment of a flake; (3) both faces, which are flattened by grinding, while one of them (that shown in the plate) is slightly pitted, evidently by metal-working; so that the natural surface is restricted to small areas about the corners. The implement was found at the camp site on Punta Miguel, already noted (page 189), whence a group of five Seri were frightened by the approach of the 1895 expedition; it was covered with blood and shreds of turtle flesh, and is still saturated with grease. Moreover, it is quite confidently identified (not only by form and material, but especially by the fortuitous notch) as a hupf seen repeatedly at Costa Rica in 1894; it was the property of a matron of the Pelican clan (whose portrait appears in plate XXII),

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

412 who was observed to use it for various industrial purposes, and who refused to part with it for any consideration.

A still more beautiful example of Seri stone art is depicted in plate LV. It is of the same homogeneous and coarse-grained granite as the last specimen, and closely approaches it in dimensions; it is slightly longer and broader, but somewhat thinner, and weighs 1 pound 11 ounces (0.77 kilogram); and, except for the absence of the accidental notch, its artificial features are still more closely similar. The ends are slightly battered, as illustrated in the end view at the right of the plate; the edges are similarly worn, but to a less extent; while both sides have been symmetrically faceted by use in grinding, the facets being straight in the longitudinal direction but slightly curved in the transverse direction, in the shape of the Mexican mano. The specimen displays well-marked color distinctions between the artificially worn and the natural surfaces, the former being gray and the latter weathered to yellowish or pinkish-brown; these colors show that something like two-thirds of the surface is artificial and the intervening third natural; and the natural portion corresponds in every respect, not only in form but in condition of surface, with the granite cobbles of Seriland's stormy shores. Unfortunately the color distinctions, with the limits of facetting and other artificial modifications, are obscure in the photomechanical reproduction; they are indicated more clearly in the outline drawing overleaf. The specimen is partially saturated with fat, and bears an ocher stain attesting use in the preparation of face-paint. It was found carefully wrapped in a parcel with the shell paint-cup illustrated in plate XXVII, a curlew mandible, two or three hawk feathers, and a tuft of pelican down (the whole evidently forming the fetish or medicine-bag of a shamanistic elderwoman), in an out-of-the-way nook in the wall of an abandoned jacal at Punta Narragansett.

A somewhat asymmetric though otherwise typical hupf is illustrated in natural colors in plate LVI. It is of andesite, and may have come originally either from the extensive volcanics of southern Sierra Seri or central Sierra Kunkaak; it weighs 1 pound 13 ounces (0.86 kilogram). The general form is that of a wave-worn cobble, and fully one-third of the surface retains the natural character save for slight smoothing through hand friction in use. The chief artificial modification is the faceting of both sides in nearly plain and approximately parallel faces, the maximum thickness of material removed from each side, estimated from the curvature of the adjacent natural surface, being perhaps three-sixteenths of an inch (5 millimeters); in addition, both ends are battered in the usual fashion, while the thinner and more projecting edge is battered still more extensively, in a way at once subserving convenient use and tending to increase the symmetry of form. One of the facets is quite smooth; the other (that on the right in the plate) is slightly pitted, as if by use in metal-working. The specimen is somewhat greasy—the normal condition of the hupf—and bears

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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NATURAL PEBBLE SLIGHTLY USED AS HAMMER AND ANVIL

[p.244A]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

conspicuous records of its latest uses; both faces (more especially the pitted one) are stained with sap from green vegetal substance (probably immature mesquite pods), while one face is brilliantly marked with ocher in such manner as to indicate that a lump of face-paint was partially pulverized by grinding on the slightly rough surface. It was found, together with the shot illustrated in plate XXXVIII, in the rear of a recently occupied jacal midway between Punta Antigualla and Punta Ygnacio, cached beneath a thorny cholla cactus uprooted and dragged thither for the purpose. The trail and other signs indicated that the jacal had been occupied for a few days and up to within twenty-four hours by a family group of six or seven persons; that it was vacated suddenly at or about the time of arrival of the party of five whose trail was followed by the 1895 expedition from Punta Antigualla to Punta Miguel (where they were interrupted in the midst of a meal and frightened to Tiburon); and that the larger party fled toward the rocky fastnesses of southern Sierra Seri.

412

Of the foregoing hupfs several are aberrant, and serve merely to illustrate the prevailing directions of departure from the optimum form and size of implements. Six of the specimens may be deemed typical; they are as follows:

Plate No.	Locality	Material	Weight	Condition
			Lb. Oz.	
XLIII.....	Costa Rica.....	Quartzite.	1 14 (0.86 kg.).	Nearly natural.
XLIV.....	Campo Navidad....	Tuff.....	1 1 (.49 kg.)...	Four-fifths natural.
XLVI.....	Pozo Escalante.....	Vesicular lava.	1 13 (.82 kg.)..	Nearly natural.
LIV.....	Punta Miguel.....	Granite...	1 10 (.74 kg.)..	One-fifth natural.
LV.....	Punta Narragansett	....do.....	1 11 (.77 kg.)..	One-fourth natural.
LVI.....	South point Sierra Seri.	Andesite..	1 15 (.88 kg.)..	One-third natural.

From these specimens a type of Seri hand implement may easily be formulated: it is a wave-worn pebble or cobble of (1) granite, quartzite, or other tough and hard rock, (2) tuff, or other light and pulverulent rock, or (3) vesicular lava; it is of flattened ovoid form, or of biscuit shape; it weighs a trifle under 2 pounds (about 0.85 kilogram); originally the form and surface are wholly natural, but through the chance of use it is modified (*a*) by a battering of the ends and more projecting edges, and (*b*) by grinding and consequent truncation of the sides; though initially a natural pebble, chosen nearly at random from the beach, it eventually becomes personal property, acquires fetishistic import, and is buried with the owner at her death.

[422]
[764]

The shots and the heavier cobbles used alternatively as shots and hupfs are too fortuitous for reduction to type; while the protean peb-

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

412 bles utilized in emergency, and commonly discarded after a single use, are too numerous and too various for convenient or useful grouping.

411 There is a distinctive type of Seri stone artifacts represented by a single category of objects, viz, chipped arrowpoints. Several of the literary descriptions of the folk—particularly those based on second-hand information and far-traveled rumor—credit the Seri with habitual [114] use of stone-tipped arrows,[1] and it is the current fashion among both Mexican and Indian residents of Sonora to ascribe to the Seri any shapely arrowpoint picked up from plain or valley; yet the observations among the tribesmen and in their haunts disclose but slight basis for classing the Seri with the aboriginal arrow-makers of America.

Among the 60 Seri (including 17 or 18 warriors) at Costa Rica in 1894, three bows and four quivers of arrows were observed, besides a number of stray arrows, chiefly in the hands of striplings. The arrows seen numbered some 60 or 70, including perhaps 20 "poisoned" specimens; nearly half of them were tipped with hoop-iron, as illustrated in plate XXX, while about as many more were fitted only with the customary foreshafts (usually sharpened and hardened by charring), and the small remainder had evidently lost iron tips in use; there was not a single stone-tipped arrow in the rancheria. Moreover, when the usually incisive and confident Mashém was asked for the Seri term for stone arrow-point he was taken aback, and was unable to answer until after lengthy conference with other members of the tribe—his manner and that of his mates clearly indicating ignorance of such a term rather than the desire to conceal information so frequently manifested in connection with esoteric matters; and the term finally obtained (*ahst-ahk*, connoting stone and arrow) is the same as that used to denote the arrowpoint of hoop-iron. The most reasonable inference from the various facts is that whatsoever might have been the customs of their ancestors, the modern Seri are not accustomed to stone arrow-making.

FIG. 37.—Seri arrowpoints.

172 The 1895 expedition was slightly more successful in the search for Seri arrows. About midway between the abandoned Rancho Libertad 411 and Barranca Salina, an ancient Seri site was found to yield hundreds of typical potsherds, half a dozen shells such as those used for utensils, the fragments of a hupf evidently shattered by use as a fire-stone, and the small rudely chipped arrowpoint shown in figure 37*a*; and among the numerous relics found on a knoll overlooking Pozo Escalante (including two jacal frames, two or three graves, an ahst, several shells

[1] The most specific reference is that of Hardy: "The men use bows and stone-pointed arrows; but whether they are poisoned, I do not know." Travels, p. 200.

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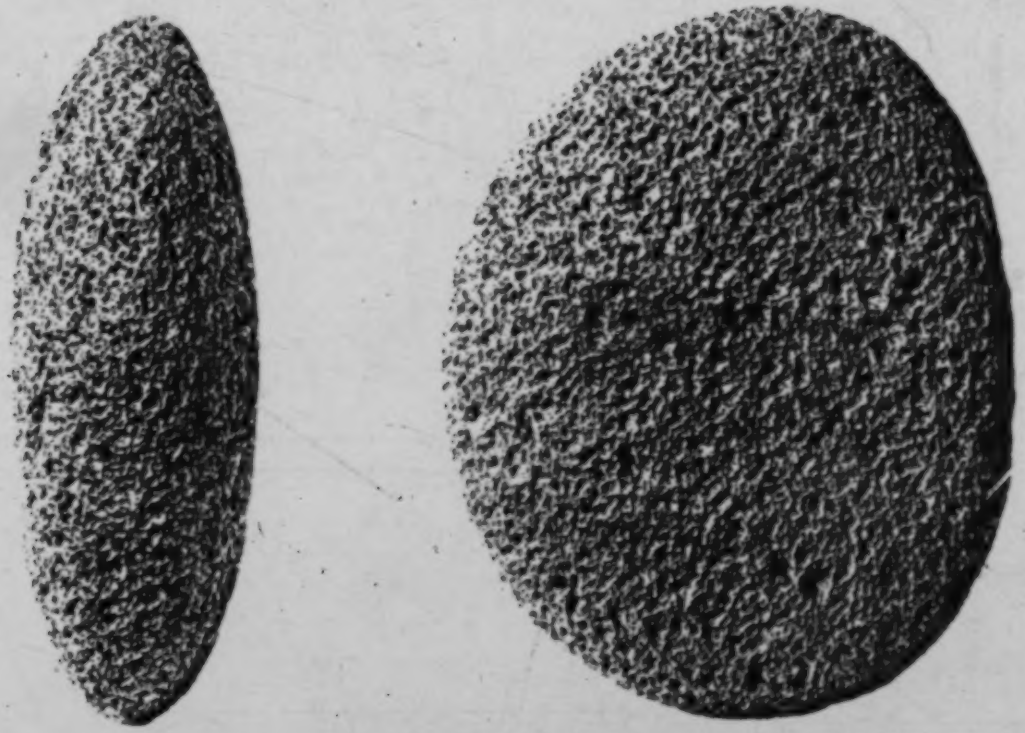

NATURAL PEBBLE SLIGHTLY USED AS GRINDER

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

(p. 276)

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1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

NATURAL PEBBLE SLIGHTLY USED AS DOMESTIC IMPLEMENT

1: McGee E-5 (1894-1895) 1898 NU31 Seri NU31

and discarded hupk, a broken fictile figurine, etc), was the still ruder arrowpoint represented in figure 376 (both figures are natural size). The specimens are nearly identical in material—a jet-black slaty rock with a few lighter flecks interspersed, weathering gray on long exposure (as is shown by the partly natural surface of the larger point); similar rock abounds in several easterly spurs of Sierra Seri. The smaller specimen was evidently finished and used; its features indicate fairly skilful chipping, though its general form is crude—in addition to the asymmetric shouldering, the entire point is curved laterally in such manner as to interfere with accurate archery. The larger specimen is still more strongly curved laterally, and the chipping is childishly crude; while the rough surface, clumsy tang, and unfinished air indicate that it was never used even to the extent of shafting. It is possible that the specimens may have been imported by aliens, but the probabilities are strong that they were manufactured by the Seri. No other arrowpoints and no chips or spalls suggesting stone arrow-making were found in all Seriland, though the entire party of twelve were on constant lookout for them for a month. The natural inference from these facts is that the ancestral Seri, like their descendants, were not habitual stone arrow-makers.

There is a final category of Seri artifacts which would be classed as distinctive by Caucasians on the basis of material, though they are combined with the stone artifacts by the tribesmen; it comprises arrow-points of hoop-iron or other metal, harpoon-points of nails, spikes, or wire, awls of like materials, and other metallic adjuncts to ordinary implements. The use of iron is of course post-Columbian, and its ordinary sources are wreckage and stealage. The date of introduction is unknown, and probably goes back to the days of Cortés and Mendoza; certainly the value of metal was so well understood in 1700 that when Padre Salvatierra's bilánder was beached in Seriland the tribesmen at once began to break her up for the nails (ante, page 67); yet the metal is wrought cold and only with hupf and abst like the local materials, and is habitually regarded and designated as a stone. By reason of the primitive methods of working, the metals are of course available only when in small pieces or slender shapes. There is a tradition among the vaqueros of the frontier that a quantity of hoop-iron designed for use in making casks was carried away from a rancheria in the vicinity of Bacuachito during a raid in the seventies, and that this stock has ever since served to supply the Seri with material for their arrowpoints; but it is probable that the chief supply is derived from the flotsam swept into the natural drift trap of Bahia Kunkaak by prevailing winds and tidal currents, and cast up on the long sandspit of Punta Tormenta after every storm. A surprising quantity and variety of wreckage was found on this point, and thence down the coast to Punta Narragansett, by the 1895 expedition: staves and heads of casks broken up after breaching, a telegraph pole crossbar which had evidently

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

177 brought in a cargo of large wire, and a piece of door-frame with heavy
502 strap-iron hinges attached with screws, were among the troves of the tribesmen within a few weeks; and it was noted that while even the hinge screws and the tacks attaching tags to the cask-heads had been extracted by breaking up the wood, the roughly forged hinges of 2 by ¾-inch wrought iron had been abandoned after a tentative battering with cobbles, and lay among the refuse stones about the jacales.

412 A rough census of the stone implements of Seriland is not without interest, even though it be no more than an approximation. Some 20 or 25 habitable and recently inhabited jacales were visited, with about twice as many more in various stages of ruin, fully two-thirds of these being on the island; and at least an equal number of camps or other houseless sites were noted. About these 150 jacales and sites there were, say, 50 ahata, ranging from nearly natural bowlders to the comparatively well-wrought specimen illustrated in plate XXXIX, and an equal number of cobbles used interchangeably as ahata and hupfa; there were also 200 or 300 pebbles bearing traces of use as hupfa, of which about a third were worn so decidedly as to attest repeated if not regular use; while no flaked or spalled implements were observed save the two doubtful examples illustrated in plates XLVII and L, and only two chipped arrowpoints. It may be assumed that the sites visited and the artifacts observed comprise from a tenth to a fifth of those of all Seriland, in addition to, say, 75 finished hupfa habitually carried by Seri matrons in their wanderings; and it may be assumed also that 50 or 100 metallic harpoon-points and several hundred hoop-iron arrowpoints are habitually carried by the warriors and their spouses.

[324] The most impressive fact brought out by this census is the practical absence of stone artifacts wrought by flaking or chipping in accordance with preconceived design; excepting the exceedingly rare arrowpoints there are none of these. And the assemblage of wrought stones demonstrates not merely that the Seri are practically without flaked or chipped implements, but that they eschew and discard stones edged by fracture whether naturally or through accident of use.

Summarily, the Seri artifacts of inorganic material fall into three groups, viz: (I) The large and characteristic one comprising regularly-used hupfa and ahata, with their little-used and discarded representatives; (II) the small and aberrant group represented by chipped arrowpoints, and (III) the considerable group comprising the cold-wrought metal points for arrows and harpoons and awls—though it is to be remembered that the Seri themselves combine the second and third of these groups.

I. On reviewing the artifacts of the larger group it becomes clear (1) that they immediately reflect environment, in that they are characteristic natural objects of the territory; (2) that they come into use as implements through chance demands met by hasty selection from the

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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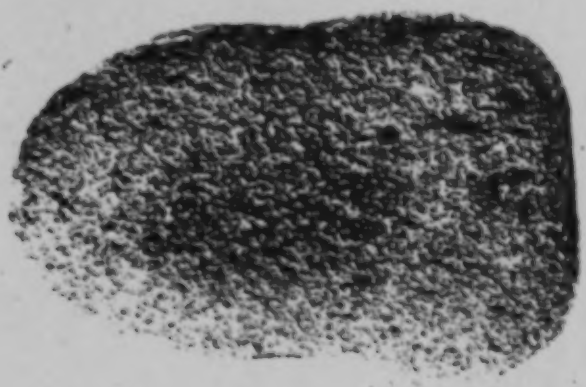

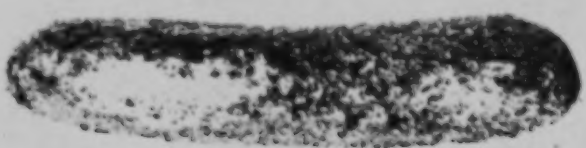

[p 248 A]

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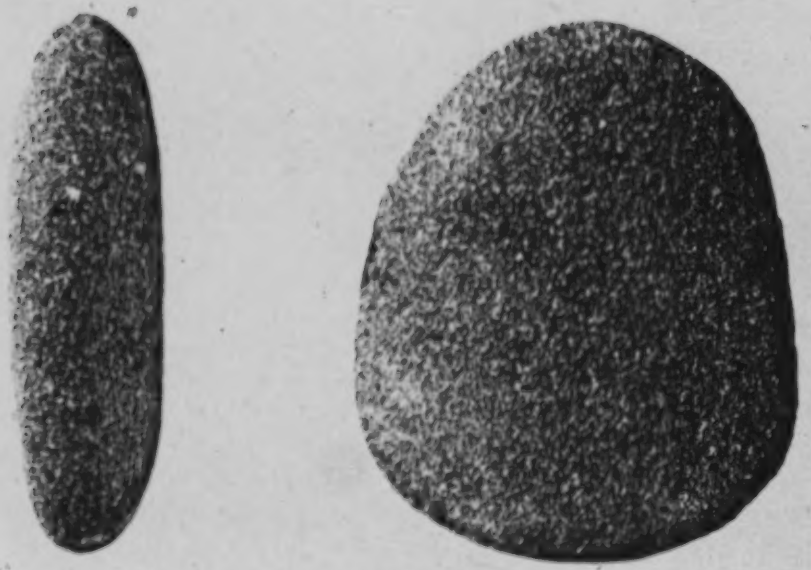
1: McGee E-5 (1894-1895)1898 NU31 Seri NU31



NATURAL PEBBLE CONSIDERABLY WORN IN USE AS GRINDER

[p. 248 B]

1: McGee 2-5 (1894-1895):693 NU31 Ser1 NU31

abundant material; (3) that the great majority of the objects so employed are discarded after a use or two; (4) that when the object proves especially serviceable, and other conditions favor, it is retained to meet later needs; (5) that the retained objects are gradually modified in form and surface by repeated use; (6) that if the modification diminishes the serviceability of the object in the notion of the user (e. g., by such fracture as to produce sharp edges), it is discarded; (7) that if the modification enhances the serviceability of the specimen in the mind of the user it is the more sedulously preserved; and (8) that through the instinctive desire for perservation, coupled with the thaumaturgic cast of primitive thinking, the object acquires at once an artificialized form and a fetichistic as well as a utilitarian function. The significant feature of the development is the total absence of foresight or design, save in so far as the concepts are fiducial rather than technical or directly industrial.

II. On reviewing the almost insignificantly small group of chipped stone artifacts, it seems clear that while the material is local the design is so incongruous with custom and characteristic thought as to raise the presumption that stone-chipping is an alien and imperfectly assimilated craft. The conspicuous and significant feature of the chipped stone artifact is the shapement in accordance with preconceived design.

III. On reviewing the arbitrarily separated group of metallic artifacts it is found clear (1) that the material is foreign; (2) that it is avidly sought and sedulously saved and utilized; (3) that it is wrought only by the crude methods used for fashioning the most primitive of implements and tools; and (4) that it is used chiefly as a substitute for organic substances employed in symbolic imitation of the natural organs and functions of animals. The significant features of the use of iron artifacts are (*a*) the absence of either alien or specialized designs, and (*b*) the mimicry of bestial characters as conceived in primitive philosophy.

Classed by material and motive jointly, the three groups are diverse in important respects: The first is local in material, local in motive; the second is local in material, foreign in design; the third is foreign in material, local in motive.

On recapitulating the several phases of Seri handicraft, the devices are found to fall into genetic classes of such sort as to illumine certain notable stages of primitive technic.

The initial class comprises teeth, beaks and mandibles, claws, hoofs, and horns, used in imitation or symbolic mimicry of either actual or imputed function of animals, chiefly those to which the organs pertain, together with vegetal spines and stalks or splints, used similarly under the zoötheistic imputation of animal powers to plants; also carapaces and pelts, used as shields combining actual and symbolic protective functions. While this class of devices is well displayed by the Seri, it is by no means peculiar to them; clear vestiges of the devices have

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

been noted among many Amerind tribes. Now the essential basis of the industrial motive has been recognized by all profounder students in zootheism, animism, or hylozoism—indeed, the industrial stage is but the reflex and expression of the zootheistic or hylozoic plane in the development of philosophy; while both the devices and the cultural stage which they represent have already been outlined by the late Frank Hamilton Cushing, on the basis of surviving vestiges and prehistoric relics, and characterized as "prelithic".[1] Cushing's designation for the initial stage of technic has the merit of euphony, and of suggesting the serial place of the stage in industrial development; but since it denotes a most important class of artifacts only by exclusion and negation it would seem desirable to supplement it by a positive term. The class of devices (considered in both material and functional aspects) and the cultural stage in general might appropriately be styled hylozoic, though it would seem preferable to emphasize the actual objective basis of the class and stage by a specific designation—and for this purpose the term *zoomimetic* (from ζῷον, τό and μιμητικός), or its simplified equivalent, *zoomimic*, would seem acceptable.

A transitional series of devices is represented by awls of wood or iron fashioned in imitation of mandibles or claws, by wooden foreshafts shaped in symbolic mimicry of teeth, and by other vicarious replace-

[1] The Development of Form and Function in Implements; an unpublished paper presented before the British Association for the Advancement of Science at the Toronto meeting in 1887. A brief abstract, revised by the author of the paper, was printed in the American Anthropologist, vol. x, 1897, pp. 325–328; and in the absence of full authorial publication, the more strictly germane passages of the abstract are worthy of quotation: "Beginning with the semiarboreal [human] progenitor indicated jointly by projecting forward the lines of biotic development and projecting backward the lines of human development, Mr Cushing undertook to trace hypothetically, yet by constant reference to known facts, (1) the genesis of artificial devices, and (2) the concurrent differentiation of the human brain and body in the directions set forth by Sir William Turner; and he gave special force to his exposition by frequent reference to commonly neglected characteristics, physical and psychic, of young infants. He pointed out that the prototype of man, whether infantile or primitive, is a clumsy ambidexter, the differentiation of hand and brain remaining inchoate; that one of the earliest artificial processes is a sawing movement, in which, however, the object to be severed is moved over the cutting edge or surface, and that the infant or savage at first selects sharp objects (teeth, shells, etc) as cutting implements, and only after long cultivation learns to make cutting implements of stone; this early stage in development he called *prelithic*. Passing, then, to the age of stone, he showed that this substance is first in the form of natural pebbles or other pieces for hammering, crushing, bruising, and as a missile. That in time the user learns that the stone is made more effective for severing tissues by fracturing it in such way as to give a sharp edge, the fracture being originally accidental and afterward designed; yet that for a long time it is the hammerstone that is fractured and not the object against which the blows are directed. In this stage of development (called *protolithic*, after McGee) stone implements come into more or less extended use in connection with implements of shell, teeth, etc; yet the implements are obtained by choice among natural pieces and by undesigned improvement of these through use. The next stage is that of designed shaping through fracture by blows from a hammerstone, followed by intentional chipping. This may be regarded as the beginning of paleolithic art, and also marks the beginning of dexterity and the activital differentiation of the hands. Incidentally the author brought out the importance of that concept of mysticism which is found of so great potency among infantile and primitive minds, in such manner as to suggest the genesis, and the obscure reasons for the persistence of this phase of intellectuality; for the inchoate imagination is able to expand only in the direction of mystical explanation, so that fertility in primitive invention seems to be dependent on appeal to the mysterious powers of nature. At first the mystery pervades all things, but in time it is largely concentrated in animate things; then animate powers are imputed, *e. g.*, to physical phenomena. So to the infant or race-child fire is a mystical animal or demon which, in prelithic or protolithic times, must have been at first tolerated, then fed with fuel and penished with water and eventually subjugated and tamed, much as the real animals were afterward brought into domestication."

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1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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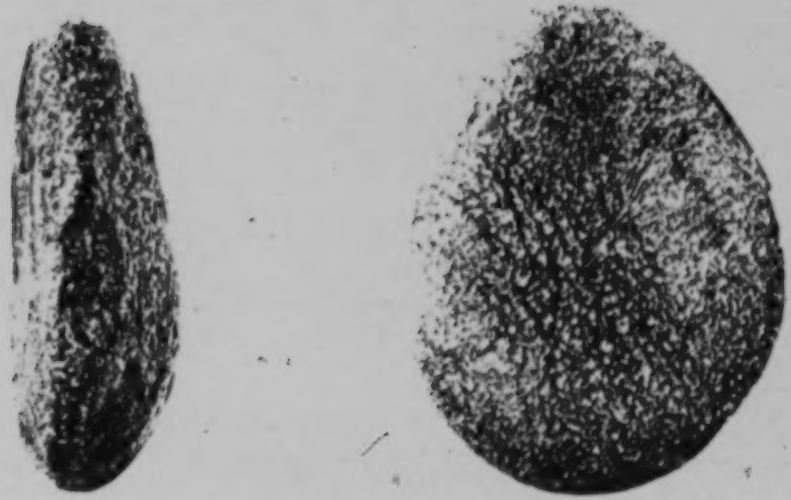

NATUPAL PEBBLE CONSIDERABLY WORN AS CUTTER AND GRINDER

It McGee Σ-5 (1894-1895)1898 NU31 Seri NU31

ments of material in devices of zoomimic motive; but this series may be regarded as constituting a subclass, or as a connecting link between classes rather than a major class of devices. Yet the subclass is of great significance as a mile-mark of progress in nature-conquest, and as the germ of that industrial revolution consummated as tribesmen grew into reliance on their own acumen and strength and skill rather than on the capricious favor of beast-gods.

The next major class of devices comprises shells and cobbles and bowlders picked up at random to meet emergency needs, wielded in ways determined by emergency adjustment of means to ends, and sometimes retained and reused under the budding instinct of fitness, though never shaped by design. The devices of this class are best exemplified by the tool-shells and by the hupfs and ahets of the Seri matrons, partly because of the practical absence of higher artifacts from their territory; yet the class is by no means confined to this notably primitive folk: the greater part of the implements used by the California Indians and a large part of those used by every other known Amerind tribe in aboriginal condition consist of shore cobbles, river pebbles, talus bowlders, or other natural stones of form and size convenient for emergency use; and (despite the fact that such objects are often ignored by observers, for the prosaic reason that they represent no familiar or trenchant class), there is no lack of evidence that they are or have been in habitual use among all primitive peoples. Although zootheistic or sortilegic motives doubtless play an undetermined rôle in the selection of the objects, and although wonted zoomimic movements doubtless affect the initial processes, the essential distinction from zoomimic artifacts resides in the selection and use of natural objects through a mechanical chance tending to inspire volitional exercise rather than through a fiducial rule tending to paralyze volitional effort; while the class is no less trenchantly separable from those of higher grade by the absence of preconceived models or technical designs. The class of devices and the culture-stage which they represent have already been outlined and defined as *protolithic*.[1]

A transitional series of devices allied to the Seri hupf on the one hand and to the chipped artifact on the other hand is frequently found among the aborigines of California and other native tribes; it is typified by a cobble or other natural piece of stone cleft (first by accident of use and later by design) in such wise as to afford an edged tool. This subclass of artifacts is religiously eschewed by the Seri; but it is of much interest as an illustration of the way in which artificialization proceeds, and of the exceeding slowness of primitive progress.

The third great class of devices defined by technologic development comprises stones chipped, flaked, battered, ground, or otherwise wrought in accordance with preconceived designs, together with cold-forged native metal, horn, bone, wood, and other substances wrought

[1] American Anthropologist, vol. IX, 1896, pp. 317-318.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

4/2

NATURAL PEBBLE CONSIDERABLY USED AS HAMMER, GRINDER, AND ANVIL (TOP AND EDGE)

[FACING P. 252]

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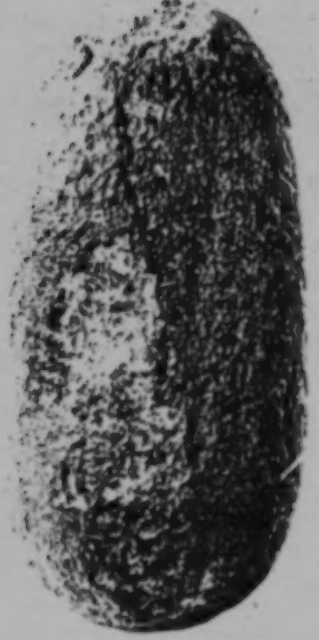
1: McGee E-5 (1894-1895)1898 NU31 Ser1 NU31



NATURAL PEBBLE CONSIDERABLY USED AS HAMMER, GRINDER, AND ANVIL (BOTTOM AND EDGE)

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

000 in accordance with preconceived models and direct motives. Among the Seri this class of devices is represented only by the rare arrowpoints of chipped stone, which seem to be acultural and largely fetishistic; but the class is abundantly represented by the artifacts of most of the Amerind tribes. The class and the cultural stage have already been outlined under the term *technolithic*.[1]

A transitional series of devices intervenes between stone artifacts and artifacts of smelted metal; it is represented by malleable native metals (chiefly copper, silver, meteoric iron, and gold), originally wrought cold, after the manner of stone, though heating under the hammer in such wise as to prepare the way for forging, fusing, and founding. These devices and the processes with which they are correlated are not represented among the Seri; indeed, the crude use of iron by the tribe would seem to lie on a lower plane in industrial development than even the arrowpoint-chipping, in that the artifacts, though of foreign material, are wrought largely in accordance with zoomimic motives.

The fourth major class of devices, comprising the multifarious artifacts of smelted and alloyed metal, was barely represented in aboriginal America; only a few of the more advanced tribes had attained the threshold of metallurgy, and even among these the crude metal working remained hieratic or esthetic, and did not displace the prevalent stone craft.

Briefly, the several stages in the development of tools and implements may be seriated as follows:

Stages	Typical materials	Typical products	Essential ideas
I. Zoomimic	Bestial organs	Awls, spears, harpoons, arrows.	Zoothetistic faith.
A. Transitional	Symbolized organs	Piercing and tearing implements.	Faith + craft.
II. Protolithic	Natural stones	Hammers and grinders—hupfs and ahats.	Mechanical chance.
B. Transitional	Cleft stones	Grinders and cutters	Chance + craft.

[1] Annual Report of the Smithsonian Institution for 1893, pp. 63-65. The long extant and well-known classification of stone artifacts as "paleolithic" and "neolithic" may not be overlooked. This classification was based originally on prehistoric relics of Europe, and it served excellent purpose in distinguishing finely finished stone implements from those of rudely chipped stone; but both classes of artifacts were shaped in accordance with preconceived design, and hence both belong to the technolithic class as herein defined. It may be added that the classification was made with little if any reference to primitive thought, was not based on observation among primitive peoples, and has not been found to apply usefully to the aborigines and aboriginal artifacts of America, where the representative tribe or prehistoric village site is characterized by implements of both "paleolithic" and "neolithic" types which intergrade in such manner as to prove contemporaneous manufacture and interchangeable use, while the preponderance of polished-stone implements is generally indicative of simpler rather than of more advanced culture.

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Stages	Typical materials	Typical products	Essential ideas
3. Technolithic	Artificialized stones.	Chipped, battered, and polished implements.	Designed shapement by molar action.
C. Transitional	Malleable native metals.	Copper celts, gold ornaments, etc.	Designed shapement by molar action + chance heating.
4. Metal	Smelted ores	Steel tools, etc.	Shapement by molar and molecular action.

It is to be realized that the successive stages represent characteristic phases of normal and continuous growth, and hence that their relations are intimate and complex. The fundamental factor of the growth is intellectual advancement, and hence in actual life each stage is at once the germ and the foundation for the next higher; each stage is characterized by a type or a cognate series of types, yet each commonly contains a few forms prophetic of the next stage and many forms vestigial of the earlier stages; so that the stages are to be likened unto successive generations of organisms, or (still more appropriately) to the successive phases of ovum, larva, pupa, and imago in the ontogeny of the insect rather than to the arbitrary classes of pigeonhole arrangements. The complex relations conceived to exist among the stages can be indicated more clearly by diagraphic representation than by typographic arrangement, and such a representation is introduced as figure 38. The successive curves in the diagram express the rhythmic character of progress and the cumulative value of its interrelated factors, as well as the dominance of successive types until gradually sapped and absorbed (though not immediately or completely annihilated) by higher types reflecting a strengthened mentality.

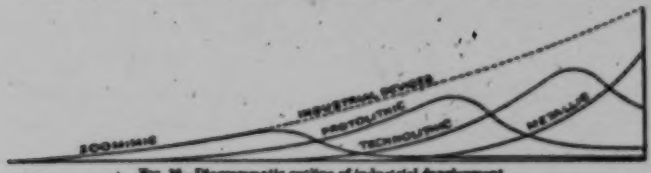

FIG. 38—Diagrammatic outline of industrial development.

The place of the normal pacific industries of the Seri in this genetic classification of human technic is definite. The Seri craft combines the features of the eccmimic and protolithic stages more completely than that of any other known folk, and in such wise as to reveal the relations

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between these stages and that next higher in the series with unparalleled clearness; their craft also displays an aberrant (and hence presumptively acultural) feature pertaining to the technolithic stage; and in so far as their craftsmen use the material typical of the age of metal they degrade it to the transitional substage between dominant zoomimicry and designless stone-using.

Viewed in the general light of their pacific industries, the Seri are, accordingly, among the most primitive of known tribes; their technic is in harmony with their esthetic, and also with their somatic and tribal characteristics, in attesting a lowly plane of development; while their industries, like their other demotic features, are essentially autochthonous.

WARFARE

Something is known of Seri warfare through the history of the centuries since 1540, and especially through the bloody episodes of the Encinas régime and the occasional outbreaks of the last decade or two. The available data clearly indicate that the warfare of the tribe complements their pacific industries in every essential respect.

As befits their primitive character, warfare has played an important rôle in the history of the folk, forming, indeed, one of the chief factors in determining the course of tribal development. There is no means of estimating the losses suffered and occasioned in warfare with the neighboring tribes during either prehistoric or historic times; but the indications are that they were much greater than the losses connected with Caucasian contact. Neither is it practicable to estimate reliably the fatalities attending the interminable conflicts with the Spanish invaders and their descendants, though it is safe to say that the Seri losses in strife against Spaniards and Mexicans aggregate many hundred, and that the correlative loss on the part of their enemies reaches several score, if not some hundred, lives. Few if any other aboriginal tribes of America have had so sanguinary a history as the Seri, and none other has at once so long and so bloody a record.

According to the consistent accounts of several survivors of conflict with the Seri, their chief weapons are arrows, stones, and clubs—though several survivors manifest greater fear of the throttling hands and rending teeth of the savage warriors than of all their artificial weapons combined. A striking feature of the recitals, indeed, is the rarity of reference to weapons; the ambushes or surrounds or chance meetings, with their disastrous or happy consequences, are commonly described with considerable detail; the carbines or rifles, the machetes and knives, or the deftly thrown riatas employed by the rancheros or vaqueros are mentioned with full appreciation of their serviceability; but the ordinary expressions concerning the despised yet dreaded Seri are precisely those employed in recounting conflicts with carnivorous beasts. When Andrés Noriega's kinswoman proudly related how he

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HAMMER AND GRINDER

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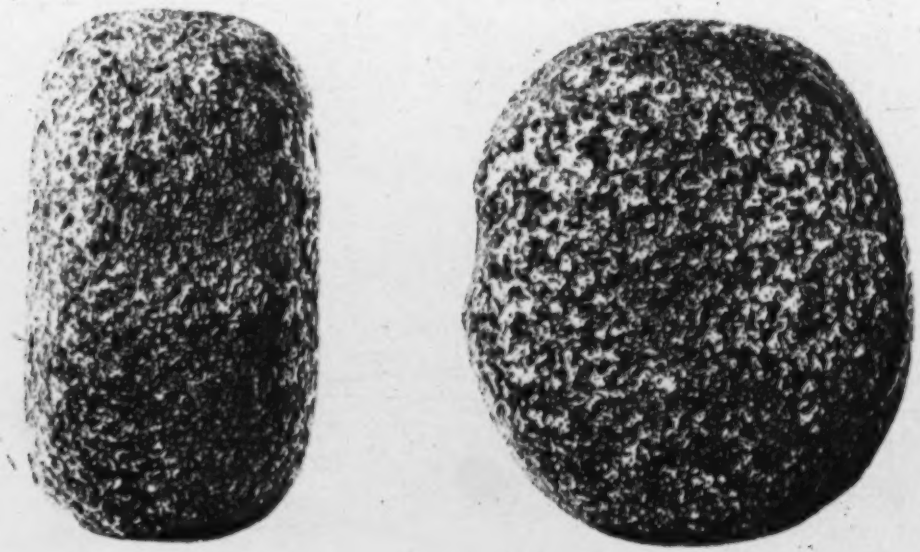

IMPLEMENT SHAPED BY USE

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alone once overawed and routed an attacking party of 30 Seri warriors, she duly mentioned the carbine ready for use in his hands and the six-shooter and machete in his belt; but nothing was said of the Seri weapons. When a distinguished sportsman citizen of Caborca, the local authority on the Seri, sought to dissuade the 1895 expedition from visiting Tiburon, he was repetitively and cumulatively emphatic in his oracular forecast, "Ils vont vous tuer! *Ils vont vous tuer!!* ILS VONT VOUS TUER!!!"—yet he made but passing reference to "poisoned" arrows, and none to other weapons, in the general implication that invaders of the tribal territory were torn limb from limb and strewn over the rocks and deserts of Seriland. When Jesus Omada, of Bacuachito, boasted his Seri scars, he indeed emphasized the arrow-mark on his breast, but only as a prelude and foil to the far ghastlier record of his teeth-torn arm. When Robinson and his companion were butchered on Tiburon in 1894, the bloody work was effected chiefly by means of a borrowed Winchester; and neither the account of the survivors nor that of the actors made mention of native weapons—save the stones with which the second victim was finished according to the local version. In short, most of the casual expressions and fuller recitals alike indicate that while the Seri are famous fighters their weapons—except the much-dreaded "poisoned" arrows—are incidents rather than essentials to savage assaults, and that their prowess rests primarily on bodily the strength and swiftness.

The stones used in battle, as described by the survivors and as intimated by Mashém, are cobbles as large as a fist, i. e., hupfs of typical form and size. So far as is known they are never hurled, slung, nor projected in any other manner, nor are they hafted or attached to cords after widespread aboriginal customs; they are merely held in the hand, as in the slaughter of quarry. Hardy made note of a war-club—"They use likewise a sort of wooden mallet called Macána, for close quarters in war";[1] but nothing of the kind was found at Costa Rica in 1894, and no woodwork suggesting such use was found in the depths of Seriland in 1895.

The most conspicuous and doubtless the most effective war weapon is the arrow projected from the bow in the unusual if not unique fashion already noted (ante, p. 201). There is nothing to indicate that the Seri are especially effective archers; the facts (1) that a large part of the arrows are pointless, save for the hard-wood foreshafts; (2) that stone arrowpoints are not habitually used; and (3) that comparatively slight reference is made to the use of arrows in records and recitals of Seri battles, tend on the contrary to indicate inferior ability in archery. And in the course of the explorations by the 1895 expedition it was noted that the feral fowls and animals of Seriland—pelican, gull, snipe, curlew, cormorant, coyote, hare, bura, mountain sheep, peccary, etc—displayed little fear of human figures at distances exceeding 75 yards,

[1] Travels, p. 290.

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411 and seldom stirred until the stranger approached within 50 or 60 yards; whence it may be assumed that these distances fairly indicate the ordinary range of Seri arrows. The few accounts of conflicts in which arrows are mentioned prove, however, that those missiles are discharged with great rapidity and in considerable numbers during the brief interval to which the fighting is customarily limited.

278 411 The most notorious feature of the Seri warfare, and that of deepest interest to students, is the reputed use of poisoned arrows. The scattered literature of the tribe, from the days of Coronado onward, abounds in references to this custom; the Jesuit authorities give somewhat varied yet fairly consistent descriptions of the preparation and the effects of these arrows; Hardy added his testimony as to the character of the poison; General Stone gave directly corroborative evidence; haciendero Encinas gives witness to the effects of the envenomed missiles on his own stock; while Mashém recounted to the 1894 expedition the various uses of the "poisoned" arrows and highly extolled their potency, though he was noncommittal—save in casual allusions—as to the details of the poisoning. A part of the arrows acquired by this expedition and now preserved in the National Museum were professedly poisoned; they are easily distinguished by a thin varnish of gummy and greasy substance over the iron tips and wooden foreshafts, and especially about the attachments of mesquite gum and sinew. According to Mashém's asseverations, such arrows are habitually used in war save when the supply is exhausted by continued demand; they are also used occasionally in hunting, especially for deer and lions (i. e., the swiftest and fiercest game of the region); and the use of the poisoned missile does not destroy the meat of the animal, though the portion immediately about the wound is "thrown away". Two of [126] the treated arrows brought back from Costa Rica were submitted to Dr S. Weir Mitchell some months afterward for examination, and for identification of any poisonous matter found on them; but no poison was detected. On the whole, the data concerning the reputed arrow poisoning are less definite than might be desired; yet they are sufficient to suggest the nature of the custom with considerable clearness.

278 [811] In any consideration of Seri customs it is to be realized that the folk are notably primitive in thought, and hence deeply steeped in that overweening mysticism which dominates all lowly folk—that they still cling to zoomimic motives in their simple handicraft, and are still wholly within zootheism in their lowly faith. In the light of this realization the numerous consistent records of the preparation of the poison are easily interpreted, and are found to be fully in accord with the prevailing motives of the tribe; and the interpretation serves to explain the somewhat discrepant accounts of the effects of the poison, effects ranging from nil to horrible sepsis. According to the more circumstantial recipes, the first constituent of the poison is a portion of lung, preferably human—a selection readily explained by pristine philosophy,

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IMPLEMENT PERFECTED BY USE

(p. 256 A)

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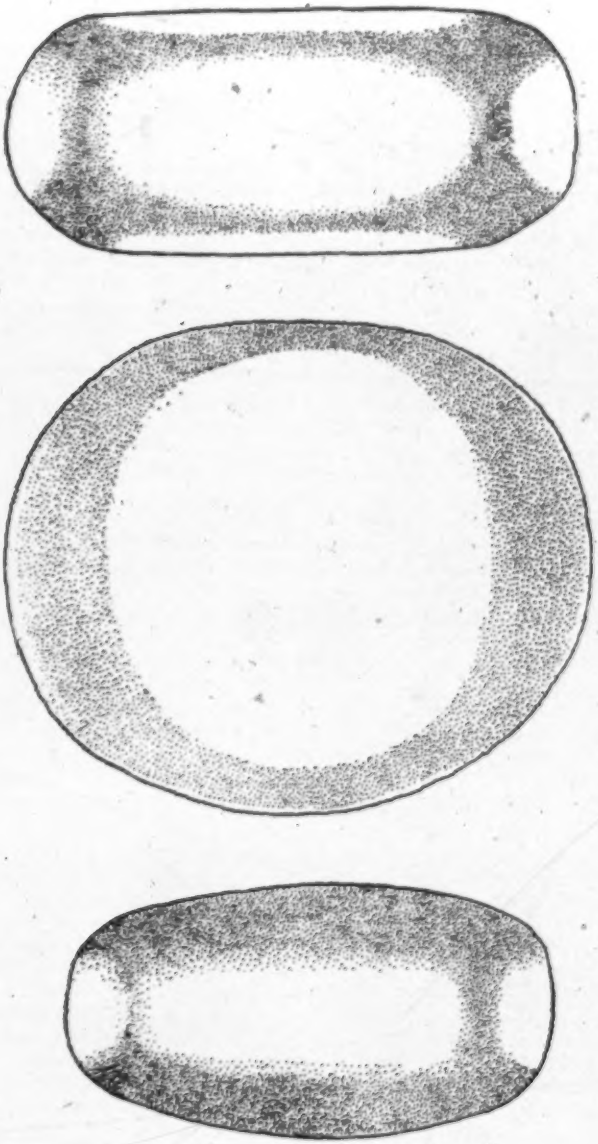

[p. 256 B]

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in which the breath is life, and the lungs at once the seat and the symbol of vitality. Naturally the fleshly symbol is from a dead body; and just as the lung denotes vitality in life, so (in primitive thought) it denotes an emphasized, as it were an incarnated, antithesis of vitality in death. Next, as the recipes continue, this death-symbol is exposed to the most potent agencies of death—to the bites of maddened rattlesnakes, to the stings of irritated scorpions, to the venomed trailings of harried centipedes. Then the deadly creatures are themselves killed, and the fanged heads of the serpents, the stinging tails of the scorpions, and the fiery feet of the centipedes, together with portions of redolent ordure from the grave-cairns, and other symbols of death and decay are crushed and macerated with the mass in a wizard's brew, grewsome beyond the emasculated and degraded witch's broth of medieval times. Finally, the grisly mess is allowed to simmer in a stinkpot[1] shell under the fierce desert sun until its ripeness and putrid potency are attested by the rank fetor of death; when it is ready for its ruthless use. Thus the entire recipe is thaumaturgic in concept, necromantic in detail; it represents merely the malevolent machinations of the medicine man seeking success by spells and enchantments; it stands for no rational system of thought or practice, but pertains wholly to the plane of shamanism and sorcery. So interpreted the recipe is readily understood; the several witnesses who have independently obtained it are justified, and Mashém's details and unwilling intimations are made clear—especially if the sacrificed flesh about the wound in deer or lion be deemed an oblation, such as primitive folk are given to making. 278

While thus the motive of the medicine-man in compounding his loathsome mess is wholly necromantic, serious consequences of its use must occasionally supervene; and though these may be incidental so far as the philosophy is concerned, they may tend reflexly toward the perpetuation of the custom. In the course of the preparation of the charm-poison, and especially in the final ripening process, morbific germs and ptomaines must be developed; these may retain their virulence up to the time of use, particularly when a batch of poison is prepared for a special occasion and the arrows are used while the application is still fresh; and in such cases the wound might initiate septicemia of the sort described in Castañeda's early narrative and still more clearly displayed by Señor Encinas' saddle-horse (ante, p. 112). Naturally the incidentally zymotic varnish frequently fails of effect, and can hardly be expected to remain morbific long enough to be detected in laboratory experiments; yet it is probable, as attested by Mashém's guarded expressions, that the occasionally terrible results of such poisoning are within the ken of the Seri shamans.

It is noteworthy that the various early accounts of the Seri arrow-poisoning are strikingly consistent, though sufficiently diverse to 114 278

[1] Cleodoxum concretum (?).

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278 [114] attest independence in origin; it is also noteworthy that several of the accounts are given hesitatingly and half qualifiedly, with alternative references (obviously hypothetical) to vegetal sources of poison. Thus the author of "Rudo Ensayo" qualified a characteristic (though brief) account of the preparation of the poison by adding: "But this is mere guesswork, and no doubt the main ingredient is some root."[1] So, too, Hardy described the compounding of the brew in much detail, adding the significant statement that "when the whole mass is in a high state of corruption the old women take the arrows and pass their points through it"; yet he could not resist the alternative hypothesis, and added: "Others again say that the poison is obtained from the juice of the yerba de la flécha (arrow-wort)."[2] Bartlett "was told that the Ceris tip their arrows with poison; but how it was effected I [he] could not learn," and so he contented himself with quoting Hardy's account.[3] Stone gave the recipe in fairly similar terms, adding that the morbific mass is hung up "to putrefy in a bag, and in the drippings of this bag they soak their arrowheads"; and he gave a characteristic account of the effect of a wound from a poisoned arrow on a human subject (ante, p. 100). Pajeken independently attested the virulence of the poison, and described the consequences of a slight wound suffered by his horse (ante, p. 101), while Pimentel gave independent corroboration, and Orozco y Berra added the further information that the proverbially deadly poison is fortified "by superstitious practices" (ante, p. 103). Bancroft gave currency to the customary recipe, and also to the complementary hypothesis that the "magot" may be the source of the poison; while Dewey merely mentioned the reputed use of poisoned arrows. Like their predecessors, the vaqueros of today are familiar with the tradition of a necromantic brew; but many of them—like Don Jesus Omada, of Bacuachito, and Don Ramon Noriega, of Pozo Noriega—display a much more lively interest in the local yerba mala, or yerba de flecha, of which they stand in such mortal dread that they can hardly be induced to approach a clump of it, and which they conceive must add the final crux to the brew. This plant was described in "Rudo Ensayo": "Mago, in the Opata language, is a small tree, very green, luxuriant, and beautiful to the eye; but it contains a deadly juice which flows upon making a slight incision in the bark. The natives rub their arrows with it, and for this reason they call it arrow-grass; but at present they use very little."[4] Elsewhere the anonymous author mentions the use of (presumably) this poison by the Jova, and describes it as "so deadly that it kills not only the wounded person, but also him who undertakes the cure by sucking the wound, as is customary with all the Indians"; the description implying that the infection is irremediable.[5] Yet he apparently discriminated this poison from that of the Seri, for which another plant known as caramutraca

[1] Op. cit., p. 188; cf. ante, p. 72.
[2] Personal Narrative, p. 482.
[3] Op. cit., pp. 127, 128.
[4] Travels, p. 280; cf. ante, p. 87.
[5] Op. cit., p. 182.

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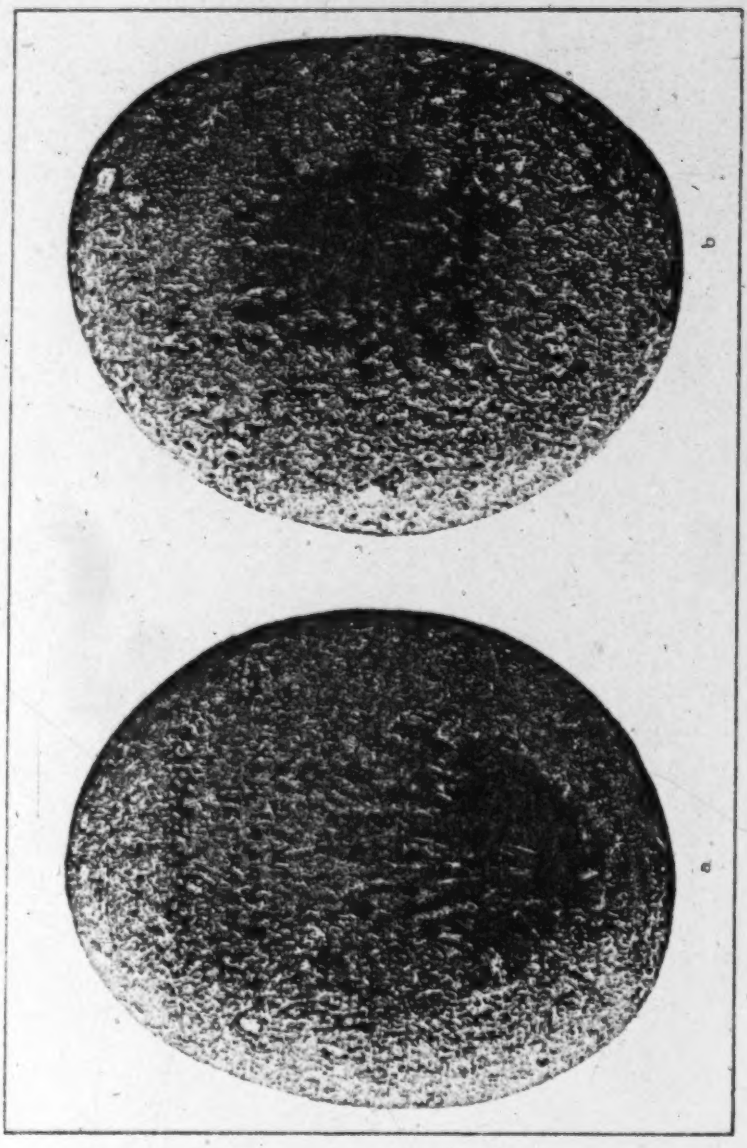

PERFECTED IMPLEMENT FOUND IN USE

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is an infallible remedy. On the whole it seems probable that the yerba mala (*Sebastiana bilocularis*?), or yerba de flécha, or mago, or magot, yielded or formed the standard arrow-poison of the Opata and perhaps of other Indians, and that the ill-repute of the shrub survived and spread throughout Mexicanized Sonora in such frequent repetition and common belief as to affect the ideas of residents and travelers alike; but it seems equally probable that the magic-inspired brew of the Seri is entirely distinct.[1]

As suggested by widespread primitive customs, and as illustrated specifically by the arrow-charming, the warfare of the Seri is largely sortilegic, this feature being but an extension and magnification of a corresponding feature of their hunting customs. The economic object of the chase is, of course, the flesh of the quarry; but the hunt normally begins with invocatory or other fiducial ceremonies, culminates in a feast opened with oblations, and ends in the use of horns or hoofs, teeth or bones, mane or tail, as talisman-trophies—primarily pledges of fealty to the favorable potencies, only secondarily symbols of success. The observances illumine the ever-present esoteric object of the chase, which is to gain the favor or overcome the power of the beast-god represented by the animal hunted; in general, this is sought to be effected through mimetic movements, or symbolic objects, associated with that animal-kind, and the retained charm-trophy is valued as a symbol of the placation or outwitting of a particular deity. Similarly, the Seri warrior strives for the supposed deific symbols of the enemy—the scalp or headdress or arrow of the alien tribesman, the fire-breathing and echo-waking (as well as death-dealing) wand of the Caucasian; and the Papago arrows, Yaqui scalps, and white man's firearms are sought avidly, treasured as fetishes, and often carried conspicuously as badges of borrowed prowess.[2] So the Seri are never without alien insignia in the form of weapons. The day before the 1895 expedition entered their stronghold, a band of warriors and women were frightened from a freshly slaughtered cow by a party of vaqueros so suddenly that their arms were left behind—and these

[1] It should be noted that the actuality of the poisonous property ascribed to the yerba mala is in some degree questionable; the plant is the only one of southern Papaguería yielding suitable material for arrow-shafts, and it is possible (if not probable) that it was consecrated to this purpose by the aboriginal Opata and protected by taboo in such wise as to become a sacred and fearsome thing. It is accordingly by no means improbable that the reputed poisonous property is but the product of generations of association, and that the plant is really harmless—an inference supported by experiments on the part of the leader of the 1895 expedition, who swallowed the juice of stem and leaves in two or three minute but increasing doses without perceptible effect. On the other hand, it should be observed that the region is one abounding in toxic juices, and that this shrub is so luxuriant and so free from thorny armament and other protective devices of a mechanical sort as to raise the presumption that it must be protected against herbivorous animals, at least, by chemical constituents of some kind (cf. ante, p. 25).

[2] These motives on the part of the Seri were reciprocated by their tribal enemies: a Papago fetish in the form of an Apache arrowpoint, long worn by an aged warrior as a protection from Apache arrows, was among the spoil of the 1895 expedition; and a "poisoned" Seri arrowhead and foreshaft, worn by a supposed Papago "doctor" as a badge of invulnerability to similar missiles, was cautiously shown to the 1895 expedition, but was held above price by its wearer—and this despite the fact that he had been christianized for decades, and retained no other pagan symbols.

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177 included a heavy Springfield "remodeled" rifle, lacking not only ammu-
411 nition but breechblock and firing pin; while Don Andrés Noriega, of
726 Costa Rica, and L. K. Thompson, of Hermosillo, described a rifle of modern make captured similarly two years before, which was in good working order and charged with a counterfeit cartridge ingeniously fashioned from raw buckskin in imitation of a center-fire brass shell and loaded with a polished stone bullet.[1] The finders opined that the rifles were carried to bluff the enemy, and even that the counterfeit cartridge was designed to do deadly execution; but it would better accord with Seri customs, and with the law of piratical acculturation which they typify,[2] to infer that the weapons were regarded rather as symbols of mystical potencies than as simple scarecrows. Of related import were two or three pseudomachetes made from rust-pitted cask hoops, reported by the majordomo and several vaqueros at Costa Rica; and of still greater significance was a machete picked up in a just-abandoned jacal by Don Ygnacio Lozania—veteran of the Andrade expedition and the Encinas conquest—which was laboriously rasped and scraped out of palobianco wood, colored in imitation of iron blade and mahogany handle by means of face-paints, and even furnished with "eyes" replacing the handle-rivets, in the form of embedded iron scales. Some of the Seri are familiar with the normal use of firearms, as was demonstrated by the Robinson and other episodes, and many of them modernly make some use of machetes or other knives, as shown by various rudely whittled wooden artifacts; yet the burden of proof indicates that the chief use of the Caucasian's weapons in the heat of actual warfare is shamanistic and symbolic. This interpretation is, in fact, practically established by the experience of the frontier; for the vaqueros and local soldiery have little fear of the ill-understood firearms and clumsily handled machetes occasionally seen in Seri hands, though they dread unspeakably the necromantic arrows and flesh-rending teeth with which the agile foes are credited.

174 The mystical potency ascribed to Caucasian firearms and cutlery by
324 the zoomimic tribesmen is of interest as a reflection of motives and methods pervading the entire range of their activities; at the same time it suggests the genesis of the aberrant technolithic craft displayed in arrow-chipping. The information obtained from Mashém and his mates concerning chipped arrowpoints implied that the process was hieratic and little understood by the body of the tribe, its place in the tribal knowledge, indeed, being similar to that of the brewing of the arrow "poison", which is the special work of shamans; and this information, comporting as it does with the rarity of the chipped points and

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[1] The imitative skill of the Seri was illustrated at Costa Rica some years ago, when the petty accounts for labor, etc, were kept by means of tokens stamped from sheet brass. While a Seri rancheria was maintained near the rancho, the storekeeper detected a number of counterfeits of his tokens, so well executed as to pass readily over the counter in ordinary exchange—and after extended detective work the counterfeiting was traced to the rancheria.

[2] American Anthropologist, vol. xi, August, 1898, pp. 243-249.

I: McGee E-5 (1894-1895)1898 NU31 Seri NU31

the crudeness of the work, strongly supports the inference that the stone arrow-making of the Seri was originally a fetishistic mimicry of alien devices—a plane, indeed, above which the craft has hardly risen even in recent decades. 174 324

While the Seri are devoid of military tactics in the strict sense of the term, they have certain customs of warfare which seem to be scrupulously observed. These customs are closely akin to those followed in hunting the larger land animals—indeed, the warfare of the tribe is merely an intensified counterpart of their chase. 726 [224]

The favorite tactical device of the warriors, as indicated by the great majority of their battles, is the ambuscade, laid and sprung either with or without the aid of decoys (usually aged women). Sometimes a considerable body act in concert under a prearranged plan; more commonly a few warriors only are involved at the outset, though these may be joined as the crisis approaches by companions lurking behind rocks and shrubs to be either on hand at the finish or in the way of ready flight, according to the turn of the battle-tide; and it is probable that the greater part of the ambuscades prove stillborn by reason of the oozing courage of leaders and the shirking of their supporters if the prospective victims present a bold front, or if the final omens are otherwise adverse. The ambuscade, with its flying contingent, grades into the device of stalking a stationary or slowly moving enemy, the stealthy approach terminating either in covert attack at close range or in sudden rush by a superior force. The theory, or rather the instinctive plan, of the campaign is to seek advantage in both position and numbers, to keep under cover until the instant of attack, to have sure and ample lines of retreat, and in every way to minimize individual risk.

There is a widespread notion toward the Seri frontier that the savages are given to sorties and surprises by night; but both specific testimony and the records indicate, when carefully analyzed, that this tactical device is much less common in practice than in repute, and is not, indeed, characteristic of the tribe. A few known battles began in attacks by night; but the war parties, like the hunting and fishing parties (save in the semiceremonial pelican pilgrimages), display decided preference for daylight in their forays—indeed, there are various indications that the folk are much more timid and oppressed with superstitious fears by night than by day.

In rare cases small parties of aliens have been half openly surrounded and done to death by considerably larger parties of the savage folk; but this method, too, is incongruous with the fixed habits of the tribe and with the deep-planted instinct of avoiding personal exposure.

A considerable number of the long list of homicides charged against the Seri, and marking the beginning of many of their battles, were individual rather than collective, the consummation of inimical impulse sometimes treacherously concealed for favorable opportunity, as in the 186 648

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

186 pitiful case of Fray Crisóstomo Gil, and othertimes rising explosively
648 beyond the feeble control of the untrained mind; for the impulse of enmity toward aliens is an ever-present possession—or obsession—of the tribe, and a reflection of that race-sense which is their most distinctive attribute.

726 Of open warfare and face-to-face fighting there is hardly a germ among the Seri. When themselves ambushed or surrounded, some of their stouter warriors have in a few instances faced the foe for a few minutes at a time, as is shown by the annals of Cerro Prieto; yet this accidental attitude but betokens the play of chance rather than the plan of choice. Concordantly, the folk avoid the method of warfare (so common among other Amerind tribes as to be properly considered characteristic) involving open duel between chiefs and other warriors; they seem to be devoid of that sense of fairness in fighting which finds expression in the duel; and despite the individual advantages growing out of gigantic stature, immense strength, and superior swiftness, they habitually seek to combine in numbers against panicked or baffled enemies, just as their hunters throw themselves mercilessly on surrounded quarry. Of open boldness or confident prowess no trace appears; and the body of facts seems to justify the prevailing Sonoran opinion that the warfare of the Seri is treacherous and cowardly in design, craven and cruel in execution.

Once begun, the conduct of the fray by the Seri fighters is fairly uniform; the warriors either discharge clouds of arrows from their coigns of vantage, or rush to brain their victims with stones, or to break their necks and limbs and crush in their chests, as in the slaughtering of quarry; and according to the tale of the occasional survivors—Señor Pasqual Encinas and his son Manuel, Don Ygnacio
[115] Lozanis, Don Andrés Noriega, Don Jesus Omada of Bacuachito, and Don Ramon Noriega of Pozo Noriega, are among the survivors and informants; also the sturdy Papago fighters, Mariano, Anton, Miguel, and Anton Castillo (whose sister died of dread while he was on the 1895 expedition)—the rushing warriors are transfigured with frenzy; their eyes blaze purple and green, their teeth glisten through snarling lips, their hair half rises in bristling mane, while their huge chests swell and their lithe limbs quiver in a fury sudden and blind and overpowering as that of springing puma or charging peccary. Of the successful assaults the ghastly end is rarely recorded, though whispered large in the lore of Sonora; in the unsuccessful assaults recounted by survivors the blood-frenzy burned but briefly and died swiftly as the disappointed warriors skulked silently behind rocks and shrubs, or fled across the sands with inconceivable fleetness. These details of battle precisely parallel the details of butchery of beastly quarry, as recounted by local observers and corroborated by Mashém's recitals.

266 So far as can be ascertained the parallelism between frenzied battling
727 and furious butchery in the chase affords the chief basis for the firm

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

Sonoran belief that the similarity extends one step further, and that the human victims are rent and consumed, like the beasts. There is a lamentable lack of data concerning the alleged anthropophagy of the Seri; on the one hand there is the deep-seated local opinion, generally growing stronger as the tribal territory is approached, and agreeing so well with the hunting customs, the thaumaturgic arrow-poisoning, the zoomimic handicraft, and zootheistic faith, and especially with the pervading fetish-piracy of the folk, that its validity would seem inherently probable; on the other hand, there is not only a dearth of specific positive testimony, but haciendero Encinas (best informed among Caucasians concerning Seri customs) and several of his yeomen reject the prevailing belief, while Mashém consistently repudiated the custom, both in general and in particular, and in ceremonial as well as in economic aspects, whenever and in whatever way the subject was approached during his intercourse with the 1894 expedition. On the whole, the much-mooted question of Seri cannibalism must be left open pending further inquiry, with some preponderance of evidence against the existence of the custom. 266 727

The war-frenzy of the Seri fighters is significant in its parallelism with the blood-craze of the chase, and even more so in its analogy with the warpath customs and ceremonies of most Amerind tribes and many other primitive peoples. In typical tribes the warpath custom is a most distinctive one, standing for an abnormal state of mind and an unaccustomed habit of body, perhaps to the extent of an extreme exaltation or obsession akin to intoxication, in which the ordinary ideas of justice and humanity are inhibited; among most tribes the condition is sought voluntarily and deliberately when occasion is thought to demand, and is superinduced by fasts and vigils, exciting songs and ceremonies, and related means; while among certain tribes the aid of symbolic "medicines", which may be actual intoxicants, is invoked. Thus the savage on the warpath is a different being from the same man in times of peace; viewed from his own standpoint, he is possessed of an alien and violent demon, usually that of a fantastic and furious beast-god whose rage he must symbolize and enact; viewed from the standpoint of higher culture, he is a raving and ruthless maniac whose craze is none the less complete by reason of its voluntary origin. The warpath frenzy is one of the fundamental, even if little understood, facts of primitive life, and the character of the savage tribe can not properly be weighed without appreciation of it. Now, the Seri blood-craze seems measurably distinct in two ways: in the first place, it expresses a more profound and bitter enmity toward aliens than is found among most savage tribes—i. e., it is instinctive and persistent in exceptional degree; in the second place, it is more spontaneous and explosive in its culmination when conditions favor than among tribesmen who induce the condition by elaborate preparation—i. e., it is dependent on the swift-changing hazard of warfare in exceptional 000 171 726 [186]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

171 726 measure; so that the Seri frenzy is at once more instinctive and more fortuitous, or in general terms more inchoate, than the corresponding condition among most of their contemporaries. Accordingly the war customs, like several other features of the tribe, seem to afford a connecting link between the habits normal to carnivorous beasts and the well-organized war customs of somewhat higher culture-grades; and thus they contribute toward outlining the course of human development through some of its darker stages.

712 Conformably with their poverty in offensive devices, the Seri are exceedingly poor in devices for defense. It is an impressive fact that a restricted motherland which has been successfully protected against invasion for nearly four centuries of history should be destitute of earthworks, fortifications, barricades, palisades, or other protective structures; yet no such structures exist on any of the natural lines of approach, and none are known anywhere in Seriland save in a single spot—Tinaja Trinchera—where there are a few walls of loose-laid stone, so unlike anything else in Seriland and so like the structures characteristic of Papagueria as to strongly indicate (if not to demonstrate) invasion and temporary occupancy by aliens. The jacales are not fortified in the slightest degree, unless the turtle-shells with which they are sometimes shingled be regarded as armor; even the most ancient rancherias are absolutely devoid of contravallations of earth, stone, or other material; and both the structures themselves and the expressions of the folk concerning them indicate that the jacales are not regarded as fortresses or places of refuge against enemies, but only as comfortable lodges for use in times of peace. Nor are walls like those of the borderland Tinaja Trinchera known in the interior of the tribal territory—e. g., the similarly conditioned Tinaja Anita, which differs only in the greater abundance and permanence of the water-supply, is entirely devoid of artificial structures, not even a pebble or bowlder being artificially placed save perchance by the casual trampling of the pathways. As already noted, the Seri seem to be practically devoid of knife-sense; they are still more completely devoid of fort-sense, although (and evidently because) they rely so fully on natural things, including tutelaries and their own fleetness, for safety.

713 Although devoid of even the germ of fortification-sense, so far as can be discovered, the Seri are not without a sort of shield-sense, which is of much significance partly by reason of its inchoate character. The ordinary shield is a pelican pelt, or a robe or kilt comprising several skins; it is employed either for confusing the enemy by swift brandishing, something after the fashion of the capa of the banderillero in the bull ring, or for actual protection of the body against arrows and other missiles or weapons. So far as known it is not backed or otherwise strengthened, the user relying solely on the stout integument and thick feathers—or rather on the mystical properties imputed to the pelt as the mystery-tinged investiture of their chief creative tutelary.

[825]

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On the coast bucklers are improvised from turtle-shells, though, according to Masbém (confirmed by direct observation), these are not carried inland for the purpose; but the protective function imputed to the turtle was well represented in the rancheria at Costa Rica by several fetishes made from phalanges of turtle-flippers tricked out in rags in imitation of Caucasian dress (somewhat like the mortuary fetishes illustrated in figure 40a and b). On the whole, the most conspicuous feature of the individual shields or protectors is their emblematic character; they are sortilegic rather than practical, and express imputation of mystical potencies rather than recognition of actual properties; and in this as in other respects they correspond closely with the offensive devices, and aid in defining the ideas and motives of the primitive warriors.

The actually effective protection of the Seri in warfare is their fleetness, coupled with their habitual and constitutional timidity, i. e., their wildness—for they are verily, as their Mexican neighbors say, "gente muy bronco". Moreover, they are adepts in concealing their persons and their movements behind shrubbery and rocks, and in finding cover on the barest plains; and suggestions are not wanting that the protecting shrub-clumps and rocks of their wonted ranges are credited with occult powers and elevated to the lower places of their zoic pantheon, after the customary way of that overpowering zootheism, or animism, which the Seri so well exemplify in many of their habits.

Summarily, the warfare of the Seri complements the pacific industries of the tribe in every essential respect. It is notable for improvidence; i. e., for reliance on chance; the dearth of devices for offense and defense parallels the poverty in industrial artifacts; and the disregard of fortifications is of a kind with the squandering of present food supplies and the utter neglect of provision for the future. A striking correspondence between workfare and warfare is found in the fierce blood-lust displayed alike in chase and battle, a feature manifestly borrowed from beasts and intensified by besetting beast-faith; and more striking still is the correspondence in motive, as revealed by the overlapping functions of the protective kilt, by the borrowing of animal symbols alike in peace and war, and by the imitation of animal movements on the warpath as in the chase.

In the last synthesis the warfare of the Seri may be considered as characterized by two attributes: (1) The motives, so far as developed, are zoomimic in even greater degree than the prevailing motives of the pacific industries; and (2) the methods are shaped largely by mechanical chance, like those normal to protolithic industry.

Nascent Industrial Development

Industries form the chief bond between man and his environment. The esthetic activities arise in the individual and extend to his fellows; the institutional activities express the relations among individual men

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000 and groups; the linguistic activities serve to extend social relations in space and time, and the sophic activities to integrate and perpetuate all relations; but it is through the industrial activities that human intelligence interacts with physical nature and makes conquest of the material world. Accordingly, industries act as a steady and never-ceasing stimulus to intelligence; accordingly, too, the industrial activities afford the simplest and surest measure of intellectual advancement.

Under this view of the place of industrial activities in human phylogeny, certain phases of Seri technology acquire importance and especial significance.

105 177 1. One of the most conspicuous features of Seri craft is its local character. The foodstuffs, the materials for apparel and habitations, and the substances utilized in the several lines of simple handicraft are essentially local; moreover, the characteristic methods and devices evidently reflect local environmental conditions. There are, indeed, a few phenomena suggesting, and a still less number demonstrating, extraneous origin; the balsa and the kilt are sufficiently similar to devices of other districts to suggest, though not to prove, genetic identity (indeed, the sum of indications of local origin is much weightier than the several suggestions of extraneous derivation); the iron harpoon-points and arrow-tips are mainly of local flotsam, and are essentially provincial in modes of employment; the chipped stone arrow-tips, though local in material, are foreign in motive; but on summarizing the industrial phenomena, it would appear that by far the greater share are essentially local, while the few of exceptional (and extraneous) character can be pretty definitely traced to importation through the social interactions of recent centuries.

105 182 13 2. An equally conspicuous feature of the industrial craft of the Seri is the dominance of chance in both processes and devices. The traditional "fisherman's luck" is made exceptionally uncertain by the sudden gales and shifting currents of Seriland shores, while the absolute necessaries of life on land are still more capricious than those alongshore; this uncertainty of resources has profoundly affected the somatic features of the tribesman, as indicated elsewhere (ante, p. 150); and that the mental attributes of the folk are even more profoundly affected is attested by the rôle played by chance in the selection and shapement of the prevailing tools of stone and shell. The large rôle of chance in Seri life is also revealed, though less directly, in the overweening [771] mysticism of zoötheistic faith, with its material reflection in zoömimic craft.

3. When the local and fortuitous features of the Seri industries are juxtaposed they are found to express a notably inchoate or primitive stage of industrial development. In both the local and the fortuitous or accidental aspects, the activities are so closely adjusted to the immediate environment as to approach the instinctive agencies and movements of bestial life, and correspondingly to diverge from the composite

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and cosmopolite characters of higher humanity; the dearth of extraneous devices denotes absence or intolerance of that accultural interchange accompanying and marking the progress of peoples; and the dearth of inventions denotes feebleness of creative faculty and absence of that self-confidence which accompanies and measures progress in nature-conquest. 105 13 182 [177]

4. When the local and fortuitous features of the Seri craft are viewed in their serial or sequential relations, they are found to reflect and attest autochthonal development. Excepting the few accultural processes and devices whose acquisition may confidently be traced to certain social interactions of the historic period, the Seri technic is too closely tied to local environment to warrant any supposition of importation from other districts. The question of the birthplace of the people may be left open in this case as in every other; but the birthplace of practically all those activities and activital products which define the folk as human was manifestly Seriland itself—so that the tribe, considered as a human folk rather than as a zoic variety, must be classed as autochthonous. 105 177

Summarily, then, the Seri industries are significant as (1) local, (2) fortuitous, (3) primitive, and (4) autochthonous; and these features combine to illumine a noteworthy stage in primitive thought. 105

5. On juxtaposing these significant features of Seri technic, they are found to reflect the tribal mind with noteworthy fidelity, and hence to indicate the sources of Seri mentations, and of the local culture in which these mentations are integrated. The local foodstuffs—especially that vital standard of values in arid regions, water—are periodic sources of the strongest aspirations and inspirations of industrial life, and the methods and devices for food-getting are but the legitimate offspring of the inevitable relation between effort and environment; the conspicuous rôle of chance is but the composite of the hard and capricious environment on the one hand, and of the lowly thought reflecting that environment on the other hand; the zoic faith into which the magma of recurrent chance has semicrystallized finds carnate symbols either in local beasts or in fantastic monsters suggested by those beasts; even the mating instinct, second only to thirst among the impelling action-factors of the folk, is so profoundly and bitterly provincial as to exclude foreign ideals to a degree unparalleled among known peoples. The industrial materials are local—but not more local than the thoughts in which they are reflected; the technical methods are unmistakably the offspring of the environment—but they are equally the offspring of minds reflecting that environment and no other; the few and simple devices stand for integrations of experiences, instinctive rather than ratiocinative, the germ of invention rather than even its opening bud—but the experiences bear the marks of that environment and no other. Accordingly, the mental side of Seri industry, and, indeed, of all Seri life, appears to be the counterpart of the physical side. 13 181 182

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181 153 side. The Seri mind is (1) local, (2) chance-dominated, (3) exceeding lowly, and especially (4) autochthonal in its content and workings.

000 There is an aspect of the inference as to the local and autochthonal character of the Seri mind which is of wide-reaching application. As indicated by many tribes, though most clearly by the Seri, there is a definite relation between the somatic characteristics of primitive folk and their environment; the indications are that the relation is inversely proportionate to development, the lowliest tribes reflecting environment most closely, and the higher peoples responding less delicately to the environmental pressure in the ratio of their increased power of nature-conquest; and the relation is essentially phylogenetic, in that it sums and integrates the innumerable interactions between organic kind and environment during generations or ages. It is to be realized that the relation is not simple and direct or physiologic merely (e. g., like that between climate and the pelage of an animal), but that it is linked through the human activities; for, as is conspicuously the case in Seri-land, the environment prompts exercises of particular kinds, and it is these exercises that shape the somatic features, such as strength of lung, length of limb, and the soundness of constitution displayed in physical endurance; yet the relation is none the less real, in that it operates through the activities rather than directly. The relation may be characterized with respect to mechanism as bodily responsion, or with respect to capacity as *responsivity of body*. Now, as is well illustrated by the provincial ideation of the Seri, the relation between environment and physique is accompanied by a corresponding relation between environment and thought. This relation, too, varies inversely with development, the connection being closest among the most primitive tribes, and growing less and less close with maturing mentality and proportionately increasing power of nature-contest; and the relation is still less direct (or physiologic merely) than that between the human body and its environment, in that not only the bodily activities but the instinctive and nascently ratiocinative processes are interposed. This relation between mind and environment may be characterized as mental responsion in its mechanical aspect, or as *responsivity of mind* when regarded as a psychic property.[1] Accordingly, the relation between the tribal mind and its environment, as illumined by the peculiarly delicate interactions observed among the Seri, seem to indicate the genesis and earlier developmental stages of mentality in its multifarious aspects.

The specially significant feature of the relation between environment on the one hand and body + mind on the other is its diminishing value with general intellectual advancement. Viewed serially, the

[1] The responsivity of mind has been defined elsewhere as the basis of knowledge, and as one of five fundamental principles of science (The Cardinal Principles of Science, Proceedings of the Washington Academy of Sciences, vol. v, 1903, pp. 1-15).

1: McGee E-5 (1894-1895)1898 NU21 Seri NU31

relation may be considered to begin in the animal realm with organisms adapted to environment through physiologic processes, and to end in that realm of enlightened humanity in which mind molds environment through complete nature-conquest. In the serial scale so defined the various primitive tribes and more advanced peoples may be arranged in the order of mental power or culture-status; when the same arrangement will express in inverse order the relative closeness with which the several tribal minds reflect their environments. It follows that the lowly minds and craft of the Seri reflect their distinctive environment with exceeding, perhaps unparalleled, closeness, because of their very lowliness; it follows, too, that any other equally lowly folk imported into the region and perfectly wonted to it by generations of experience would equally reflect the physical features of the region in their craft and in their thinking; it follows, also, that if the Seri were transported into any other district of equally distinctive physical features, they would gradually adapt themselves to the new environment—though with some added intelligence, and hence with diminished closeness, as is the way of demotic development—in such manner that their craft and thinking would reflect its features. In a more general way it follows that those similarities in culture, or activital coincidences, which have impressed the ethnologic students of the world (notably Powell and Brinton), are normal and inevitable in primitive culture and of diminishing prominence with cultural advancement.

Social Organization

Among the Seri, as among many other aboriginal tribes, the social relations are largely esoteric; moreover, in this, as in other savage groups, the social laws are not codified, nor even definitely formulated, but exist mainly as mere habits of action arising in instinct and sanctioned by usage; so that the tribesmen could not define the law even if they would. Accordingly the Seri socialry[1] is to be ascertained only by patient observation of conduct under varying circumstances. Unfortunately, the opportunities for such observation have been too meager to warrant extended description, or anything more, indeed, than brief notice of salient points.

Clans and totems

The most noticeable social fact revealed about the Seri rancherias is the prominence of the females, especially the elderwomen, in the management of everyday affairs. The matrons erect the jacales without help from men or boys; they carry the meager belongings of the family and dispose them about the habitation in conformity with general custom and immediate convenience; and after the household is prepared, the men approach and range themselves about, apparently in a definite

[1] A convenient term proposed by Patten.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

562 order, the matron's eldest brother coming first, the younger brothers
592 next, and finally the husband, who squats in, or outside of, the open end of the bower. According to Mashém's iterated explanations, which were corroborated by several elderwomen (notably the clanmother [423] known to the Mexicans as Juana María) and verified by observation of the family movements, the house and its contents belong exclusively to the matron, though her brothers are entitled to places within it whenever they wish; while the husband has neither title nor fixed place, "because he belongs to another house"—though, as a matter of fact, he is frequently at or in the hut of his spouse, where he normally occupies the outermost place in the group and acts as a sort of outer guard or sentinel. Conformably to their proprietary position, the matrons have chief, if not sole, voice in extending and removing the rancherías; and such questions as that of the placement of a new jacal are discussed animatedly among them and finally decided by the dictum of the eldest in the group. The importance of the function thus exercised by the women has long been noted at Costa Rica and other points on the Seri frontier, for the rancherías are located and the initial jacal erected commonly by a solitary matron, sometimes by two or three aged dames; around this nucleus other matrons and their children gather in the course of a day or two; while it is usually three or four days, and sometimes a week, before the brothers and husbands skulk singly or in small bands into the new rancheria.

Quite similar is the regimentation of the family groups as indicated by the correlative privileges and duties as to placement, as well as the reciprocal rights of command and the requirements of obedience. Ordinarily (especially when the men are not about) the elderwoman of the jacal exercises unlimited privileges as to placement of both persons and property, locating the ahet, the bedding, the fire (if any), and other possessions at will, and assigning positions to the members of her family, the nubile girls receiving especial attention; she is also the arbiter of disputes, the distributor of food, etc; but in case of tumult, especially when children from other jacales are present, she may invoke the author- [614] ity of the clanmother, whose powers in the rancheria are analogous to those of the younger matrons in their own jacales. Even when the men are present they take little part in the regulation of personal conduct, but tacitly accept the decision of matron or clanmother; yet in emergencies any of the women are ready to appeal for aid in the execution of their will to a brother (preferably the elder brother) of the family, or, if need be great, to the brothers of the clanmother. So far as was observed, and so far as could be ascertained through informants, these appeals are always for executive and never for legislative or judicative cooperation; but various general facts indicate that in times of stress—in the heat of the chase, in the warpath-craze, etc—the men bestir themselves into the initiative, while the women drop into an 562 inferior legislative place. As an illustration of the ordination in some-

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

As an illustration of the ordination in some 125
what unusual circumstances, it may be noted that when the "Seri 562
belle" (Candelaria) refused to pose for a photograph she was supported 626
by the clanmother (Juana María) until the latter was placated by presents; and that when the belle refused to obey the mother's command—to the vociferous scandal of the entire group—Juana María appealed to Señor Encinas, as the conqueror of the tribe and hence as the virtual head of both rancho and rancheria. And when a younger Seri maiden (plate XXV) similarly refused to pose, and in like manner disobeyed her mother (again to the general disgust), the latter appealed to Mashém; when he, after first exacting additional presents for both girl and mother and a double amount for himself, put hands on the recalcitrant demoiselle and forced her into the pose required, despite the shrinking and tremulous terror perceptible even in the picture.

Commonly the regimentation of family, clan, and larger group appears 592
to be indicated approximately by the placement assumed spontaneously in the idle lounging of peace and plenty. A typical placement of a small group is illustrated in plate XIV. Here the family are assembled outside the jacal, but in the relative positions which would be assumed within. The matron (a Red Pelican woman) squats in easy reach of her few and squalid possessions; on her left, i. e., in the group-background and place of honor, sits the elderwoman of the rancheria (a Turtle); then comes the daughter of the family, followed by two girl-child guests of the group, the three occupying positions pertaining to chiefs or elder brothers or, in their absence, to daughters; opposite the matron sits a younger brother,[1] whose wife is a Turtle woman (daughter of the dame in the place of honor) and matron of another jacal. A few feet behind this brother (just outside the limits of the photograph reproduced, though shown on the duplicate negative) squats the husband, with his side to the group and face toward the direction of natural approach; while the place belonging to the sons of the family on the matron's right is temporarily occupied by a White Pelican girl, together with a dog, notable in the local pack for largely imported blood and correspondingly docile disposition. The place for the babe, were there one in the family, would be on the heap of odds and ends behind the matron. As in this group so in most others, the place of the sons is vacant; for the boys are at once the most restless and the most lawless members of the tribe—indeed, the striplings seem often to ignore [858] [882] the maternal injunctions and even to evade the rarely uttered avuncular orders, so that their movements are practically free, except in so far as they are themselves regimented or graded by strength and fleetness and success in hunting.

The raison d'être of the proprietorship and regimentation reflected in 302
the everyday customs is satisfactorily indicated by that totemic feature 614
of the social organization revealed in the face-painting described in

[1] This man was one of those involved in the Robinson butchery on Tiburon island a few months before the picture was taken; and he was one of those executed or transported for the affair during the interval between the 1894 and 1895 expeditions.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

614 earlier paragraphs (pp. 184–189); these symbols evidently represent an
[302] exclusively maternal organization into clans consecrated to zoic tutelaries. The tutelaries, or totems, together with the clan names and all personal designations connected with the totems, are highly esoteric, and were not ascertained save in the few cases mentioned above.[1]

593 It should be observed that the identification of kindred by the alien observer is difficult and somewhat uncertain, since the relationships recognized in Seri socialry are not equivalent to those customary among Caucasians. It was found especially difficult to identify the husband
[582] of the jacal, partly because he is commonly incongruously younger (and hence relatively smaller) than the mistress, and partly because of the undignified position of outer guard into which he is forced by the tribal etiquette. Moreover, his connection with the house is veiled by the absence of authority over both children and domestic affairs, though he exercises such authority freely (within the customary limits) in the jacales of his female relatives. There is, indeed, some question as to
[842] the clear recognition of paternity; certainly the females have no term
601 for "my father", i. e., the term is the same as that for "my mother", *em*, though the males distinguish the maternal ancestor by a suffixed syllable (*e*="my father"; *e-ta* or *i'-tah*="my mother"), which seems to be a magnificative or an intensificative element. It is noteworthy that the kinship terminology is strikingly meager; also that while the records suggest various significant points, the material is hardly rich enough to warrant complete synthesis of the consanguineal system.

421 While the burden of the more permanent property pertains to the women, there is a decided differentiation of labor with a concomitant vesting of certain property in the warriors—the distinctively masculine chattels comprising arrows, quivers, bows, turtle-harpoons, etc. There are indications that the balsas, too, are regarded as masculine property. The impermanent possessions—water, food, etc—seem to be the common property of men, women, and children, except in so far as the
[264] right is regulated by regimentation; for the privileges of eating and drinking are enjoyed in the order of seniority. In the reckoning of
554 seniority, the chief (who is comonly such in virtue of his position as
602 nominal elder brother of a prolific dame) ranks first, and is followed by other warriors in an order affected in an undetermined way by conjugal relations as well as by their prowess or sagacity (the equivalents of age in primitive philosophy) down to an undetermined point—apparently fixed by puberty; then comes the clanmother, followed by her daughters in the order of nominal age, which is affected by the status of spouses and the number of living offspring; finally come the children, practically in the order of their strength (which also is deemed an equivalent of age), though the girls—especially those

[121] [1]The chief object of the 1895 expedition was to pursue the inquiries concerning social organization, totems, etc; but, as mentioned elsewhere, this object was defeated by the troublous history of the tribe during the earlier part of 1895, and the consequent revival and intensification of their animosity toward aliens.

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approaching nubility—receive some advantage through the connivance of the matrons. To a considerable extent in the matter of sustentation, and to a dominant degree in the matter of apparceling, the distribution of values is affected by a highly significant (though by no means peculiar) humanitarian notion of inherent individual rights—i. e., every member of the family or clan is entitled to necessary food and raiment, and it is the duty of every other person to see that the need is supplied. The stress of this duty is graded partly by proximity (so that, other things equal, it begins with the nearest person), but chiefly by standing and responsibility in the group (which again are reckoned as equivalents of age), whereby it becomes the business of the first at the feast to see that enough is left to supply all below him; and this duty passes down the line in such wise as to protect the interests of the helpless infant, and even of the tribal good-for-naught or hanger-on, who may gather crumbs and lick bones within limits fixed by the tribal consensus. Beyond these limits lies outlawry; and this status arises and passes into the tribal recognition in various ways: Kolusio was outlawed for consociating with aliens, and Mashem narrowly missed the same fate at several stages of his career; the would-be grooms who fail in their moral tests are ostracized and at least semioutlawed, and range about like rogue elephants, approved targets for any arrow, until they perish through the multiplied risks of solitude, or until some brilliant opportunity for display of prowess or generosity brings reinstatement; deformed offspring are classed as outside the human pale, even when the deformity is defined rather by occult associations than by physical features; abnormal and persistent indolence, too serious for scorn and ostracism to cure, may also outpass the tribal toleration; and, as indicated by Mashem's guarded expressions and slight additional data, disease, mental aberration, and decrepitude are allied with indolence and deemed sufficient reason for excluding the persistently helpless from the tribal solidarity, and hence from recognized humanity—and the fate of the outlaw, even if nothing more severe than abandonment in the desert, is usually sure and swift. The entire customs of outlawry among the Seri are singularly like those of gregarious animals, including especially kine and swine in domestication. Now, studied equity in the distribution of necessaries might seem to be allied to thrift; but it is noteworthy that this is not so among the Seri, who take thought for one another but not for the morrow, who seem to have no conception of storage (save an incipient one in connection with water and the repulsive notion underlying the "second harvest"), and who habitually gorge everything in sight until their stomachs and gullets are packed—and then waste the fragments.

554 602 554 577 626 [732] 185

The division of labor which affects proprietary interests is undoubtedly affected in turn by the militant habit of the tribe and by the frequent decimation of the warriors. In general, the adult males limit their work to fighting and fishing, with occasional excursions into the hunt-

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462 ing field; though by far the greater part of their time is spent in listless lounging or heedless slumber under the incidental guard of roaming youths and toiling women. The matrons are the real workers in the tribal hive; they are normally alert and active, passing from one simple task to another, gathering flotsam food along the beach or preparing edibles in the shadow of the jacal, with an eye ever on material possessions and children; they frequently join in hunting excursions of considerable extent; they are the chief manufacturers of apparel, utensils, and tools; and the scions of Castilian caballeros are not infrequently staggered at the sight of half a dozen Seri women "milling" a band of horses, and at intervals leaping on one to kill it with their hupfs. The masculine drones are the more petted and courted by reason of their fewness, for during a century or two, at least, the women [162] [562] have far outnumbered their consorts—a disproportion doubtless tending in some respects toward the disintegration of the clan system and, reciprocally, toward the firmer union of the tribe.

[756] One of the most noteworthy extensions of feminine functions among the Seri is toward shamanism. So far as could be ascertained from Mashém and the associated matrons at Costa Rica, it is such beldams as Juana María who concoct the arrow "poison", compound both necromantic medicines and curative simples, cast spells on men and things, and even fabricate the stone arrowpoints and counterfeit cartridges; though unhappily the data are neither so full nor so decisive as desirable.[1]

562 623 Conformably with their prominence in proprietary affairs, the Seri matrons seem to exercise formal legislative and judicative functions; for not only do they hold their own councils for the arrangement of the domestic business of the rancherías, but they also participate prominently in the tribal councils (as explained by Mashém), and play important rôles in carrying out the decisions of such councils—as when they cooperate with war parties as decoys, or journey across their bounding desert to spy out the land of the enemy.

614 On the whole, it would appear that the clan organization of the Seri conforms closely with that characteristic of savagery elsewhere, especially among the American aborigines. The social unit is the maternal clan, organized in theory and faith in homage of a beast-god, though defined practically by the ocular consanguinity of birth from a common line of mothers; yet the several units are pretty definitely welded into [619] a tribal aggregate by common feelings, identical interests, and conjugal ties. The most distinctive features brought out by the incomplete 562 investigation are the somewhat exceptional manifestation of property-right in the females, the singularly strong sense of maternal relation, and the apparent prominence of females in shamanistic practices as well as in the tribal councils.

[1] The agency of the women in applying the arrow "poison" was noted by Hardy; cf. p. 252.

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CHIEFSHIP

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The unformulated tribal laws of the Seri are intimately connected with leadership, which is, in turn, largely a reflection of personal characteristics; so that the tribal organization is about as variable as that of the practically autonomous herds of cattle ranging the Sonoran plains adjacent to Seriland. Indeed, just as the stock-clans enjoy a precedence on pasturage and at waterholes, determined by the valor and strength of the bulls by which they are led, so the Seri clans appear to be graded by the prowess of their masculine leaders, combined with the sortilegic success of the leaders' consorts; while, just as the leadership of the cattle shifts from band to band as the years go by, according to the fairly equal hazard of natural selection, so the clan dynasties of the human group rise, flourish, and decline in an endless succession shaped by the chances of birth and survival under a capricious environment, by the fate of battles internecine and external, and by various other factors. The instability of the Seri organization is demonstrated by the tribal changes recorded in history, as well as by the vicissitudes within the memory of Señor Encinas and others. At the beginning of the records the Upanguayma were already exiled from Seriland proper [175] and apparently suffering from raids of their collinguals; within a century the Guayma, also, were expatriated and nearly annihilated; then, in the early part of the present century, the Tepoka were extruded and (after a series of wars in active progress in Hardy's time) forced far up the coast to one of the poorest habitats ever occupied by any folk. So, too, throughout the Encinas régime the internal dissensions continued whenever the clans were not combined against aliens; and the veteran pioneer has seen much intratribal strife, attended by the rise and passing of many chiefs, both acknowledged and pretended, and often exercising chiefly prerogatives two or three at a time. This instability grows largely out of the fact that the essential unit is the clan, and that the tribe is nothing more than a lax aggregation; and it is measurably explained by the crude customs accompanying the choice of leaders.

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As already noted, the clan organization is maternal, and the clan-mother is the central figure of the group; but the executive power resides in her brothers in the order of seniority—i. e., while the personal arrangement of the group is maternal, the appellate administration is fraternal. So far as could be ascertained, the form of government is clearly discriminable from that commonly styled avuncular; for, in the first place, the minor administration accompanying the control of property invests the elderwomen with exceptional legislative and judicative powers, while, in the second place, there are no old men (by reason of the militant habit), so that the reverence for age so assiduously cultivated in primitive life extends to matrons much more than to men. [888]

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614 Classed with respect to major administration, therefore, the clan may be regarded as an informal *adelphiarchy* (*ἀδελφός* and *ἄρχος*) or *adelphocracy* (*ἀδελφός* and *κρατός*). It has none of the elements of the patriarchy, since male lineage is not recognized, and can not be classed as a matriarchy, since the clanmother is admistratively subordinate to her brothers; while the avuncular functions are apparently inchoate and indirect, i. e., exercised only through or in conjunction with the clanmother. In short, the clan is ordinated or regimented in ostensible accordance with physical power, though the real faculty is confused (after the fashion of primitive thinking generally) with mystical faculties, imputed largely on magical grounds but partly on grounds of age-reverence, etc. Now, when two or more clans combine, the basis on 578 which the common chiefship is determined is similar to that determin- 614 ing the clan leadership; at the outset three factors enter, viz, (1) the 643 seniority of the clans in the accepted tribal mythology (2) the prowess of the respective clan leaders (always weighed in conjunction with the [756] shamanistic potency of their consorts), and (3) the numerical strength of the respective clans; but practically, so far as can be judged from all available information, the choice really reflects physical force, since in case of doubt the strongest and bravest man becomes the oldest by virtue of his strength and bravery, while the strongest clan finds fair ground for claiming seniority in the very fact of its strength. Naturally disputes arise in the adjustment of the several relations; and in the actual analysis in council, the dispute is commonly reduced to a contest between gods and men, i. e., between the claims for mystical and magical potencies on the one hand and the claims of brawn and bone on the other hand, so that strength wins, unless omens or prodigies turn the scale—which happens often enough to keep the subjective and the objective elements in fairly equal balance. Sometimes the contests are quickly settled; again they last for months, during which the tribe struggles under its weight of Cerberus heads; and repeatedly the disputes have ended in the annihilation of clans, or even in the tribal fissions attested by the recorded and traditional history of the Serian family.

643 The chiefship once determined, the leader bends all energies toward maintaining the position by which he is dignified and his clan exalted. He recognizes his responsibility for the welfare of the tribe—not only for success in battle and food-getting, but for stilling storms at sea, protecting the aguajes from the drought-demons, and securing all other benefits, both physical and magical; he must be aggressive yet cautious on the warpath, fleet and enduring in retreat, indomitable in the chase, bold but not reckless on the balsa, and above all panoplied and favored by the shadowy potencies of air and earth and waters; he must be the local and lowly Admirable Crichton, and his never-neglected watchword must be *noblesse oblige*. His practical devices for maintaining prestige are many and diverse; it is commonly the chief who carries the sym-

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bolic weapon, the counterfeit cartridge, the imitation machete, or other charm against alien power; it is usually he who wears the white man's hat or random garment in lieu of the deer or lion mask of earlier days; and during recent years his most-prized fetish, and one which practically insures the support of his fellows, is a written certificate of his chiefship from Señor Encinas, or, still better, from El Gobernador at Hermosillo. Yet he is a throneless and even homeless potentate, sojourning, like the rest of his fellows, in such jacales as his two or three or four wives may erect, wandering with season and sisterly whim, chased often by rumors of invasion or by fearsome dreams, and restrained by convention even from chiding his own children in his wives' jacales save through the intercession of female relatives. 643 [648]

In 1804 the head chief was reported to be on Tiburon; the putative chief of the ranchería at Costa Rica was the taciturn giant known as El Mudo (plate XIX); while Mashém (or Juan Estorga) was the head of one of the Pelican clans.

ADOPTION

One of the more important factors in demotic development among primitive peoples (probably second only to interclan marriage in extending sympathy and unifying law) is adoption; and special efforts were made to obtain data relating to the subject. Direct inquiries were futile, the responses indicating that the entire subject is foreign to the thought of the tribe; but three sporadic and measurably incongruous examples of quasi adoption are worthy of record. 594 [724]

The most specific case is that of Lieutenant Hardy, who visited Isla Tiburon in 1826, and was fortunate in gaining the confidence of the tribe through successful medical treatment of the wife of the chief. On his second landing he was greeted with many expressions of gratitude, which were especially exuberant on the part of the daughter of the family (always a personage in Seri custom), who insisted on painting his face. He specifies: 597 648

> Not wishing to deny her the indulgence of this innocent frolic, I quietly suffered her to proceed. She mixed up part of a cake of blue color, which resembles ultramarine (and of which I have a specimen), in a small shell; in another, a white color, obtained by ground talc, and in a third was mixed a color obtained from the red flint-stone of the class which I before stated was to be found on Seal Island, and resembled cinnabar. With the assistance of a pointed stick the tender artist formed perpendicular narrow stripes down my cheeks and nose, at such distances apart as to admit of an equally narrow white line between them. With equal delicacy and skill the tops and bottoms of the white lines were finished off with a white spot. If the cartilage of my nose at the nostrils had been perforated so as to admit a small, round, white bone, five inches in length, tapering off at both ends and rigged something like a cross-jack yard, I might have been mistaken for a native of the island. As soon as the operation was finished, the whole party set up a roar of merry laughter, and called me "Hermano, Capitan Tiburow," being the very limited extent of their knowledge of Spanish.[1] [386] [302]

[1] Travels, p. 286.

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597 648 While the lieutenant attached no significance to the painting, the procedure would seem to have been a ceremonial adoption, such as might, for example, be used in connection with a confederate clan. The description of the painting is sufficiently explicit to identify the totem with that of the Turtle clan, represented by the clanmother and the daughter of the clan at Costa Rica in 1894 (plates XVIII and XXIV); but it is noteworthy that the salutation with which the ceremony terminated, and which may be rendered "Captain-Brother of the Sharks", would seem to identify the totem with the shark rather than the turtle.[1]

The second case of adoption (if so it may be styled) was that of Señor Encinas, after his bloodiest battle, in which nearly all of the Seri warriors were left on the field. In this case there was no ceremony, or at least none remembered by the beneficiary; he was merely informed by a delegation of aged dames that thenceforth he would be regarded as a stronger and more invulnerable chief (shaman) than any member of the tribe, and hence as the tribal leader.

173 563 727 The third instance is still less definite, though it seems to be trustworthy. There is a widespread tradition throughout Sonora that in the course of a brush between a band of Papago hunters and a marauding bunch of Seri warriors in the mountains southeast of Cieneguilla twenty-five or thirty years ago, a Papago maiden was captured and carried off to Tiburon; and that for some years thereafter—i. e., until the Papago had taken ample blood-vengeance—the intertribal animosity was exceptionally bitter. No wholly satisfactory basis for the traditions could be found among the Papago, though some of the silences of the old men were suggestive; nor was the tradition fully credited by Señor Encinas, despite its deep lodgment in the minds of some of his yoemanry. When Mashém was interrogated on different occasions, he merely shook his head in stolid silence; but when the device was adopted of inquiring the number of Papago children brought into the tribe through this woman he responded promptly with a snort of scorn, and followed this with the explanation that she never had children, and could not because she was an alien slave. The explanation was corroborated by clanmother Juana María and other matrons, with sundry expressions of contemptuous disapproval of the inquiry and scorn of the very idea that aliens could fructify within the tribe. Later, the ice being broken, Mashém intimated that the woman had recently died of old age and its consequences—doubtless as an outcast. On the whole, the direct testimony would seem to substantiate the tradition, and to supplement it with the short and simple annals of a spouseless and childless life (incredible of other tribes, but consistent

[1] This identification may possibly be correct; the collocation of the totem with the turtle was shaped through unwilling and perhaps misleading responses made by Mashém to inquiries in 1894—these responses denoting a sea monster which in the beginning helped the Ancient of Pellicans to make the world by pushing from below, and which is now very good food—a description apparently fitting the turtle more closely than the other animal. [124] [773]

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with the customs of the Seri), endured for many years and ending at last in unpitied death.

Collectively the cases seem to define a germ, rather than a mature custom, of adoption. In the first case a benefactor (by means regarded as magical) was formally inducted into the reigning family; in the second case the conquering hero (through what were again regarded as magical means) was less formally recognized and venerated, even worshiped, as an all-powerful shaman; while in the third case a representative of the doughtiest alien tribe was enslaved, probably with motives akin to those expressed in the carrying of chargeless guns, the making of imitation machetes, and other fetishistic devices. Except in the first instance there is no indication of consistent custom; but since the entire history of the tribe clearly contradicts regulated adoption of aliens (and indeed affords no other example), it must be inferred that any such custom is intratribal rather than intertribal.

MARRIAGE

The most striking and significant social facts discovered among the Seri relate to marriage customs.

As noted repeatedly elsewhere, the tribal population is preponderantly feminine, so that polygyny naturally prevails; the number of wives reaches three or possibly four, averaging about two, though the younger warriors commonly have but one, and there are always a number of spouseless (widowed) dames but no single men of marriageable age. So far as could be ascertained, no special formalities attend the taking of supernumerary wives, who are usually widowed sisters of the first spouse; it seems to be practically a family affair, governed by considerations of convenience rather than established regulations—an irregularity combining with other facts to suggest that polygyny is incidental, and perhaps of comparatively recent origin.

The primary mating of the Seri is attended by observances so elaborate as to show that marriage is one of the profoundest sacraments of the tribe, penetrating the innermost recesses of tribal thought, and interwoven with the essential fibers of tribal existence. Few if any other peoples devote such anxious care to their mating as do the Seri;[1] and among no other known tribe or folk is the moral aspect of conjugal union so rigorously guarded by collective action and individual devotion.

The initial movement toward formal marriage seems to be somewhat indefinite (or perhaps, rather, spontaneous); according to Mashim it may be made either by the prospective groom or else by his father, though not directly by the maiden or her kinswomen. In any event the prerequisites for the union are provisionally determined in the suitor's family; these relate to the suitability of age, the propriety of

[1] Perhaps the closest parallel in this respect is that found in the elaborate marriage regulations prevailing among the Australian aborigines, as described by Spencer and Gillen, Walter E. Roth, and other modern observers.

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584 [582] the clan relation, etc; for no stripling may seriously contemplate matrimony until he has entered manhood (apparently corresponding with the warrior class), nor can he mate in his own totem, though all other clans of the tribe are apparently open to him; while the maiden must have passed (apparently by a considerable time) her puberty feast. In any event, too, the proposal is formally conveyed by the elderwoman of the suitor's family to the maiden's clanmother, when it is duly pondered, first by this dame and her daughter matrons; and later (if the proposal is entertained) it is deliberated and discussed at length by the matrons of the two clans involved, who commonly hold repeated councils for the purpose. At an undetermined stage and to an undetermined degree the maiden herself is consulted; certainly she holds the power of veto, ostensible if not actual. Pending the deliberations the maiden receives special consideration and enjoys various dignities; if circumstances favor, her kinswomen erect a jacal for her; and even if circumstances are adverse, she is outfitted with a pelican robe of six or eight pelts and other matronly requisites. When all parties concerned are eventually satisfied a probationary marriage is arranged, and the groom leaves his clan and attaches himself to that of the bride. Two essential conditions—one of material character and the other moral—are involved in this probationary union; in the first place, the groom must become the provider for, and the protector of, the entire family of the bride, including the dependent children and such cripples and invalids as may be tolerated by the tribe—i. e., he must display and exercise skill in turtle-fishing, strength in the chase, subtlety in warfare, and all other physical qualities of competent manhood. This relation, with the attendant obligations, holds for a year, i. e., a round of the seasons. During the same period the groom shares the jacal and sleeping robe provided for the prospective matron by her kinswomen, not as privileged spouse, but merely as a protecting companion; and throughout this probationary term he is compelled to maintain continence—i. e., he must display the most indubitable proofs of moral force. During this period the always dignified position occupied by the daughter of the family culminates; she is the observed of all observers, the subject of gossip among matrons and warriors alike, the recipient of frequent tokens from designing sisters with an eye to shares of her spouse's spoils, and the receiver of material supplies measuring the competence of the would-be husband; through his energy she is enabled to dispense largess with lavish hand, and thus to dignify her clan and honor her spouse in the most effective way known to primitive life; and at the same time she enjoys the immeasurable moral stimulus of realizing that she is the arbiter of the fate of a man who becomes warrior or outcast at her bidding, and through him of the future of two clans—i. e., she is raised to a responsibility in both personal and tribal affairs which, albeit temporary, is hardly lower than that of the warrior-chief. In tribal theory the moral test measures

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the character of the man; in very fact, it at the same time both measures and makes the character of the woman. Among other privileges bestowed on the bride during the probationary period are those of receiving the most intimate attentions from the clanfellows of the groom; and these are noteworthy as suggestions of a vestigial polyandry or adelphogamy. At the close of the year the probation ends in a feast provided by the probationer, who thereupon enters the bride's jacal as a perpetual guest of unlimited personal privileges (subject to tribal custom); while the bride passes from a half-wanton heyday into the duller routine of matronly existence.

These details were elicited at Costa Rica in 1894 through methodical inquiries made in connection with the linguistic collection. This collection was made with the cooperation of Señor Alvemar Leon as Spanish-English interpreter, together with Mashém and (commonly) the clanmother known as Juana María. Usually quite a group of Seri matrons with two or three warriors were gathered about, and to these Mashém frequently appealed for advice and verification, while they constantly expressed approval or disapproval of questions and replies, as gathered through Mashém's words and mien, in such manner as to afford a fair index of their habitual thought—e. g., when the Seri vernacular for "twins" was obtained and the inquiry was extended (by normal association of ideas) to the term for "triplets", Mashém collapsed into moody silence while the rest of the group decamped incontinently with horror-stricken countenances—thereby suggesting cautious subsequent inquiry, and the discovery that triplets are deemed evil monsters and their production a capital crime. It was in one of the earlier conferences that the first intimations concerning the unusual marital customs were incidentally brought out; the Caucasian interpreter and bystanders were diverted by the naive reference to the moral test, but their expressions were hastily checked lest the native informants might be startled and rendered secretive; then, during two later conferences, when Mashém and several matrons were freely participating in the proceedings, the line of inquiry was so turned as to touch on various aspects of the marriage custom and bring out all essential features; so that much confidence is reposed in the accuracy of the details.[1] The confidence in the verity of the customs was such as not to be impaired seriously by the fact that no records of coincident moral tests were known in the voluminous literature of marriage and its concomitants; nor was it shaken by the still weightier fact that none of the experienced ethnologists to whom inquiries were addressed during ensuing months were acquainted with parallel customs—indeed the only shadow of corroboration thus obtained came in the form of references to the widespread requirement of continence in war and ceremonies,

[1] It may be observed that Kolonia, when visited in January, 1895, failed to corroborate the descriptions of Mashém and the matrons, but his failure occasioned little surprise for the reason that he has not lived with his tribe since early boyhood, and is equally uninformed (or uncommunicative) concerning the myths, ceremonies, and even the totems of the tribe.

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and to an affectation of self-restraint for a moon on the part of Zuñi grooms noted by Frank Hamilton Cushing. Accordingly the facts were announced in a preliminary paper,[1] and were shown to stand in such relation to the marital customs of other aboriginal tribes as practically to demonstrate their validity, and at the same time to locate the Seri customs on a lower plane of cultural development than any hitherto definitely recognized.

Happily, subsequent researches have resulted in the discovery of records corroborative of the primitive customs observed by the Seri, and also of the assignment of serial place to these customs. The most specific record is that of John Giles (or Gyles), who spent his youth as a captive among the northeastern Algonquian Indians (probably the Malisect or some closely related Abnaki tribe), from August 2, 1689, to June 28, 1698. Referring to the marital customs of the tribe, he observed:

> If parents have a daughter marriageable, they seek a husband for her who is a good hunter. If she has been educated to make monoodah (Indian bags), birch dishes, to lace snowshoes, make Indian shoes, string wampum belts, sew birch canoes, and boil the kettle, she is esteemed a lady of fine accomplishments. If the man sought out for her husband have a gun and ammunition, a canoe, a spear, a hatchet, a monoodah, a crooked knife, looking-glass and paint, a pipe, tobacco, and knot-bowl to toss a kind of dice in, he is accounted a gentleman of a plentiful fortune. Whatever the new married man procures the first year belongs to his wife's parents. If the young pair have a child within a year and nine months, they are thought to be very forward and libidinous persons.[2]

This record is of peculiar interest in that it definitely specifies a custom corresponding with the material test of the Seri, and unmistakably implies the existence, at least in vestigial or sentimental form, of a custom corresponding with the moral test of Seriland; and it is particularly noteworthy as coming from a remote tribe occupying a distant part of the continent.

A somewhat less specific corroboration is found in Lawson's account of the Carolina tribes. He observes:

> When any young Indian has a mind for such a girl to his wife, he, or some one for him, goes to the young woman's parents, if living; if not, to her nearest relations, where they make offers of the match betwixt the couple. The relations reply, they will consider of it; which serves for a sufficient answer, till there be a second meeting about the marriage, which is generally brought into debate before all the relations, that are old people, on both sides, and sometimes the king, with all his great men, give their opinions therein. If it be agreed on, and the young woman approve thereof, for these savages never give their children in marriage without their own consent, the man pays so much for his wife; and the handsomer she is the greater price she bears. Now, it often happens that the man has not so much of their money ready as he is to pay for his wife; but if they know him to be a good hunter, and that he can raise the sum agreed for, in some few moons, or any little

[1] The Beginning of Marriage, American Anthropologist, vol. II, 1889, pp. 371–386.

[2] Memoirs | of | Odd Adventures, | Strange Deliverances, etc. | in the | Captivity of John Giles, Esq., | Commander of the Garrison on Saint George river, in the | District of Maine. | Written by Himself. | Originally published at Boston, 1736. | Printed for William Dodge. | Cincinnati: | Spiller & Gaine, printers, 166 Vine street. | 1852.—P. 45.

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thus they agree, she shall go along with him as betrothed, but he is not to have any knowledge of her till the utmost payment is discharged; all which is punctually observed. Thus they lie together under one covering for several months, and the woman remains the same as she was when she first came to him.[1] 171

This record also is peculiarly pertinent, partly in that it practically corroborates the Seri testimony, but chiefly in that it indicates definite transition toward a higher culture-plane in which the primitive material test is at least partially replaced by a commutation in goods or their equivalents.

On reducing the marital customs of the Seri to conventional terms, the more prominent features are found to be (1) strict clan exogamy and (2) absolute tribal endogamy, together with (3) theoretical or constructive monogamy, coupled with (4) vague traces of polyandry, and (5) an apparently superficial polygyny, as well as (6) total absence of purchase or capture of either spouse. 582

On reviewing the customs in the light of their influence on the everyday life of the tribe, certain features stand out conspicuously: (1) Perhaps the most striking feature is the collective character of the function; for while the movement originates in personal inclination on the part of the suitor and is shaped by personal inclination on the part of the maiden, all manifestations of inclination are open and public (at least to the elders of the two clans involved), while the personal sentiments on both sides are completely subordinated to the public interests of clans and tribe as weighed and decided by the matronly lawgivers and adelphiarchal administratives. Thus neither man nor maid mates for themself, but both love and move in the tribal interests and along the lines laid down by the tribal leaders. (2) As a corollary or a complement (according to the viewpoint) to the collectivity of the mating, the next most striking feature is the formal or legal aspect of the union; for the entire affair, from inception to consummation, is rigorously regulated by precedents and usages handed down from an immemorial past. Thus the roots of young affection are not destroyed but rather cultivated, though the burgeoning vine and the outreaching tendrils are trained to a social structure shaped in ages gone and kept in the olden form by unbroken tradition. (3) A collateral feature of the customs is the necessary reaction of the requirements on individual character of both groom and bride; for the would-be warrior-spouse is compelled to display high qualities of physical and moral manhood on pain of ostracism and outlawry, so that his passions of ambition and affection are at once stimulated to the highest degree, while the maiden's pride of blood and possession and her sense of regnant responsibility are fostered to the utmost. The brief preliminary courtship and the long probationary mating mark an era of intensification in two lives at their most impressionable stage; and if there be 581 584 584 585

[1] The History of Carolina, etc, by John Lawson (1714), reprint of 1860, pp. 382-383. Attention was called to this passage by Mr James Mooney.

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aught in the simple yet puissant law of conjugal conation—that law whose motive underlies the world's song and story and all the pulsing progress of mankind as the inspiration of most men's work and most women's hopes—the vital intensity of this era passes down the line of blood-descent to the betterment of later generations. (4) Another collateral feature is the necessary reaction on clan and tribe; for not only does the individual character-making raise the average physique and morale of the group, but the carefully studied restraint of excessive individuality serves to strengthen still further the tribal bonds and to lift still higher the racial bar against aliens. The blackest crime in the Seri calendar is the toleration of alien blood; and no more effective device could be found for keeping alive the race-sense on which this canon depends than that virtually sacramental surveillance of sexual intimacy which Seri usage requires.[1]

On scanning the conventional classifications of human marriage in the light of the Seri customs, it becomes clear that these customs define a plane not hitherto recognized observationally. For convenience, this plane and the mode of marriage defining it may, in special allusion to the correlative race-sense, be styled *ethnogamy;* and the more systematic characters of this mode and plane of marriage may be outlined briefly:

1. The most conspicuous character of ethnogamic union, as manifested in the type tribe, is its absolute confinement to the consanguineal group. The breach of this limitation is hardly conceivable in the minds of the group, since aliens are not classed as human, nor even dignified as animals of the kinds deified in their lowly faith, but contemned as unclean and loathsome monsters; yet the infraction has a sort of theoretical place at the head of their calendar as an utterly intolerable crime. In respect to this character, ethnogamy corresponds fairly with the endogamy of McLennan, Spencer, and others, i. e., with the tribal endogamy of Powell.

2. A hardly less conspicuous character of ethnogamic union is the formality, or legality, accompanying and reflecting the collective nature of the function. In this respect ethnogamy is the direct antithesis of that hypothetical promiscuity postulated by Morgan and adopted by Spencer, Lubbock, Tylor, and others; and the customs of the type tribe go farther, perhaps, than any other example in verifying the alternative

[1] The remarkable race-sense of the tribe, with the conjugal conation in which it seems to rest, are discussed ante, pp. 149–162. There is nothing to indicate, and much to contraindicate, that the Seri are consciously engaged in stirpiculture; yet their social and federal devices would seem to be no less effective in developing race-sense, with its concomitants, than were those of prehistoric men in developing the physical attributes of animal associates, such as the wool-bearing of the sheep, the egg-laying of the fowl, and the milk-giving of the cow; or the still more striking mental attributes, such as the docility of the horse, the fidelity of the dog, and the domesticity of the cat. All these attributes are artificial, though not consciously so to their producers, hardly even to modern users; they are by-products of long-continued breeding and selection, commonly directed toward collateral ends (as when the horse was bred for speed, the dog for hunting, and the fowl and cat for beauty); and, similarly, the Seri race-sense would seem to be largely a by-product of faith-shaped customs designed primarily to propitiate or invoke mystical potencies—yet the collateral effect is not diminished because overlooked in the primary motive.

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assumption of Westermarck that the course of conjugal development is rather from monogamy toward promiscuity than in the reverse direction.

3. A noteworthy character of ethnogamic union is the absence of capture of either bride or groom. Any semblance of capture would indeed be wholly incongruous with the rigid confinement of union to members of the group; it would also be incongruous with the exceeding formality and necessary amicability of both preliminary and concomitant arrangements.

4. Another noteworthy character is the total absence of purchase on either part. Although a material condition attends the union, it is essentially a test of character, and is applied in such wise as to dignify the feminine element rather than to degrade it like barbaric wife-purchase; while any semblance of purchase would be incongruous with the economic condition of a tribe practically destitute of accumulated property or even of thrift-sense.

5. A significant character of ethnogamic union, as exemplified in the type tribe, is the ceremonial or constructive monogamy. While there are obscure (and presumptively vestigial) traces of polyandry or adelphogamy, and while an informal polygyny is practiced by the chiefs and older warriors, the formal matings are between one man and one woman, and appear to be permanent.

Now, on comparing these characters with those revealed in the marital customs of other tribes and peoples, they are found to betoken a notably provincial and primitive culture-stage. Perhaps the nearest American approach to the Seri customs is found among certain California aborigines, notably the Yurok and Patawat tribes, who recognize the institution of "half-marriage";[1] but here the material test of Seri-land is replaced by purchase, while no trace of the moral test is found (even as among the Carolina Indians, according to Lawson); moreover, while these tribes discourage alien connections, they are not absolutely eschewed and reprobated as among the Seri. Other notably primitive customs, like those so fully described by Spencer and Gillen, have been found among the Australian aborigines;[2] but even here a part only of the marriages are regulated by amicable convention, while others are effected by (1) charm, (2) capture, and (3) elopement; and these collateral devices imply intertribal relations of a kind incongruous with the ethnogamic habit and utterly repugnant to the ethnogamic instinct. In both cases, accordingly, the marital customs clearly imply (and actually accompany) a much more highly differentiated society and economy than that of the Seri. The same is true of that vestigial custom of the Scottish clans known as handfasting, which is, moreover, a direct antithesis of the Seri custom in that it carries a warrant for, rather than an abridgment of, conjugal prerogatives; and the same

[1] Contributions to North American Ethnology, vol. III, 1877 (Tribes of California, by Stephen Powers), pp. 36, 86.

[2] The Native Tribes of Central Australia, 1899, pp. 553-560 and elsewhere.

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000 might be said also of various South American, African, and southeastern Asian customs.

Certain representative North American customs have already been seriated in connection with the Seri customs, and their relations are of sufficient significance to warrant recapitulation. The series begins with the maternally organized and practically propertyless Seri. Next stand the Zuñi, with an essentially maternal organization, the vestigial moral test of the groom noted by Cushing, and a concomitant material test verging on purchase; so, too, monogamy persists, while the function remains largely collective, and is regulated by the elders, though the bride enjoys special prerogatives; and the fierce tribal endogamy is relaxed, though clan exogamy is enforced. Measurably similar to those of the Zuñi are the marital customs of the peaceful Tarahumari tribe of northern Mexico and the once warlike Seneca tribe of northeastern United States, although among both of these more cosmopolitan peoples the regulations are less closely similar to the Seri customs than are those of the Pueblo tribe named. Next in order of marital differentiation stand the Kwakiutl and Salish tribes of British Columbia, in which the social organization has practically passed into the paternal stage; here the laws of monogamy, clan exogamy, and tribal endogamy are materially relaxed, the moral test is lost among the Kwakiutl and reduced to a curious vestige among the Salish, while the material test is commuted into the making of expensive presents. Still more remote from the initial stage is the marriage of the paternally organized Omaha, among whom tribal endogamy is prevalent but not absolute, while polygyny is customary; among whom the moral test seems wholly obsolete, while the material test is completely replaced by purchase (or at least by the interchange of expensive presents); and among whom, concordantly, the feminine privileges are few and the females are practically degraded to the rank of property of male kindred or spouses. These several customs fall into a natural order or series definitely coordinated with the esthetic, the industrial or economic, and the general institutional or social conditions of the respective tribes; and it is noteworthy that they mark successive stages in that passage from the mechanical to the spontaneous which characterizes demotic activity.[1]

In brief, ethnogamy, as exemplified by the type tribe, accompanies that strictly maternal organization which marks the lowest known stage of social development; it accompanies also a rudimentary esthetic condition in which decorative symbols are restricted to the expression of maternal relation; it accompanies, in like manner, an inchoate economic

[1] Cf. The Beginning of Marriage, op. cit. The conclusion from the details discussed in this paper is as follows: "Summarizing the tendencies revealed in this history, it would appear that the course of evolution [of conjugal institutions] has been from the simple to the complex, from the definite to the indefinite, from the general to the special, from the fixed to the variable, from the involuntary to the voluntary, from the mechanical to the spontaneous, from the provincial to the cosmopolitan, or, in brief, from the chiefly blotic to the wholly demotic" (p. 268).

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condition characterized by absence of property and thrift-sense; while its most essential concomitant is extratribal antipathy too bitter to permit toleration of alien blood, or even of alien presence save under the constraint of superior force.

MORTUARY CUSTOMS

The prevailing opinion among the better informed Caucasian neighbors of the Seri is that the tribesmen display an inhuman indifference to their dead; and this opinion is one of the factors—combining with current notions as to cannibalism and arrow-poisoning and beastlike toothing in battle—involved in the widespread feeling that the tribesmen are to be accounted as mongrel and uncanny monsters rather than human beings.

The opinion that the Seri neglect their dead on occasion would seem to rest on a considerable body of evidence; Mendoza's record of the numberless neglected corpses of warriors polluting the air and poisoning the streams of Cerro Prieto in 1737 would seem to be unusual only in its fulness; and Señor Encinas, albeit so conservative as to repudiate the reputed anthropophagy and to recognize better qualities among the folk than any contemporary, declares that they are utterly negligent of their dead, save that when the bodies lie near rancherias heaps of brambles are thrown over them to bar—and thus to lessen the disturbance from—prowling coyotes. Quite indubitable, too, is the specific testimony of vaqueros to the effect that Seri raiders overtaken by the Draconian penalty of the frontier merely lie where they fall, even when this is well within reach of the tribesmen, Don Andrés Noriega's verification of his boast (ante, p. 113) being an instance in point. On the other hand stands the conspicuous fact (unknown to the frontiersman) that well-marked cemeteries adjoin some of the rancherias of interior Seriland. The sum of the somewhat discrepant evidence accords with a characteristically unsatisfactory statement by Mashém, to the effect that the mourning ceremonies are important only in connection with women—i. e., matrons—because "the woman is just like the family" ("la muger es como la familia"); and this intimation, in turn, is corroborated by the single known instance of inhumation in Seriland, as well as by certain indirect indications connected with the scatophagic customs (ante, p. 213). On the whole it seems certain that the mortuary ceremonies attain their highest development in connection with females, the recognized blood-bearers and legislators of the tribe.

The special dignification of females in respect to funerary rites is without precise parallel among other American aborigines, so far as is known, but is not without analogues in the shape of (presumptive) vestiges of a former magnification of matrons in the mortuary customs of certain tribes. The vestiges are especially clear among the Iroquoian Indians, whose aboriginal socialry coincided with that of the

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Seri at various points; witness the following passage from the Onondaga mourning ritual, as collected and translated by Hewitt:

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Now, moreover, again, another thing, indeed, our voices come forth to utter; and is it not that that we say, that far yonder the Hoyaner [chief of highest grade] who labored for us so well is falling away as falls a tree? So, moreover, it is those things that he bears away with him—this file of mat-carriers, warriors all, visible and present here; also this file of those who customarily dance the corn-dances [the women]—they go prosperously. And alas! How utterly calamitous is that thing that occurs when the body of this woman falls! For, verily, far yonder in the length of the file will the file of our grandchildren be removed! These our grandchildren who run hither and thither in sport, these our grandchildren who by creeping drag themselves about in the dust, these our grandchildren whose bodies are slung to cradle-boards, and even those of them whose faces are looking hitherward as they come under the ground.[1]

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The identifiable cemeteries of Seriland are few and small—much less populous than might be expected of a tribe numbering several hundreds for centuries, and able to maintain well-worn trails threading all parts of their rugged domain. Three graves were noted near the abandoned rancheria at Pozo Escalante; one was observed near a jacal skeleton at Barranca Salina; five or six were made out doubtfully on a low spur adjacent to Punta Antigualla; another was found near the rancheria midway thence to Punta Ygnacio; still another was doubtfully identified hard by a ruinous jacal just where the foothills of Sierra Seri descend to the plain stretching toward Punta Miguel; and this distribution may be deemed representative. A scant half-dozen perceptible graves were observed near the considerable rancheria of Punta Narragansett, which was numerously inhabited during the Dewey surveys of 1873; one was found adjoining the old jacal near Campo Navidad; but none were discovered in connection with the extensive rancheria on Rada Ballena. The largest known cemetery occupies the triangular point of shrub-dotted plain pushing out toward the site of the old rancheria at the base of Punta Tormenta; it comprises perhaps a score of evidently ancient graves, while two newer ones were found on the pebble bar beyond the jacales. When near the pebbly beaches the graves are marked by heaps of pebbles and small cobbles, commonly about the size of those used as hupfa, these cairns being 3 or 4 feet long, two-thirds as wide, and seldom over 12 or 15 inches in height; and most of the cairns are accompanied and enlarged by piles (ranging from a peck to a bushel) of the scatophagic shells already noted. The graves remote from pebbly beaches are marked by heaps of cholla stems and branches, rudely thatched with miscellaneous brambles roughly pinned

[1] MS in the archives of the Bureau of American Ethnology. A somewhat more elaborate version was recorded by Hale in "The Iroquois Book Rites": "Now, there is another thing we say, we younger brothers. He who has worked for us has gone afar off, and he also will in time take with him all those—the whole body of warriors and also the whole body of women—they will go with him. But it is still harder when the woman shall die, because with her the line is lost. And also the grandchildren and the little ones who are running around—these he will take away; and also those that are creeping on the ground, and also those that are on the cradle-boards; all these he will take away with him." (Brinton's Library of Aboriginal American Literature, number II, 1883, pp. 141-142.)

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764 together by okatilla stems, the shocks being sometimes nearly as high and broad as the jacales. A few of the scatophagic shells were found about the bramble-marked graves at Pozo Escalante, and a single one [768] at Barranca Salina. In general the association of cemeteries and rancherias, or of graves and jacales, indicates that habitations are usually abandoned for a time when a death occurs within or near [415] them.

FIG. 80.—Mortuary olla.

The most conspicuous cairn seen in Seriland was well within Tiburon. It stands on the southern side of a little rock-butte about a mile and a half east-southeast of Tinaja Anita, south of the main arroyo, and near where the trail from the tinaja bifurcates toward Arroyo Carrizal and Punta Narragansett, respectively. It is shadowed by a notably large and widespreading paloverde, and is in the form of a cone estimated at 7 feet in height and 18 or 20 feet across the base. The materials, at least on the surface, are rounded pebbles and cobbles, possibly from the adjacent arroyos, though more probably from the beaches, of which the nearest is miles away. It was not determined to be mortuary.[1]

On the death of the matron, a grave is scooped out by means of shells

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[1] As an indication of the conditions for observation in Seriland, this cairn is fairly typical: it was seen but once (on December 25, 1895), and the observation was limited to a few minutes by the attendant circumstances. On the evening before the party landed at Campo Navidad, with the hope of working up the coast nearly or quite to Punta Tormenta on the following day; but before morning a downbay gale was whitening the waters of Bahia Kunkaak so fiercely as to prohibit embarkation. Meantime the supply of water—that standard commodity of arid regions—was too nearly exhausted to permit inaction; so while Mr Johnson with three guards ascended the sierra to establish a new topographic station, the leader of the party with the remaining seven men set out in search of water. The nearest known aguaje was that of Arroyo Carrizal; but under the hypothesis that some of the better-beaten trails turning northward might lead to nearer water, one of them was taken; and after turning back from half a dozen false scents, the principal trail was followed to the well-known Tinaja Anita, 15 miles by the trail from Campo Navidad; and here the party watered. It was on the return trip that the cairn was discovered; but the party were laden with filled canteens and canopenas and coffeepots, the day was well spent, and the camp more than a dozen miles distant even over the air line traversing spall-sprinkled taluses and sharp-edged rocks; moreover, the men were naturally and necessarily heavily armed and on constant guard. Accordingly even the short stay and cursory notes involved an additional mile of darkness on a trail so rough as to cut through shoe-soles and sandals and catch scents of blood to tempt coyotes to the camp site. Thus it was that the cairn was not more critically examined and is not more fully described.

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764 a few yards from her jacal, preference being given to relatively elevated or commanding points. The excavation is about 30 inches (90 cm.) in depth; within it is placed first the pelican-skin robe of the deceased, so arranged as to fold over the body; then the corpse, dressed in the ordinary costume of life, is compressed into small compass by closely flexing the knees and bringing them against the thorax, extending the arms around and along the lower limbs so that hands and feet are together, and bending the head forward on the chest; when it is deposited in the receptacle in such manner as to lie on the left side, facing north-

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[778]

FIG. 40.—Woman's fetishes.

ward. Near the face is laid a dish of baked clay or a large shell filled with food, and beside it a small olla of water (an actual example is shown in figure 39), while the hupf, awls, hairbrush, olla-ring, and other domestic paraphernalia are placed near the hands. Next the personal fetishes and votive symbols (in the form of puppets or dolls such as those shown in figure 40 *a* and *b*) of the dead mother are slipped beneath the face, and her paint-cup, with a plentiful supply of paint, is added; the poor personal possessions, in the form of shell-beads and miscellaneous trinketry, are then heaped over the face and shoulders, and these are covered with the superfluous garments and miscellaneous

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property of the deceased. Finally the pelican-pelt bedding is folded over the body, and two turtle-shells are laid over all as a kind of coffin, when the grave is carefully filled, and the ground so smoothed as to leave no mark of the burial. During subsequent hours the stones for the cairn or the cholla-joints and other brambles for the brush-heap are piled over the spot, while the scatophagic shells are added at intervals apparently for weeks or months and perhaps for years after the burial.

FIG. 41.—Food for the long journey.

The mortuary food is carefully selected for appropriate qualities (i. e., for "strength" in the notion of the mourners). It comprises portions of turtle-flippers, and, if practicable, a chunk of charred plastron—the food substance especially associated with long and hard journeys—with a few fresh mollusks, and, judging from a single good example as well as from analogy, one or two scatophagic shells. The remains of a funerary feast are illustrated in figures 41 and 42, the latter being the scatophagic receptacle utilized apparently in the absence of the customary Noah's ark. It may be significant that this shell is perforated at the apex, evidently by long wave-wear before utilization, and that the accompanying olla bears marks of having been broken, then repaired, and afterward perforated, as illustrated in the photo-mechanical reproduction (figure 39); for these features perhaps express that idea of "killing" mortuary sacrifices, ostensibly to fit them to the condition of the deceased, though really (in subconscious practicality) to protect the sepulcher from predation.[1]

FIG. 42.—Mortuary cup.

[1] "In all stages of development belief runs a close race against cupidity, and is sometimes distanced; so the sagos learn that even a buried weapon may be a source of contention, which they thereafterward forestall by breaking or burning it." (Primitive Trephining in Peru: Sixteenth Ann. Rep., Bureau of American Ethnology, 1897, p. 22.)

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765 Soon after the death (immediately after the burial, so nearly as could be ascertained) there is an apparently ceremonial mourning, in which the matrons of the clan, and, at least to some extent, the warriors also, participate. The mourners wail loudly, throw earth and ashes or ordure on their heads, and beat and bruise (but apparently avoid scarifying) their breasts, faces, and arms. This is continued, culminating daily about the hour of interment, for several days—unless the rancheria is sooner abandoned, in which case the period of formal mourning is shortened.

In addition to the formal mourning of matrons there is a custom of nocturnal wailing after the death of warriors in battle, and, apparently, also, following the death of matrons or nubile maidens, which attracts the notice of frontier rancheros and vaqueros. According to their accounts the first note of lamentation may be sounded at any hour of the night by any of the group to which the deceased belonged; it is successively taken up by other members of the party until all voices are united in a resounding chorus of inarticulate moans, wails, shriller cries, and wild howls, likened by the auditors to the blood-bellowing of cattle; if other groups of the tribesmen are within hearing, they, too, take up the cry, so that the lamentation may extend to the entire tribe and echo throughout practically all Seriland at the same moment. The fierce howling and attendant excitement may rise so high in the group in which the wailing begins that all seem bereft of customary caution; and sometimes they suddenly seize ollas and weapons, and decamp incontinently, perhaps scattering widely and racing for miles before settling again for sleep or watchful guard.

775 The ideas of the folk concerning death and concerning the relations between the living and the dead are largely esoteric, and are, moreover, veiled by the nonequivalence of Seri expressions with the terms of alien languages.

At least an inchoate belief in a life beyond the grave was intimated by Mashém and his companions at Costa Rica, and their circumspection of speech and mien indicated a strong veneration for, or dread of, the manes; though the specific expressions were connected with deceased matrons, who alone seemed to be prominent in the minds of the clanmates. So far as could be gathered the belief seems to be that the dead find their way back to the primordial underworld, whence Earth and Beings were brought up by Pelican and Turtle (or Shark) respectively, and are liable to return by night with mischievous intent.

The direct expressions of the Seri informants are fully corroborated by the association of things in interior Seriland. The burial of water and food, of the personal fetishes and votive objects, and of the highly prized face-paint belonging to the dead matron, attests anticipation of a post-mortuary journey; while the temporary abandonment of jacales and rancherias and the nocturnal fears and flights alike betoken

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dread of sepulchral visitants. The most suggestive of the associations, i. e., between the scatophagic stores and the sepulchers, awaits full explanation. 775

Serial Place of Seri Socialry

In the conventional seriation of social development four stages are clearly recognizable, viz: (1) Savagery, in which the social organization is based on blood kinship reckoned in the female line; (2) barbarism, in which the basis of organization is actual or assumed consanguinity reckoned in the male line; (3) civilization, in which the laws are based on property-right, primarily territorial; and (4) enlightenment, in which the organization is constitutional and rests on the recognition of equal human rights to life, liberty, and the pursuit of happiness. Now, in terms of this seriation of general culture-stages, the place of the Seri tribe is clear. Reckoning consanguinity wholly in the maternal line, as they do, they belong in the initial stage of savagery. Accordingly they pertain to the lower or more primitive of the two great stages represented by the American aborigines. 000

A still more refined seriation may be effected through conspection of the several lines of activital development—the esthetic and industrial, and especially the sophic or fiducial, as well as the strictly social; for these lines are most intimately intertwined. Thus, in the Old World, the transition from maternal to patriarchal organization was accompanied, and evidently superinduced, by the development of zoöculture into extensive herding; in different districts of the New World, a parallel transition attended the development of agriculture to a phase involving the protection of acequias and fields by armed men; while throughout primitive life, laws are formulated and enforced chiefly through appeals to the superphysical or mythologic. Now, review of the Seri esthetic indicates that the decorative concepts and activities are in large measure inchoate and are practically confined to a single manifestation, i. e., the delineation of totemic symbols primarily denoting zoïc tutelaries and incidentally connoting the blood carriers of clans consecrated to these beast-gods; so that the esthetic motives and devices of the tribe are essentially zoösematic. In like manner a considerable part of the technic of the tribe is zoömimic, as already shown, while even the most highly developed industrial activities occupy the biotic borderland of mechanical chance rather than the characteristic demotic realm of intellectual design. So, too, the faith of the folk is exclusively and overweeningly zootheistic, to the extent that every motion, every thought, every organized action, every law, every ceremony, is shaped with reference to mystical potencies vaguely conceived as a pantheon of maleficent beast-gods; and it is this dark and hopeless faith that gives character to the tribal esthetic and technic. Concordantly the faith finds reflection in the very elements of the social organization; the matron is the blood-carrier and the lawgiver not in and for herself

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but as the vicarious and visible exponent of an ever-immanent beast-god—the clan tutelary; her appeals to her brothers for administrative aid are precisely parallel to her intuitive passage from zoomimicry into the field of mechanical chance defined by protolithic implements; and the appeal, like the execution of the law either by herself or by her brothers, is controlled and regulated in absolute deference to the zoic pantheon. Thus, the inchoate tribal laws, expressed in habitual lines of action and modes of thought, are by no means conscious products of human wisdom, but are confidently imputed to a superhuman wisdom on the part of myth-magnified beasts of a mystical olden time; and, similarly, the power of executing these laws is by no means cognized as conscious human faculty, but is faithfully imputed to supernal potencies of mythical monsters. Essentially, therefore, the tribal law is putatively *zoocratic;* and the social organization may justly be classed as a putative *zoocracy.*

To prevent possible confusion, it may be desirable to note specifically that the Seri government is not matriarchal in any proper sense. As pointed out elsewhere, matriarchy is not (at least among the American aborigines) an antecedent of patriarchy, but a correlative of that form of government; and it would be especially erroneous and misleading to designate as matriarchal a tribe like the Seri, whose chiefs and subchiefs (i. e., appellate clan-administratives) are invariably masculine. Neither would it be just, despite the dominance of matrons in legislative and judicative matters, to regard the tribal government as a gynecocracy, such as have been noted in various parts of North America—e. g., in Sonora, according to a current tradition as to the origin of the name of the province, and among the Pomo Indians of California, according to Cronise as interpreted by Powers;[1] for the actual control is exercised by the warrior brothers, while the ideal control is vested in that zoic pantheon of which the matrons are putative mouthpieces. Physically and practically the Seri government is an adelphiarchy, as already indicated; but in the minds of the tribesmen themselves it is an inchoate theocracy putatively headed by a pantheon of animate monsters, whose prelates are personified in the painted clan-mothers.

Summarily, then, the Seri are zoocosmic in esthetic, zoömimic in technic, zootheistic in faith, and putatively zoocratic in government, while even the Seri tongue is so largely mimetic or onomatopoetic in form as to accord with the industries and institutions; and in view of the intimate interrelations between the several lines of activity, it would seem preferable to determine the culture-status from the coincident testimony of all the lines, but feasible to measure it in terms of any one or more of these activital lines.

Now, on comparing the characteristics of the Seri with those of other known tribes of North America, many resemblances and a few differ-

[1] Tribes of California, pp. 150-151.

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ences are found; and practically all of the more conspicuous differences extend in the same direction—i. e., they combine to indicate an exceptionally primitive, or lowly, or zoic, plane for the simple savages of Seriland. Thus, few tribes are so poor in esthetic as the Seri, and in none other are the esthetic devices so clearly and so exclusively zoic; few if any other known tribes so clearly exemplify zoomimic culture; none other so well represents protolithic culture, and no other known tribe is so completely devoid of mechanical devices reflecting higher culture; in general socialry no other known tribe better, or indeed so well, exemplifies zoocracy, while in such special features as those of ethnogamic mating, ceremonial scatophagy, and mortuary magnification of the blood-carriers, the folk mark the most primitive known phase of cultural advancement; and although language and faith yield less definite measure, their testimony is coincident with that of the other lines of activity. Accordingly the Seri must be assigned to the initial place in the scale of cultural development represented by the American aborigines, and hence to the lowest recognized phase of savagery.

Two or three corollaries of this placement are noteworthy: (1) In most of the researches concerning human development conducted by the anthropologists of the world, attention has been given chiefly or wholly to the somatic or biotic characters of *Homo sapiens;* but while various physical features of the Seri suggest bestial affinities (as has been pointed out in an earlier chapter), it is especially significant that the nearest and clearest indications of bestial relationship are found in the psychical features of the lowly folk—for zoic faith in its multifarious manifestations is but a reflection of burgeoning yet still bestial mind.

(2) While human independence of environment culminates in socialry, the interdependence of activital lines so well revealed in lowest savagery demonstrates that institutions and all government necessarily reflect environment; and, at the same time, that the progressive emancipation from environment signalized in the higher culture-grades measures the conquest of Nature through industrial activity—for both the productive work and the attendant exercise cumulatively elevate sapient Man above mindless Nature.

(3) An adjunct of progress in every stage of development, as indicated with especial clearness in the earliest stages, is the annulment or curtailment of both physical and formal law, and the substitution of cumulatively growing volition: the development of the esthetic passes from the intuitive toward the ratiocinative, that of the industrial from the instinctive toward the inventive, and that of the social from the merely reflective to the vigorously constructive; with every pulse of progress the subservience to blind chance and imaginative figment diminishes; and with each increment of sound confidence the ability to surmount physical obstruction and to dispense with primitive formality is cumulatively augmented.

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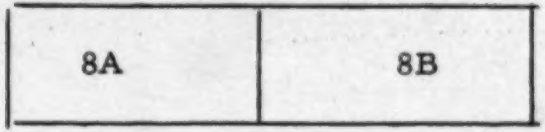
The map of Seriland appearing on pp. 8A and 8B has been processed for the files in the following manner:



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[For the recorded history of the Seri see category 116, pp. 15, 17-19, 51-117, 126-130, 132-135.]

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THE SERI

By A. L. KROEBER, *University of California*

INTRODUCTION

The present paper is the first product of field studies made between January and March, 1930, in Arizona, Sonora, and Sinaloa, under a joint expedition of the Southwest Museum, Los Angeles, and the University of California. The financial contribution of the University was the gift of Mrs. Ethel W. Crocker. While the purpose of the trip was to define rather than solve problems, the following pages contain part of the positive observations obtained.

The Seri, who live on Tiburon Island, Sonora, in the Gulf of California, are often considered the wildest and most primitive tribe surviving in North America. They owe this repute partly to McGee's monograph about them, in the Seventeenth Annual Report of the Bureau of American Ethnology. It is easy to read between the lines of this description that McGee leaned toward a romantic and imaginative interpretation of the Seri. Also, his actual contacts with the people themselves were brief, and hampered by imperfect communication. Moreover, the Seri have been for three hundred years in contact with Spaniards and Mexicans, part of the time even under direct mission control. It therefore seems doubtful whether their backwardness could be the result wholly of preserved primitiveness, and may not rather be attributable to a recalcitrant degeneration. In order to answer this question, and to place Seri culture at least tentatively among the other tribal cultures of the Southwest instead of leaving it as an unexplained and lurid abnormality, a brief visit to them was undertaken.

The success of this visit was due wholly to Sr. Roberto Thomson of Hermosillo and Rancho San Rafael, who is now the Mexican Government's *Jefe de Vigilancia* for the Seris, and in effect what in the United States would be known as Indian Agent for the tribe. He has protected and befriended them, kept them in turn in bounds, and secured some governmental assistance for them, under which they are making a beginning of adaptation to the modern world. At any rate, the mutual raidings and killings have stopped, and the Seri, though still very suspicious of most of the neighboring settlers and of strangers, look upon Sr. Thomson as their protector and friend. Without his introduction and experience, many less data could have been collected in a longer stay.

The Seri now live wholly on Tiburon Island. I was with them six days, half of them on the island. This is about as long a time as McGee spent with them—all of it at the cattle ranch of Costa Rica. McGee also explored the island and its camps at some length, but without encountering any Seri, who eluded his party.

Inasmuch as Mr. Edward H. Davis of Mesa Grande, California, has three times visited Tiburon to form an ethnological collection for the Museum of the American Indian, Heye Foundation, I attempted no examination of Seri material or economic culture, which Mr.

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Davis has had fuller opportunity to investigate, but confined my attention to the social and religious sides of their life. There was the more reason for this since it is in dealing with these latter aspects, where verbal communications are as important as observation, that McGee's monograph is most tenuous and dubious. I also secured linguistic notes for the preliminary placing of the curious tonal speech of the Seri.

Seri culture in its present form is a fragmentary thing such as could hardly have existed under purely native conditions. Religion especially has suffered, no doubt under Christian influence, without many elements of Christianity having been taken over in exchange. Of mythology, only tatters seem to remain; of ritual, little more; only shamanism seems to be fairly well preserved. Nor, beyond the Spanish names for God and the cross, do the Seri give evidence of being or having been Catholics. The result is that they seem remarkably religionless. I do not know of a native people that appears so free from superstition and so unspiritual in its attitudes. Possibly I conferred with the wrong informants; but those I talked with seemed unsecretive. Social culture is better preserved, as is evident from a set of kinship terms that are numerous, precise, and untouched by Spanish concepts. On the other hand, there is little formal social organization. Whether this is also the result of a loss, is hard to say. The Seri may never have had sibs or clans; but the fact that they appear to lack them now is no positive evidence that they were without them three centuries ago. Shifts of residence, contraction of territory, shrinkage of numbers, amalgamation of distinct bands, may well have obliterated much of such social fabric as they once possessed. Games and the calendar are wholly native and intact, but taboos connected with sex, age, food, and the like seem fewer than among the backward tribes of the southwestern United States. It seems reasonable to construe this condition as the result of varyingly hostile, parasitic, and missionizing Spanish-Mexican contacts; especially when one realizes how overwhelmingly, though also spottily, this influence has affected the other tribes of Sonora—the Yaqui, Mayo, Pima, and Opata.

Historically the Seri are not a tribe but the consolidated remnant of a series of dialectically distinct tribes that once held the barren coast of Sonora from Guaymas to Puerto Libertad. Tiburon Island is the stronghold in which the mixed survivors, probably now numbering less than 200, have taken refuge, and, owing to its inaccessibility, drought, and poverty, have succeeded in maintaining themselves and their blended and reduced culture. Toward the interior, it is doubtful if they ranged beyond the present line of the Southern Pacific railroad, if that far. Orozco y Berra indeed assigns them territory up the Sonora River to Ures, on his famous map, which is still basic to all other ethnic maps of Mexico. But from Hermosillo

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to Ures is good farming country, and why the only non-agricultural people in Sonora should have held this stretch, is hard to see. Moreover, Orozco's bringing the Serian tribes so far inland as to abut on the Opata, severs the continuity of the American Pima Alto and Papago with the Mexican Pima Bajo, whose speech is almost identical. This identity is best understood as the reflection of a continuous occupation by the Pima of the whole foothill country from the Gila to the Mayo, between the Serian desert lowlanders and the Opata in their mountain valleys, with the Yaqui, Mayo, and other Cahita peoples replacing the Serians south of Guaymas where heavier rainfall and large flowing rivers made the lowlands attractive to farming peoples. The natural inland frontier of the Seri along the Sonora River would have been at the Siete Cerros, a low range some 25 miles, more or less, west of Hermosillo, where grass ends and creosote bush and giant sahuaro cactus soon become dominant beside mesquite. This boundary would have put the farmers on farm land, the roving gatherers into the succulently overgrown desert and along the food-stocked coast.

The Seri, then, in the wider sense, including the Guaymas, Tepocas, etc., were anomalous among the native peoples of Sonora in habitat as well as in culture. Now a similar country, almost waterless and cactus dominated, is the central segment of Mexican California. Here lived the Cochimi, dialectically the most divergent of the Yuman peoples, and with a culture similar to that of the Seri at least in its level. The habitat enforced a similar subsistence economy, unsettled living, scattering of population, inability of serious accumulation of property, and hence no doubt a relative paucity of most organizational aspects of culture. Whether the content of Cochimi culture was equally similar is difficult to say because of the melting away of the people. At any rate the question arises whether Cochimi and Seri are not historically connected, especially as both their languages are related to Yuman, whereas all other Sonora tribes are Uto-Aztecans. The connection seems the more possible in that southwest of Tiburon lies San Esteban Island; beyond that, San Lorenzo; and beyond, the great peninsula. The open-water distance nowhere exceeds fifteen miles. This is a difficult but not impossible gap to cross on cane rafts; and the Seri have skilful knowledge of currents and winds. The passage across the Infiernillo between mainland and Tiburon is little more than a mile at the narrowest point, but they often paddle five in their open boats to take advantage of weather conditions. The Seri remember navigating to San Esteban, and there is historical mention of crossings of the Gulf.

The final evidence for or against derivation of the Seri from Baja California will probably be linguistic, and if, as seems possible though doubtful, Cochimi speech can still be recorded in the peninsula, the answer may be definitive. The materials at present available

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are inconclusive. Some of the outstanding speech similarities and differences are given in a section of the present paper; a fuller presentation will be made in a subsequent classification of the Yuman languages.

The Yuman tribes of the United States are better known, and there are published or collected accounts of the Dieguefio, Kamia, Cocopa, Yuma, Mohave, Maricopa-Halchidhoma, Yavapai, Walapai, and Havasupai. These fall into two groups, culturally: the farming tribes of the Colorado (and Gila) bottomlands, and the gathering tribes of the desert and semi-desert of Arizona and southern California, the latter again affiliating with those of northern Baja California, such as the Kiliwa and Akwa'ala-Paipai. As might be expected, it is the desert Yumans of Arizona who show the greater number of resemblances to the Seri and fewest differences.

The Pima as the immediate neighbors of the Seri, and the Opata and Cahita tribes beyond, ought to show many similarities with the Seri, plus differences due to their agriculture and activities like weaving which are normally encouraged by sedentary habits.

Such are some of the indications as to the history of the Seri and their culture, as discussed more in detail below so far as the preliminary data available allow. Further and intensive investigation is obviously needed. On the side of material life, Mr. Davis' studies ought largely to fill the need. For social and spiritual culture, the work will be difficult. It is not that the Seri are unwilling, but that they are inaccessible and hard to communicate with. The obvious procedure would be a study of their speech until it served as a medium. In that way both their language and their culture could be recorded hand in hand. But the obstacles are numerous. The island is thirty miles long by twenty wide. There is not a roof on it. The six summer months are extremely hot, and, along the coast, said to be almost insufferable from gnats and mosquitoes. Most of the few water holes are inland; the Seri live, except during the cactus and mesquite harvest, scattered in small settlements along the shore, often several miles from water. There is no communication across the strait, except by open boat, subject to weather conditions; and then it is twenty miles to the nearest house and a hundred to a town. Life on the island would be both harsh and monotonous to an unusual degree. Nor can the Seri as yet be studied by taking one or two of them to civilization for a prolonged stay. They soon become restless and homesick. Added to all this is the fact that their Spanish, though reasonably fluent in some cases, is ungrammatical, and would hardly serve for securing paradigms or accurate translations of texts; and while able to endure hardships, the people are not accustomed to steady work or mental concentration. The difficulties would not be insuperable, when the destined linguist-ethnologist undertakes the task; but he should not under-rate them.

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NEW DATA

Informants' Attitude

Most of my information was obtained from Chico Romero, the present official chief, a man of about 38. Santo Blanco and one or two other men contributed occasionally. Sr. Thomson was present most of the time and aided materially, both in encouraging the Seri and in helping to formulate questions suitably to their experience and comprehension. For instance, he repeatedly cleared up points in the kinship system by applying his knowledge of the actual relationship of Seri individuals, or their acquaintance with his relatives, to frame concrete cases, real or hypothetical, for which a denomination was then readily given. Without this aid, the system could not have been obtained with either reasonable surety or correctness. So far as possible, direct questions were replaced by giving to the Seri accounts of customs attributed to the Cocopa, of whose existence they know, and suggesting comparisons, in which they proved interested. On the whole, their attitude was friendly, coöperative, and appeared unsecretive. Concealment may be so automatic a habit with them that they practice it without giving a sign; but I had the constant impression that they told little about their religion because they knew little, and not from any skilfully concealed reluctance. Still, all negative statements must be regarded as only tentative when secured in a brief time through an imperfect medium of communication from informants not accustomed to mental exertion.

Historical Tradition

There were formerly four tribes, according to the informant: to the East, the Seris, at Pueblo de los Seris (the ex-mission, across the river from Hermosillo); to the West, the Tiburones, on the island; to the North, at Tepoca, the Xeka'aikö'ye; to the South, at Tastiota, the Antepkê'ituX or Tastioteños. Too many died at Pueblo Seris, so they joined the Tiburones. They fought the northern and southern groups. Sixty (or 68) Seri-Tiburones once went to Tepoca to kill a man and his two sons. They made marks and stuck a knife in the trail to cause them to stop. Then they shot them. The women and children were captured, taken to the island and kept, the women first being abused by the whole party. The informant's son José Manuel (13) had a Tepoca maternal grandmother; that is, the informant, now about 38, married the daughter of a Tepoca woman. (This would put the incident hardly earlier than 1860 or later than 1890.) Similarly, there is Tastioteño blood among the present Seri. The dialects of the several tribes are said to have been distinct, though allied.

It is evident that these memories cover only the last part of the period of Spanish contacts.

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Society

583 Marriage is monogamous. The wife is bought, in spite of the
[595] poverty of the Seri. Santa Blanco paid 150 pesos in property for his wife. Chico Romero, a widower, paid more for his, a widow, "because she had three daughters, and a family with daughters is rich" (in expectation of bride prices).

591 The wife goes to live with the husband. A young couple lives
562 with the young man's parents, perhaps in an annex to the house. "The man commands." Chico was emphatic on this point, and repeated that when his son married he would live with him, not with the girl's relatives. Both he and Santo have step-sons-in-law as well as daughters-in-law living with them, but this is because they are chief and boat-owner respectively; (and the sons-in-law are young).

833 Copulation was said to take place immediately on marriage.
McGee's statement of a period of continence being cited as the custom of a foreign tribe, the informant obviously wondered and laughed.
[813] Intercourse goes on during pregnancy; but not for some months after birth, for fear of a new pregnancy, which would be injurious to the child. A good man respects his wife at all times and does not constantly pursue her.

144 No half-breeds were seen, and the Seri declare they are free of
164 venereal disease.

551 Nothing could be elicited from the informant as to anything like
614 the group-inherited names of lineages, or clans, of the Yuman tribes.

768 When a woman dies, the widower may give the children to his dead wife's parents to raise. This is the only item learned that might point to McGee's "matriarchate"; but the informant may have been thinking of particular cases. His son lives with him, though he lost the boy's mother.

582 Cross-cousin marriage is as prohibited as that of parallel cousins.
This is in accord with the sibling terminology for all cousins; but in view of the present small number of the tribe, the rule must work difficulty.

[587] A man does not marry his dead wife's sister. Apparently he may not. Nor is there levirate. The informant volunteered the question if marriage with step-daughters was permitted by other peoples. Being told of the Navaho custom, he seemed shocked.

606 Neither husband nor wife looks at or addresses either parent-
183 in-law. In the isolated, small-group life of the Seri, this rule can hardly be adhered to with complete rigor, and its conspicuous carrying out was not observed; but then everything in their behavior is casual, informal, and slovenly.

607 The kinship system as recorded contains a note as to a woman
not addressing her younger sister's husband by kinship term except

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in endearment when drunk. This may apply also to other siblings-in-law. 607

Younger siblings (? and other relatives) may say nothing obscene before the older, out of respect for them; but the older talk freely before the younger. This applies to both men and women. Otherwise there seems to be little prudery; the informant recited the names of the private parts before his wife and children, and she indifferently repeated them after him in confirmation. 593 834

There is no teknonymy. 551

The dead are buried. Cremation of the body seemed unknown to the informant. All property of the dead person is burned or destroyed. His balsa was burned; modern boats are not, because they "belong to the government," which furnishes the lumber. The house is abandoned and a new one built a short distance away. The name of the dead is not spoken. 76 [422]

Kinship

The Seri kinship system is distinguished by three general features: the large number of terms; the strong tendency to terms reciprocal in meaning; and the distinction made between older and younger siblings of nearer relatives if they are of the same sex. All of these are characteristic Yuman traits. 601

The number of terms obtained is 50; which number might have been increased if step-relatives, great-grandparents, great-uncle-aunts, siblings of siblings-in-law, spouses of uncles-aunts, and spouses had been inquired for. However, the informant seemed to feel that the list was exhausted with the set obtained; before that, he pursued the subject of his own accord. Fifty is an unusually large number of kinship names in any language; the more so, since there are no cousin terms. The 12 siblings-in-law terms—a quite extraordinary number—swell the total.

Conceptually reciprocal terms dominate the system except in the sibling class. The informant soon realized this principle. Some of the reciprocals are derivatives; others are not; self-reciprocals are lacking. This last fact helps increase the size of the system.

The distinction between older and younger siblings of the same (but not of the opposite) sex as nearer relatives is consistently carried out for uncles-aunts and spouses' siblings (or siblings' spouses).

ẩi	father	reciprocals ísâ'k	(man's son), ẩq (man's daughter)
o'l·a	mother	rec. íq'l	(woman's child)
o'p·ke	father's father	rec. ík-o'pke	(man's son's child)
omẩo	father's mother	rec. oka'nak	(woman's son's chd.)
ẩ'ẩo	mother's father	rec. íqẩei	(man's dtr.'s child)
ẩit	mother's mother	rec. íqaq	(woman's dtr.'s chd.)

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eske	**older brother (of man or woman)**		
eXa"s	**younger brother (of man or woman?)**		
i'q·ðe	**younger brother of woman**	**rec. 'ipák**	**(older sister of man)**
huya'k	**younger brother (reference, not address?)**		
emya'k	**younger brother (term of endearment, cuando contento)**		
ekð'me	**younger sister (of man)**		
etke	**older sister of woman**	**rec. ica'k**	**(yngr. sister of w.)**
ema"ðx	**father's older brother**	**rec. ek-ma"ñ(x)**	**(man's y. br.'s child)**
e'ite	**father's younger br.**	**rec. ekð'tae (ekð'pae?)**	**(man's o. br.'s child)**
a'yak	**father's sister**	**rec. icôk**	**(woman's br.'s child)**
etma"ðx	**mother's older sister**	**rec. eixema"ñ(x)**	**(woman's y. sis. ch.)**
ista'k	**mother's younger sis.**	**rec. epxac**	**(woman's o. sis. ch.)**
exak	**mother's brother**	**rec. e"ak**	**(man's sister's child)**

All cousins, cross and parallel, are said to be brothers and sisters. The cases used as tests did not suffice to determine whether the names used depend on the respective ages of the cousins or of their parents.

eqôqt	**man's parent-in-law**	**rec. iqaqa'm**	**(son-in-law)**
iqe·pôc	**woman's father in law**	**rec. iqa'mãc**	**(daughter-in-law)**
iqêmêc	**woman's mother in law**		
iqe'mut	**wife's brother**	**rec. eqtoñqwa'l**	**(man's sis. husband)**
eqmaXê'te	**wife's older sister**	**rec. etmaXêm***	**(wom. y. sis.'s husb.)**
ika'ite	**wife's younger sister**	**rec. imaqe'te**	**(wom. o. sis.'s husb.)**
eqwaq	**husband's sister**	**rec. ikôk**	**(wom.'s br.'s wife)**
iqma"aX	**hus.'s older brother**	**rec. eqmaXôt**	**(man's y. br.'s wife)**
iqê'ite	**hus.'s younger brother**	**rec. iqe'tae ha'ta**	**(man's o. br.'s wife)**

* Term of endearment, when drunk; otherwise they do not speak.

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601

There is no word for child's parent-in-law (consuegro).

That a man distinguishes his son and daughter but a woman calls them by a single term, is a Yuman trait.

The number of sibling terms is greater than among the Yumans. The Diegueño-Kamia agree with the majority of Californian tribes in having four terms: older and younger brother and sister. The Yuma and Mohave have three, older siblings being merged; the Papago, two.

Six uncle-aunt terms, allotted as among the Seri, prevail through southern California, including the Yuman tribes; also among Walapai-

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Havasupai. This therefore looks like a trait of Yuman origin. The Papago go further, with eight terms. 191 60

The Seri habit of calling cross cousins siblings prevails through central and northern California alongside the trait of designating them by uncle-nephew terms. All southern California, including the Yuman tribes, has special cross cousin terms. The Walapai-Havasupai combine the last two methods.

As compared with the three Seri parent-in-law terms, the California Yumans have two, the Walapai-Havasupai one. The twelve Seri sibling-in-law terms are most nearly approached in California by the Yuman Kamia, with seven. The Yuma have five; the Mohave, like the majority of Californian tribes, three. The Walapai-Havasupai, like the Hopi and apparently the Pima-Papago, have reduced separate terms for both siblings-in-law and children-in-law to very few.

Calendar and Astronomy

One informant said there were 12 moons in the year; another, 6. The list obtained consists of 12. Of these, about 6 refer to seasonal events, especially those concerned with food; 6 to constellations. This type of calendar resembles that of the Walapai-Havasupai. 805 821

1. June, ehe'naaX hi'oaX, mesquite ripe.
2. July, aatte'ka hi'oaX, grass green, ruben.
3. August, aaxwe'naa, or aaxwe'naa. (cf. 7), (certain stars) not yet visible (before dawn); tuuna.
4. September, hi'ka-ya'a, (stars of that name) appear; cold begins.
5. October, e'-ya'a, constellation Jacknife (?) rises in morning.
6. November, aa'yXa-ya'a, constellation hamaxi (aa'yXa) appears (in morning).
7. December, xaaxXaa'naa. aa'a (cf. 3; verified) (certain stars) not yet visible.
8. January, hoya.Xaa'k, certain stars just begin to show; small sea-turtles appear.
9. February, hoya.Xa'ka, larger turtles appear.
10. March, eXaa'kaa'i hi'oaX, sub-genus sea-weed (xaa'ka) "appears." See below.
11. April, hpi'taaa hi'oaX, shorter (a'ipit) cease.
12. May, aaa'aaaa hi'oaX, pitahaya ripe (aaa'a was given as ripe fruit of saharora, pitahaya, etc.)

Some of these names appear to be merely connotive of the events to which they refer. The seasonal happenings would probably be more truly placed if the calendar fell a fortnight to a month later, beginning in June-July or July instead of June. This would put the beginning at about the summer solstice, and might account for the statement that the "year" had six moons. The list was recorded on

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February 28, 1930, which the informant (correctly) declared to be the first of a new moon. He also said it was eXno'lasn't, with which he began his list. This would roughly equate moon 10 with March, as per the list; but when asked about the edible "seeds" of the eelgrass, he stated that these were due next month.

Unfortunately, the informant who stated that there were six "months" in the year was not questioned further. He may have referred to a calendar of six seasons like that of the Lower Californians.

The upper large star in Orion (Betelgeuze) is an antelope; the three of the belt, mountain-sheep; the three of the hilt, an arrow; Sirius, a dog following the sheep.

The Pleiades, kmă'mk, are a woman (xmâm, kmâm) with children, who came outdoors to urinate.

Ursa Major is a sahuaro or pitahaya fruit-gathering crook, a pole with a bar diagonally across the end.

Kwe'pitnX, quail (*codorniz*, qwe'pt) is a constellation.

Suxmi'ka, a man carrying a harpoon (*lanza*), may be Scorpio.

There are constellations Jackrabbit (ë'), Buzzard (nă'pXe), and kë'to, according to the calendar. These rise before dawn about March 1. Clouded skies prevented their being seen several mornings. A few days later, at 6 a. m. (7 a. m. Mexican time), Altair was visible well above the horizon; this may be Buzzard — compare Luiseño Buzzard-Altair.

Polaris was pointed out in answer to the question if there was a star that did not move.

The sickle of Leo was not recognized (Walapai-Havasupai, hand).

Of these, Orion-Mountain-sheep, Ursa-crook, Pole-carrier-Scorpio (?), Buzzard-Altair occur among Yuman tribes as far away as Diegueño, Walapai, Havasupai.

Myth Fragments

1.

People were born in a cane, the Seri in one joint, the Mexicans, Americans, Chinese in others, separate from each other. God (Dios, Yos) came along here from south, then went east (?), setting signal smokes; the Seri alone did not come to him, therefore have nothing.

2.

Coyote was trying to catch ducks. As he jumped, they flew away and he landed in the moon, where he is visible now.

3.

Death was caused by Coyote and Kontë'tXiat (*pinacate*, an insect that stinks, turns his black belly up, dung-beetle?). Coyote

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wanted people to die so he could eat their bodies; Pinacate because men stepped on him. Then Coyote killed his own son (daughter?), and people began to die. 539

4.

Fire is from the fly, who made it by rubbing his hands together, as he still does (*fide* R. Thomson).

5.

A man wanted to find the house of "Dios," who was the Sun. He went to ask Moon. Moon sent him on, but he could not find it, and returned. Moon played the musical bow (kăpʔxa"ĕt) to call all the birds, but they could not tell him. He played again and one more came, CaXa'pniX ke"ĕt, a little duck, who took the man and showed him the way, in a field, with the house in a corner, and showed him the door. The man went in. Sun had a pretty daughter. The man wanted to marry her, she was willing, but Sun would not allow it. He played (cards!) with the man, for each other's bodies. Sun won. He kept the man in his house. But in the morning when Sun went his rounds, the man escaped with the girl into the brush.

Of these tales, the first, except for the cane concept, is a rationalization, evidently post-Caucasian; the third probably finds its nearest analogues in central California; the fourth and fifth are characteristic of the Yuman tribes and southern California Shoshoneans.

Episodes apparently unknown to the Seri of today are: earth diving; frog eating the excrement of the god who dies; vagina dentata.

Shamanism

A "doctor" or shaman, kŏ'tĕ, becomes such by going to a "cave" in the mountains. This is solid rock, but he paints a sign or mark on it, it opens, and he enters. The "santo" or spirit inside, seakotkme'k ve, "going about in the brush," may or may not help him; if so, he strikes the man and enters his body. Through this the shaman can cure; because of the spirit in him, he can see the cause of the disease in a patient's body, "as if he had spectacles on." The spirit is not visible to others, nor does he talk from the shaman's body. 756

The shaman cures by putting his hands on the sick part; he circles them like a tube, puts his mouth on them, and says cho, cho, cho. He does not suck out any object. The informant was startled when told how grasshoppers, etc. were extracted by sucking shamans elsewhere; he volunteered later that the idea frightened him. There is no special treatment for rattlesnake bite. [755]

Most old men have more or less shamanistic power.

A shaman is paid a knife, a bow, four arrows, five pesos, or any such amount for curing. Killing of unsuccessful shamans was denied.

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789 Some shamans display their ability to hold live coals in their mouth.

Taboos

[88] 784 At first menstruation, the girl eats nothing (!) for 8 days, only drinking water. For 4 nights a *fiesta* is held for her, men and women dancing in a circle, anti-sunwise. She is outside the ring. Her head is not covered. San-pit roasting was unknown to the informant.

[841] At menstruation a woman drinks hot water. She may cook for others. She may not eat deer meat.

[844] After childbirth, both husband and wife eat only *atole* (gruel) and water, he for 4, she for 8 days. She may not work at all, he only a little, such as getting wood, "hunting" as necessary, etc.

[881] There is no puberty ceremony for boys. Nothing is said to be [224] known of any rule forbidding a boy to eat of the first game killed by him.

[833] Continence before hunting deer was not observed. Nor was there any special treatment or respect due the deer carcass. It is said that deer meat could not be left behind unless there was too much, but this is probably a statement of practise rather than a taboo.

Dances

535 [727] Besides the girl's puberty dance, the Seri also had a scalp dance. Only the frontal piece of the scalp was used. This was hung on a pole. Men (armed) and women danced together around it. If the scalp fell down, all would die.

Dances seen were solo on a plank laid over a shallow pit. Several singers sat by, beating or rattling anything convenient. Each song and dance lasted scarcely three minutes. The tempo is fast. The step is a quick double shuffle with alternate feet. In one type, the dancer held to a stick with one hand, his body and hanging arm remaining as motionless as possible. Another type was without the stick, the dancer holding a gourd rattle and keeping his body bent forward somewhat.

534 171 Rattles are of gourds, e'Xéc, on a stick, or of cocoons, Xekaké'mta. Deer-hoof rattles were denied. The cocoons are on a band worn below the knee. The Yaqui-Mayo wear such knee-bands of cocoons; and sometimes of deer-hoofs. The Gila Pima also know the cocoon band.

Various Religious Items

276 Datura (toloache, jimsonweed) does not appear to have been used. Even the plant seems unknown, although it is said to occur in the Seri range.

778 789 Rain making seems to be by amulet rather than by direct shamanistic power. For instance, Antonio Herrera wears a small object

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on a string around his neck, which he got from his father. It is a two inch length of cane, with a wooden stopper, containing a white powder of stone (?). A little of this powder put into fresh water, brings dew; into salt water, rain. 778 789

Similarly, Chico Romero wears on his neck a tiny spool-shaped object of wood, scarcely 2 cm. long, with notched ends. When he dies, this will burst; or rather, it seems that a larger object of the same shape, which another man keeps, will burst with thunder.

To get luck, a man paints a "cross" on his forehead, breast, and "bed" and goes to sleep. Then a dream comes in which he gets what he is thinking of. Sometimes the dream comes true; sometimes not. Some dreams are lies. 787

The soul (*alma*), he'ë'sax, is all over the body and is noiseless. It is "nearly the same as blood": when the blood is lost, the soul goes. Some say that when the Seri die they are reborn in the north as Cocopa. 774 775

There seem to be no special beliefs or practises about twins. 845

Antiso'ma (— Montezuma?) is the size of a child, has a beard, a golden staff, white clothes inside and black outside. He lives in a cave. Once he tried to take a young man away with him in order to dress him nicely. Later the young man's relatives went with him to find Antiso'ma again, but could not. 776

Songs

Toad was a woman who had only a breech-clout and wanted a cotton shirt. She said she would give herself to a man for one. 533

Coyote was a Seri once.

Pinacate (dung-beetle?) wanted a bride and was jealous about her.

Colaprieta, the black-bellied ant, also was a man and wanted to marry the holo'ctim ant. He was making a house of grass for her. She was afraid of him, and her relatives took her away.

Games

The four-tube-hiding game is played with canes open at one end. These canes are: blackened all over, old man; unpainted, old woman; blackened at one end, boy; blackened in the middle, girl. The boy and girl are made by slitting off slivers on two sides. The names serve as designations only; the differences between the tubes do not enter into the game. The player with the tubes turns around, puts a piece of twig into one, fills them all with sand, and throws them before his opponent, who tries to empty the twig from the *third* tube he selects. If so, he wins the canes, that *is*, the right to play. If the twig is in the first tube emptied, he loses 10; if in the second, 6; if in the fourth, 4. Counters are little natural shell disks. 524

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524 Dice are three splints of cane; tapering toward both ends, nearly flat. The concave inside is greenish white, the outside darker. The count is: 0 insides up, win 4; 1 inside up, win 1; 2 insides up, lose 1 and play; 3 insides up, lose 4. The 3 splints are stacked together, then thrown endwise against the palm, a piece of turtle shell, or anything similar, so as to fly forward and scatter on the ground. (Some players probably acquire a degree of skill in making the canes fall right.) A player repeats until he throws 2 whites or insides. For points scored, he draws lines on the ground in front of himself. His opponent erases his lines as he wins, or adds to them as he loses, until he himself is ahead, when he begins to mark his own lines. Ten points wins the game. A stick is then set in the ground by the winner, who goes on playing the next game. That is, if he has 8, and throws 4, he sets up his stick, erases 6 lines so as to start the new game with a credit of 2, and throws again. The Seri perform these additions and subtractions with the rapidity of a practiced white man.

A ring of people may play at once. Their scoring in relation to one another was not ascertained, but it is presumably each from his neighbor, with the totals shown by sticks.

Since with fair throws the losses in this game must equal gains, a lead of 10 over an opponent is as much as could expectably be played for if the game were not to be unduly protracted.

526 Football race is played with *palo fierro* balls, perhaps 3 inches in diameter, one to each side of 4 runners. The ball may be moved only with the foot. The race is along the beach, where cactus and brush do not interfere. The distance, according to places named to Sr. Thomson and known to him, is about 6 miles. The men on a side relieve each other in informal relays; usually only 1 or 2 finish. The [648] Seri once went north to play the Papago this game, but lost.

Shinny is a woman's game, preliminary to the football race. Four women to a side carry sticks with which they try to throw an 8-12 inch hoop to a goal mark at the end of a short field. Behind each side stand the 4 men runners who are to race with a ball.

Notes on Material Culture

482 Women carry loads on their heads with a ring: men with the pén, Spanish *palanca* or lever, a stick over the shoulder, with load [171] hung from each end. These are the usual Sonora and Sinaloa Indian ways of carrying.

516 The Seri sit and lounge randomly. The men squat, occasionally cross the legs, put them sidewise, or sit with one knee up. The women wear long cloth skirts, but apparently sit just as variously.

714 Body armor, *naitanikap*, with sleeves and helmet, and a shield. *saXe'tiX*, both of hide, were worn. The shield was described as 4 or 5 feet high, roof-shaped toward the front. It is not clear whether

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it was set up by an archer in front of himself, or carried for him by another man. At any rate it suggests open fighting besides raids and ambushes. 714

Pottery, which is thin, porous, and reddish-buff to gray, was not seen made. The clay is said to be tempered with jackrabbit or horse dung. The vessel is started, apparently by coiling, in a dish or receptacle. It is certainly built up by coiling, the sausages being somewhat less than the thickness of a finger. It dries fast, the bottom becoming somewhat hard as the top is being built. The coils are smoothed as they are added, with a stone inside, a shell to scrape the outside. A paddle is not used. The vessel is further smoothed with the stone and dried for a day. It is fired with wood, sufficient manure being unavailable on the island. 323 [372]

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McGEE ON THE SERI

The pages that follow deal with McGee's well-known monograph on the Seri,[1] discussing first points on which his data are fuller or mine confirm or modify his, and then points on which I believe him to have been in error or to have misconstrued his observations. McGee spent little more time in actual contact with the Seri than I did.[2] His work impresses me as that of an extraordinarily good observer, keen in seeing significant evidence, but of uncontrolled imagination and unconscious of his preconceptions. It is only fair to state that where he founds an interpretation on slender or uncertain data, he generally indicates the fact to a careful reader.

Data and Discussion

The ratio of kilogram weight to liter capacity of water jars is given by McGee (p. 183) as follows: 2 Seri, .126-.147; 2 Papago, .239-.279; 4 modern Pueblo, .252-.295. There is no doubt that the Seri olla is unusually thin-walled. Sherds seen at a campsite near San Rafael, on the dry course of the Bacuachi, 20 or more miles from the coast, ran from 2 to 5.5 millimeters in thickness, averaging 3.8; their curvature was slight, indicating large vessels. McGee remarks (p. 184) that the purpose of nearly all Seri pottery is to hold or transport water, other uses being secondary, generally after breakage. My observations on the island confirm this.

Head loads are carried on a ring of "yucca" fiber (p. 184).

The carrying stick or yoke, with nets to hold ollas, is considered aboriginal by McGee (p. 184), although he mentions (p. 68) that Ugarte in 1721 saw the device in use by men, the women carrying single ollas, presumably on their heads. Nordenskiöld has recently shown the "coolie yoke" to be ancient in the area.[3] It is used today in Sinaloa and Sonora.

McGee (pp. 11, 191, 292) thought that he understood that the "Ancient of Pelicans" was the chief creative deity and brought up the islands and earth with the help of the Turtle or Shark. This

[1] W J McGee, The Seri Indians, BAE-R 17, part 1, pp. 1-129, 139*-344*, 1898. (In citations of the higher page numbers, the asterisk is omitted.)

[2] McGee (pp. 13, 98, 291) in 1894 spent "about a week" at Costa Rica west of Hermosillo where some 40 Seri were temporarily congregated, his principal informants being sub-chief Mashém who spoke Spanish, and Juana Maria. A Spanish-English interpreter is referred to. In 1895 the coast and Tiburon Island were visited, camps examined, but not a single Seri encountered. The vocabulary was obtained chiefly at Hermosillo from Kohauis, an old Seri official interpreter who had left the island in childhood, never revisited it, considered himself an outlaw in Seri eyes, and had long had no dealings with them except under Mexican protection. I spent six days or parts of days with Seri, sleeping two nights on Punta San Miguel and three in the ranchería on the island opposite. Two Seri accompanied us back to Hermosillo to draw their government stipends, and were available for some supplementary questioning and revision of notes on the two following days.

[3] Comparative Ethnographical Studies, No. 9, 234, 1930.

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sounds like an expectable enough mythic idea, but seems involved with McGee's dubious conceptions as to totemism, discussed below. 114 193

The two-pointed fish-spear, with serrated points 6 inches long and spreading 5°, seen by Hardy (McGee, p. 193), is interesting because seemingly unreported in or near the area. 114 227

"Fishing" with staked pelicans who are then fed by free birds, is authenticated by the statement of Venegas for lower California, (McGee, p. 193). [226 231]

No fish nets, hooks, or lines were seen by McGee among the abandoned effects on Tiburon (p. 194). This is in accord with my observation. The abundance of sharks may interfere with net or deep water fishing.

The bow (p. 200) is of *palo blanco;* the release (pls. 28, 29), Mediterranean; the archer's position (pl. 29), with elbow above head, suggests a quick downward shot at a target or game lying on the ground not far away. 114 411

Mesquite, according to McGee (p. 207), is ground on the metate. Sr. Thomson told me of its being pounded in a hole in the ground. The Seri gave me the name a'kata for what I understood to be this earth mortar. According to Sr. Thomson's description, the flour from the first beans cakes and lines the cavity firmly, so that the bulk of the material is secured quite cleanly. In general, mesquite is mortar-pounded rather than metate-ground by the tribes from whom we have records, as is expectable from the woody nature of the beans. 114 252

McGee (p. 207) noted the viznaga cactus, Echinocistus, as rare in the Seri habitat, presumably owing to its use for water by the natives. I made the same observation on the mainland, but Sr. Thomson stated that along the roads the plant is being gathered for candying. 114 137

The one basket described by McGee (p. 208, fig. 24) is bundle-coiled and plain. The only one I saw in use among the Seri was ornamented with a plain reddish band. Sr. Thomson presented me with two which bear patterns (fig. 13), and showed me a photograph of a collection made by Mr. Davis for the Museum of the American Indian, Heye Foundation, nearly all of which were decorated, some fairly elaborately. Several of these are shown by courtesy of that institution in figure 12. As McGee observes, there is obvious resemblance to Southwestern baskets; especially of the Papago, Pima, and Apache. Southern California basketry is less similar. That of Baja California is unknown from specimens, though the mention of water-tight vessels used for winnowing and parching suggests a coiled tray of Seri type. The surviving tribes of Sonora other than the Seri use few baskets distinguishable from those of the non-Indian population. 114 285 [171]

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114 262 [171 514] The Seri "second harvest" of cactus seeds (p. 209), which Baegert and Clavigero also describe from Lower California (p. 211) is found also among the American Pima,[4] and is therefore likely to have prevailed as far as Cereus fruits were a principal food supply.

The ground-squirrel is not eaten by the Seri, the badger not by the Baja Californieños (p. 212).

McGee gives a valuable percentage estimate of Seri food composition: land game, large and small (including 6% of stolen stock), 21%; pelicans, other waterfowl, and eggs, 13; sea turtles, 25; fish, 15; shellfish, 10; cactus fruit, 9; other plants, 6; miscellaneous, 2; total animal, 84; maritime, nearly two-thirds. My impression is that clams, other mollusks, and crabs constitute more than a tenth of the total consumption. Clams especially can usually be obtained at low tide when wind and water prevent other food taking. I should also be inclined to raise the proportion of plant food, especially mesquite. The use of agave was almost certainly limited chiefly by the supply. Sealions, porpoises, and occasional whales could perhaps hardly be accounted for under the two percent of miscellaneous. On the other hand, deer are evidently taken only occasionally, and the figure for turtles seems too high, these animals being absent from Seri waters for months in the year and always free-swimming. McGee appears to have over-emphasized the importance of the turtle in Seri thought as well as life. I would incline to estimate the proportion of animal food in native times, before domestic animals could be preyed on, as rather under three-fourths of the total; of maritime, as perhaps three-fifths. Even these figures might be high for the bands primarily resident on the mainland, with free access to the mesquite thickets of the lower Sonora and Bacuachi (Bacavachi) courses, and the countless cactuses.

114 171 561 A double-bladed paddle pictured by the Dewey-Narragansett expedition of 1873 is reproduced by McGee (p. 219, fig. 28) without comment. This type of paddle is established for the Seri, Santa Barbara islanders, and San Francisco Bay Indians; then apparently is lacking until the Eskimo-Aleutian area. Among the Chumash it is native and associated with a plank-built canoe. On San Francisco Bay it was used with the rush balsa, and may or may not be due to Aleutian sea-otter hunters introduced by the Russians. It seems possible that the Seri and Chumash occurrences would prove connected by occasional use in Baja California, if we had fuller data, since some of the natives there went several leagues out into the open sea. We are so accustomed to think of the two-bladed paddle as an adjunct of the specialized kayak, that it too impresses as a complicated device, inappropriate with a simple raft. As a matter of fact, wherever scarcity of wood, or lack of skill and usage in working it,[5] resulted

[4] Russell, BAE-R 26:71, 1908.
[5] Cf. The Valley Nisenan, UC-PAAE, 24:253-390, 1929.

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in a paddle blade being cut separately from the shaft, the inventive step from attaching one blade to attaching two blades would have been insignificant—in fact, would be an improvement or variation rather than an invention. The determining factor as to its adoption would probably be the type of navigation as set by water conditions. This is borne out by the distribution of the double paddle, which clings to areas of open salt-water navigation or large bays approximating open water conditions. On rivers and lakes the double paddle would rarely help and often be in the way. In this way the varying association with skin boat, wooden boat, and raft boat seems accounted for. Another factor must be size of the vessel navigated. A broad or high canoe would scarcely allow of alternate paddling on both sides. This may be the cause of the absence of the implement on the Northwest Coast. Whether the Arctic and the California-Seri occurrences are to be historically connected, must probably be left an open question for the present. An answer in favor of connection will evidently depend on the establishment of sufficient other connections to set up a favorable presumption. Until then, the considerations just mentioned make the possibility of independent origin equally plausible.

The single-bladed paddles seen by McGee (p. 219) and myself were two-piece and hafted with nails. McGee is more interested in balsa propulsion by recumbent women with hands, shells, or unhandled blades. That such crude devices were used along shore or in bays often enough to be mentioned, is wholly in line with the conspicuous Seri indifference, slovenliness, and lack of standards; but it is also obvious that real paddles being known and made, these would be the ones taken on open sea voyages of a dozen miles in a region of notably variable winds and currents. The Seri are never fools in practical matters within their compass; and they could not have acquired their indubitable navigating skill by letting their women do most of their paddling with bare hands. The one woman I saw aboard was carried as a passenger across the Infiernillo.

What is typical of Seri habits is that the harpoon shaft is also used for poling, and the harpoon cord as anchor rope, tow-line along shore, sheet rope, and for tying a blanket to a mast and pole to serve as sail; just as the bailer of a leaky skiff is an enamel-ware plate or pot employed at other times for food. The whole harpoon, including the rod-iron point, but dismounted, seems regularly to be taken along on a transport voyage.

The Seri houses I saw opposite Punta San Miguel were like those described by McGee (pp. 221-223): long, narrow, low, and open at least at one end; but they were unroofed. There was also one of double length, and another "joined obliquely"—that is, annexes occupied by younger kin and their families. The lengthwise double house was open through, though constricted at both ends and the

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342 middle. Two imperfect wind-breaks of brush, less than a quarter of a circumference in curvature, stood near the camp..

On the subject of textiles and textile clothing (pp. 171, 225-232), 114 McGee is necessarily vague on account of lack of specimens. He 281 says that native kilts, from waist to knee, were either of birdskin or 286 "a rectangle of coarse textile fabric," "woven probably on some prim- 291 itive device"; that it is practically certain that a long-sleeved, short-bodied shirt or wammus is "of local aboriginal design" and was "made primitively of haircloth or native textiles"; that the probable genetic series of Seri garments was: 1, the pelican-skin robe used as a kilt, 2, the textile shirt, 3, the textile kilt; and that Seri fabrics, according to a Mexican informant, "resemble coarse bagging, and are woven or netted quite plainly."

Human hair cord could be netted, or twined in double weft into 114 basket-like bags or mats; it could hardly be woven into cloth without 171 a loom. The same holds of *irtle*, agave fiber. Bast of willow, cotton- 286 wood, beanstalk, such as was spun and twined, and perhaps woven on a limited scale, by the Colorado river Yuman tribes, was not available to the Seri, though they may have had nearly equally soft substitutes, even in their desert. Cotton they did not have. *Irtle* is a strong, harsh fiber, excellent for cordage, nets, open-mesh bags, and the like, and still largely used in Mexico for such purposes. It would also serve well for fringe-aprons, for which the Lower Californians used it. A fabric from it would be rough and stiff, giving little warmth, not very satisfactory for a kilt, and quite unserviceable for a fitted garment like a sleeved shirt. Cotton was the prevailing garment material found along the coast by the first Spaniards, north up to the Cahita (Ka'ita, namely Tehueco, Mayo, Yaqui); here *irtle* became more prevalent though cotton persisted; but the type of garment is not clear.

As to looms, *irtle* is today woven into carrying bags on a heddled belt-loom by the Nahua-speaking Indians of Sinaloa. The Mayo weave woolen girdles on a similar loom. They also weave woolen blankets on a demountable horizontal loom, the warp passing continuously around the two heavy yarn beams. It is not clear whether this is a hybrid Spanish or a purely native apparatus. The Opata and Pima Bajo loom is not known. The American Pima weave cotton both on a belt-loom and on a staked horizontal loom, but with warps in a single plane.[4] It is difficult to imagine these looms existing among the Seri, except the first mentioned; and this would not yield them much in the way of garments. There is no reason why they 114 should have worn more than the Lower Californian women's fringe- 291 aprons, supplemented perhaps by birdskin blankets and loin covers. 439 They no doubt secured occasional garments from neighboring tribes, as they gladly but irregularly wear those of whites today; and this

[4] Russell, BAE-R, 26:148-152, 1908.

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is what their "shirt" (McGee, pl. 29) probably was. The fabrics of McGee's Mexican informant may refer to gunny-sacks made over into improvised imitations of civilized garments; or to single-element carrying bags. It is entirely possible that contact with the cloth-weaving tribes of Sonora long ago induced the Seri to shrink from habitual complete nudity; but it is difficult to imagine them producing even a coarse wearable cloth. McGee's interpretation of the historic sequence of Seri garments is of course wholly speculative.

The cradle shown by McGee (p. 226, fig. 30) consists of a kite-shaped hoop with eight sticks tied across it and a lashing thong passed back and forth across it half-a-dozen times. Even allowing for some slip of the parts in transport to Washington, this specimen is quite typical in Seri disregard of evenness, neatness, order, or finish. The Yaqui cradle illustrated by Hrdlička[7] consists of eight or nine lengthwise sticks or canes twined close together. The Lower Californians used a basket or a turtleshell. The Gila Pima and river Yuman cradle is of "ladder" type, and therefore similar in structure to the Seri except that it lacks the point at the bottom and has the sides parallel; it also carries a hood of wickered or twilled splints. As regards basic structure, one form of Maidu cradle is most similar to the Seri; just as the plan of the Yaqui one reappears among Miwok, Yokuts, and Mono a little further south in California.[8] It appears from this irregular distribution that so simple an apparatus as the open or flat baby-carrier, which can be just as serviceable without a definite technique or style entering into it, is likely to vary locally without much significance, and that its forms will indicate historic connection only when they are parallel in a number of details. In these respects it resembles house types. In both these objects, new "inventions," certainly of detail elements and perhaps of basic structure, seem to be readily made and adopted.

McGee's finding (p. 247) that the Seri are "not habitual stone arrow-makers" has a parallel among the river Yumans, and, at least partially, among the remaining Sonoran tribes. His conclusion (p. 259) that the *yerba de la flecha* (magot, Sebastiano bilocularis?) was an Opata but probably not a Seri arrow poison, seems sound. The plant was shown me on the island, and the Seri knew it as venomous, but volunteered nothing as to using it on arrows.

That the question of Seri cannibalism must be left open, with a preponderance of evidence against the practice (p. 263), also seems a conservative judgment.

As to shields, McGee learned of loose pelican pelts and turtle-shells (p. 264), I of armor and a large upright shield of hide. Both accounts may be right, one referring to emergency pick-ups, the other ——— to prepared defence or attack.

[7] AA 6, pl. 9, 1904.
[8] BAE-B 78:635, fig. 48, pls. 80, 84.

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to prepared defence or attack. The Seri mode of life and induced temperament must have led to many instabilities, with make-shifts often actually more in use, but finished or efficient types of artifact seemingly latent and sporadically emerging in the stream of their culture. Thus, the shell alongside the double-bladed paddle; plain baskets seen in use, but a series patterned in a definite style being produced as soon as their manufacture was profitable; unroofed and roofed houses. Similarly, the two-pointed fish-spear and olla carrying-net, which neither McGee nor I saw, but which may persist in memory in the culture ready for revival on occasion.

Somewhat similar, perhaps, is the status of polygyny, which prevailed in McGee's day (p. 279) a half generation after a disastrous war, but was not the rule, or was successfully disavowed, in earlier times and to-day.

Errors and Misconstructions

McGee dwells at length (pp. 152-156) on three strong trends of Seri life and culture: the pedestrian habit, accompanied by quite exceptional fleetness; a hand and tooth sense with corresponding absence of tool sense; and a race sense unalterably opposed to mixture with alien blood.

All the Sonora and Southwestern Indians were and largely still are fast and sustained long-distance travelers on foot. There is nothing to show that the Seri were superior to the others. The one time they remember having met the Papago in a foot-ball race, they were beaten. Yaqui warfare is a record of at least equal endurance and ability to evade superior civilized forces. In fact the faculties of the Yaqui are the more remarkable in that they have always been settled farmers and often moved in larger bodies. The incredible fleetness of the Seri was probably most manifest in mesquite thickets and on rocky ground. That they should outrun a horseman on an open plain is the sort of tale that one hears on every frontier and which the more intelligent frontiersman does not take seriously.

Hand and tooth sense was undoubtedly strong among the Seri. The same thing, especially as regards food, is reported for the Lower Californians. But the inference of lack of tool sense is erroneous. Knives are prized by the Seri, and, along with nails, axes, and the like, are handled with a direct, crude effectiveness. The crudity is due to the lack of standard, order, and interest in finish which pervades all Seri cultural manifestations and which rests ultimately on their essential isolation and self-sufficiency in an unusually forbidding environment. What a Seri is interested in is not a neat job but one that will substantially meet his immediate need. Their modern plank boats are weak in plan, badly joined, and always leaky; but they serve. A structurally stronger boat would probably profit noth-

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ing, because it would be swamped in a sea which it could resist. The joining and calking are always carried far enough that the boat can be bailed faster than it leaks. That the Seri prefer to bail rather than to finick over joints, is a matter of preference. Most of our real frontier life runs on much the same plan, though sprung from a tradition of intrinsic standard and provided with a superior tool equipment. Tribes like the Walapai and Papago, who live in nearly the same desert, show much of the Seri combination of technological crudeness and effectiveness. They do make an exception in basketry, which is what has chiefly reached our museum cases from their culture; but the Davis-Heye collection shows that the Seri too can make baskets of unsuspected quality. My impression, based on the way the Seri handle their knives, boats, bows, and the like, is that they have excellent practical mechanical sense, but that their standards are astonishingly different from our own. Most people that depended so much on sailing their boats as the modern Seri do, would not be content with two sticks, a blanket, and a harpoon line. But, given the willingness to operate with this equipment, very few would be as successful in quickly rigging and skilfully handling the sail. And sailing is something the Seri have recently learned or evolved. They are the frontiersmen of native culture: hardy, rude, unorganized, practical, efficient; but, like our own frontiersmen, in no sense only half emerged from the tool-less animal. McGee was so inspired by the desire to find ultimate "primitiveness" among the Seri that he often ignored the tremendous effect of their habitat which he so well observed and described. After all, in his day cultural evolutionism was still in vogue.

As to race sense, McGee seems partly but only partly right. Chico Romero of his own accord asked me if other Indians had venereal diseases, and on the return question replied that the Seri were entirely free from them. I also saw and heard of no half-breeds. On the other hand, Chico's historical tradition told of the violation and keeping of captive Tepoca women, and since his own son was descended from one of them, in the second generation, Chico's mother-in-law must have been a Tepoca. McGee's "alien conjugal union" as the "blackest crime" (p. 11) is therefore an exaggeration, and his informant's statement that a Papago woman captive among the Seri never could have had children because she was an alien slave (p. 278), must rest upon a misunderstanding.

The groom's continence for a year after marriage as a moral test before admission to full husbandly status (pp. 280-3), is probably a matriarchally colored fantasy based on another misunderstanding. As already mentioned, Chico was interested, but mildly riskily amused, at the idea when it was put before him as a foreign Indian custom. He reacted like the average white man under the circumstances, not in the least like an actor skilfully feigning ignorance.

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114 583 As to the "total absence" (p. 285) of marriage purchase, whereas I found it, such purchase can hardly be believed to have originated wholly within the last 35 years, in view of its wide distribution in native America.

114 614 The whole matter of maternal lineages crystallized into totemic clans with matron rule (pp. 10-11, 167-8, 269 seq.) seems a fantasy. A careful reading of the passages in questions reveals how much McGee has built up on statements which he conscientiously admits to have been slender, probable only, and subject to possible misunderstanding. It must be remembered that in 1894 the matriarchate as original and primitive was still standard anthropological doctrine. At any rate, I got nothing suggesting even matrilineal reckoning in my indirect approaches to the subject, and explicit denials when it was directly presented.

114 342 That house-building may now and then be "accompanied by a chant" (p. 223) is possible, though it seems out of accord with the haphazard and shiftless methods of Seri work and the flimsy irregularity of their homes; but that the chant was "usually led by the eldest matron" seems more matriarchate.

114 174 That the Upanguayma, Guayma, and Tepoka were successively "extruded" (p. 75) would be correct if there were anything to show that the Seri were the parent stock of superior virtue, conservatism, and faithful attachment to their original habitat.

114 601 The statement (p. 11) that "kinship terms are strikingly scanty," made in the face of round-about and imperfect speech communications with the Seri, I cite only as an indication of the degree of McGee's readiness to fall back upon his preconceptions when facts became thin.

114 304 I did not note the absence of superior medial incisor teeth observed by McGee (p. 169) in married women. If a regular practise, its connection with the puberty rite would be a natural inference. But knocking out of teeth is a rare custom in America.

114 224 McGee's statements (pp. 196-7) that it is "undignified, if not wrong" to kill deer other than with the hands, and that jackrabbits are "customarily taken alive to camp," seem over-emphases. That a sense of sport or passing pride, or lack of weapons, now and then leads to such happenings, I do not doubt; but the Seri seem too practical and unromantic to exact rules on the point. I suspect that a youth who insisted on living up to them would soon be considered a vain lore. I may add that I saw a crippled wild duck hobble about the camp on Tiburon for two days, being played with occasionally by the children—without unusual roughness or unkindliness—and that finally it wandered to the water and gradually drifted off without notice being taken.

114 302 614 Face painting is construed by McGee as sematic of totemic line-

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ages (pp. 164-167), and Hardy's story of his being painted is interpreted as ceremonial adoption (pp. 277-8). My conviction is that the Seri paint primarily for adornment, and that further significance is either secondary or absent. When I reached the island and about thirty people, including visitors from other settlements, were gathered to receive and inspect me, all the younger women and one or two adolescent boys were freshly and very neatly painted. After all, their ragged cast-off civilized garments were nothing to make a show with on a state occasion. In former times, the everyday-wear pelican robes would not have served much better. The ocher red, dumortierite blue, and gypsum white pigments however gave a chance for decoration and display. Three days later, when our party was an old story, some of the faces still carried paint, but it was worn, defaced, and bedraggled. It seems unlikely that people should greet strangers by decorating themselves with representations of lineage totems which they at the same time denied or tried to conceal from their knowledge. The construal of Hardy's painting as an adoption-rite rests on the same blood-kin interpretation. It was probably nothing more than an act of friendliness tinged with the simple humor of which the Seri have a strong sense.

Face painting in fact seems to be the chief if not only purely aesthetic expression of Seri culture, their mode of life and psycho-physiological habits being such as almost to prohibit any other form of art. In this painting, on the other hand, they have achieved a high degree of stylization and taste. The designs I saw were throughout in the manner illustrated by McGee in his plates 13-16, 18, 20, 22, 24-26.

Ethnographically, the interest of this style lies in its similarity to the river Yuman face paintings. The Seri first of all specialize on a horizontal bar across the nose and cheeks, immediately below the eyes; in addition to this, there may be vertical elements dependent over the cheeks. The design deliberately breaks across the natural lines of the face in such a way as to orient itself with reference to the eyes without touching them. Bordering or enclosing of the eyes is avoided; neither are planes like the cheeks, forehead, or chin felt as fields to be filled in with decoration. The fundamental plan attacks the face at once drastically and subtly. That the style has both feeling and rigor is shown by the fact that none of the endless variations of color and design detail depart much from the basic scheme. That this scheme is old is shown by Hardy's description of a century ago. It is a true art of high order within its narrow compass.

The Mohave paintings[9] are somewhat freer and more variable, but also less classical or chaste stylistically. The transverse element

[9] Kroeber, Handbook, BAE-B 78, fig. 69-82, 1925. With the Mohave, contrary to the Seri, the vertical elements predominate over the horizontal. The Gila Pima style (Russell, pl. 28), and the Havasupai (Spier, AMNH-AP 20:196, 1928), are also related.

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171 302 below the eyes and the verticals below them are predominant in most cases. Even where the design extends above the eyes, it does not cover the forehead, but terminates in a straight edge paralleling the one below. Where the chin is involved, the Mohave bring solid triangles up from the jaw and then leave the chin itself blank, instead of accentuating its contour with color, as a less sophisticated style would do. Like the Seri, the Mohave are a people with deficient material culture and little dress suitable for display. The two tribal styles are unquestionably connected in their history.

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SERIAN TERRITORY AND TRIBES

The close speech unity of the Seri, Tepoca, Salineros, Guaymas, and Upanguaymas is affirmed by all the older authors. The name Seri has however been used in several senses, even in pre-ethnologic days: (1), for the entire group of related tribes, sometimes excluding and sometimes including the Guaymas; (2), for the inhabitants of Tiburon Island and the immediately opposite stretch of mainland; (3), for the inlanders more or less associated with the mission establishments from Hermosillo upstream, in contrast with the "Tiburones" of the island; (4), for the modern fusion of mainlanders and islanders, which evidently includes descendants of all Serian tribes except the Guaymas and Upanguaymas, who became absorbed in the lowermost Yaqui tribe or village of Belem. It is in this fourth and last sense that I use the term; my principal informant, in the tradition given, employed the third meaning; McGee mostly the second, with a strong implication of the thorough apartness and greater primitiveness of the islanders, as compared with their ethnic kinsmen.

The Tastiotefios of my informant appear not to be known otherwise. The coastwise alignment of tribes from south to north seems to have been: Guaymas, Upanguaymas, Tastiotefio, Seri or Tiburones, Tepoca, Salinero.

As already mentioned in the Introduction, it seems inherently unlikely that Serian territory extended as far up the Sonora river as Ures, near which Orozco y Berra puts the boundary. His undue extension is probably due to the fact that the missions to which Serians (other than Guaymas-Upanguaymas) became attached, were situated in the valley of the Opodepe or Horcasitas branch of the Sonora. According to McGee[10] these Missions were: Santa Magdalena de Tepoca, founded in 1699, soon abandoned, location long lost but probably up-stream from next; Nacameri, 7 leagues below Opodepe; Nuestra Señora del Pópulo, 9 leagues down, at Horcasitas; Nuestra Señora de los Angeles, 3-4 leagues down, maintained, with preceding, until 1767; Pitic or Pueblo de los Seris, more than 12 leagues down (opposite Hermosillo), founded last, in 1742. Nacameri and Pitic sound like Pima, not Seri, words. Whether the river valleys from Hermosillo up were actually Pima territory, as here surmised, will have to be established from documentary sources, possibly supplemented by recollections of the Pima surviving about Ures. It is conceivable that Serian tribes had driven the Pima out of the Sonora valley shortly before the founding of the missions, thus effectuating the division into Pima Bajos and Altos; or that the Pima shrinkage out of the middle of their territory began after their mis-

[10] Pp. 66, 69, 70, 72.

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sionization. The Pima are so uniform in speech from the Gila to the Mayo that their territory must be assumed to have been continuous at no remote date.

Seri Population Estimates
After McGee, pages 135

1700,	Velasco	2,000
1824,	Troncoso	1,000+
1826,	Ortiz, Tiburon only	1,000-1,500
1826,	Hardy	3,000-4,000
1841,	de Mofras	1,500
1844,		550
1846,	Velasco	500—
c. 1855,	Encinas	400-600
c. 1865,	Encinas	250-300
1894,	Mashém, native	250-350
1930,	Thomson	175

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LANGUAGE

Seri speech on first audition seems fairly difficult for the European ear. This is on account of the presence of marked tone instead of stress accent; an abundance of "gutturals," that is, palatal and velar stops and fricatives and glottal stops; a surd l and surd bilabial f; and certain consonant clusters. None of these features, however, present serious difficulties to a phonetically trained ear, and it is expectable that when intensive study can be made, it will show the Seri language a distinct one indeed, but in no sense abnormal. The tone variations are great enough to be unusually plain, and syllables are spoken in an even, measured way with clear articulation.

The principal present interest of the vocabulary I recorded is in the light it may throw on the ethnic relations and origin of the Seri. The vocabulary puts beyond doubt the often accepted kinship of the Seri to the Yuman languages.[11] However, the differences are also great. I had expected that an accurately recorded vocabulary might class Seri outright as one of the Yuman group of languages. This expectation however has been dispelled. Seri is coördinate with the Yuman group as a whole, not a branch of it.

Another possibility remains to be considered. The Yuman family may be described as situate at the head of the Gulf of California, extending east, north, and west of the mouth of the Colorado in a fairly compact block. The most remote member of the family geographically, as well as the most diverse intrinsically, it appears, is Cochimí, which occupied Lower California between about latitudes 26° and 31°,[12] in other words, the central part of the peninsula, across the Gulf from the Seri. Now if Seri is an ancient off-shoot from the main stem of the Yuman languages at the head of the Gulf, then Cochimí, which is also a much diversified off-shoot from the same stem, but on the other side of the Gulf, ought to represent a separate specialization independent of Seri, and the ancientness of split-off combined with the territorial separation ought to have led to an increased divergence of the two off-shoots from the presumedly ancestral and still relatively homogeneous main Yuman block. That is, in this event the relationship of Seri to Cochimí being through the main Yuman group, Seri and Cochimí should be more different from each other than either from Yuman. The line of similarity and kinship thus would be Seri-main Yuman-Cochimí.

[11] A. S. Gatschet, Der Yuma-Sprachstamm, 1886 (Zeitschrift für Ethnologie, 3-34, 1871-1882); D. G. Brinton, The American Race, 1891, 1901; J. W. Powell, BAE-R, 7:124, 1891; Kroeber, UC-PAAE, 11:379-396, 1916, McGee, 396-408, on the basis of Hewitt's comparative analysis, 389-344, makes Seri unrelated.

[12] Kliksi or Kilbox and Abor'ak-Paipai in the northern end of the peninsula belong with Diegueño, Cocopa, Walapai, etc., that is are "normal" Yuman and not Cochimí-Yuman in type.

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197 On the other hand, if the hypothesis were true that the Seri
174 reached their historic habitat from across the Gulf, they would have come from territory which in recent times was Cochimí, and their presumably closest relationship would be with these former neighbors, and only indirectly with the other Yumans. Thus the line of affinity would be Seri-Cochimí-main Yuman.

192 It is to test these two alternative hypotheses of Seri origins that
197 the accompanying comparative vocabularies of Seri, Cochimí, Yuma,
[121] and Cocopa have been selected. They are limited because the only material pertinent to the problem at issue is stems represented in all three linguistic groups; and both the Seri and Cochimí data are scant. A number of words of the same meaning differ completely in the three groups—in their surface appearance at any rate—and have therefore been omitted as irrelevant. The residue consists of 33 Seri words which show more or less resemblance to the corresponding Cochimí or Yuman words or to both.

The Seri, Yuma, and Cocopa vocabularies were recorded by myself. Yuma and Cocopa represent distinct branches of Yuman. Cochimí 1 and 2 were recorded or copied respectively by W. M. Gabb in 1867 and by J. R. Bartlett about 1852, and are transcribed from photostat copies of the originals filed in the Bureau of American Ethnology and furnished through the courtesy of its Chief, Mr. Matthew Stirling. Both are entered on Smithsonian printed blanks. The Bartlett vocabulary is designated "from M. Robinia at Guaymas." It may represent a vocabulary taken down by Robinia from a Cochimí and given to Bartlett, or a record made by Bartlett from Sr. Robinia's memory of Cochimí. The words for two and three are identical, even in spelling, with those given by Clavigero. Those for one and man (tepeeg and tanna in Clavigero) are different. The Bartlett vocabulary may thus not go back to a single native source.

The relations of the Cochimí dialects are not clear. To judge from the three Lord's prayers given by Clavigero, languages rather than dialects may have been involved. These prayers begin respectively pennayú nakaenambá, na-happá anuna-hang miamú, cahai apá ambeing miá, and are attributed to latitudes 25°30'-26°, 28°, and 29°-31° in the peninsula. Gabb's entry for "my father" is ka-ai and for "sky" em-hai, which clearly correspond to Clavigero's northern Cochimí cahai (h silent in Spanish, usually a glottal stop) and ambei-ng ("in heaven"). Bartlett's dialect is not so easily identified. His word for father is calemlag, and his sky remains a blank entry. There are a few other identities with Clavigero, besides the numerals mentioned, but they are to words scattered in Clavigero's

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text, without reference to the locality of the dialect from which they are taken.[13] 192 197

Gabb's vocabulary therefore represents a Cochimi dialect or language north of the latitude of Tiburon; Bartlett's, a Cochimi dialect, or possibly mixture of dialects, farther south, somewhat more nearly abreast the Seri, but of undetermined provenience.[14]

Words from both these Cochimi sources are reproduced as they appear in the Bureau manuscripts, except that the accents have been put after instead of on the vowels, and that Gabb's syllabifying hyphens have been omitted where their absence seems irrelevant to his phonetic intent. Gabb states that his *ch* is as in German; his ch is presumably as in Spanish and English. 192 197 104

In the Seri, Yuma, and Cocopa lists, the circumflex denotes long open, the macron long close vowels; small capitals, vowels obscure in quality; superior vowels, glides or whispered vowels. Of consonants, q is velar k; X, velar fricative; x, palatal fricative; c, sh; ɬ, surd l; italicised stops, unvoiced and unaspirated stops (intermediates); ð, interdental sonant fricative; v, *F*, bilabial v and f. The apostrophe denotes the glottal stop; its reverse, the Greek rough breathing sign, an aspiration;[15] a superior period, consonantal length.

In Yuma and Cocopa, the prime accent denotes stress accent;[16] in Seri, high tone. Seri low tone is shown by italicized vowels; middle tone, by lack of indication.

The comparative vocabularies of Seri, Cochimi, Yuman and Cocopa are given on the following page.

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[13] B, sun, yhu, C. ñu; B, summer, mesahu, C. mejñá, June to August, season of pitahaya harvest, also year; B, autumn, amaiñ, appi, C. amaiñ-appi, August to October; B, winter, maaihit, C. majñil, December to February; B, spring, maaihe'a, C. majñea, February to April; B, ñ, magarahagum', C, the same (but: B, ñ, mearracoqui, C, nagnand tajoxq ignimet). Bartlett's vocabulary is general, whereas Clavigero chiefly gives names of foods, plants, animals, and points of ethnographic interest.

[14] Hamburgen in his Spuren der Astrikischen Sprache, 489-472, 496-511, 1868, has assembled and discussed all available Cochimi material then in print, except Clavigero's.

[15] The initial pronominal h- of Seri body-part words might perhaps more properly have been written with a rough breathing, '.

[16] There is a tendency for the stressed syllable in Yuma and Cocopa to be higher in pitch, but the tone seems an incidental accompaniment, and not organic. The same is true of Mariopa and Walapai, and I now believe, contrary to previously expressed opinion, of Mohave and Diegueño.

	Seri	Cochimí 1	Cochimí 2	Yuma	Cocopa
man	ktam	(wanyu-)amiˈ	delma'	l'pa"	iyupa'tc
person, people	e'm·ê	maha	demansu'	pi'lpa"	tcapa'l
hair	hetɹe'l	epok	lagubu'	hê'e"	amxwaɹ
nose	hê"r	vichpyuk	huichil	hixê'	ixê'
eye	he'toᵉX	yupicha	yebaka'	hêêe"	iyu"
ear	he'stɹa	mang-ngi	muguil'	hacma'lyk	icmâ'l
tongue	hipɹ	hapara	abilg	hipa'ly	ampaɹ
tooth	hitâ'st	hastaa'	foea'	hêê"	iya'wi'
beard	hita-môkne	hy-a-mi	jaeta	yâveme"	ialeme'e
bone	hitak	hak	acheso' (Sp?)	nyetc-ack'k	nyengiyâ'k
blood	hfâ"lt	huat	jued, ined	ny-êxwi'l	nyény-exwa'l
house	âqo	ewa	guaka'	ava"	"wa"
sky	amîm'e	embai		am·a'l	"mâ'
moon	hê'câX	konga	kegiimba'k	xely'a"	xeɹ'a"
earth	amt	emat	akug	ama'l	amatc
rock, mountain	ast	echkai	aba'	avi'	awi'
fire	amak	maahra	usi	a'a'u	a'a"
water	aX	tasi	cai	axa"	xa'
sea	Xepé	kachpara	caapai	axâ"si'l'ly	xa'ex'l'ɹ
tree, wood	e"ê, aqe'aXqᵉ	wache, aputᵉ	agimoso', allegcoᵉ	a'l'	l
maize	a'pXᵉtɹ	pechkarai		ta#l'tc	tcâs
tobacco	â'pisqo'pX	mingnga	hui	a'û'v	'ûp
dog	aXc	ethatta	masa'	axa'l	
bird	ce'kâtɹk	icha	kabto'	atciye'r	
good	Xê'pê	tai'p	aha'mi	axo'lk	paxwa'l
large	kâ'kwx	chai	ca'okoo	vata'lk	îxe'l
small	keslɹ	achtawan	canil	ano'cek	alytca'c
yellow	ma'seɹ	zimarai	yembil	aqwe'sk	qwac
one	tacoᵉ	chaqui	dopi'	ace'nt	"cit
two	kôk·ᵉ	kooak	goguo	xavi'k	xawa'k
three	ka'pXᵉ	kabiak	combio'	xamu'k	xamo'k
eat	hîk-o"êt	hu-a'	guaba'	hamâ'-m	'oma"
drink	axe-se'si	desi	calisi'	xa'-si'-m	'osi"

[1] Wanyu is young.
[2] Firewood. The first words mean tree or stick.

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The Seri similarities evident in the vocabulary may be summarised as follows: 192 197

Definitely more similar to Cochimí: man, person, large : 3.
Somewhat more similar to Cochimí: tooth, house, two, three : 4.
Equally similar to Cochimí and Yuman: nose, bone, blood, sky, earth, fire, drink : 7.
Somewhat more similar to Yuman: hair, tongue, water : 3.
Definitely more similar to Yuman: eye, wood, dog : 3.
Perhaps more similar to Cochimí: sea, maize, bird, small, yellow : 5.
Perhaps equally similar: rock, good, one, eat : 4.
Perhaps more similar to Yuman: ear, beard, moon, tobacco : 4.

The result is, in brief, that the available data indicate the Seri language as about equally related to, and differentiated from, normal Yuman and Cochimí. There is proof neither for the hypothesis that Seri and Cochimí branched off in different directions from the main body of Yuman tribes, nor for the one which would branch the Seri off from the Cochimí after these had drifted into the peninsula and acquired a certain specialization there. The relation of the three language groups might be described as an equilateral one—or more exactly as isosceles, with Cochimí and Yuman somewhat the nearest to each other, but Seri equidistant from both. 197

Various hypothetical considerations might be adduced to explain this condition. Seri might be construed as an ancient offshoot from Yuman or proto-Yuman, which later came into contact with the Cochimí off-shoot and was influenced by it. Or, Seri might be conceived of as a Yuman branch that had drifted earliest into the peninsula and then was superseded there by Cochimí as a later offshoot from Yuman. But all such suppositions are equally lacking in positive evidence in their favor, and discussion of them tends to become fine-spun among conjectures. It is wisest to accept the salient fact, namely that available linguistic evidence affords no decisive proof either for or against the hypothesis that the Seri originated in peninsular California, and to leave the problem there in the hope that fuller knowledge of the languages will ultimately solve it. 194 197

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PHYSICAL TYPE

123 I had a calipers and rule with me on Tiburon Island, but no
141 stature rod. The Seri proved not to object to being measured, but in order to avoid the possibility of arousing prejudice, I had left the matter to the last; but for this, my series would have been longer. The results are given in the adjoining table. The somewhat unconventional finger and foot measurements were taken because of the seeming length (more probably only unusual slenderness) of these members, but may give an approximate indication of the bodily height.

114 McGee is undoubtedly in error (p. 136) in estimating the average
141 height of Seri men at 1825 mm., of women between 1727 and 1750. I would deduct 100 mm. from these figures.[17] The Seri impressed me as less tall than the Mohave and Maricopa, who run about 1720 to 1740.[18] Hrdlička[19] found the following for the region: 53 American Pima, 1718; 50 Papago, 1709; 50 Yaqui, 1696; 30 Opata, 1670; 53 Mayo, 1673; 1 Seri, 1707. The Seri look taller than they are on account of their slenderness. This in turn might be due to preponderant animal diet, general malnutrition, or congenital type. Certainly their calves, arms, and wrists are notably thin. The forearm bones in particular look long and exceptionally thin. The muscles are generally firm.

[142]

Head form, and nose index for adults, run close to those of other Sonoran tribes. Thus:

Cephalic index, 12 Seri men, women, and children, 80.4; Hrdlička,[20] 1 Seri, 81.3; 50 Mayo, 80.3; 31 Opata, 79.3; 49 Yaqui, 78.5. The Pima in the United States are longer headed, 78.1. Eleven Yaqui skulls averaged 75.7, equivalent to 77+ in the head by the usual estimate.

Nasal index, Seri, 4 men of 28 and up, 79.3, 4 women of 20 and up, 74.7, mean of total 8 adults, 77; Hrdlička, 1 Seri, 71.9; 53 Mayo, 80.2; 31 Opata, 81.1; 52 Yaqui, 78.9; 50 Papago, 79.8; 53 American Pima, 78.1; ten Kato, 38 Mohave, 82.

The Seri are slightly broader headed and narrower nosed than the others, but the difference does not seem significant, especially in view of the smallness of the Seri series.

141 Physiognomically the Seri are quite different both from the
142 Yaqui and Mayo and the American Pima and Papago; in fact con-

[Text continues on page 38]

[17] Hrdlička, in McGee, 143-147, gives the following on the skeleton of a Seri woman of age 20-24: Stature (computed by Manouvrier method), about 1520 mm.; indicated musculature, ample; cranial index (occipital deformation, probably unintentional), 80.9; nasal index, 49; skull capacity (Broca) 1545, (Flower) 1490 cc.

[18] Mohave, 1716; Yuma, 1722; Maricopa, 1749 (Hrdlička, in Putnam Anniversary Volume, 405-424, 1909); Maricopa, 1722 (ten Kato, Journ. Am. Ethnol. and Archaeol. 3:117-144, 1892).

[19] Putnam volume, as just cited; the Seri, in AA, 6:88, 1904.

[20] AA, 6:86-88, 1904. The nasal index means are given by Hrdlička. Neither means nor individual measurements are given for cephalic index, but the percentage distribution in index ranges of one point allows the calculation of an approximate mean.

SERI MEASUREMENTS—1930

Estim. Age	Name	Length Head	Breadth Head	Length Face	Breadth Face	Length Nose	Breadth Nose	Cephalic Index	Nasal Index	Length[1] Middle Finger	Length[2] Foot
	MALES										
55	Santo Blanco	188	154	129	150	53	44	81.2	82.	74	243
42	Urbano Sanchez	186	150	124	145	56	42	80.6	75.	70	244
32	Chico Romero[3]	189	159	131	156	58	46	84.1	79.3	78	260
25	Luis Huicho	189	149	113	143	50	40	78.8	80.	75	240*
16	Pedro Comito	181	144	112	135	53	37	79.6		68	242
12	José Manuel Romero.. (son of Chico)	176	143	107	124	41	29	81.3		63	235
10	Juan Chavin	185	148	103	134	42	37	80.		57	192
	FEMALES										
43	Maria	182	143	124	141	55	43	78.6	78.2	74	225*
26	Loreta	187	147	126	144	61	46	78.6	75.4	76	236*
22	Maria Antonia	188	159	122	147	55	41	84.6	74.6	76	223*
20	Maria Ramona ..... (dtr. of Santo)	183	140	100	136	48	34	76.5	70.8	73	225
18	Martina Sanchez[4] ...	180	152	110	141	52	39	84.4		72	234*
13	Lupe	178	136	107	126	46	35	76.4		63	203
	Mean of 13 individuals							80.4			
	Mean of 5 adults								77.0		
	Mm. less than head breadth:										
	Av. 6 indiv. act. 25+				4						
	Av. 7 indiv. act. 23—				19						

[1] With calipers, tip to proximal crease at base of finger.
[2] With calipers, round of heel to round of end of big toe (*second too longer, measured instead); foot unweighted, hanging free.
[3] Talbot, broadest, and heaviest in the group.
[4] Recorded as "Martin," but entered as female.

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stitute a distinctive type, as shown by McGee's pictures of them, as well as mine (figs. 1-11). Physiognomic distinctiveness however frequently fails to appear in measurements, at any rate the standard ones, and is often no doubt largely a matter of expression rather than of features. Expression must be determined by habitual feelings and behavior, and these in turn are heavily influenced by culture, which again, through subsistence, is interrelated with geographical environment. It is therefore expectable that a tribe like the Seri would look different from other populations. The one feature of face which impressed me as a Seri anatomical peculiarity was narrowness of lower jaw as compared with breadth in the region of the cheekbones. The reader's verdict from the photographs may or may not coincide with mine.

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COMPARISON AND PLACE OF SERI CULTURE

It may seem premature to attempt to place the Seri culturally with reference to other Southwestern tribes, since only a fraction of their and other Sonoran cultures is on record. But it does seem justifiable at least to forecast an answer to the problem of how far their culture is an exceptional growth or explainable by the generally accepted principles of historical origins and contact and environmental adaptation. [7]

Any present comparison must be made primarily from the Seri outward. Were one to start with a more fully known tribe, too many absences of traits would be ambiguously construable as lacks either in Seri culture or in our knowledge of their culture. Positive Seri traits on the contrary, though less numerous, have definite meaning according as they occur or are known not to exist among other, better-known peoples. List 1 accordingly compiles the occurrence elsewhere of characteristic Seri traits, those peculiar to them, at least within the Southwest, being signalized by an asterisk.

For Lower California, data are about as meager as on the Seri, and, except in the extreme north of the peninsula, can probably no longer be secured. This is specially unfortunate because the environment, subsistence habits, and culture level of the Lower Californians were obviously similar to those of the Seri. To facilitate such comparisons as are possible, I have compiled in List 2 the principal specific known traits of peninsular culture. Those recorded by Baegert seem all to relate to one group, the Waicura in the south—but not the extreme end—of the peninsula, and have been subdivided as they recur or seem not to recur among the Seri. The data preserved by Clavigero and Venegas refer to several groups and are only partially localized as to occurrence. They have therefore been presented separately within the list. It so happens that nearly all of them are not known to be Seri.

List 3 bears indirectly on the Seri through the Pima, chief immediate neighbors of the Seri. The specific ethnological records of the southerly or lower Pima have never been systematically compiled. The upper Pima consist of some Sonoran divisions pretty well missionized and absorbed; of other divisions who have gradually come to be called Papago; and of the Gila River or United States Pima, who were brought under mission influence relatively late and imperfectly. Since nearly a century ago the Papago and Gila Pima have been able partly to revert to their old culture, while their kinsmen in Mexico have continued to lose theirs. It is unfortunate that the one systematic ethnologic account of any Pima group, Russell's monograph, deals with the peripheral Gila division. However, these Gila Pima are obviously similar in some respects to their neighbors, the Colorado River Yuman tribes. List 3 has therefore been drawn up

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17 to distinguish Yuman-Pima resemblances (which may have originated with either group) from Pima traits which are not River Yuman; and, to balance the picture, from River Yuman traits which are not Pima.

Distribution Lists

LIST 1. OCCURRENCE OF KNOWN SERI CULTURE ELEMENTS AMONG OTHER TRIBES

[Abbreviations: LC, SC, CC, Lower or Peninsular, Southern, Central California; RY, Colorado River Yuman tribes—Mohave, Yuma, Cocopa, Maricopa; W-H, Walapai, Havasupai, or both; API, American or Gila Pima; Pue, Pueblo.]

Bodily

Head carrying by women. Yaqui-Mayo, RY, Pue, API.—Abs. SC, LC. Seems corelated with pottery water vessels.

Pole carrying by men. Y-M, Sinaloa. Absent in United States, probably in LC (single-load pole mentioned).

Net carrying-bag. LC, SC.—CC, W-H, baskets; RY, API, mesh frames.

Nose piercing. RY, LC.

Face paint, horizontal across nose under eyes. RY; some W-H. Vertical below eyes; RY, W-H, API.

Food

Little or no boiling of food. LC.

Both sexes cook. LC.

Re-eating cactus seeds. LC, API.

Technology

Unroofed house, windbreak. LC.

Cane balsa. LC; rushes, SC, RY, CC.

Double-bladed paddle. Chumash, CC (San Francisco Bay).

Fish harpoon. LC, CC; SC? Absent, RY.

Two-pronged fish spear. LC? (Clavigero, "horquilla").

Long self-bow. LC, SC, RY, Yaqui-Mayo.—API, Pue, less long.

Reed arrow, foreshafted. LC, SC, (RY), Pue, Yaqui-Mayo, Mex.—Arrowweed, API, RY.

Mediterranean release. SC, Apache.

Pottery. Yaqui-Mayo, API, RY, W-H, Pue. Abs. LC; SC (part), CC (part). Scraped, NW Mexico, W-H, Pue, CC. Paddled, RY, SC, API.

Multiple foundation coiled basketry. SC, CC; prob. LC; Pue, RY rare; API, W-H, three-rod.

Body armor of skin. W-H.

*Long skin shield.

Human hair cord, etc. LC, SC, API. Not RY, W-H, CC, Pue.

Kite-shaped stick cradle. CC. The related hoop type is W-H, ladder type API, RY, SC.

Kinship

Many terms. RY.

Reciprocity. RY, W-H, SC, CC; weaker, API, Pue.

*Numerous (8) sibling terms.

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*Numerous (12) sibling-in-law terms.—SC, CC, W-H, API, Pue, few terms for connections by marriage; Kamia 7, Yuma 6, Mohave 3. (7)

Age distinction of parent's siblings of same sex as parent. RY, W-H, API, SC.

Social

Wife purchase. SC, W-H.—Absent, RY, API, Pue, prob. LC.

Patrilocal residence. SC, RY, W-H, API.—Matrilocal, Pue, Navaho.

Parent-in-law avoidance, LC, CC, Navaho, Apache.—Absent, SC, RY, W-H, API, Pue.

Sibling-in-law avoidance. LC (?).

*Respect shown elder siblings in avoiding sexual references.

Death

Burial. API, Pue, some LC.—Cremation. SC, RY, W-H, some LC.

All property destroyed. SC, RY, W-H, API.—Not all, Pue.

Name of dead taboo. Same as last.

Games

Hidden-ball game. Pue, API, W-H, RY. Abs. SC, CC.
4 tubes. Pue, API. Abs. RY.
Guess for third tube. Pue, API (?).
Score 10-6-0-4. Pue, API.
Tubes marked end-middle-both-ends (or 2 ends). API, (Pue, on dice).
Tubes named old man, etc. API.

Dice—three in number. Pue, Navaho, W-H (recent?). Abs. API, SC, CC.
Cane splints. Pue.
*Score 4-1-1-4.
*Tally on ground, no counters.
*Erase (subtract) in tallying.

Foot-ball race. SC, API, Pue. Abs. RY, W-H.
Ball. SC, API. Stick instead of ball, Pue.
Four runners to side. Pue. One or indefinite, SC, API.

Shinny, with *hoop. API, double ball. Abs. RY.
Played by women. CC, API. Men's game, RY.

Constellations

Mountain-sheep, Orion's belt. W-H, R-Y, SC (Diguello).
Antelope, Betelgeuse.
Arrow, Sword hilt.
Dog, Sirius. Walapai, Sirius or Bellatrix is coyote.

Cactus-fruit gathering crook, Ursa Major. W-H.

Pole carrier, Scorpio (?). W-H.

Buzzard, Altair (?). SC.

*Quail.

*Jackrabbit.

Woman with children, Pleiades. All Yuman, Hacha, meaning usually unknown; Luis., girls; Walapai, coyote's or hat's daughters.

Not moving, Polaris. W-H, API.

Calendar

Year begins with cactus harvest. LC, API.

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171 Year of 13 moons. CC, W-H, API, some Pue; Enki, Diegueño, 6 repeated. Absent, LC.
Part of these named from constellations. W-H.
Less than 13 periods (?)—LC, 6; SC, Luiseño, 8, Juaneño, 13.

Ritual

Girls' puberty fast. SC, RY, W-H, perhaps LC.—API, seclusion, no fast; Pue, lacking.
Girl's puberty dance. SC, API, CC, perhaps LC.—Absent, RY, W-H, Pue.
Menstruating women forbidden deer meat. SC, CC, W-H.
Victory dance, scalp on pole. SC, CC, RY, W-H, Pue. Abs. API, perhaps LC.
By both sexes. CC, RY, W-H, Pue, API.
In circle. CC, W-H, API, Pue.
*Falling of scalp fatal to dancers.
Gourd rattle. RY, (W-H), API, Pue.
Cocoon rattle on knee. Yaqui-Mayo, API. On handle, CC. Neither, SC, RY, Pue.
Dancing on plank over pit, singly. CC (foot-drum).
*Holding pole.
Ritual number four. RY, W-H, API, Pue; prob. LC; SC, variable.
*Soul is blood.
Rain-making with amulet. CC, API.

Shamanism

Spirit quest. W-H. Absent, RY, API, Pue.
Ventriloquism in caves. LC, (W-H). Absent, SC, CC, RY, API, Pue.
Spirit enters shaman (possession without utterance). W-H. Absent, RY, API, Pue, CC.
Shaman lays on hands, breathes. RY.
Shaman sucks or blows through tube or hands. LC.

Myths

Death from coyote and insect. CC.
Coyote's child first victim. CC.
Fire from fly. SC, RY, API.
Sun's daughter. W-H.
Gambling for body. SC, RY, W-H, API.

LIST 2. LOWER CALIFORNIAN TRAITS OCCURRING AND LACKING AMONG THE SERI

A. Waicura traits which are also Seri.

Cane balsa: used in open sea.
Curved wind-break, unroofed, as dwelling.
Nose pierced (allegedly).
Turtleshell receptacle.
Little division of labor: cooking by both sexes.
Pitahaya not preserved.
Pitahaya seeds re-eaten.

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Fishing with harpoon only; no nets or hooks.
Singeing and roasting on open fire; no boiling of food.
Mother-in-law taboo.
Shamans use caverns and ventriloquism.
Shamans suck or blow.
No special shamanistic treatment for rattlesnake bite.
Girls' puberty ceremony.
Women's child-bed restrictions ("ceremonies").
Readiness to laughter and merriment.
Inclination to pilfer, lie, slovenliness, and filth.

B. Waicuru-Seri traits found also over a larger area.

Men wear hair long.
Net-like carrying-bag of agave fiber.
Bow long and nearly straight.
Forewhafted cane (reed) arrow.
Earth-oven for agave.
Hair cut in mourning.
Long distance travel by running.

C. Waicuru traits not occurring or not reported among the modern Seri.

Wood raft.
Buckskin sandal.
Complete absence of roofed dwellings.
Absence of pottery; gut or bladder for transport of water.
Turtle shell only cradle.
Women's front and back apron.
Men carry on heads, women with tumpline.
Forehead protected by high piece of buckskin.
Men cross, women stretch legs in sitting (Seri variable).
Litter for transport of sick.
Ear piercing and enlarging.
Absence of fermented drink.
Marriage to wife's sisters.
Shamans of both sexes.
Shamans wear human hair mantle or wig.
Shamans blow or suck through tube (Seri, hands).
Shamans extract pain object.
Bleeding and ligaturing for sickness.
Boys' puberty ceremony.

D. Lower California traits (other than Waicuru), mostly Cochimí or unlocalized, not occurring or not reported among the Seri (Olaviguro, Venegas)

Cabin-like arbors (*ramparados*) as house.
Pericú: cape or mantle (*capotillo*) in addition to woman's front and back apron.
Cochimí: front apron of reed, back of buckskin.

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North of Cochimí: cape of otter, rabbit, or jackrabbit fur (*piel*); woven rabbitskin blanket?

Buckskin sandal.

Guaicura of Loreto: head net.

No fermented drink.

Winnowing and parching trough (*bateo*) of water-tight reeds (basketry) or palm wood (carved).

Round (coiled basketry) dish (*plato* or *cocudillo*, Cochimí *adda*), for food, drinking, and woman's hat.

Agave fiber net hung from forehead or pole to carry children (except Pericú).

Pericú: cradle a deeper trough (*bateo*).

Agave fiber net (from forehead?) for carrying (fruit)

Deer head decoy.

Curved throwing stick for rabbits.

Rabbit nets.

Fish nets.

Balsa of 3, 5, or 7 light logs, middle longest; used to 4-5 leagues from shore.

Bone awl.

Guaicura: marriage ceremony is exchange of a trough and carrying net.

Other tribes: dance at marriage.

Monogamy; only Pericú polygynous.

Husband has absolute authority over wife.

Levirate.

Ears (and noses) of boys pierced.

Pericú: creator called shaman.

Guaicura: creator of food (pitahaya and fish) comes from north, on east coast teaches the making of shamans' mantles, returns north.

Cochimí north of 30°: impersonator of creator comes from hills, with men eats food prepared in arbor by women. Similarly, return of dead from north impersonated, women retire, men eat food.

Shaman's wig or cape of human hair, from head to feet.

Pericú: add head-dress of deer tails to same.

Cochimí: add two belts of deer hoofs to same.

"Conjuring" with boards (*tablitas*) bearing designs.

Curing by sucking through joint of cane.

Burial or cremation (as convenient? varying according to locality?)

Mourning commemoration, rude figure of dead made of branches on pole, lauded by shaman.

No moon-sequence calendar, but six named periods in year.

LIST 3. CULTURAL RESEMBLANCES AND DIFFERENCES OF GILA PIMA AND RIVER YUMAN TRIBES

A. Gila Pima and River Yuman common traits

Wooden mortar, with long wooden or stone pestle, for mesquite.

Absence of basketry seed-beater.

Type of planter and ("weaving sword" shape) weed-cutter (Russell's "digging-stick" and "hoe").

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Flood irrigation by one Pima village and Kwadhak (canal irrigation by other villages).
Wheat growing very early of importance.
Arrowweed bins or storage baskets.
Arrows of arrowweed, without foreshaft or head.
Few stone arrowheads.
"Potato-masher" type of war club.
Paddle for pottery making.
Cradle of wooden "ladder" type, with wicker basketry hood.
Metate flat, not grooved, with long mano; fairly shaped.
Head ring of willow bark for carrying.
Stone axes not made (prehistoric ones used by Pima for metate dressing).
House earth-covered, resting on 4 forked posts (Yuman, side posts too and rafters; Pima, bent willow frame).
Sweat-house lacking.
Man's breech-clout, woman's apron kilt, of inner bark of willow.
Men's hair long, unbraided, in "skeins" or gummed pencils.
Women's hair loose, cut in front.
Hair treated with plaster of mud and mesquite gum.
Face paint mostly arranged vertically below eyes.
Nose piercing of brave men.
Low aesthetic sense or interest, lack of finish in manufactures.
Flageolet (flute)—Pima from Maricopa.
Coiled basket used as drum—Pima from Maricopa.
Ring-and-pin game of gourd or pumpkin rings, with spiral scoring design.
Girl's puberty rite, 4 days' seclusion (Pima also dance, Mohave not).
Dance formation: men and women in two lines, back and forth (Pima, puberty dance).
No wife purchase.
Patrilineal and patrilocal descent.
Patrilineal sibs (Pima, 4 or 5, under moieties; Yumans, many); these have totemic reference but not names; designated by common names used by members (for fathers by Pima, for women by Yumans).
Slaves (Pima, children; Yumans, young women).
Chief's liberality.
Secondary names of men often refer to female genital organs.
Rigid taboo of names of dead.
Salt forbidden as ritual restriction.
Absence of altars, of specific dance regalia, and of masks (except Pima Navitco, imported?).
Shamans do not seek dream or trance.
Shamans brush and spray in curing.
Shamans killed for failure.
Myth episodes or tendencies:
Finding middle of earth.
Four tribes at first.
Rivalry of two first great gods.
Coyote sent on errand, fly makes fire, cremation (Pima actually bury!),

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Coyote leaps over two short men, steals heart of corpse.
Lengthy pseudo-historical tales of group wars.

B. Gila Pima traits not found among River Yumans

Canal irrigation.
Fermented drink of giant-cactus fruit or agave (northwestern limit of alcohol).
Pottery patterns after firing, of mesquite gum, slightly refired.
Coiled basketry; materials Typha, willow, Martynia.
Twilled basketry with lids.
Oval sifter of parallel rods.
Storage baskets, boiled, of willow and wheat straw.
Kiaho carrying frame: 4 sticks, hoop, half-hitch agave-fiber net (Mohave, 2 looped sticks, wound with cord).
Cotton, loom weaving, blankets, patterned belts.
Outer frame of house of bent poles.
Flat-roofed shade earth-covered.
Foot-ball race (Yuman, present but uncharacteristic, favorite game hoop-and-pole).
Women's double-ball shinny (Yuman single-ball by men).
"Relay race" by teams (not clear: Russell, pp. 173-4).
Dice with scoring circuit; giant-cactus wood, marked middle-end-both-none.
Hidden ball game of cañuto type, 4 tubes marked middle-end-both-none, called old man, old woman, score apparently 10, 6, 4, 0 (not clear, Russell, p. 177), 100 grains to game, stick set up at winning each game (Yuman, simple hiding in sand).
Sororate.
Moieties.
Gibs not exogamous (?).
Gib designations refer to words used for father.
Purification rite for year-old children.
Naming ceremony with godparents (Spanish?).
Youths trained four days in tribal legends.
Tear salutation.
Musical rasp.
Dance in circle, arms over neighbors' shoulders.
"Name song" begging.
Girls' puberty dance.
Girl at puberty, menstruating woman, work basketry.
Victory dance apparently without scalp pole.
Navitco rain dance (from south?).
Shamans extract disease object.
Shamans trained by being "shot" by older shamans.
Women shamans cure only abdominal disease of men and women.
Curing by songs of animal diagnosed as causing disease.
Curing by masked Navitco.
Stone tablets.

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Omina, feather-stick offerings.
Calendar sticks (year tallies).
Most of origin myth except as mentioned as similar to River Yuman.

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C. River Yuman traits not found among Gila Pima

House completely roofed with rafters.
Large fishing scoop of sticks.
Guessing game without tubes.
Kohot chiefs social entertainers and managers.
Same name borne by all women of one sib.
War as sport, with challenges, champions' contests, close-in mass fighting.
Cremation.
Mourning accompanied by singing, begins before death.
Mourning commemoration, with images and mimic battle.
Intra-tribal group disputes settled by regulated pushing match and stick fight contests.
Ceremonial induction of berdache into status.
Women may change sex socially.
Girl at puberty covered with hot sand.
Datura eaten by individuals (Pima, one song reference, Russell, p. 299).
Soul loss cause of disease.
Individual dreaming as basis of most religious functioning.
Dreaming largely of myth period, world origin, one sacred mountain, dying god, culture hero.
Many myth episodes and trends.
Song cycles: Tumanpa, Vinimulya, Nyohaiva, Raven, Salt, Deer, Turtle, Chuhuscha, Cane, Goose, etc.
Choice of cycles sung according to individual dreamer or learner, rather than function or occasion.
Musical style (Herzog, Journ. Am. Folk-Lore, 41, 1928).

Interpretation of the Comparative Data

Seri culture resemblances would expectably run along one or more of the following lines:

1. With the adjacent tribes of Sonora, of which, in default of direct knowledge, the American or Gila Pima may be taken as the nearest though imperfect representative. However, a considerable gap undoubtedly existed between these tribes and the Seri through the possession by the former of developed agriculture and cloth weaving. This gap would at once be apparent in a comparison made from the point of view of the Pima, Opata, or Yaqui. It need not exist from the Seri angle if Seri culture were essentially a reduced or impoverished copy of general Sonoran culture.

2. With the non-agricultural desert tribes of peninsular California. In this case, strongly preponderant similarity would be con-

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[71] clusive proof of a common origin or active communications across the Gulf of California.

3. With the Yuman peoples other than those of the peninsula. Among these the Colorado river tribes are agricultural and otherwise specialized. Of those who farm sporadically or not at all, the Yavapai, Walapai, and Havasupai[1] of Arizona are geographically nearest and in a similar though less extreme environment.

4. Of more distant groups, those of southern California come into consideration because of their semi-desert environment, lack of agriculture, contacts with the Yumans, and through including, in the Diegueño, a Yuman people. The central Californians and Pueblos should give a measure of basic Seri relationships respectively toward the Pacific coast and the classical "Southwest" of recent archaeology and ethnology. On the Apache, unfortunately, there are inadequate data.

The entries in list 1 summarize as follows:

	Agreements	*Disagreements*	*Surplus of Agreements*
Walapai-Havasupai	29	7	22
Gila Pima	31	12	19
Southern California	27	12	15
Lower California	18	3	15
Central California	18	5	13
Colorado River Yumans	23	16	7
Yaqui-Mayo	7	0	7
Pueblo	18	13	5
Peculiar to Seri, (*), 10			

Rather surprising is the high total of resemblances with the Gila Pima. It suggests that with systematic data available, the Papago and Sonora river Pima would show a culture fairly close to that of the Seri, except for agriculture, weaving, etc. Presumably the Opata and Yaqui-Mayo would be only a little farther removed, though in their case river valley habitats would add differences to those due to greater distance.

The peninsular California relations are somewhat puzzling. The greater number of listed Seri resemblances with southern as compared with lower California is obviously due to fuller data. The ratio of agreements to disagreements is probably more significant: about five to one for the peninsula, but two to one for southern California. The resemblance would be still greater if traits directly reflecting the environment had been included: such as cactus fruit diet, or use of turtle shell receptacles. Certain more detailed considerations arising from list 2 are discussed below.

[1] The Havasupai farm on a considerable scale, but appear to be essentially a Walapai off-shoot who have been able to add agriculture. For six months in the year their life is practically indistinguishable from that of the Walapai.

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Very notable is the high resemblance to the Yumans of Arizona, especially in contrast with those of the Colorado. Not only are there more agreements with the Walapai than with the Yuma and Mohave, but the excess of resemblances over differences is about three times as great. The divergence between the two Yuman groups would be still wider if the comparison had been two-way instead of one-way, on account of the river tribes possessing whole systems of cults, clans, etc., of which the Walapai, Havasupai, and presumably Yavapai are almost as free as the Seri. 171

The central Californians are geographically so remote that the only significant figure in their case seems to be the fair number of positive resemblances.

The Pueblo low net excess of agreements is surely significant. Had the comparison been the other way around, it would have yielded an overwhelming excess of disagreements.

As to Sinaloa, the rather scant and uncompiled data indicate its culture, from about the Sinaloa river southward, as probably in the main a dilution of that of central Mexico, just as its prevailing speech is generally accepted as having been a dialect of "Mexican" or Nahua. However, occurrences like that of the *palanca* or carrying pole in Sinaloa and among the Seri are evidences of connection in that direction also.

List 2 is a check on the Lower California part of 1 by reversing the comparison. On its face, it diminishes the Seri-Baja California resemblances. Evidently the Gulf formed a serious barrier to communications, and if the Seri came out of the peninsula, it was a long time ago. Puzzling is the fact that the Waicura, three to four degrees of latitude south of the Seri, show an excess of agreements; the Cochimí, directly opposite, an excess of traits not reported for the Seri. Different authorship of the Waicura and Cochimí records can hardly explain all of this difference. Quite surprising is the northern Cochimí account of a woman-deceiving impersonation both of the creator and of ghosts, which inevitably suggests a secret society of the Patwin-Pomo-Yuki type of north central California.[*] One would certainly not expect such a cult organization among the scattered, chronically hungry Lower Californians.

One tentative clue suggests itself. It is conceivable that the Seri came to Sonora from the peninsula when the Waicura, or a culture of their eighteenth century type, were still situated about latitude 29° or 28°, being subsequently dispossessed by Cochimí, or by cultural stimuli from the north, which resulted in richer local growths than have been taken for granted for the area. I am not ready to take 174

[*] The human hair wigs or mantles which covered the whole person, like the central Californian feather mantle or rope of the moki, etc., are another parallel, but are reported for the peninsula generally.

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104 sides on this hypothesis. Intensive analysis of the data may strengthen or eliminate it.

171 List 3 bears on the Seri indirectly through segregating Gila Pima culture into those constituents which are also River Yuman (including the Maricopa) and those which are non-Yuman and therefore likely to be old or generic Pima. It must be remembered that the Gila outpost division of the Pima nation were in immediate contact and friendly alliance with the Maricopa, whose dialect and customs indicate them as a river Yuman tribe rather recently extruded from the lower Colorado valley. The Maricopa are first mentioned by Kino and his associates, just before 1700, as on the Gila. It seems unlikely that they left the Colorado more than about a hundred years earlier. However, this would give three centuries of close association of the two tribes, before which there may have existed a period of less specific communications up and down the Gila.

The array of Pima-Yuman traits in section A of list 3 is rather impressive. Several have a somewhat wider distribution, but even such traits are usually centered, or most intensely developed, in the Gila-Colorado tract. It is probable that the Pima and Yumans contributed about equally to what they share. Traits like agriculture, irrigation, and pottery, which extend thousands of miles southward but stop with or just beyond the Yumans, have certainly moved from the Gila to the Colorado. On the other hand, in some cases the Pima admit adoption of Maricopa elements. The myth-episode of the making of fire by the fly and coyote's theft of the heart must have originated among the cremating Yumans or southern Californians and been adopted with something of a wrench by the interring Pima.

Sections B and C of the list give the traits not shared by the two groups. The Pima list is about twice as long as the Yuman one. This appears to be due only in part to the fullness of Russell's monograph. Pima culture seems quantitatively the richer, River Yuman the more specialized. It will be noted that the Yuman traits include very few in material culture or technology, interest in which, as in ritual, seems to have been suppressed by the Yuma and Mohave in proportion as they became absorbed in their peculiar war customs and their individualistic dream religion. Again, as Herzog has pointed out, River Yuman music has developed an unusually well marked style of its own.[39]

The bearing on the Seri is this. Half-a-dozen non-Yuman Gila traits (list 3B) recur among the Seri—more if the several features of the dice and hiding games are counted separately; none of the non-Pima River Yuman traits (3C) are Seri. But this does not mean that the Seri are closer to the Pima than to the Yumans generally, because the desert Yumans, as represented by the Walapai and Hava-

[39] JAFL. 41:188-251, 1928.

2: Kroeber E-5 (1930) 1931 NU31 Seri NU31

supai, possess as many Seri traits (list 1) as do the Gila Pima. In other words, Seri culture is definitely related both to Pima and to the generalized, basal, and presumably original Yuman culture—which is mainly situated in a similar environment. On this foundation the River Yumans then reared their own culture through the adoption of agriculture, the reduction of technology, and special growths in spiritual culture. This River Yuman culture however did not appreciably influence the Seri, because its localized specializations remained impracticable, unacceptable, or unknown to them.

Here ends the comparative discussion of Seri culture. Tentative as the findings are, I trust that the examination has at least helped to shed light on problems of the area to which the Seri belong.

2: Kroeber E-5 (1930)1931 NU31 Seri NU31

SUMMARY AND CONCLUSIONS

121 Knowledge of the Seri is still in its infancy. McGee's actual
114 observations are excellent but slender in range. He has interwoven them with conjectures, some of which are erroneous and others unproved and doubtful. Intensive study of the Seri will be difficult, chiefly for physical and practical reasons, but, to judge from such explicit data as are in hand, should prove them to be a tribe unusually interesting indeed, yet fundamentally similar to others in the same region. So many of their known traits are shared with one or another of these tribes, that it is practically precluded that complete investigation will leave the Seri as a unique people or even as one set widely apart, except in their historical fortunes.

13 The most distinctive thing about the Seri is their environment.
182 This is extremely arid and lacking in water supply, but not desert in the ordinary, untechnical sense. Botanists describe it as a succulent vegetation desert. It is fairly well stocked with food inland and rich in food along shore. This territory is able to support a fair sized population, but scatters it and keeps it from settling down. The land is also inhospitable and difficult to strangers who are not ready to adopt the Seri mode of life. This fact has helped preserve Seri ethnic integrity and culture to an unusual degree. A considerable fraction of original Serian territory is wholly unoccupied by civilization today, a full three centuries after its frontier was settled. The Indian neighbors of the Seri, all being farmers in fertile valleys, had no more incentive or ability than Caucasians to penetrate Seri territory sustainedly.

171 Across the Gulf, the peninsula of California presents a very
174 similar environment, and was inhabited by tribes of very similar subsistence and residential habits, culture level, and temperament. But the Baja Californians differed from the Seri in being so situated, with reference to the rest of the world, that the length of the peninsula cut them off, except in the northern portion, from nearly all outside relations. Each group in the peninsula thus had contacts and stimuli only from others of similar culture. The Seri, on the contrary, having long been surrounded on the landward side by peoples of higher cultural level, were able to exploit this difference, in part by adopting cultural traits from their neighbors; and perhaps still more largely by preying upon them economically; while their habitat afforded them a refuge from destructive reprisals. Such may have been the condition in pre-Columbian days. At any rate it has been such since the coming of the Spaniards, and has made the "history" of the Seri different from that of the Baja Californians.

174 Three islands, Tiburon, San Esteban, and San Lorenzo, form stepping stones from Seri mainland to the peninsula. The water gaps between them are navigable to native craft and have been navigated

2: Kroeber E-5 (1930) 1931 NU31 Seri NU31

by them at times. This raises the question of whether the Seri may not have reached their habitat from the peninsula, or possibly the reverse. The solution of this problem depends on an analysis of full data on physical type, speech, and culture content, and only a partly conclusive answer, discussed below, can as yet be given. In general behavior and temperament, Seri and peninsular Californians seem to have been strikingly alike; but this fact can not in itself be construed as evidence of common origin, because the similar psychology may be largely determined by similar residence and subsistence habits resting in turn on almost parallel environment; much as pastoral nomads or mariners in whatever part of the world, and with or without historical connections, are likely to exhibit analogous mental attitudes in contrast with rural or urban populations.

In any event, it is wholly unproved that the Seri possess a native endowment which is more animal-like, more dominated by instinctive impulses and less capable of cultural development, than other peoples'. In fact the improbability of such an assumption is indicated by their possession of culture traits, like certain games and their kinship system, which they either share with neighboring tribes or have developed into rather high specialization. The meagernesses of their culture are therefore evidently due to factors in their particular history or geography rather than to congenital deficiencies or abnormalities. This does not mean that it would be easy to convert the Seri to the mode of life of Pima or Mexican. Habits of irresponsibility and unsettlement once established, even through part of childhood only, are notoriously difficult to alter. Witness the Gypsies. However, such practical habit difficulties are of course no evidence as to quality of endowment.

The modern Seri are the amalgamated remnants of some three or four of a half dozen closely related Serian groups formerly recognized. The preponderant one in the fusion of these groups is likely to have been that which held Tiburon and the fronting mainland, on account of better preservation of their numbers and habits in the relatively inaccessible island refuge.

Seri physique is distinctive in physiognomy, expression, and habitus, as would be expectable in a people sharply set off from its neighbors in practises and attitudes. The measurements available show no very marked differences of gross anatomy from neighboring tribes, either in stature, head shape, or nose proportion. The head may be somewhat rounder than among Pima and Yaqui; the difference in body seems more to be one of greater slenderness than of greater height. The Seri abilities to endure hunger and fatigue and to run great distances are faculties possessed by nearly all tribes of the southwest United States and northwest Mexico.

The Seri language is intrinsically and markedly tonal, more given to consonontal accumulations than the neighboring Uto-Aztecan and

2: Kroeber E-5 (1930)1931 NU31 Seri NU31

197 Yuman dialects, and possessed of some relatively rare sounds like *f*. It bears an indubitable relation to Yuman, as was assumed forty years ago, but the relationship is remote enough to indicate that the Seri have had a history apart from that of the Yuman tribes for a long time, estimable at a thousand years at the least, to judge by the rate of change of most languages. The Yuman idioms seem to fall into two primary groups, Yuman in the narrower sense, in Arizona, southern upper California, and northern lower California; and Cochimí in central lower California. On Cochimí, which is generally reputed extinct, data are very scant. If this group of dialects showed markedly greater resemblance to Seri than do the other Yuman languages, a derivation of the Seri from the Cochimí across the Gulf of California (or the reverse, if Cochimí proved more different than Seri from Yuman) would be an almost inescapable inference. Unfortunately, the available data are too scant to allow of a definite decision. On their face, they seem to make out Cochimí and the narrower Yuman group as about equally distinct from Seri.

171 Comparative analysis of the known specific facts of Seri culture, while impeded by inadequate information on many tribes, especially in Mexico, shows positive relations in all directions, but outstandingly with three peoples: the Pima, the Arizona desert Yumans, and the Lower Californians.

The Pima in question are those of the Gila river, the remotest of their nation from the Seri, agricultural, and demonstrably subject to some cultural affection by the Yuman tribes of the lower Colorado. Quite expectably therefore they lack many elements of Seri culture besides those which they share; not to mention a large stock of their traits not possessed by the Seri. Had we satisfactorily specific data on more southerly Pima divisions, such as those of the Sonora river, who were immediate neighbors of the Seri, there can thus be little doubt that an even larger proportion of the Seri cultural inventory would be found among them. More or less the same would probably hold for the Yaqui. These adjacent cultures would seem to have contained most of Seri culture plus increments such as agriculture, cloth weaving, and others.

The Arizona desert Yuman tribes, the Yavapai, Walapai, Havasupai, live farther from the Seri, in fact beyond even the Gila Pima. It is therefore significant that they show almost as many cultural agreements with the Seri, and fewer disagreements. They are perforce an almost non-farming population, except in a few spots. It is clear that they and the Seri have jointly preserved many features of an old, non-agricultural, desert-adapted culture. The Yuman tribes of the lower Colorado are much more different, though their geographical distance from the Seri is no greater. They possess definitely fewer and lack more Seri traits. This is not only because they

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farm, but because they have secondarily specialized their culture away from the old Seri-Walapai substratum. 171

The Baja Californians must be reckoned as having participated in the same basal, low-level, desert culture, though of course, like every other people, with certain variants and developments of their own. That we can name fewer Seri traits in their culture than in that of the preceding groups, is probably due to the less store of our knowledge of them. More significant of relationship is the smallness of the number of Seri traits which they are known to lack. It is entirely possible that if there existed adequate information for both sides of the Gulf, Seri and Cochimí similarity would prove to be the closest of all. But at present this possibility cannot be either conclusively proved or disproved.

Seri similarities with southern and even central California are fairly numerous, and can be attributed partly to the common non-agricultural subsistence, which would tend to induce the adoption or retention of similar cultural traits. On the other hand, the basic farming life of the Opata, Mayo, and north Sinaloan peoples must have operated at many points in the opposite direction in spite of their geographical nearness. Pueblo culture is so highly specialized that its mass would expectably show little kinship to Seri, and such is the trend of the available comparative data.

The Seri thus relate culturally to other peoples much as might be anticipated from their geographical position and subsistence opportunities. The Seri problem consequently has to be removed from the category of those which hold out a hope or illusion of being particularly significant for the solution of basic questions or broad hypotheses. It is essentially a problem of specific local ethnography, with wider significances revealable only by impartial comparative studies; but of special interest because of the relatively well-preserved status of parts of old Seri culture and the human appeal of three centuries of outlaw history. The thorough study of this culture will involve much grinding physical hardship and possibly some danger. It is to be hoped that when the work is undertaken, it will not be in a spirit of personal adventure, with emphasis on the external difficulties to be overcome, but with a serious desire and competence to secure facts and understanding. 121

ABBREVIATIONS USED

AA—American Anthropologist. 113
AMNH-AP—American Museum of Natural History, Anthropological Papers. 128
BAE-B—Bureau of American Ethnology, Bulletin.
BAE-R—Bureau of American Ethnology, Reports.
JAFL—Journal of American Folk-Lore.
UC-PAAE—University of California, Publications in American Archaeology and Ethnology.

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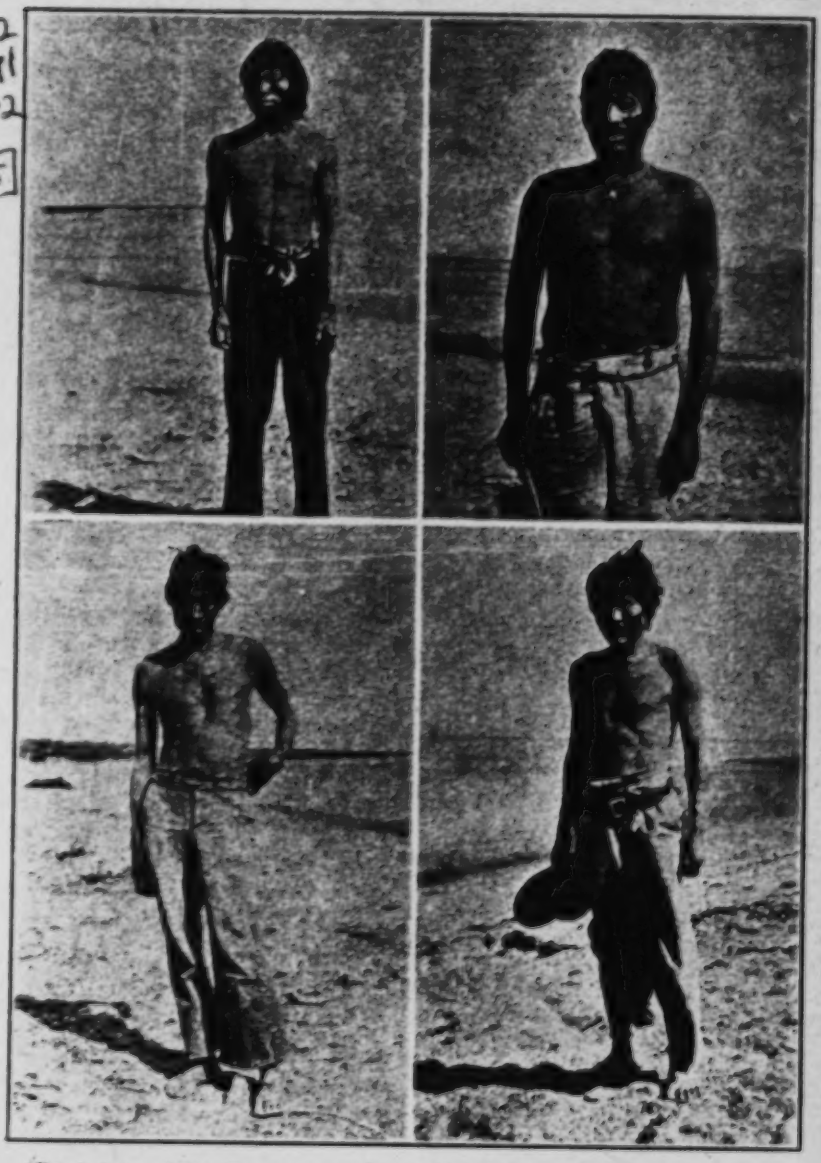

FIG. 1 (upper left). *Young man with long hair.*

FIG. 2 (upper right). *Chico Romero, official Seri chief and principal informant. The largest individual seen.*

FIG. 3 (lower left). *Elderly man of the apare Seri type.*

FIG. 4 (lower right). *Native policeman for the Mexican government.*

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FIG. 5 (upper left). *Maria, wife of Chico, with their baby.*

FIG. 6 (upper right). *Heavier Seri type on beach of Tiburon Island, a bay of El Infiernillo in background.*

FIG. 7 (lower left). *Man, youth, and boy.*

FIG. 8 (lower right). *On Punta San Miguel, mainland, mangroves in background.*

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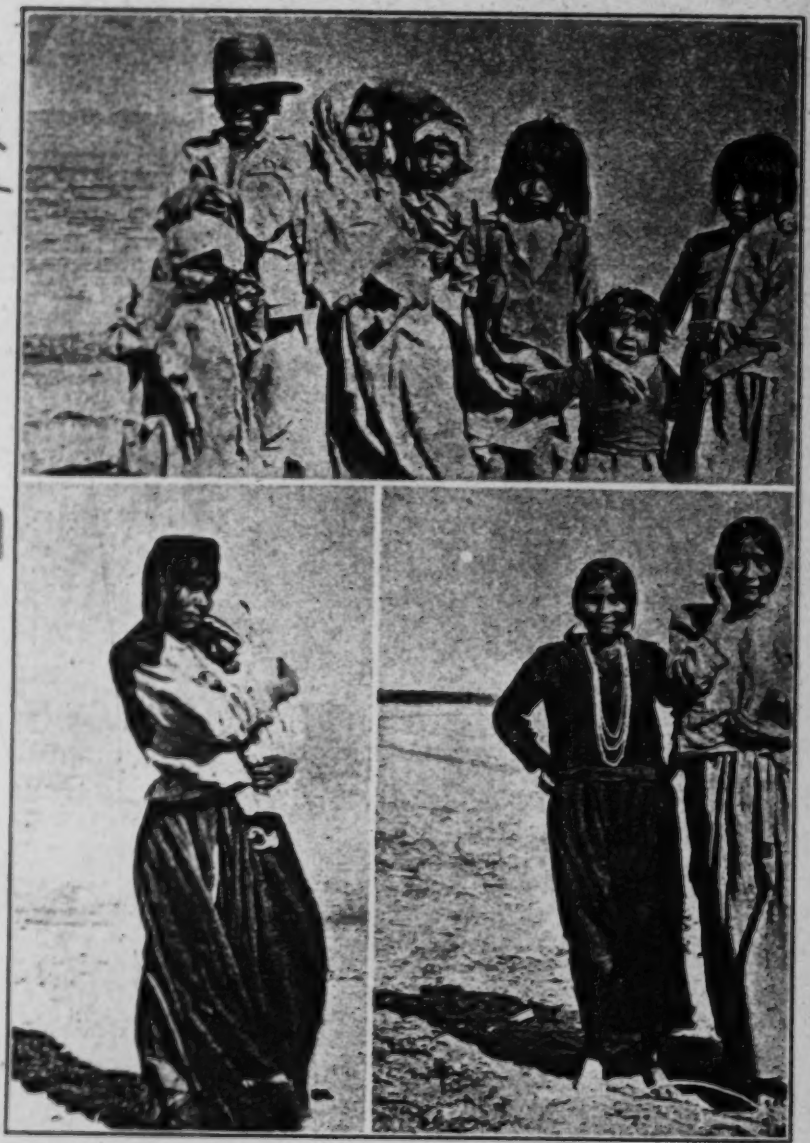

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FIG. 9 (upper). *Seri children showing variety of expressions at camera experience.*
FIG. 10 (lower left). *Young woman with sickly baby.*
FIG. 11 (lower right). *Two girls, the shorter unmarried.*

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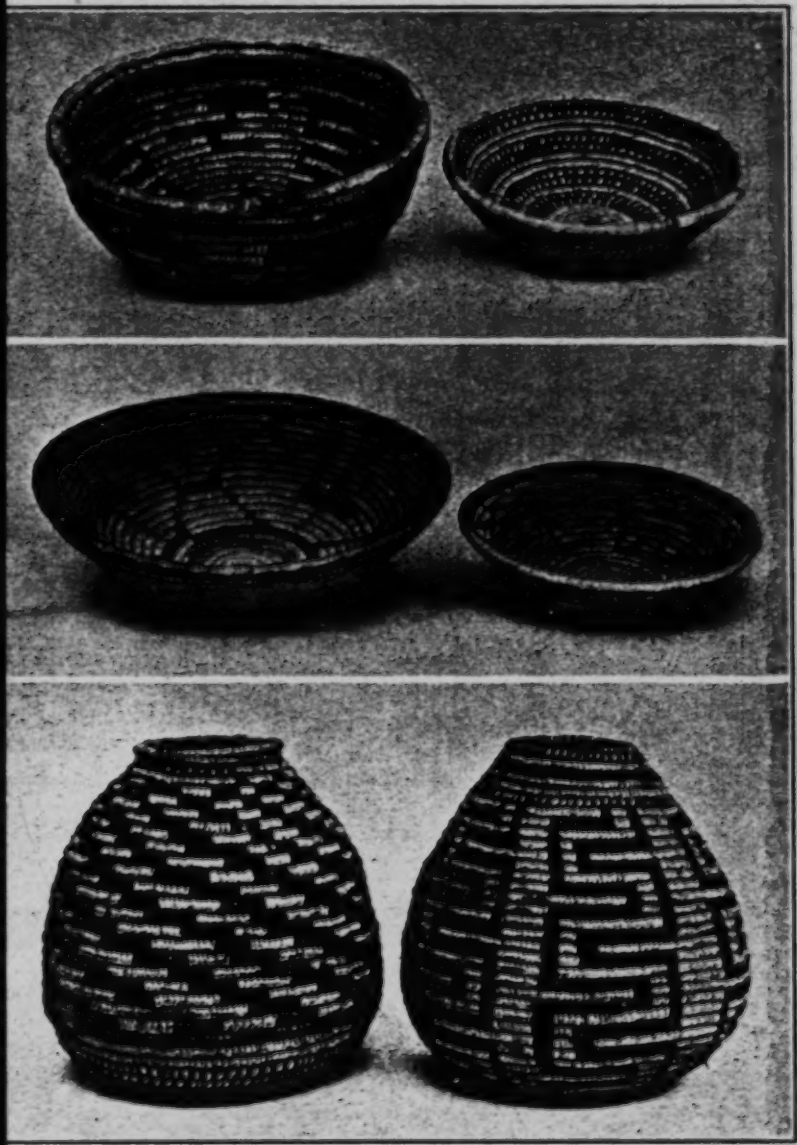

FIG. 12. *Seri Baskets in Museum of the American Indian, Heye Foundation.*
Nos. 15—4279, 4285, 4295, 4288, 4247, 4249.

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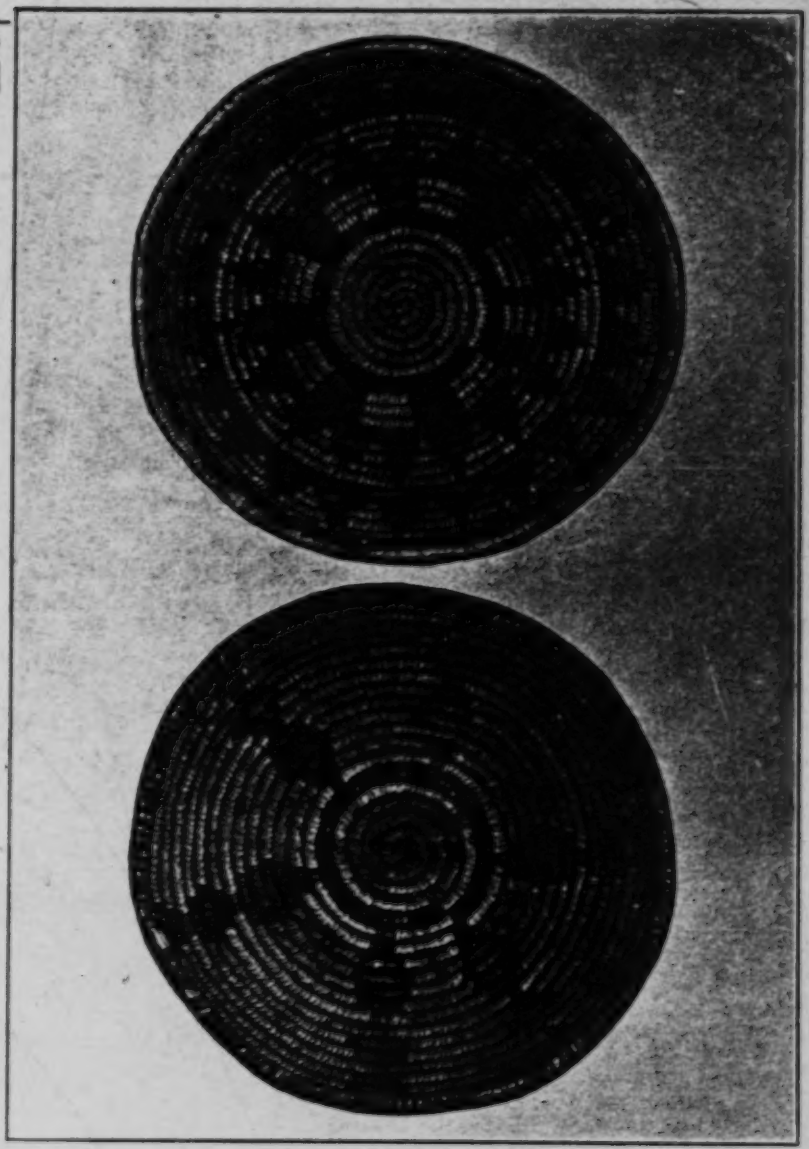

FIG. 13. *Seri Baskets in University of California Museum of Anthropology.*

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116 TEXTS--a full set of pages from each processed source, arranged in page order, as a means of establishing the context for any particular slip. Sets are arranged in the numerical order of the sources. See also:

Literary texts 599

3: Davis & Dawson E-5 (1922-1940)1945 NU31 Seri NU31

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3:Davis & Dawson E-5 (1922-1940) 1945
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THE SAVAGE SERIS OF SONORA—I

By EDWARD H. DAVIS AND E. YALE DAWSON

WHEN the Seri Indians pass into extinction, "good riddance" will be voiced by many a Mexican, for centuries of warfare against the invaders of their inhospitable lands have made this small tribe notorious among the aborigines of Mexico. Many people will be ignorant of their passing, but a few of us even now watch with some regret the losing struggle of their diminishing numbers against the spreading civilization that tramples out the wild things and destroys the natural features of the earth. With the Seri goes a link with a past, primeval age of nature in America, for these are a strange and primitive people, a people whose lives and habits assign them to the initial place in the scale of cultural development among American Indians, and hence to the lowest recognized phase of savagery.

In 1540 one of Coronado's officers was the first to capture and bring into the army encampment in Sonora a Seri warrior, an Indian so large and tall that his stature created a sensation among the Spanish soldiery. It was three and a half centuries, however, before the Seri tribe was finally subjugated by an invading force, and then only after the slaughter of nine-tenths of its population.

In modern times, though the encroachment of settlements has forced the Seris into domestic contact with the Mexican people, few outsiders have ever come to know them. Until the fishing village of Kino was settled some ten years ago, there were only two men they counted real friends among aliens. The senior author was one of those. Today the Seri not only must tolerate the encroachment of the Mexican, but must suffer from imported diseases which are gradually destroying him. The present life of the Seri is but an echo of its past, but in this modern world the habits of the survivors of America's most primitive people are none the less astonishing. Their gradual acquisition of modern implements and materials has gone along with centuries of warfare and bloodshed, and their submission to law entails a long story of violence. Before considering these more recent phases of their history, however, let

[p. 193(A)]

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THE SAVAGE SERIS OF SONORA—I

By EDWARD H. DAVIS AND E. YALE DAWSON

000 us first acquaint ourselves with the life and habits of the Seri before the Spaniard trod upon his thorny land.

131 His homeland speaks first of isolation. Tiburon Island, in the Gulf of California, and the adjacent coast of Sonora are pro-

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[291]
[283]

FIG. 1. CHICO ROMERO, SERI CHIEF WEARING A KILT OF PELICAN SKINS WHICH USED TO BE THEIR ONLY MATERIAL FOR GARMENTS. NOTE THE CORD MADE OF HUMAN HAIR CARRIED IN THE HAND.

tected on one side by stormy seas and on the other by even more forbidding deserts. The natural isolation of this habitat set its people apart from all other human beings, and the two or three thousand Seris, wandering between their desert island and the mountain-

[p.193(B)]

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FIG. 2. THE PELICAN SKIN ROBE
A TYPICAL WOMAN'S GARMENT BEFORE THE ADVENT OF THE COTTON CLOTH AND BAGS THAT REPLACED IT.

131 bounded coastal plain, lived a life so independent and so oblivious of the outside world that they might well have been on another planet.

182 The hard, inhospitable natural environ-
105 ment afforded by Seriland long ago moulded the characteristics of its people and their whole mode of life. The distance between reliable food sources in the sea and supplies of fresh water created a pedestrian habit whereby they acquired a remarkable fleetness of foot and tremendous physical endurance against thirst and weariness on the trail. The monotonous sea-food diet induced a wandering, roving life in search of game and vegetal produce to supplement their meager rations. They became a homeless, burden-bearing people, wandering in family

[p. 194(A)]

105 groups or clans between the waterholes and
182 their temporary dwellings by the sea, chasing for game or searching for cactus fruits, sleeping wherever weariness overtook them, or where the successful end of a hunt left them gorged and drowsy. Under a climate where frost is almost unknown they needed no protection except from the sun, and built no other dwellings than their brush-heap jacals (Fig. 3). Living in animal-like savagery, without commerce or industry, the Seri's every bodily character and function were directed toward the provision, day by day, of the food and water necessary for life.

312 Potable water, a commodity so abundant in most regions as to divert conscious attention from its paramount role in physiologic function and in industrial economy, attained in Seriland the primary place of importance because of its rarity. In that arid land it is scanty to the extreme. Two thirds of the meager supply is confined to a single rivulet in the interior of Tiburon Island (Fig. 4). Because of this and other widely separated aguajes within the island whose shores provided the greater part of their food resources, the Seris early found this island the most tolerable habitat in their desolate realm.

225 The most conspicuous single article in the
[262] dietary of the Seri, and undoubtedly that which first determined the location of his habitat, is the green sea turtle which is abundant throughout the Gulf of California, but particularly so in the narrow channel between Tiburon Island and the mainland. There the shallow lagoons abound with its marine grass food plant, and the sandy beaches provide optimum conditions for egg laying and hatching. In consequence of this natural provision for abundant food, easily obtained, perhaps half the aggregate life of the Seri tribe came to be spent within easy reach of the feeding and breeding grounds of the turtle.

[361] The most extensive and permanent of all Seri communities was established on the channel side of the island, just back of the lagoon in which the turtles feed and whose sands provided eggs and the succulent flesh
225 of newly-hatched turtle young. When fe-
501 males could not be captured at the laying grounds, the big chelonians were speared

[p. 194(B)]

[text continues on p 195(B)]

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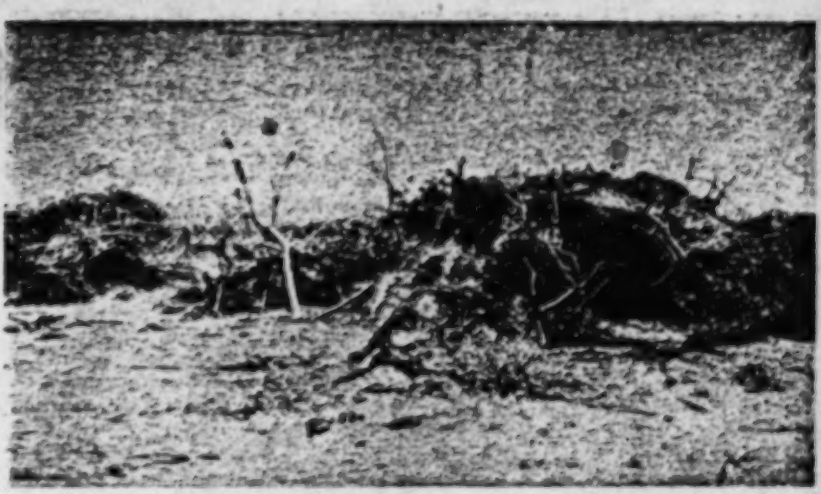

FIG. 3. THE SERI HOME—A BOWER OF BRUSH

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FIG. 4. AN AGUAJE ON TIBURON ISLAND
THE PRINCIPAL WATER SUPPLY AND SOURCE OF THE CARRIZO REED USED IN CONSTRUCTING THE BALSA.

[p. 195]

3:Davis & Dawson E-5 (1922-1940) 1945
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225
501 from graceful balsas made of carrizo canes bound together with mesquite fiber cords (Fig. 5). On these buoyant craft, too, they navigated freely the narrow but stormy

[p. 195(B)]

3:Davis & Dawson E-5 (1922-1940) 1945
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225 channel separating their island habitations
501 from those on the mainland.

In pre-Columbian times the turtle fisheries
614 of the channel must have supported several

[p. 195(c)]

614 hundred Seris at a time. They lived in maternal groups or clans in which the elder females were of great prominence in the management of everyday affairs. When, in 342 the wanderings of a family a new camp was [462] decided upon, the elder matron usually erected the jacal alone, without the aid of men or boys, gathering the long poles of the ocotillo or the branches of desert trees and fashioning them into an arched framework over which a covering of brush, and often later of turtle shells, served to give protection from the desert sun. After the house- 361 hold was prepared, she took her place within 592 easy reach of the meager and squalid family possessions, and around this nucleus other matrons and their children gathered in the course of a day or two. It was usually three or four days, and sometimes a week, before the brothers and husbands came wandering in from their roving search for food to take their places at the new camp site.

482 From the turtle fishing camps on the chan- 312 nel, the nearest fresh water was at a distance

[p. 196(A)]

3:Davis & Dawson I-5 (1922-1940) 1945
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312 of four miles by a rough and stony trail. In
482 other parts of the island, habitations were occupied as distant as 15 miles from the nearest watering places. Under these conditions the Seris became essentially and primarily water carriers, and all their other industries were subordinated to this function. They learned to economize on water carrying by gulping incredible quantities on their occasional visits to the aguajes, yet, more than half of the water required in their vital economy was consumed after transportation over distances of four to twelve miles. The
[271]
312 women were ordinarily the water bearers and
482 for this important business manufactured a
323 distinctive vessel for the purpose. From fine adobe clay they hollowed, expanded and shaped by manipulation with the fingers and without the aid of implements of any sort, a large olla of remarkably light weight in proportion to its capacity. Its mouth was made no larger than the hand that shaped it, thus to prevent spilling on the trail. From
482 yucca fiber a cylindrical cushion was also

[p. 196(B)]

[text continues on p. 197(B)]

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FIG. 5. THE NATIVE BALSA MADE OF CARRIZO REEDS

PHOTOGRAPHED IN 1922, THIS WAS THE LAST BALSA MADE BY THE SERIS. IT IS ONE OF THE SMALLER GUYMAS BALSAS FROM WHICH TURTLES WERE SPEARED WITH THE LOCO-GRAFTED IMPLEMENT PICTURED HERE.

[p. 196(c)]

3: Davis & Dawson E-5 (1922-1940)1945 NU31 Seri NU31

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FIG. 4. DOMESTIC SCENE IN A SERI VILLAGE

[p. 197(A)]

482 fashioned to fit the head (Fig. 7) and to aid in balancing the forty- to fifty-pound water-filled olla as it was carried over the rough and hilly trails from aguaje to jacal. (It is not certain whether the use of the shoulder pole, or palanca, was a part of original Seri culture, but in more recent times two water vessels were frequently carried, hung from either end of the notched pole.)

396 [462] While the tasks of supplying water and of manufacturing the vessels used in its transport were generally delegated to the women and children of the household, the building of the balsa was an undertaking that required the co-operation of the entire group. The carrizo canes were first gathered by the women and boys from the patches growing about the few permanent fresh waters of Seriland (Fig. 4). The leaves and tassels of the canes were removed by hand and the canes tied in bundles for carrying to the shore. There the men proceeded to lay, overlap, interlace and bind the canes into a larger and larger cylindrical bundle, tapering at

[p. 197(B)]

3:Davis & Dawson E-5 (1922-1940) 1945
NU31 Seri NU31

396 the extremities. Throughout the process the
cord used for lashing was laboriously made
[283] by hand and mouth by the women who ob-
tained the fibrous raw material from mes-
[462] quite tree roots, from the yucca or the
maguay. Three of the finished bundles were
lashed together to form a watercraft some
thirty feet in length and of four-foot beam.
These large balsas were buoyant enough to
carry several members of a family across El
Infiernillo channel. One-man balsas were
also made (Fig. 5) principally for use in
turtle fishing.

225 Except during the egg-laying season
411 turtles had to be sought from the balsa. The
Seris lacked tool sense in the extreme, but
their clumsy brains had devised a harpoon
for use against the turtle. The hard, pene-
trating point was commonly made of native
ironwood, but may also have been the sharp-
ened tooth of a sea lion or the shin bone of
a deer. It was fitted and firmly cemented
with mesquite gum to a short, hardwood
foreshaft whose rounded end fitted into the

[p. 197(C)]
[Text continues on p. 198(B)]

482

FIG. 7. CARRYING WATER FROM A DESERT AGUAJE

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FIG. 8. STRETCHING AND DRYING THE PELICAN SKIN BOBE

[p. 198(A)]

S:Davis & Dawson E-5 (1922-1940) 1945
NU31 Seri NU31

225
[411] ten- to twelve-foot main shaft. A stout cord was knotted to the foreshaft and carried along the main shaft to the hand of the user. When, from the quietly floating balsa, a

[p. 198(B)]

h:Davis & Dawson E-5 (1925-1940) 1945
NU31 Seri NU31

225 turtle was seen lying in the water, the fisherman stealthily brought his spear-point over the carapace of the unsuspecting animal and then, with a sharp thrust, drove the point

[p. 198(c)]

3:Davis & Dawson E-5 (1922-1940) 1945
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225 through the shell. The foreshaft was jerked out at the first movement of the animal which was held by the fisherman's line until tired, after which it was either driven ashore or lifted onto the balsa.

No sooner was the quarry landed than the soft undershell was crushed and broken loose with a cobblestone "hupf," and then torn off
264 by the tribespeople with the impetuous fury of blood-crazed carnivorous beasts. The entrails and soft, bloody gore were first consumed, followed, depending upon the proximity of the last meal, by the firmer flesh, all but the infants of the household pounding, tearing and chewing their raw, grisly
[252] chunks, stopping to singe or half roast larger pieces only if near satiety. If immediate consumption of the prey was not accomplished, the remnants were carried to the rancheria and there lifted to the top of the jacal to soften in the sun. The reeking carapace was often left indefinitely beside the

[197]

Photo by J. B. Harrison

FIG. 9. PITAHAYA AND SAGUESO CACTI PROVIDE A RICH HARVEST OF FRUITS IN SUMMER.

[p. 199(A)]

3:Davis & Dawson E-6 (1922-1940) 1945
NU31 Seri NU31

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FIG. 10. SERI BELLE
WEARING A PAINTED DESIGN SUCH AS FORMERLY WAS INDICATIVE OF THE BLOOD LINE OF A GIVEN CLAN.

264 hut, the rotting flesh and cartilage of its noisome interior to be explored and mouthed by the toddling children or gnawed by the cringing coyote-curs attached to the rancheria.

223 At certain seasons or when deemed propitious by the elders of the family, a pelican harvest was planned. Isla Tasne, some fifteen miles from Tiburon Island, is the haunt and breeding ground of the pelican that served not only as a valuable food supply for the Seris, but also as the chief source of apparel. At such seasons temporary rancherias were set up on the shores of Bahia Kino, and when conditions were favorable, or when hunger prompted them, the balsas [302] would be launched in the evening toward Isla Tasne, the women of the party lying prone on the cane bundles and propelling the craft by paddling with their hands or with large hatchet clam shells. Reaching the island after dark, the balsas were left in charge of the women while the men and older boys, armed with clubs, crept up over the slippery, guano-covered rocks to rush on [264] the roosting fowls and slaughter them. The

[p. 179(B)]

3:Davis & Deeson E-5 (1925-1949) 1945
MU31 Sari MU31

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FIG. 11. PAINTING THE FACE
USING A RED PIGMENT OBTAINED FROM THE TUBERS.

223 lice-infested carcasses were then gathered
264 and brought to a central place among the stinking rocks where a gluttonous feast was held in the dark, the long ahungered tribesmen gorging themselves with the soft entrails and succulent parts, and carousing in the carnage until overcome by slumber.

281 The day following the slaughter, the
294 matrons collected the carcasses with least damaged plumage and carefully removed the skins, which were then gnawed and sucked clean of flesh and grease and dried in the sun (Fig. 8). From two or more of these skins they made a kilt or robe (Figs. 1, 2), the principal apparel, not so much for protection from cold as from the scratch and prick of the abounding spines and thorns of Seriland. The skins were sewed with sinew and often held in place on the body by a
283 cord made of human hair (Fig. 1). The
302 culture of their long, luxuriant hair, indeed, was an important matter. They brushed their hair regularly with a brush fashioned

[p.200(A)]

283 from coarse, wiry grass stems, and saved all
302 the brushings to be used in the making of strong threads and cords.

The fleetness of foot and remarkable physi-
147 cal endurance of these people attest to the
481 rigorous and difficult life in Seriland where the ability of an individual to survive a season of want depended upon the reserve energy of his own body by which he could carry himself long distances in search of food and yet have strength to return to a waterhole, left miles behind. The slender, sinewy limbs and capacious chests of the Seris, in whom no trace of obesity has ever been observed, show clearly the result of untold centuries of selection of the strong by the severity of the environment, where water,
[312] too heavy for transport, too difficult of storage, is yet always within reach of an organism strong enough to journey ten, twenty, or even fifty miles in search of it.

Perhaps the most severe physical exercise
224 practiced by the Seris was the chase of animal game, particularly since it was often resorted to only after a period of weakening hunger which prompted the all-out effort to obtain adequate food supply. Days of wandering over the deserts in search of vegetable food were sometimes unrewarded, and although rabbits were to be had for the chase, they were too small to be of much consequence in the feeding of a family. The deer were fairly plentiful and provided excellently for a lasting feast.

The deer hunt was conducted by several tribesmen without weapons. When an animal was sighted it was followed by one and circled by others of the party, chased until frantic and exhausted, whereupon one of the men rushed upon it, threw it to the ground and caved in its skull with a stone.

The most avidly sought prey in the Seri chase were the helpless young and heavily pregnant does which were pursued and rent to fragments with a horrible fury, particularly with intent upon the succulent tidbits afforded by the fetal flesh.

222 A time of ease and plenty came each summer, for usually in late May or June the cactus plants with which Seriland abounds begin to mature their fruits. In the foothills of Sierra Seri on the mainland, great

222 forests of giant cacti (Fig. 9) provide during this season an unlimited supply of "pitahayas" toward which the tribespeople customarily moved to accomplish the annual harvest. The fruits were readily knocked down by means of long poles and, when ripe, the spines were easily brushed off, leaving a luscious pulp as big as a fig. During the height of the season all the clans withdrew from the coast and gave their undivided attention to the collection and consumption of the cactus fruit, gorging tremendous quantities for weeks until waning supply and cloying appetite drove them back to the more severe hunt for turtle and pelican.

252 262 514 Perhaps the only germ of thriftiness in the Seris is shown by a peculiar custom with respect to the pitahayas. The fruits, eaten in such enormous quantity, were imperfectly digested, the hard-coated seeds particularly passing through the body unchanged. Using [415] large seashells, the feces containing these [251] seeds were collected and preserved with some care. Thus, when the harvest of fresh fruits was over, there remained a hoard of these dry, nutritious discharges which were ground on the stone abst, winnowed in a shallow basket and made into a meal to be eaten, either dry, as a watery atole, or mixed with turtle grease to form a thick paste.

614 Although the Seri's omnipresent problems of food-getting and of personal subsistence have been of particular interest, the lost social customs of the tribe deserve a moment's attention. Before the death of all [161] but a few of the 2,000–3,000 Seris at the hands of invading Spaniard and Mexican, the tribe consisted of a number of conspicuous maternal clans, each of which was presided over by a zoic tutelary such as the Pelican, the Turtle, the Rattlesnake, or the Badger. The totemic symbols denoting the 302 various beast-gods and incidentally indicat- 386 ing the blood-carriers of clans dedicated to 614 them, consisted of elaborate designs painted upon the face (Fig. 10). In accord with their savagery in which the social organization was based on blood kinship reckoned in the female line, under ordinary circumstances, the faces only of the females were painted. Colored minerals pounded to powder afforded the pigments for the paint-

[p. 201(A)]

3:Davis & Dawson E-5 (1922-1940) 1945
NU31 Seri NU31

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[487]
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FIG. 12. SERI MOTHER AND BABE

SERI MOTHERS COMMONLY HAVE TOO MUCH MILK AND FREQUENTLY RELIEVE THEMSELVES BY SUCKLING AN ORPHANED PUPPY OR SOMETIMES EVEN A BABY PIG.

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ing, and were carried in cane tubes. The paints were carefully prepared, applied, and preserved, and, as indispensable feminine accompaniments even on the longest journeys, were among the most highly prized of the people's possessions. The importance of the face-painting custom, established in the old tribal life, remained strong even as the slaughter of the warring tribe progressed

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[p. 201(B)]

3:Davis & Dawson E-5 (1922-1940) 1945
NU31 Seri NU31

302 614 and the maternal clans disappeared. Today, with the entire tribe numbering no more than 150 persons, the meaning of the painted symbols has become vague and meaningless with respect to the nonexistent clans, yet the custom persists, now largely for personal adornment, and even a male tribesman may sometimes be seen squatting before little dishes of pigments, peering into a ten cent store mirror as he carefully applies the colors (Fig. 11).

649 Had it not been for the Seris' intolerance of aliens they might today constitute a numerous and thriving people, or at least have been absorbed by the polyglot Mexican popu-

[p. 202 (A)]

648 lation, but as the Ishmaelites of America they brought misery and death upon themselves by an unwavering belligerence toward all outsiders. The history of their centuries of bitter contest against the forces of law in Sonora is a bloody one, but whatever has been the extent of their wanton looting and murder, there is one crime of which they have long been unjustly accused. Sonora is
[266] full of legend and tale of "los canibales," but no convincing evidence has ever come to light proving that the Seris ever practiced cannibalism. Of course, it could be argued that the only ones who might have proved it were killed and eaten.

[p. 202(B)]

[pp. 203-260 have no material relating to the Seri.]

2:Davis & Dawson F-5 (1932-1940) 1945
MU31 Seri MU31

THE SAVAGE SERIS OF SONORA—II*

By EDWARD H. DAVIS AND E. YALE DAWSON

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After the Seris' first contact with the invading white man through Coronado's soldiers in 1540, they lived for nearly another century outside the influence of the civilization that was eventually to engulf them. By the early 17th century, however, pearls were discovered in the Gulf and the sailing ships that began to ply the waters introduced the first great innovation into Seri culture. The Indians found on their beaches boards from these ships and, most important, flotsam hoop-iron and nails. One of the great difficulties in constructing arrows and harpoons had been the fashioning of the point. The stone, tooth, or bone points were difficult to make and more difficult to attach securely to the shaft. The more easily worked iron proved a boon to their hunting and fishing, and later made a more satisfactory weapon of war than they had hitherto possessed.

000 The beginning of Seri wars was the year

* Continued from page 202 of preceding issue.

[p. 261(A)]

2:Davis & Dawson E-5 (1922-1940) 1945
NU31 Seri NU31

THE SAVAGE SERIS OF SONORA—II*

By EDWARD H. DAVIS AND E. YALE DAWSON

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The beginning of Seri wars was the year 1700 during which they first conducted nocturnal raids on some of the most outlying of the Jesuit mission pueblos of Sonora, killing inhabitants with their arrows and stealing the cattle and horses. Year after year, the gradual expansion of Sonoran settlements and their nearer approach to the borders of the Seri homeland aggravated the conditions of conflict. The vigorous proselyting expeditions of the Jesuit missionaries brought about the capture of some hundred women, children, cripples and viellards of the Seris, and concurrently the death of many defending warriors. These expeditions further kindled the hatred of the free Seri against the white man, while the few score "converts" gathered about the several missions gained a shocking character for sloth, filth, thievery, treachery, obstinacy and drunkenness. Raids upon the settlements continued and between 1757 and 1763 4,000 mules, mares and horses were known to have been stolen and eaten.

[p. 261(B)] [text continues on p. 262(A)]

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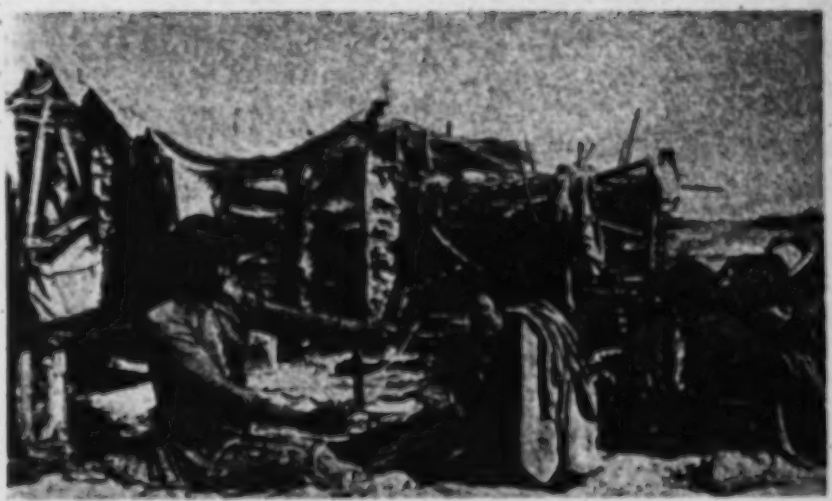

FIG. 13. PREPARING BASKETRY MATERIAL.
THE SPLINTS ARE MADE BY HAND AND MOUTH STRIPPING OF THE BRANCHES OF TOBOSE AND PALO BLANCO.

[p.261(c)]

3:Davis & Dawson F-5 (1927-1940) 1945
MUSI Seri MUSI

[291]

FIG. 14. JUAN TOMAS AND NEPHEW
OLD SERI CHIEF BEFORE CHICO ROMERO AND VETERAN OF MANY WARS, IN 1936 AT THE AGE OF 94 YEARS.

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The further extension of settlements necessitated the establishment of military posts from which troops were sent out, first by one, then another governor of Sonora, to destroy all Seris they might find and to discourage their wanton looting and killing. If a strong force was sent out, it was frequently ambushed and many soldiers were left on the field, transfixed by arrows. Many small forces left never to be heard from again. In 1780 an army of national troops met the Seris in several bloody battles in their Cerro Prieto, and claimed to have exterminated the tribe. Yet the Indians retained sufficient vitality to continue their sanguinary raids

[p. 262 (A)]

648 726 on the settlements of Sonora. Many expeditions, fitted out at great expense, were sent against them, but in that barren land, destitute of water, the military parties suffered greatly in their campaigns, and succeeded little in their efforts to conquer the wary natives.

177 648 By 1850 probably every Seri between infancy and decrepitude had seen the proprietor and other inhabitants of the rancho of Don Pascual Encinas at Costa Rica where the Seris were abnormally tolerated and even encouraged to make themselves useful and unobjectionable. They yielded to indolent scavengering more than ever before; they substituted cast-off rags and barter-bought cotton cloth for their pelican robes and other primitive garments. They ate cooked food when it fell their way; half heartedly they adopted metal cutting implements and sought or stole nails and hoop-iron for arrow [191] points. Some acquired a smattering of Spanish and many came to sport Spanish names. Never, however, did more than one or two Seris come to live in a house, nor even to encompass the idea of making adobe. They had not learned to ride horses nor to burden them, but only to use them for immediate slaughter and consumption. They were acquainted with firearms, but it was not until years later that they learned to use them. In and about Rancho Costa Rica the Seris and the Mexicans lived for a time in mutual tolerance, certain depredations being allowed the Indians just as were the rodents of the rancheria.

648 721 When, in 1855, Don Pascual Encinas experienced the loss of unusually large numbers of stock from Seri raids, he was aroused into announcing that a Seri head would be taken for each head of stock stolen. For a while the Indians seemed to acquiesce, but within a few days a group of Seri women "milled" a band of horses, caught and threw one so that its neck was broken, whereupon [252] they immediately sucked its blood, gorged on its intestines, and buried its quarters to "ripen" according to their custom. The vaqueros of the settlement were instructed to shoot the first Seri seen on the llano. Within two days the tribe was on the warpath and the war raged for a decade.

[p.262(B)]

3:Davis & Dawson I-5 (1923-1940) 1945
MUSI Sari MUSI

648 726 [161] The Encinas war reduced the tribe to some 350 people, and temporarily discouraged their bloodthirsty raids. By 1893, however, new killings were being reported. In one instance the Seri Chief, Juan Tomas (Fig. 14), watched as the men of a large rancho left for a rodeo and then, worming up through the brush, led his warriors into the buildings and with clubs and arrows massacred every woman and child within. Two Yaqui women who had managed to escape into the brush watched as the warriors seized [727] the infants by their feet and dashed their brains out against a large rock near the corral.

In 1904 a number of wilder Seri, led by several Yaquis, went on the warpath and killed every soul in a Papago village. The war with the Papagos that ensued aroused the Governor of Sonora into action. Nearly 250 armed men were sent out to kill or capture the Yaqui leaders and to administer a severe lesson to the Seris. The desert water holes were all placed under guard until the Seri chief, Juan Tomas, was forced to surrender for his thirsting tribesmen. Peace was conditional on the delivery of the Yaqui leaders with their hands tied together. Two days later a couple of gaunt, wild-looking Seri women, clothed in rags and with painted faces, walked into the camp to keep the conditions of the peace as they had understood them. They carried a palanca between them from which were suspended bundles of severed hands of the Yaquis who had been clubbed to death as they slept.

114 648 Twenty years after the delivery of the Yaqui hands (1922) the senior author, under arrangement with the Museum of the American Indian in New York, carried out his first expedition into the heart of Seriland. Although still intolerant of aliens and at times dangerous if aggravated, their depredations had been reduced to the occasional killing of a stray cow. The Seris had come to live a comparatively peaceful life under the supervision of Roberto Thomson of Hermosillo. It was through his efforts that the Seris were saved from complete extermination by the vaqueros of Sonora, and after having treated them for many years as a friend and adviser, he had made it feasible for a visitor to enter

[p.263(A)]

S.Davis & Thomson E-5 (1922-1940) 1945
NUSI Seri NUSI

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their midst and to live among them without undue fear of losing his life. Through the kindness of Señor Thomson the senior author succeeded in making himself a friend of the Seri and, enlarging upon this friendship through long periods of living and traveling among them, has acquired an intimate knowledge of these strange people.

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In 1923 the fishing industry of the Gulf of California was not yet well developed, and it was to be ten years before the village of Kino should appear on the maps of the Sonora coast. The Seris were still isolated in their desert domain and their numbers, then about

[161]

250, were maintaining themselves out of reach of the infectious diseases of the white man. The clan life had disappeared, and the people lived as a single tribe with their old chief, Juan Tomas, 90 years old at that time

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[482]
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FIG. 15. MOVING DAY AMONG THE SERIS
THESE BURDENS, BORNE FOR MANY MILES OVER ROCKS, THROUGH CACTUS AND DEEP SAND, CONTAIN UTENSILS FOR HOUSEKEEPING WHEREVER THE SERIS MAY STOP.

[p.263(B)]

3:Davis & Dawson E-5 (1923-1940) 1945
MU31 Sect MU31

105 178 and a veteran of nearly a century of warfare against the soldiers of Sonora. The turtle remained their most important source of food, and the pitahaya harvest the most enjoyed. The crafts of their old culture were largely gone, however. Hoop-iron had come in for many uses: harpoon points, scrapers, and knives. The bow and arrow had been almost entirely supplanted by rifles of which the tribe possessed more than thirty. The handmade olla was fast disappearing in favor of the five-gallon tin can, and water carrying, now much done by the males, was [482] accomplished by means of a palanca, borne on the heavily calloused shoulder, to which a can was suspended from each end.

It seemed that the balsa building art was 178 encountered barely as it passed into extinction, for the last balsa known to have been 396 made by the Seris was found in use near [126] Kino, in 1922. This rare prize was immediately bargained for and in exchange it was agreed that the tribesman should have lumber to build a boat large enough for all the people of his family. A few months later the finished craft, caulked with a "pitch" made

[p. 264 (A)]

178 of sea lion oil and powdered cactus skeleton,
396 was launched. It was the largest craft they had ever possessed and came to be called the "battleship," for its size.

114 After having established firm friendship with the tribe in 1922, it was possible two
221 years later to carry out an extensive plan to learn the habits of the Seris by living among them, sharing their comradeship along with their privations. At this time they still had no homes that could even be called semi-permanent. Moving here and there in response to fluctuations of their precarious food supply, household things were not accumulated, and life continued to be reduced to its very simplest elements and absolute necessities. Baskets made of fiber from the torote tree, some tin cooking and water ves-
[415] sels (the handmade olla was seldom any longer made), some patched and filthy rags which served as blankets to the fortunate few, constituted the family possessions (Fig. 15). Starved, bony family dogs were abun-
231 dant, as always, every Indian having one or two (Fig. 16). Each day they could be seen gnawing on some old fish head long since

[p. 264 (B)]
[Text continues on p. 265 (N)]

3: Davis & Dawson E-5 (1922-1940)1945 NU31 Seri NU31

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FIG. 16. FAMILY DOGS ARE OFTEN MORE NUMEROUS THAN THE PEOPLE
HERE A GROUP OF SEVEN SERIS IN THE VILLAGE NEAR KINO KEEPS TEN OR MORE OF THE MEXICAN CANINES.

[p. 264(C)]

3:Davis & Dawson 2-6 (1923-1944) 1945
MNH Seri MNH

[342]
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[732]

FIG. 17. SERI BLIND MAN
BEING LED BY A BOY. BOTH THE CRUDE SHELTER OF POLES AND BRUSH SERVING AS AN ART DWELLING.

231 destitute of nourishment, tough and strong as rawhide; but hope springs eternal in an Indian dog's stomach, and again and again he will search out and mouth the same old pelican bone or fish head, discouraged never. The dogs, beside keeping the camp clean, lick all the cooking utensils when they are not tended, and also are allowed to lick clean the infants after they have performed their natural defecations. A Seri girl was seen placing [312] a small can of water for a dog to drink from, afterward drinking some of the remainder herself and then pouring the rest back into the family five-gallon can.

732 Although the conditions of existence for
734 the Seris had from time immemorial been too precarious to permit of anyone living who was unable by physical disability to hunt or fish to get his meat, there were two or three men, blind or nearly so, whose wives got an uncertain living for them by the hardest struggle (Fig. 17). If a Seri, however, became ill of a disease which the tribe feared, he was often taken into the desert and left with a little food and water, either to get well and return or to perish.

[P. 265(A)]

3:Devb & Desmm I-5 (1922-1940) 1945
MUH Seri MUH

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[161]

Sea turtle was still the staple meat, and with better boats and improved tools and tackle borrowed from the Mexicans, the living was becoming considerably less harsh along the shores. They then had nine boats for some two hundred people. One good boat could secure a living for five families, and they had well improved this minimum standard of living.

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The origin of the use of fire among the Seri's is unknown, but they have their own story of it. One day Chico Romero, present chief of the Seris (Fig. 19), made a fire drill out of a piece of dry driftwood and showed how to make a fire by turning the stick between the hands. In three or four minutes the fine dust became a glowing punk which, with the aid of some dry grass and the wind, was quickly fanned into a flame. He was then induced to tell the legend. He looked about and pointed to a little green and blue-bodied fly and said: "The gods sent this fly down from the sky to show us how to make fire. Notice when it lands. Did you not see

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[535]

FIG. 18. THE NATIVE DANCE
IS DONE ON TOP OF A TURTLE SHELL TO THE BEAT OF A BOW STRING BEING STRUCK WHILE THE BOW IS HELD AGAINST TWO INVERTED BASKETS ON SAND.

[p. 265 (B)]

3:Davis & Dawson E-6 (1922-1940) 1945
NUXI Seri NUXI

372 it take its two hands, rub them over its head
and then rub them together a few times?
773 The Indians noticed this and in this way we were taught by this little fly how to make fire by rubbing a stick back and forth between our two hands."

773 In response to comments about the nocturnal howling of the coyote, Chico told another interesting tribal legend. "A long time ago all Seris were birds or animals. The badger had charge of the saints or gods, which were little images carried in a pouch and hung around his neck by black strings.

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[643] FIG. 19. CHICO ROMERO
WHO SUCCEEDED OLD JUAN TOMAS AS CHIEF OF SERIS.

Coyote got to quarreling with badger and, watching his chance, grabbed the bag, tore it loose and ran off with it, giving his derisive laugh as he ran, and ever since coyote has been laughing at badger and all others.

[p.266(A)]

773 Before this it was day all the time, but then it became night and coyote only laughs at night. The black strings still hang about badger's neck."

It is strange to find, too, that a flood legend is traditional among the Seris. Chico said: "In the times of the ancients a great flood came, the ocean rose up and all the country of the Seris was under water except the top of Cerro Alto. There a few Seris gathered and were saved. Everyone else was drowned. To this day the top of Cerro Alto is covered with brush which the flood did not submerge. All Seri children are taught this flood tradition, and they must learn it by heart so as to teach their children and their grandchildren."

764 The death of a tribesman gives no cause for ceremony among the Seris, although the [763] nearest relatives may customarily wail, sometimes for months, morning and evening. The disposal of the bodies of the dead, is, however, of considerable interest. A hole about [412] three feet deep is dug by means of large clam shells and a cave is excavated for the head such that the earth will not touch it. The deceased Indian is wrapped in his own blanket and laid in the grave with the head to the East, face up. The body is covered and the grave is partly filled with earth, then covered with a layer of the spiniest of chollas and thorny brush, further filled, leveled and covered with another layer of chollas to discourage the coyotes from digging up the body. When the Seris are on the move, how- [766] ever, and grave-digging is too great a task, a body may simply be lifted high to the fork of a giant cactus and left there.

583 Marriage among the Seris is not so much 585 a ceremony as it is the completion of a bargain. Under ordinary circumstances, when a man buys a woman he strikes a bargain with the bride's parents and makes a down payment. Only after completion of the bargain does the woman go to live with the man, but even then payments do not cease but continue intermittently through life. Chico Romero, although "married" for fifteen years, gave his wife's father some paint that he had received in payment for guiding and 425 packing. It is also considered natural to 858 buy and sell children. One Seri, Santo

[p. 266 (B)]
[Text continues on p. 267 (B)]

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FIG. 20. SERI WOMEN BEARING FIRE WOOD TO THE CAMP AT KINO

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FIG. 21. A MEXICAN TOTUAVA CATCH ON THE BEACH AT KINO

[p.267(A)]

S:Davis & Dawson E-5 (1922-1940) 1945
NU31 Seri NU31

425 Blanco, whose son was only sixteen years
458 old, bought outright for him a little girl of
six years.

When contracts for fish were secured by
621 the Mexicans from American markets in

[p.267(B)]

S:Davis & Dawson E-5 (1922-1940) 1945
NU31 Seri NU31

621 about 1922–3, the exploitation of the teeming waters of the Gulf was rapid, and the village of Kino suddenly appeared on the bay by that name where there had been nothing but Seri jacals before. Today there

[p. 267(C)]

[font continues on p. 268(B)]

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FIG. 22. SOME SERI WOMEN OF THE VILLAGE NEAR KINO

[p. 268(A)]

S.Davis & Dawson E-5 (1922-1946) 1945
NU31 Seri NU31

621 are four or five hundred people there, more during the peak of the season, and some fifty or more wattle and daub shacks arranged without plan or order, facing at every angle, but all near the beach on which the fishing boats land and are pulled up on shore. Refrigerated trucks carry fifteen to twenty-five tons of fish away daily during the height of the season, mostly the huge endemic totuava (Fig. 21). These great fish are dragged from the boats and lined up on the shore, where the heads are chopped off and the entrails are pulled out and left to be carried away by the tides or consumed by hundreds of scavenger gulls of the beach. A quarter mile [131] north of Kino is the present-day Seri village where nearly all the Seris now live semi-permanently because of the easy money and [439] living. They have their own boats, fish a [262] little for profit, and also bake the discarded fish heads for food. The Seri dwellings are 342 now scarcely inferior to many of the wattle and daub shacks of the Mexicans. Indeed, [439] many of the Mexican shacks are built by Seris in exchange for manta cloth or food.

[p. 268(B)]

3:Davis & Dawson E-5 (1922-1940) 1945
NU31 Seri NU31

342 They are mostly of ocotillo sticks and mesquite branches stood up in the sand, lashed together, and plastered with mud for protection from the wind, but not from the rain (Fig. 22). When the fishing season ends
221 about Holy Week, they all move away to the turtle grounds on Tiburon Island, where they also hunt deer. Then in June and July they go into the desert hills to reap the harvest of cactus fruit, retiring to the lowlands thereafter to harvest the mesquite beans and to await the recurrence of the big fish. In and about Kino they are reasonably well fed and clothed, and were it not for their susceptibility to disease they would be as well-
164 off as many of the Mexicans. Influenza
161 strikes them heavily, however, and pneumonia is common, usually fatal. Their numbers dwindle and their extinction is in sight, yet for a little while these strange people will continue to tread the rocks and thorns of their desert land, a handful of Nature's primitive creatures, through whose veins flows the blood of thoroughbred American aborigines.

[p.268(c)]

4:Malkin E-5 (1953-1955) 1956 NU31 Seri NU31

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[Title page]

4:Malkin E-5 (1953-1955) 1956 NU31 Seri NU31

SERI ETHNOBOTANY: A PRELIMINARY REPORT[1]

Boryo Malkin

121 In this paper I shall attempt to summarize briefly some of the possibilities inherent in ethnozoological studies. Ethnozoologies, published so far, have either stressed only the economic or medicinal uses of animals or have just included them as part and parcel of mythology and religion. The emphasis here, on the other hand, is primarily on the aboriginal knowledge of natural history and naturalistic concepts about animals. A comparison with the actual situation in nature will be frequently made in order to test the acuteness of the native observation.

This account is part of a wider comparative study in ethnozoology of several aboriginal groups. Additional field work has recently been completed among two other tribes, the Cora in Nayarit, Mexico, and the Sumu in northern Nicaragua.

Ethnozoological studies of such scope require much more extensive background in natural history than anthropologists or even zoologists today are likely to have. One has to deal with very diverse groups of animals and I have found my own knowledge of the subject repeatedly inadequate on many occasions. It is hoped that a study of this sort will attract individuals who will cover more satisfactorily the entire range of the animal kingdom.

Economic Uses

825 Almost all major classes of animals, with the exception of the insects,
262 are used for food. Only a very limited number of species serve other purposes
439 such as trade with the Mexicans. Among these are various species of large fishes, sea-turtles and a number of shells. None are used for the basic non-dietary products such as utensils, clothing, and other items of the material culture, for these are purchased ready-made in the local Mexican "tiendas" (small general store).

825 As a major source of income for their livelihood the Seris depend mainly
[439] upon a few commercially significant species of large fish and sea-turtles. Yet they do exploit a wide range of the animal environment as a source of additional food. Of the total number of species of animals[2] upon which information has been available, 45% were reported as economically exploited. The table below gives the breakdown of the major groups.

[p.73]

Class	Species Reported	Species Exploited	Percentages
Mammals	21	9	43
Birds	28	6	21
Reptiles and Amphibians	28	11	39
Fish	45	23	51
Molluscs	36	21	58
Crustaceans	10	2	20
Total:	160	72	45

These figures show clearly the dependence of the Seris on marine life for a major source of their diet. Today, pinta, boys, cubera and sardineros are their primary source of income with meat and sea-turtles ranking second in importance. Several species of clams, limpets and gastropods supplement this diet.

All other animals represent only incidental additions to the menu. During the last war, sharks and mantas were hunted extensively for their liver, then a source of vitamin D. But since the war, the demand for shark liver has declined and because of this, a considerable income for the Seris has been lost. Shark and manta fishing have been abandoned for these fish were taken only for the commercially profitable liver and not for their flesh.

Fishing and Hunting

Seri fishing techniques are simple. In the past they used double-pronged spears and for the larger fish, harpoons. Today the spears are employed chiefly in fishing while the harpoons are reserved exclusively for sea-turtles. Hook and line fishing was introduced after 1930, as Kroeber (1931) saw none during his visit to Kino in 1930, and it is now the standard method of fishing. An abortive and unsuccessful attempt was made several years ago with net fishing. Another change has occurred within the past fifty years. The old balsas have been replaced by flat-bottomed plank boats outfitted with five-horsepower motors or sails. These motors, incidentally, are leased from the Mexican fish traders because none of the Seris are rich enough to own one.

Bait is obtained by dynamiting schools of small fish in coastal waters or by collecting them at low tide in the tidal pools and from under rocks. Fishing usually begins at dawn and lasts until noon when, as a rule, all of the "pangas", as the boats are called, return to Desemboque. In stormy weather no fishing expeditions are made and when this occurs, starvation becomes a real menace. Harpooning of sea-turtles takes place far out in the Gulf. It is done only at night in exceptionally calm weather by the light of torches or Coleman lanterns.

Hunting as it is done today has changed from the time of McGee's visit in 1894-95. The bow and arrow has disappeared completely except for a crude and diminutive form used as a toy by small boys. Iron spears once used in shark and manta hunting are now carried primarily as a weapon against the numerous and much feared rattlesnakes. They are said to be used occasionally in the peccary hunt. Old .22s or 30/30 rifles are owned by several of the men, some of whom specialize in hunting.

Game pursuit is usually done on foot, mostly in the winter and very little in the summer. The intense heat of the desert in the summer makes hunting unattractive. The most frequent trophies are the Sonoran bighorn, peccary, cottontail and jack-rabbits. Sometimes, semi-wild burros, running loose on the adjacent extensive Mexican "rancherias", are poached for meat. The peccary is the only animal hunted with the aid of dogs. Large rodents are dispatched by sling-shot, stick, stone, or shot with a .22 caliber rifle. Birds, such as sea-gulls, ducks and pelicans, are clubbed, stoned or shot with a small caliber rifle.

While fishing and hunting are primarily men's occupations, the gathering of the terrestrial and marine animals is almost exclusively women's work. Rattlesnakes and other reptiles are often killed and brought to the encampments by the women from their morning trek into the desert after firewood and fruit. Small fish and marine invertebrates in the tidal pools are collected by women, aided by children of both sexes.

Preparation of meat is quite simple. It is either boiled in hot water with salt added as the only seasoning or else roasted whole, if small enough, over an open fire with or without a grill. The use of spices such as tomato sauce, chili, peppers, and the like, depend upon the tastes of the individuals and also upon the availability of money.

In individual competence as hunters or fishermen the men show a great deal of variability. Some excel in fishing while others do so in hunting. Hand in hand with this, goes the degree of knowledge of the local natural history and, as expected, the best fishermen lead in the knowledge of fishes while the best hunters possess the most extensive knowledge of terrestrial animals and insects. It has also been observed that boys were far ahead of adults in their knowledge of inconspicuous or otherwise commercially unimportant creatures such as insects, obscure marine invertebrates and small fishes. Interest in the commercially or otherwise economically important forms of animals unquestionably becomes overwhelming in adult life while much of the natural history lore learned in youth is forgotten.

Food Preferences and Taboos

A number of animals were reported as being a part of their diet in the past but which were not used at the present time. Several species of shells collected from kitchen middens along the coast were thus identified. In some instances it has been denied that a certain animal was used for food; yet, later when such a beast was brought to the camp, it would be added to the menu. Undoubtedly, some of the species were held in low esteem as food and the Seris preferred not to admit eating them.

Large fishes, especially pinta and baya, sea-turtles, and the very large chuckawalla lizard, which is brought back from rare expeditions to San Esteban Island, are the preferred cuisine. Cochi fish, also called puercos, are disdained. Large catches of these were frequently brought in from the sea, only to be unceremoniously dumped on the beach and left to the dogs and the vultures. But when other fish were scarce, the puercos were eaten. Pelicans, once an

important source of meat for the Seris, and sea-gulls are occasionally killed and likewise abandoned, except when famine threatens. The above examples most likely apply to other varieties of animals as well.

No specific food taboos were discovered in the course of field work except the unexplained reluctance to eat certain species. McGee (1898) reports a taboo on eating sea-lions but my informants asserted that these mammals were hunted in the past for both their flesh and hide. All of my informants denied that the Seris eat cougars, and this abhorrance has been confirmed by the Mexicans. Yet the Mexicans themselves do hunt and eat these big cats. McGee (1898:196, 202) again casually mentions cougars and jaguars as being hunted by by the Indians but gives no evidence for this. It should be mentioned that only a few Seris know what sort of an animal the jaguar is, and these know it only from hearsay as "huge animal inhabiting the mountains far in the interior". There are occasionally some migrant jaguars in Seri territory.

Pets

The Seris have only a limited variety of pets. Dogs are very numerous, each family keeping many of them. Although they maintain that the dogs are acquired in order to keep the coyotes away from the camps, there is nothing in their camps that a coyote would want to steal. There are a few cats and several species of wild desert doves which are often caged. Wild animals in captivity are, as a rule, those which accidentally come into the hands of the Indians. On one occasion a badger was kept tied to a house post for a couple of weeks and fed on fish heads, snakes, lizards and water until one night when it made its escape.

Of the insects, only the singing male Cicadas are captured by the roving Seri boys. These are tied to a long thread and having their fore-wings partly clipped, they are released into the air like kites. Local Mexicans also provide a similar kind of toy for their children.

Classification of Animals

Seri taxonomic notions of the animal world are vague and indistinct. No conscious classification exists and perhaps none should be expected of non-literate people. But there is a random association of animals based on the external similarities of form, habits and habitat. A clear distinction is made between plants and animals. Quite obscure animals, for example, the Echinoderms, Holothurians, Coelenterates or barnacles, are classed as animals and not as plants. It seems that voluntary movement is used here to distinguish the two categories. Thus, informants insisted that sea-anemones and jelly-fish are animals and not plants. One difficulty arises in the case of sessile barnacles. It is hard to account why those growing on the sea-turtles are classified as animals and are called "turtle fleas".

In the assemblage of major animals, the mammals form one group and birds and fish others. Since general similarity of form and not real structural affinities are the primary reason for these associations, the bats "are not birds, but are probably mammals because they have fur". Thus, sharks and

mantas are classed together and separate from the fishes while whales and dolphins represent another group; the latter two being considered as neither mammals nor fishes but as a category of their own. Yet, in many instances, especially in dealing with the smaller categories, natural affinities are placed together as is well shown in the case of many insects. For example, tiger beetles of the genera Tetracha and Cicindela are called by the same name, k*o-ps. Some of the Buprestid and Tenebrionid beetles also share a common name. In general, for the insects, similarity of shape, color, pilosity associated with the similarities of the habitat, behavior and particularly similarities of movement suggested natural affinities. This is very clear from the association of the two different kinds of tiger beetles in which the determining factors are the type of flight and running behavior plus the type of habitat in which both happen to live.

Sex Differentiation

All animals are said to have both the female and the male sexes, although it is not always possible to tell them apart. In almost half of the total number of species for which information has been obtained, the informants were unable to tell whether the sexes were different or alike in appearance. This proved to be particularly true in the case of insects. Of the remainder, in more than sixty cases, specific individual traits were given for the distinguishing of the two sexes. In most of these, the males are said to be larger than the females, which is actually the case. Another generalized trait of this sort was the supposedly darker coloration of the males. An analysis of these responses and a comparison with the actual sexual differences revealed that this was most likely a cultural pattern in operation and not a result of direct observation. This is certainly the reason why several pairs of different insects belonging not only to different genera but also to different orders were classified as being a male and female of the same kind. Thus two different Scarabeid beetles of the genera Ligyrus and Cyclocephala were considered the same, with Ligyrus being the larger and darker of the two, it was identified as the male. Informants also guessed that the male of the American Cockroach was darker and larger, not knowing that the female is quite different in appearance in being wingless. Confronted with several specimens of the grasshopper, Anconia integra, the informants suggested that the largest of them was a male. In another instance, the darkling beetle, Endrodes vendriccosus, was described as being the female of Arenivaga, a round roach, the smaller size of the beetle suggesting femaleness. But these examples do not exhaust the multitude of ways in which the Seris distinguish between the sexes.

For the land mammals, one of the standard characteristics distinguishing them was said to be the presence of "dos huevos", literally "two eggs", in the male. For the kangaroo rat it is the protruding penis which denotes the male, while for the bighorn it is the presence of larger horns. In the mule deer it is only the male that has horns and then only seasonally. An interesting attempt to generalize sexual differences in several species of lizards was made. Informants first searched for "ridges" on the ventral side of the femora, which supposedly denote the males. This, however, is a trait typical of separate genera of lizards and not of the sexes. But if here they have failed to uncover actual sexual differences, they have succeeded in the case of the gridiron-

tailed lizard, Callisaurus draconides insulans, in which the males have blue abdomens, this fact being quickly pointed out by the informants. This association of more colorful pattern with the male was applied to several of the molluscs and to many of the fishes. In the fishes, another and standardized sexual distinction has been given; the males being longer and narrower and less bulky than the females. More specific characteristics have been given in sexing sharks and mantas. Here the males are said to have "two penises" near the vent. Indeed, they do have two claspers which are absent in the females. Interestingly, no sexual differences were given concerning birds. The informants simply could not tell the female from the male bird. This is not surprising at all for in most birds sexes cannot be distinguished without dissection.

Knowledge of Habitats

Habitat distinctions are sharply impressed upon the Seris. They are well aware of the fact that various marine animals and terrestrial animals have strong preferences in this respect. They know that some of the marine animals prefer deep waters while others prefer shallow water and that some will be found on sandy bottoms and others on rocky bottoms. They also know of similar preferences among the terrestrial animals; some being partial to the proximity of fresh water, others to sandy beaches, some to the mountains and others to the desert. This knowledge is frequently exact and often extends to quite small and inconspicuous creatures. Presented with Hydrophilus insularis, a large water beetle, the informants unhesitatingly gave its name as ?ax-hahkö, the prefix ?ax meaning water. They indicated also that it lives in fresh water. Yet this beetle is extremely rare in the locality, only one specimen having been seen and captured in the course of my field work. A giant tarantula-hunting wasp, Pepsis, was also said to live near water and its name has been given as ?aa kax . These tarantula killers indeed do often congregate near water. The tiger beetles were invariably associated with the "playas" and marine beaches, even when the informants were not told where they were captured and when they came from localities distant from Desemboque.

Likewise, the nesting grounds of egrets in the mangrove mud flats of the Estero Sargento, an estuary south of Desemboque, were correctly associated with the mud where these birds find an excellent feeding ground. In giving the distribution of the coastal animals, the informants often indicated their presence or absence at Porto Kino or Desemboque, stressing that the sandy sea bottom at Porto Kino and the rock sea bottom at Desemboque accounted for this fact. This is especially true of many fishes which prefer one or the other of these two habitats.

Seasonal Differences

The seasonal turnover in Sonora from winter to summer is very great; the summers being extremely hot and the winters quite chilly. This was particularly stressed by the informants in relation to reptiles and insects which are not much in evidence during the cold season. Most mammals, on the other hand, were indicated as equally numerous in both seasons. The fishes, accordingly, migrate a great deal. Most important commercial species were said to travel north in the spring and to return south in the late fall. Similar migrations were

ascribed to whales. Some of the birds are supposed to be migratory, but the direction of their migration is a mystery to the Seris. The swallows "pass in great numbers" but that is all that was known about them. The ducks winter on Isla Patos and then depart for the north in the spring without ever laying any eggs. Hence, their eggs were totally unknown to the informants. Egrets are said to remain in Estero Sargente for the winter.

Sometimes seasonal differences in the appearance of an animal were noted; for example, the loss of horns by the male mule deer during the winter. Seasonal differences are more sharply impressed upon the Seris than on either the Cora or the Sumu. This is not surprising because seasonal changes in Sonora are more contrasting than in either Nayarit or Nicaragua.

Age

The Seris find this feature of animal life the most difficult to ascertain. Hardly any responses were given that could be correlated with the actual length of life. Most replies were standardized according to the individual notions of the informant, such as "4 or 5 years", "about 6 months", and so on. In general, the larger the animal the greater the longevity attributed to it. In many cases it has been suggested that "perhaps the animal dies with the beginning of the cold season". This was frequently said especially in regard to reptiles. There is very little understanding of reptile hibernation through the winter.

Transformation and Immature Stages

No generalized idea of the transformation or metamorphosis of one kind of animal into another has been discovered, with the exception of two instances among the insects. Maggots are correctly associated with flies, but this is not surprising in an encampment where untold millions of them infest offal and other remains. It is also possible that this idea came to the Seris by way of the more sophisticated Mexicans. A hawk moth larva, found in great numbers on the jimson weed, was said to turn into a butterfly within 10 to 20 days if it rained, but if the rains failed, it would continue in its larval stage. These two unconnected cases represent the total knowledge of insect metamorphosis discovered in the course of my field work.

In other animals, the immature individuals are always described as being similar to the adults except for their smaller size. In addition to this, the young of several of the birds were supposed to have differently colored plumage.

Nocturnal and Diurnal Variation

As expected, there is very little knowledge of the activity of fishes, but there is a great deal of accurate knowledge of these phenomena for the mammals, many birds and reptiles. By way of illustration, rattlesnakes and most other snakes are reported as coming out at night and resting in the ground during the day, whereas the opposite is noted for the lizards. They are most active in the brilliant sunshine and go into hiding at night. For many mammals, decreased activity was noted during the day. Peccary, coyote, deer and cottontail were some of the mammals listed.

Food Habits

The food habits of all but a very few of the insects are totally unknown to the Indians but they do have accurate and detailed knowledge of the food habits of fish. This is probably due to the great economic importance of fish to the Seris. They also have very full data for the mammals, including bats, which are said to be insectivorous. The responses varied concerning lizards and often did not parallel the situation in nature. In some instances, the acuteness of the observation was remarkable. Thus, the Northern Crested lizard, Dipsosaurus dorsalis sonorensis, which occurs on the sands of Rancho San Francisco, inland from Desemboque, has been mentioned as climbing trees after fruit. Even more unusual, the leopard lizard, Crotaphytus wislizeni, was said to feed on other species of lizards. And indeed, it is one of the very few species of lizard in the region which habitually devours others of its own kind.

Mating Seasons, Eggs and Nesting

In most of these aspects of natural history the native information is quite deficient. In the case of birds, it is assumed that mating occurs in early spring, that the eggs are laid a month later, that in another month the young hatch out and about the third month they fly from the nest. This sequence seems to represent a conventionalized idea rather than a reflection of direct observation. Another difficult question for them to answer, with respect to the reptiles, was whether the young are born alive or whether they hatch from an egg. Only a few of the species are correctly described, among them the rattlesnakes. Sharks and mantas are said to give birth to live young.

Guesses as to the number of eggs varied from fairly accurate estimates for some of the birds to rough approximations ("many") for some of the reptiles and most of the fishes. The knowledge of bird nesting habits was fair. The informants had no difficulty in pointing out the particular localities where one or another species of bird nests nor in the identification of the nest by its shape and construction. This was especially true of the cormorants, egrets, sea-gulls and pelicans. All these are either marine or shore birds as will be noted.

Animals: Venomous and Otherwise Feared

In contrast to the Mexicans, the Seris fear relatively few animals and they are almost always those which can inflict a vicious or toxic bite or sting. The Mexicans, on the other hand, are afraid of a great many animals. European folklore plays a part in this as does unfamiliarity with the desert and the consequent fear of it.

The Seris fear most the rattlesnake, both the Western Diamondback and the Sidewinder. These snakes, they say, bite with their fangs but the venom is located in the rear of the body, about two inches in front of the anus. A plant called "huaco" (?) is used as a remedy both in the form of a drink and as a dressing for the wound. The Mexicans claim this remedy is effective. The coral snake is also considered to be venomous although the Seris believe that its bite is fatal only to Mexicans and not to themselves (!). Most of the

125 other snakes are also viewed as venomous but are claimed to be of mild disposition and do not bite people.

Among the lizards, curiously, the one feared most is not the highly poisonous Gila Monster, but the harmless little gekko, Coelonyx variegatus sonorensis, which lives in fallen and dried-up sagnaros. The informants could not even be induced to touch specimens killed in alcohol. It is believed 153 that this creature could kill humans either by contact or by allowing them to inhale its vapors which cause a fatal lung illness. This little lizard is reminiscent of the European salamander in some ways. The Mexicans call it 171 locally "salamanquesa", and attribute to it the same unpleasant traits which the Seris do. Since this little lizard does resemble the European salamander and the beliefs about it are quite similar to those in European folklore, it is possible that here is a case of a transfer of this folklore upon an animal of a different kind. These beliefs eventually perhaps diffused to the Seris.

A small desert night lizard, Xantusia vigilis, is also very much feared and is frequently confused with the gekko. It lives in an identical habitat. A toad, Bufo alvarius, is said to bite with its tongue and is supposed to be able to inject venom with it. Its blood and "milk" are also very toxic.

Several of the arthropods are believed to be dangerous. The Seris claim that the blood sucking cone-nosed beetle, Triatoma rubida, stings with its mouth parts and also causes an illness called syxhil i te kapap, which can be fatal to children. This bug actually is a vector of the Chagas disease and its repeated bites may cause a sensitization to them. But in this case it is impossible to tell which is the situation without a clinical analysis. Scorpions, which sting with their tails, are considered to be very dangerous. The Black Widow spider, which is very numerous in the locality, is also viewed as very toxic and is said to be sometimes fatal, although a few days' illness is all that its bite usually causes. The tarantula spider also bites but its venom is never fatal. The Sun spiders, Solifugida, are venomous but their venom supposedly kills horses but not people. All of these spiders and their relatives, according to the informants, sting with the rear end of their body in wasp-like fashion. No medicant is applied on the bite, nature being allowed to take its own course in the recovery.

Concerning other animals, the sting rays are much feared because of the venom in their thorns and their ability to inflict a nasty wound. The bats, according to some informants, can cause disintegration of the body by spitting on it and they also have venom in their tongues, although this belief was not shared by one of the more sophisticated informants.

Only a few animals are considered to be dangerous to eat owing to their toxicity. The toad is one and a little fish, Sphaeroides annulatus, is another. 162 Of this fish it is said that "one hundred years ago, a man ate one; he died", hence the avoidance. However, rattlesnakes are eaten with relish; only the head and the part of the body where venom is believed to be located being discarded.

171 The above discussion suggested some of the differences in the attitudes 125 toward animals between the Mexicans and the Seris. While the former fear many,

171 the latter are largely unconcerned with by far the greater majority of them.
825 If there is any magical importance attached to any of the species, it has not been discovered in the course of this field work and this fact has been corroborated by other recent observers.3

Summary

182 Extensive field work of this sort has many ramifications. One of the main
825 items investigated has been the acuteness of the native observation of animals. In the case of the Seris, this knowledge progressively increases both in volume and in accuracy with the increasing economic importance of the group. The mammals and large fish are the best known followed in order by birds, reptiles, smaller fish, insects and marine invertebrates. It is also obvious that local ecology, habits and anatomy of the various species of animals set definite limitations upon observation. Lack of understanding of the hibernation of reptiles through the winter is a case in point. Another example is in the Seris' inability to distinguish between the sexes of birds. Purely cultural factors are also potent as can be seen in the standardized responses to the questions about the age of animals and the development of birds. Seri knowledge of animals is remarkably free from mythology, although a number of animals are known to have had mythological significance in the past.

825 There is little fear of animals except of those which are actually dangerous.

An interesting fact emerges from the comparison of the particular aspects of the knowledge of natural history. Namely, that this knowledge is not always symmetrical in that some facets of natural history are far better known by the Seris than others. An excellent illustration is provided here in the complicated ways of sexing animals, in their extensive knowledge of the food habits of some of the animals and their ecological environment, and by their very limited ability to guess correctly the age of animals.

Not all of these differences can be accounted for in natural terms and it is suggested that the answer to this asymmetry lies, perhaps, in the cultural factors unaccounted for in this study. In spite of their dependence upon a relatively few economically important species of animals, the Seris do make use of much of their animal environment in their diet, as would be expected of a marginal people who still live today in a fishing and gathering economy.

FOOTNOTES

122 1. This field work was made possible by research grants from the Department
114 of Anthropology, University of Washington. Most of the work was done in Desemboque, Sonora, during the summer of 1953 with some additional work there in May 1955.

For much help in carrying out this field work I am indebted to my friend, Leo Sandoval, a school teacher in Desemboque.

4:Malkin E-5 (1953-1955) 1956 NU31 Seri NU31

2. In addition to these 160 species of animals, data has been obtained on more than 100 species of insects and their terrestrial allies, none of which are eaten.

3. Edward Spicer and William Smith, Jr., in verbal communication.

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DESERT PLANT LIFE

SOME ETHNOBOTANICAL NOTES ON THE SERI INDIANS

WATERCRAFT OF CARRIZAL REED

A STUDY OF THE GENUS LOPHOPHORA, THE PEYOTE

NOVEMBER [illegible] twenty-five cents

[Front cover – p.129]

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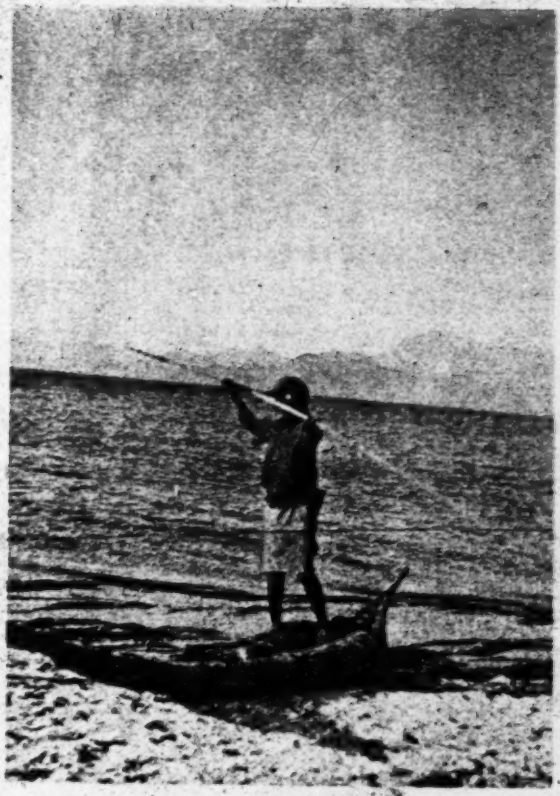

A rare photograph of the last native carrizal reed balsa made by the Seris in 1922. Tiburon Island.

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DESERT
PLANT LIFE

SIXTEENTH YEAR NUMBER 9

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SOME ETHNOBOTANICAL NOTES ON THE SERI INDIANS

105 If the natural resources of a region may be said to reflect the degree of
121 cultural and social development of its aboriginal people, we may easily understand why the Seris of Sonora, now approaching extinction and with much modified habits and culture, are considered the most primitive and savage of American Indians. Certainly the arid coast of Sonora, destitute
[133] of water but for a few widely separated, stagnant holes, with a dry, rocky soil habitable only by the most frugal and thorny of desert vegetation, presents little in the way of resources to a native people. It was, indeed,
[202] only along the ocean shore that the Seris found animal food sufficient to sustain them, principally, the sea turtle and the pelican. This food source proved adequate to support a tribe of some 2000 in pre-Columbian times, but the limited habitat of the pelican and turtle brought about extreme isolation of the people. Thirty-mile-long Tiburon Island became their principal home, separated from the mainland by the narrow but tempestuous channel, El Infiernillo, across which they frequently voyaged in their buoyant balsas to search out vegetal supplements to their monotonous sea food diet. It is this use of vegetable materials, not only as food but in other phases of the domestic economy of these people in earlier times, with which these notes are particularly concerned.

225 Primary occupation of the Seris aside from their continual movement to and from the water holes was, necessarily, their search for food, for they cultivated nothing and conserved little. Fish were exceedingly abundant
[227] in the waters around their island, but their very limited tool sense, providing them with almost no fishing devices, excluded much of this food from their diet. Clams and other shellfish were to be had, but it was the abundant green sea turtle, feeding upon luxuriant growths of marine grass, *Ruppia maritima*, in the shallow, sandy lagoons along El Infiernillo, that provided their meat staple. The turtles could be captured with ease during egg laying season as they crawled over the beach, but at other times they had to be
396 speared from a watercraft. No sizable timber grows in Seriland and before the advent of flotsam boards and hoop-iron it would have strained the

ingenuity of a modern shipbuilder to have constructed a boat. These simple, desert people, however, through centuries of struggle for life in their desolate realm had learned to use every natural material available to them, however laborious the tasks and inefficient the products. The carrizal reed, *Phragmites communis*, grows about the few permanent water holes of Seriland, and from countless numbers of these slender, buoyant canes they built their watercraft. The reeds were stripped of leaves and gathered in long bundles, bound together and gradually augmented by more and more interlaced canes until a bundle 18 to 30 feet long and 1½ feet in diameter, tapering at both ends, was made. Three of these were then bound together with cords of fiber or human hair, making a maneuverable one or two man raft, easily transported to the shores.

The mesquite tree, *Prosopis juliflora*, provided fiber for cords. The flexible outer tissues of the roots were stripped off, soaked and progressively pounded, split and worked between hand and mouth until very slender, fibrous threads were obtained which were then twisted into cords. In some cases a coarse, rough fabric was woven from these fibers, but most garments were made of pelican skins. The strips of workable mesquite root or sometimes yucca fiber were also used in making doughnut-shaped head pads which aided in balancing the capacitous earthen water jars as they were carried on the heads of the women over rough and stony trails from water hole to camp site.

While occupying the turtle fishing camps on El Infiernillo during the good season, vegetable supplements to the fishy diet were few. Every nourishing seed or woody fruit yielded by the desert was carefully gathered; even the tiny seeds of the sea grass, *Ruppia*, were sorted from beach drift and made into meal. Never did the Seris learn to cultivate any crop or domesticate any animals other than the half wild coyote dogs that lived in mutual toleration with them. Even had they done so, their success in the barren, waterless land would have been small.

Sterile as is the Seri's hinterland, for a time each summer the thorny plants with which it is so profusely stocked ripen an abundant crop of fruit. The cacti in particular yield a wonderful harvest of luscious and succulent fruits, and toward this fortuitous supply the Seris were accustomed to move in June and July. The foothills of Sierra Seri on the mainland are adorned with great numbers of giant cacti, *Pachycereus Pringlei*, *Carnegiea gigantea* and *Lemaireocereus Thurberi* from which the luscious pitahayas were readily knocked down when ripe. The Indians wandered into the cactus forest and after a simple ritual marking the beginning of the feast, proceeded to gorge themselves for weeks on the succulent fruit until waning supply and cloying appetite drove them back to more severe food-getting activity by the sea. They did not customarily find it necessary to leave the cactus forest, however, as soon as the supply of fruits was no longer sufficient, for by the time the fruiting season was ended they had provided themselves with a second harvest. The pitahayas, gorged in such tremendous quantity throughout the season, were very imperfectly digested; the miriads of hard seeds, particularly, passed through the system unchanged and with the preservation of these in mind the Indians carefully collected with the aid of large sea shells all such seedy discharges and let them dry in the desert sun. Thus, as the supply of fresh fruit faded they proceeded to the use of this hoard

5:Dawson N-5 (1940) 1944 NU31 Seri NU31

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1. A basket of cactus meal.

342 2. A Seri village on Tiburon Island. Note the large shells of the sea turtle that serves as food.

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342 3. Making the Seri basket. House is constructed of ocotillo branches and brush.

[p. 135]

of nutritious material which was ground to powder on their stone ahsts, winnowed in shallow baskets and made into a meal or paste.

The abundant cacti of many species served several other functions in the domestic economy of the Seris. The thorny cholla whose insipid fruits were not fit to eat and whose spines were a constant threat to the unprotected bodies of the Seris, found one use, nevertheless, in the burial procedure. After a body was partly covered with earth in the three foot deep grave, it was densely overlaid with chollas before leveling, to discourage the coyotes from digging for the body.

The dry skeletons of the giant cacti provided the long, cylindrical poles used in knocking off ripe pitahayas as well as in all other instances in which a straight, slender pole was needed. Since the advent of the open boat in modern times, the cactus skeleton has come in for a new use, for after trituration between stone ahst and hupf, it was found to yield a satisfactory caulking compound when mixed with sea-lion oil.

The barrel cacti, *Ferocactus Wislizenii* and *F. Coulteri*, though ordinarily abundant on the Sonoran desert are rare in Seriland and practically absent from Isla Tiburon where they may easily have been exterminated by the improvident Seris during their centuries of occupancy on account of their recognized value as water providers on the wastelands over which the Seris so frequently ventured.

These Indians found housing no problem, for, living under a climate in which frost is rare and rain infrequent, they found little need for shelters except for protection against the blazing desert sun. Camps that were occupied for more than a day or two, however, usually saw the appearance of a group of crude sun shelters. These were usually made of long, flexible ocotillo branches, *Fouquieria splendens*, stuck in the sand and fashioned into an arched framework over which a more or less complete covering of brush was piled. If, by the sea, a windbreak were desired, the brush top and siding were usually augmented by the addition of several empty turtle shells.

On the delta plain of the Rio Sonora, the mesquite, *Prosopis juliflora*, grows in remarkable luxuriance, these gnarled, spiny trees forming an almost continuous open forest 20-40 feet high. Its fruit, consisting of small, hard beans borne in slender, woody pods forms a concentrated, starchy food that the Seris found highly nutritious if not appetizing. In late summer when all fresh vegetable food had withered and disappeared, provided the turtle fisheries had not yet attracted them back to their island, they often spent some weeks gathering the beans and grinding them into a meal which was eaten as a watery atole or as a paste mixed with sea-lion oil. The more straggly and thorny cat's claw mesquite, *Acacia Greggii*, and the ironwood, *Olneya tesota*, also yielded woody beans in limited quantity.

In the deeper gorges of the mountains the Seris found *Guaiacum Coulteri* yielding a berry of medicinal properties and also *Jacquinia pungens* which produced a nut, edible when not quite ripe, and forming a favorite rattlebead when dry.

Along sandy washes, particularly on the lower flood plain of the llano grows a low, shrubby weed, *Hymenoclea monogyra*. Although during times of drought it shrinks to stunted tussocks, after periods of heavy rain its flourishing fens produce abundant seeds eaten both by the beasts of the plain and formerly by the Seris.

Before the advent of the tin can and the cardboard carton, basketry was an important handicraft among these Indians

[Text continues on p. 138--Analyst]

5:Dawson N-5 (1940) 1944 NU31 Seri NU31

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Preparing a mesquite bean meal cake on the stone metate.

Seri women carrying firewood back to camp. Note the baskets and the head pads made of mesquite or torote.

5:Dawson N-5 (1940) 1944 NU31 Seri NU31

an important handicraft among these Indians. They made a shallow, coil type basket such as is characteristic of many southwestern tribes. The Seri basket, however, was remarkable for its extreme lightness in proportion to capacity, a quality due to the spongy character of the coil made of a whisp of splints of the torote. Several torotes are found in the region, the commonest species being *Jatropha cardiophylla*. Also used were the torote amarillo, *Jatropha spatulata*, torote blanco, *Bursera microphylla*, and torote prieto, *Bursera laxiflora*. The woof consisted of splints of palo blanco, *Acacia Willardiana*, or of baraprieta, *Caesalpinia gracilis*, deftly interlaced by means of a bone awl to form a smooth, practically waterproof utensil.

In pre-Columbian times the Seris commonly sought wild game, mostly deer, without the aid of weapons, using only their tremendous physical endurance against their prey, chasing the animal until it was exhausted and could be thrown to the ground. With the introduction of iron, however, the development of the bow and arrow achieved prominence, for the shaping and fastening of points had long retarded the exploitation of these implements. Few straight stemmed or straight grained plants grow in Seriland suitable for making arrow shafts, but on the flanks of the deeper gorges of Sierra Seri and Sierra Kunkaak on Tiburon Island, the Indians found one leafy shrub that filled the need, *Sapium biloculare*. The juice of this plant is also said to have been used for arrow poison. The bow was preferably of palo blanco, wrapped and strung with mesquite fiber cord.

The modern Seri tribe consists of barely more than 100 souls, with early extinction threatening from imported diseases. Their natural habits are now vastly modified and they live a comparatively sedentary life near the village of Kino, scavengering for fish heads and other refuse discarded by the fishermen, now and then fishing for themselves when in need. Every year, however, they trek off to the cactus forest for the annual feast, and in late summer many may be seen camping among the mesquite groves near the Kino well where an abundance of both mesquite beans and water makes for easy living.

6: Morzón E-5 (1952) 1953 NU31 Seri NU31

Seri Social Structure
[La Estructura social de los Seris]

by Arturo Monzón

Mexico, D.F., 1953

La Sociología en Mexico
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1961

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Seri Social Structure (1)

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1. The material presented here was collected on a three-week visit to the Seri zone, the costs of which were defrayed by the I.N.A.H. [Instituto Nacional de Antropología e Historia], for the purpose of planning later investigations. It took place in January, 1952, in the company of Mr. Paul Finninger of M.C.M. [Mexico City College].

121 The permanent system of interacting influences that is presented among the Seri is of great scientific interest for its extreme characteristics of geographic isolation, environmental hostility, poverty, and the small size of the community.

131 The Seri occupy coastal territory in Sonora on the Gulf of California; formerly they covered a territory that toward the end of the 18th century, along the coast extended from Guaymas Bay, including it, to Punta Peñasco and, on the mainland, included the area in the vicinity of the present city of Hermosillo. They have been reduced little by little, now occupying only some isolated points on Cape Tepoca, Desemboque, and Tiburón Island, places from which, in spite of their inclemency, they are also being displaced.

648 Until some 30 years ago, most of the contacts of the Seri with Western culture had been warlike, ferociously defending their skins from the attacks of the yori (Mexican) invaders. Their contacts with the natives have been with the Yaqui, Papago, and those of Santa Rosalía (crossing the gulf). It was not until about 20 years ago, when the establishment of fishing camps was initiated with mestizo capital, that a new orientation in the treatment of the Seri came into being. Existing side by side with them at present are various Mexicans who exploit the products of Seri fishing, and some scientific investigators, principally from the United States.

13 They form enclaves in the heart of Aridamerica, with its cactus, shrubs and grasses, without flowing water, and with abundant flying and, especially, marine fauna.

[89 cont.]

000 abundant flying and, especially, marine fauna.

For a modern technology, their region has great resources,
511 but for the culture of the Seri it is frankly inhospitable. The standard of living is exceedingly low, as is proclaimed by natives and foreigners and as is demonstrated by the illnesses and hunger that weaken the population.

[90] The Seri truly form part of our Western society, in
226 so far as they catch fish, with fishhooks and motorboats, to sell
439 in the markets of Hermosillo, Nogales, and Tucson, and they
[177] obtain payments in national specie and coin. The part that
182 they form, however, has its own internal structure, which regulates the relations with the environment and among its mem-
[161] bers, even though a group of 218 persons, which suffers severe alterations in percentages from disasters like the sinking of a boat or strokes of good luck like the establishment of a prosperous fishing camp, is almost insignificant for the nation.

Most probably they have never been much more numerous, and they must not have had great cohesion in the past, a situation explicable in view of their nomadic gathering economy.
621 Toward the close of the 18th century they were divided into bands, of which it is known that the most important were the Guaymas, Upanguaymas, Tepocas, Tiburones, and Salineros.
[648] They banded together at various times in order to defend themselves and to attack the nuclei of Mexicans of the zone, achieving combined action, but without effective political unity.

At present they seem to form a single group without marked
619 subdivisions, although they recognize affiliations like that of "Tiburones," "half-Papago," etc., which appear to have little real classificatory significance.

There is great uniformity: they speak a single language
184 incomprehensible to the rest of humanity; they have a relatively
619 uniform culture, and there is tribal unification for matters involving sexual exchange.

The most obvious relations are spatial; they have important
361 settlements that sprung up around the fishing establishments and are more or less permanently occupied. Of these, "El Desemboque," close to the mouth of a river from which they have been displaced, is the most important, with 80 per cent of the Seri

[90 cont.]

361 population. There is an obvious separation there between the
563 Seri and the yori, or non-Seri, with manifest differences in cultural patterns.

The yori occupy an extensive area per person; their homes are quite distant from one another, and four families in conjunction occupy a belt of land of about 100 by 50 meters.

361 The Seri are grouped by families, inhabiting minute squares of from one and a half to two meters to a side. The yori
182 feeling of prestige, based on the territorial expanse of their prop-
361 erty, contrasts with the feeling of security based on personal
511 contact that dominates many aspects of Seri life; the small size of the Seri habitation indicates, not a low standard of living, but a distinct [91] concept of comfort, according to which the Seri, having all the desert to live in, like the yori, confine themselves to the limits that personal contact permits.

In January, 1952, there were 35 dwellings, with an aver-
592 age of 4.6 persons in each, those lodging four, five, and six persons frankly predominating. Each three or four more closely related families occupied contiguous homes, forming relatively separate conjunctions by themselves, which we might call
596 macrofamilies.

The family is the basic Seri institution, which is manifest in all aspects of life: it is the center of production, co-operation, the division of labor, education, diversion, government, etc.

582 Going beyond the family and macrofamily organization,
619 we have a tribal structure based on the generalized exchange (2)
621

2. Lévy Strauss, Les Structures élémentaires de la Parenté [Elementary Kinship Structures], Paris, 1949.

of members for concluding marriage, by which all the Seri are actually linked by consanguinity or affinity. One is almost able to include all the members of the tribe on a single genealogical chart, systematically excluding only some few outsiders who have penetrated the group.

582 This situation, which would make one think of a primitive

[91 cont.]

582 promiscuity of gatherers corroborative of the ideas of Morgan, is very far from being simple, tending more to confirm the ideas of Kirchoff regarding the greater restriction and regulation of marital relations in societies having a rudimentary economy. In all Seri marriages close consanguineous relatives seem to be avoided. More precisely, a classification of relatives is estab-
582 lished, from which only one group can provide a spouse. To
621 differentiate the Seri system from clan systems and marital
601 classes, in which each member belongs to a fixed class in relation to all the other members, in this system the classification varies with respect to the position of each person, that is to say, it is a true system of kinship. The factors of sex, polarity, generation, relative age, affinity, and consanguinity are involved in it, acting to deny or permit the possibility of marriage. Perhaps because of the small size of the Seri group, only within which are marriages concluded, the kinship system results in a clear identification of all persons by terms that are functions of marital relationships: approximately 50 per cent are excluded for being of the [92] same sex; 30 per cent for being of a distinct generation (very few aged or very young); the consanguineous relatives close to the affinal relatives and married persons are also excluded, leaving only so many persons as possible mates, a situation that is reflected in the kinship terminology.

582 [897] [836] It is not that sexual relations may be prohibited, for there is relative freedom in extramarital, including prenuptial, sexual relations, but the "marriage" association, sanctioned by the society and for which there is strong community pressure, has the limitations mentioned. And it tends to be realized, in spite of the disadvantages of the disappearance of sexual liberty, avoidance of near affinal relatives, and the economic obligations that begin upon the conclusion of the marriage.

156 155 With regard to individual development, this social structure is of such nature that it has well integrated cultural elements that create a very special personality, characterized by improvidence, emotional instability, inconstancy, and feelings of security, dispossession, and dependence.

[92 cont.]

156 They are principally the result of influences that act dur-
854 ing the first years of life: constant contact of the skin with that
155 of adults; immobilization of the extremities by cloth wrappings; provision of a permanent support in the form of a cradle to which the child is fastened; constant attention to his alimentary needs, and continuous supervision of his actions.

155 "Give me bread," "give me coffee," "you have food, I
156 am hungry," "why do you keep food?" "that's the way things are," etc., are very common expressions that manifest the Seri personality.

000 On the other hand, from the practical point of view (3),

226 3. For the present fishing promoters, the
439 Seri personality is a serious obstacle: because of the wealth of marine fauna, the competent Seri obtain a good catch in a few hours, and their earnings permit them to live several days, which would be multiplied if the yori would not resort to the sale
[276] of marijuana at excessive prices to obligate them to work.

it has to be greatly altered, above all in so far as it influences the personality, in order to raise the Seri standard of living, changing their habits, ideas,and values.

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LA ESTRUCTURA SOCIAL DE LOS SERIS (1)

Por *Arturo Monzón*(*).

EL sistema permanente de interinfluencias que se presenta entre los seris es de gran atractivo científico, por sus características extremas de aislamiento geográfico, hostilidad ambiental, pobreza y pequeñez de la comunidad.

Los seris están ocupando tierra costeña sonorense en el golfo de California; antes se extendían en un territorio que hacia fines de siglo XVIII llegaba, por la costa, de la Bahía de Guaymas, incluyéndola, hasta Punta Peñasco; y por tierra firme, abarcando hasta cerca de la hoy Ciudad Hermosillo. Han sido reducidos poco a poco, ocupando actualmente sólo unos puntos aislados en Punta Tepoca, Desemboque y Tiburón; lugares de donde, a pesar de su inclemencia, están en vías de ser desplazados también.

Hasta hace unos 30 años, la mayoría de los contactos de los seris con la cultura occidental, habían sido bélicos, defendiendo ferozmente su pellejo de los ataques de los invasores *yoris* (mexicanos). En contacto han estado con nativos yaquis, pápagos, y de Santa Rosalía (cruzando el Golfo). Hasta hace unos 20 años, cuando se inició el establecimiento de campamentos de pesca con capitales mestizos, comenzó una nueva orientación en el trato de los seris. Conviven con ellos actualmente varios mexicanos que explotan los productos de la pesca seri, y algunos investigadores científicos, principalmente norteamericanos.

Están enclavados en plena Aridamérica, con cactus, arbustos y yerbas, sin corrientes de agua y con fauna abundante, volátil y especialmente marina.

Para una técnica moderna, su región cuenta con grandes recursos, pero para la cultura de los seris, es francamente inhospitalaria. El nivel de vida es bajísimo y así lo proclaman propios y extraños y lo demuestran las enfermedades y el hambre que privan en la población.

(1) El material presentado aquí fué recogido en una visita de 3 semanas a la zona seri, costeada por el I.N.A.H. con fines de planear investigaciones posteriores. Se realizó en enero de 1952, acompañado del señor Paul Finninger, del M.C.M.

(*) Véase la pág. 81 de este tomo (No. 11 de este boletín). (Nota de los editores.

En verdad forman parte los seris de nuestra sociedad occidental, en cuanto pescan para vender en los mercados de Hermosillo, Nogales y Tucson, con anzuelos y lanchas de motor, y obtienen pagos en especie y moneda nacional. Pero esta parte que forman tiene su propia estructura interna, reguladora de las relaciones con el ambiente y entre sus miembros, aunque es casi insignificante para la nación un grupo de 218 personas que sufre alteraciones de fuertes porcentajes con desgracias como el hundimiento de una lancha, o golpes de buena suerte como el establecimiento de un próspero campamento de pesca.

Lo más probable es que nunca hayan sido mucho más numerosos. Tampoco deben haber tenido en el pasado una gran cohesión. Situación explicable por su economía nómada de recolectores. Estuvieron hacia fines del siglo XVIII divididos en bandas, de las que se sabe que eran las más importantes, los guaymas, upanguaymas, tepocas, tiburones y salineros. Se organizaron varias veces para defenderse y atacar a los núcleos de mexicanos de la zona, logrando acciones combinadas, pero sin efectiva unidad política.

Actualmente parecen formar ya un solo grupo, sin marcadas subdivisiones, aunque reconocen afiliaciones como la de "tiburones", "medio pápago", etc., que parecen tener poca significación clasificatoria real.

Están fuertemente uniformados: hablan un solo idioma incomprensible para el resto de la humanidad, tienen cultura relativamente uniforme, y unificación tribal para las relaciones de intercambio sexual.

Las relaciones más ostensibles son espaciales: tienen importantes poblados, surgidos alrededor de los establecimientos pesqueros, más o menos permanentemente ocupados. De ellos "El Desemboque", cerca del desemboque de un río, de donde han sido desplazados, es el más importante, con 80% de la población seri. Se muestra ahí una separación de seris y *yoris* o no seris, con manifiestas diferencias en patrones culturales.

Los *yoris* ocupan una gran extensión por persona, tienen hogares muy distanciados unos de otros, y en conjunto ocupan 4 familias una faja de terreno de unos 100 mts. por 50 mts.

Los seris están agrupados por familias, habitando diminutos cubos de 1.5 mts. a 2 mts. por lado. Contrasta con el sentimiento de prestigio yori, basado en la extensión territorial de la propiedad, el sentimiento de seguridad basado en el contacto epidérmico que domina muchos de los aspectos de la vida seri: muestra la pequeñez de la habitación seri, no un bajo nivel de vida, sino un concepto dis-

tinto de la comodidad, por lo que, teniendo los seris todo el desierto por habitación, igual que los yoris, se reducen a los límites que permite el contacto personal.

En enero de 1952 había 35 cuartos, con un promedio de 4,6 personas en cada uno, predominando francamente los que alojaban a 4, 5 y 6 personas. Cada 3 ó 4 familias más cercanamente emparentadas ocupan hogares contiguos, formando conjuntos relativamente separados entre sí, que podríamos llamar macrofamilias.

La familia es la institución básica seri, que se manifiesta en todos los aspectos de la vida: es el centro de la producción, de la cooperación, de la división del trabajo, de la educación, de la diversión, del gobierno, etc.

Sobrepasando la organización familiar y macrofamiliar, tenemos una estructura tribal, basada en el intercambio generalizado (2) de miembros para la realización del matrimonio. Por lo cual todos los seris están verdaderamente ligados por consanguinidad o afinidad. Se puede llegar a incluir, en un solo cuadro genealógico, a todos los miembros de la tribu, del que sólo se excluyen sistemáticamente unos cuantos extraños que han penetrado en el grupo.

Esta situación, que haría pensar en una promiscuidad primitiva de recolectores, corroborativa de las ideas morganianas, está muy lejos de ser sencilla, confirmando más bien las ideas de Kirchhoff acerca de la mayor restricción y reglamentación de las relaciones matrimoniales en las sociedades de economía rudimentaria. En todos los matrimonios seris parecen evitarse los parientes consanguíneos cercanos. Se establece más bien una clasificación de parientes, de la que sólo un grupo puede proporcionar cónyuge. Nada más que, a diferencia de los sistemas clánicos y de clases matrimoniales, en las que cualquier miembro del grupo tiene una clase fija en relación con todos los otros miembros, en el sistema seri hay un desplazamiento de la clasificación conforme a la posición de cada persona, es decir, es un verdadero sistema de parentesco. Intervienen en él factores de sexo, polaridad, generación, edad relativa, afinidad y consanguinidad, que actúan para negar o permitir la posibilidad del matrimonio. Quizá por la pequeñez del grupo seri, dentro del cual únicamente se realizan los matrimonios, resulta el sistema de parentesco, en una clara identificación de todas las personas por términos en función de las relaciones matrimoniales: 50% aproximadamente, excluido por ser del

(2) Lévy Strauss: *Les Structures élémentaires de la Parenté*, París, 1949.

mismo sexo; 30% por ser de distinta generación (muy pocos ancianos o muy jóvenes); excluídos también los parientes consanguíneos cercanos a los afines y casados, quedan unas cuantas personas como cónyuges posibles. Situación que se refleja en la terminología de parentesco.

No es que estén prohibidas las relaciones sexuales, pues hay una relativa libertad sexual extramatrimonial, inclusive prenupcial. Pero la asociación "matrimonio", sancionada por la sociedad, y para la cual hay una fuerte presión de la comunidad, tiene las limitaciones mencionadas. Y tiende a ser realizado, a pesar de las desventajas de la desaparición de la libertad sexual, el evitamiento de los parientes afines cercanos, y las obligaciones económicas que comienzan a la realización del matrimonio.

En relación con el desarrollo individual esta estructura social es de tal naturaleza, que tiene bien integrados elementos culturales creadores de una personalidad muy especial, caracterizada por la imprevisión, inestabilidad emocional, inconstancia y sentimientos de seguridad, desposesión y dependencia.

Son el resultado principalmente de influencias que actúan durante los primeros años de vida: constante contacto de la piel con la de adultos; inmovilización de las extremidades por envolturas de género; dotación de un respaldo permanente en forma de cuna, a la que se fija al niño; atención constante a sus necesidades alimenticias y supervisión continua de sus acciones.

"Dame pan", "dame café", "tú tienes comida, yo tengo hambre", "¿para qué guardas comida?" "ya está así no más", etc., son expresiones muy frecuentes que manifiestan la personalidad seri.

Por otra parte, desde el punto de vista práctico (3), tiene que ser fuertemente alterada, sobre todo en cuanto influye en la personalidad, para lograr elevar el nivel de vida seri, cambiando los hábitos, las ideas y los valores.

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(3) Para los empresarios pescadores actuales la personalidad seri es un grave escollo: por la riqueza de la fauna marina, los seris capaces logran una buena pesca en unas horas, y su ganancia les permite vivir varios días, que se multiplicarían si los yoris no recurrieran a la venta, a precios excesivos, de la mariguana, para obligarlos a trabajar.

7: Marroquin E-5 (1955) 1957 NU31 Seri NU31

BOLETIN Indigenista

Mujeres indígenas motilones del río Yasa, Edo. Zulia, Venezuela. *Foto Tulio López Ramírez.*

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[The issue of Boletín Indigenista from which this article is excerpted begins with page 278; pages 278-331 contain material which is not pertinent to the NU31 Seri file.-Analyst]

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SITUACIÓN DE LOS INDIOS SERIS DE SONORA

Damos a conocer los siguientes datos, tomados de un informe del Prof. Alejandro D. Marroquín, acerca de la población seri y algunos de sus principales problemas. Los datos recopilados por el Prof. Marroquín y de los que aquí se hace un extracto, aparecieron primero en *Acción Indigenista*, N° 36, boletín informativo del Instituto Nacional Indigenista.

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Indian Improvement Brigades

During this period 12 Indian Improvement Brigades were in operation. These brigades concentrated economic and social efforts in order to improve the environment and the conditions of agriculture and animal husbandry of their respective zones of influence.

The 26 legal offices, whose purpose is the promotion, consultation, and defense of the economic and legal interests of the aboriginal groups, are functioning effectively.

In collaboration with the government of the state of Veracruz, an experimental Educational Unit was established in the zone of Chicontepec (Ixhuatlán, a congregation of Colatlán). This Unit consisted of an Indian Training Center, the rural schools of the zone, two Indian Improvement Brigades, two legal offices and a delegation which, in cooperation with the Departments of Health and Agriculture, the National Cofee Commission and the National Corn Commission, attacked the problems of the region.

The goal sought is one of multiple social benefits which will be attained through the collaboration of the Indian pupil.

The administrative personnel of the Office was improved by the establishment of posts with equal opportunities for promotion and salary increases. The domestic help were substantially benefited by salary increases of 50%.

Budget Increase

Considering the recognized importance of the Indian class, the budget has been increased by 4 million 675 thousand 671 pesos from 1953 to 1957. In 1953 the budget was 4 million 667 thousand 820 pesos, while in 1957 it is 9 million 340 thousand 495 pesos.

In regard to 1956, the increase was 698 thousand pesos, since the total budget for this year was 6 million 642 thousand 555 pesos. In addition, the sum of 566 thousand 100 pesos has been assigned as a fund for Indian promotion.

In the future we hope to be able to continue working on an increasingly broader basis in collaboration with the other Indianist organisms, both national and international, which operate within the country.

THE SITUATION OF THE SERI INDIANS OF SONORA

Following is data, taken from a report by Prof. Alejandro D. Marroquín, on the Seri population and some of its principal problems. The data gathered by Prof. Marroquín, synthesized here, first appeared in *Acción Indigenista*, N° 36, the information bulletin of the National Indian Institute.

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Distribución geográfica

000 Los indios seris viven en dos pequeñas poblaciones de la costa del Estado de Sonora, frente al Golfo de California, en Desemboque y en Punta Chueca. De allí pasan con alguna frecuencia a la Isla de Tiburón en el mencionado Golfo de California.

En Desemboque viven aproximadamente 35 familias seris y en Punta Chueca 16. Tan solo en el primero de estos dos lugares se hallan establecidas 5 familias "yoris" (mestizas).

Problemas sanitarios

Los seris carecen de defensa ante ciertas enfermedades que, como el sarampión y la gripe, adquieren en sus relaciones con los "yoris"; estas enfermedades causan muchas defunciones entre los indígenas.

[302]
[291]
[516]

Familia indígena seri de Desemboque, Sonora. *Foto Enriqueta Yurchenco.*

Según el anciano seri Chico Romero, último gobernador seri, hubo una fuerte epidemia de viruela allá por 1897, que causó la muerte de una tercera parte de la tribu que se encontraba residiendo en Costa Rica, ranchería de la costa de Sonora.

En 1955 se propagó el sarampión entre los seris, ocasionando gran número de víctimas, niños y adultos; la actividad del maestro rural Leo Sandoval, del lingüista Eduardo Mosser y de las autoridades sanitarias de Hermosillo, lograron contener la mortalidad; no obstante, el número de defunciones llegó al 5 % del total de la población nativa.

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Geographical Distribution

The Seri Indians live in two small Indian villages on the coast of the Gulf of California, State of Sonora, Desemboque and Punta Chueca. From there they frequently go to Isla Tiburón in the Gulf of California. 131 [484]

Approximately 35 Seri families live in Desemboque and 16 in Punta Chueca. Only in the first of these two places are there five "yori" (mestizo) families. 162 [563]

Sanitary Problems

The Seris have no defense against certain diseases which, like measles and flu, they acquire in their relations with the "yoris"; these diseases cause many deaths among the Indians. According to the an- 164 731 [751]

[291] [854] [302]

Seri Indian woman of Desemboque, Sonora. *Photo Henriette Yurchenco.*

cient Seri Chico Romero, last Seri Governor, there was a great smallpox epidemic there about 1897 which caused the death of a third of the tribe which was living in Costa Rica, a small ranch on the coast of Sonora.

In 1955 measles appeared among the Seris, with a great number of victims, children and adults; the actions of the rural teacher Leo Sandoval, the Linguistic Eduardo Mosser and of the sanitation authorities of Hermosillo, succeeded in keeping the mortality rate down; nevertheless, the number of deaths reached 5% of the total native population. [165] [744]

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000 En general, los seris presentan aspecto de buena salud; sus enfermedades más frecuentes son las gastro-intestinales y las alteraciones de la vista a consecuencia de la avitaminosis. Es muy posible, que dadas las duras condiciones de vida que les impone el ambiente desértico, se realice una rigurosa selección entre los recién nacidos, de manera que sólo sobreviven aquéllos que están dotados de excepcionales condiciones físicas. Así se explica que la mayoría de ellos conserven las características físicas con que Hardy los describió hace más de un siglo: "los indios de la isla del Tiburón son altos, de buena constitución y bien plantados".

A pesar de la acción escolar, los seris no practican elementales reglas de higiene; su vida, descuidada en este aspecto, contribuye así a aumentar los focos insalubres que existen en los lugares en donde se han establecido.

Habitación.—Los seris conservan muchos vestigios de su vida nomádica; entre ellos se cuenta la choza que les sirve de habitación; muchas de ellas son simples arreglos provisionales para guarecerse del viento y del sol, que en nada suponen la estabilidad y la fijeza de nuestras habitaciones; la choza seri era hecha para acomodarse a las necesidades de un pueblo nómada que no tiene por qué dedicar mucha atención y trabajo para hacer una habitación, que solamente sería utilizada por una temporada (uno, dos, o a lo sumo tres meses). Sin embargo, algunas innovaciones se han introducido en los últimos 20 años, por lo cual debemos distinguir dos tipos de casas. El modelo primitivo consiste en una serie de arcos de ocotillo entrecruzados por ramas del mismo arbusto y cubiertas casi totalmente por hojarasca, carapachos de tortuga, zacate, etc., que sólo deja un pequeño agujero en uno de sus extremos como entrada (este tipo de chozas es el mismo que contempló McGee en 1894 cuando los seris todavía continuaban con su vida nómada). En el modelo nuevo se aprovechan maderas más resistentes, como el sabueso, el torote, etc., y varas, entre las cuales se coloca el embarre de lodo. La casa es rectangular, sin ventanas; con una sola entrada, pero siempre de mayores dimensiones que la entrada de la choza de enramada. A estos dos modelos habría que agregar otros, por la incorporación y utilización de carpas o tiendas de campaña elaboradas en EE.UU., que algunos turistas norteamericanos o la Sociedad de los Amigos les han regalado. La tienda de campaña es utilizada como vivienda permanente; otras veces, la carpa es combinada con ramas para cubrir chozas de tipo primitivo.

Animales domésticos.—Los seris son muy aficionados a los animales domésticos como el perro, el gato y, últimamente, la gallina. Estos animales conviven, prácticamente, con la familia; se echan en los montones de trapos y arena que sirven de lecho a los indígenas; lamen los platos y cacharros de cocina; ensucian la casa; aumentan la fauna hogareña con sus pulgas y demás bichos, contribuyendo así a crear un ambiente insalubre en el hogar.

Problemas de la embriaguez.—Sus tratos con los comerciantes de pescado, en cuyas tiendas se vende cerveza, mezcal y tequila, los han orientado hacia el consumo de estas bebidas. El seri toma licor de una manera desmedida. Como la preparación de las bebidas que les

In general, the Seris have a healthy appearance; the most frequent complaints are gastro-intestinal and visual defects due to avitaminosis. It is very possible that given the difficult living conditions resulting from the desert environment, a rigorous selective process among the newborn takes place so that only those who possess exceptional physical qualities survive. This explains why the majority of them retain the physical characteristics described by Hardy more than a century ago: "the Indians of Isla Tiburón are tall, healthy and well built". 164 147 142

In spite of attempts at education, the Seris do not practice the elemental rules of hygiene; their way of life, neglecting this aspect, contributes to increase the unhealthy foci which exist in the places where they have established themselves. 515 751

Dwellings.—The Seris retain many vestiges of their nomadic life, among them the hut which serves as their living quarters; many of them are simple provisional arrangements for sheltering themselves from wind and sun, and they bear no relationship to the stability and durability of our dwellings. The Seri hut was made to meet the necessities of a nomadic people who had no reason to spend much time nor work on making a dwelling which would only be used for a season (one, two or at the most three months). Nevertheless, some innovations have been introduced in the last 20 years, so that we must distinguish between two types of houses. The primitive model consists of a series of scrub pine arches interwoven with branches from the same shrub almost totally covered by foliage, tortoise shells, *zacate*, etc., with only a small hole in one of its ends as an entrance (this type of hut is the same that McGee saw in 1894 when the Seris still led a nomadic life). 342 [221] [177]

In the new model more resistent woods are used, like *sahueso*, *torote*, etc., and poles, between which is laid a layer mud. The house is rectangular, without windows; with only one entrance, but always larger than the entrance to the brush hut. Other models would have to be added to these two, due to the incorporation and utilization of tents made in the United States which some U. S. tourists or the Society of Friends have given them. The tent is used as permanent living quarters; or sometimes combined with branches to cover the primitive type huts. 342 178 [177]

Domestic Animals.—The Seris are very fond of domestic animals like the dog, cat, and finally, the chicken. For all practical purposes these animals live together with the family; they rest on the piles of rags and sand which serve the Indians as beds; lick the plates and cooking utensils; dirty the house; increase the household fauna with their fleas and other vermin thus contributing to create and unhealthy atmosphere in the home. 231 [136]

Problems of Intoxication.—Their dealings with the fish buyers, in whose stores are sold beer, mezcal and tequila, has turned them to the consumption of these drinks. The Seri drinks liquor in an uncontrolled 273 [275]

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venden los comerciantes no es muy higiénica, se suelen producir en ellos trastornos gastro-intestinales de alguna gravedad y hasta afecciones a la vista.

Datos demográficos

El cuadro siguiente muestra la distribución de la población por grupos de edades:

POBLACIÓN SERI POR GRUPOS DE EDADES Y SEXOS
(al 31 de diciembre de 1955)

	Hombres	*Mujeres*
Menos de 1 año	4	3
De 1 a 5 años	10	11
De 6 a 10 años	15	12
De 11 a 15 años	15	16
De 16 a 20 años	13	14
De 21 a 25 años	1	1
De 26 a 30 años	7	15
De 31 a 35 años	16	13
De 36 a 40 años	5	2
De 41 a 45 años	2	2
De 46 a 50 años	3	6
De 51 a 55 años	5	5
De 56 a 60 años	—	—
De 61 a 65 años	4	2
De 66 a 70 años	1	2
De 71 a 75 años	—	3
De 76 a 80 años	—	1
De 81 a 85 años	2	—
De 86 a 90 años	—	—
De 91 a 95 años	1	—
TOTAL	107	108

La pirámide de edades formada con los datos del cuadro anterior, no presenta las características definidas de una comunidad joven en pleno crecimiento, como es usual en los pueblos indígenas; más bien se aproxima a las comunidades viejas, con predominio de los grupos en edad de trabajar sobre los grupos infantiles y sobre los de la ancianidad.

Trabajo

La población con capacidad de trabajo puede calcularse entre los que tienen 11 y 65 años de edad; pues si bien la incorporación a la actividad económica es muy precoz, es, por el contrario, muy prolongado el ciclo de productividad económica. El cálculo de dicha población nos da las siguientes cifras:

way. Since the preparation of the drinks served to them is not very hygienic, they often produce severe gastro-intestinal upsets and even affect their vision.

Demographic Data

The following chart shows the population distribution by age groups:

SERI POPULATION BY AGE GROUPS AND SEXES
(as of December 31, 1955)

	Men	*Women*
Less than 1 year	4	3
From 1 to 5 years	10	11
From 6 to 10 years	15	12
From 11 to 15 years	15	16
From 16 to 20 years	13	14
From 21 to 25 years	4	1
From 26 to 30 years	7	15
From 31 to 35 years	16	13
From 36 to 40 years	5	2
From 41 to 45 years	2	2
From 46 to 50 years	3	6
From 51 to 55 years	5	5
From 56 to 60 years	—	—
From 61 to 65 years	4	2
From 66 to 70 years	1	2
From 71 to 75 years	—	3
From 76 to 80 years	—	1
From 81 to 85 years	2	—
From 86 to 90 years	—	—
From 91 to 95 years	1	—
Total	107	108

The pyramid of ages formed by the data of the above chart does not present the usual characteristics of a young community in full growth, as is common in the Indian villages; rather it is closer to the old communities, with predomination of the working age groups over the infant and old age groups.

Work

The population able to work can be calculated as that between 11 and 65 years of age; because even though they begin to work very early, the cycle of economic productivity is very long. Calculation of that population gives us the following figures:

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POBLACIÓN CON CAPACIDAD DE TRABAJO
(entre 11 y 65 años)

000 Hombres 74, o sea el 69 % de la población masculina.
Mujeres 76, o sea el 70 % de la población femenina.

Podemos agregar que, por lo menos para la población masculina, el porcentaje de 69 % de capacidad potencial de trabajo, equivale, en términos generales, al porcentaje de la población económicamente activa; pues una de las características singulares de la población seri es el hecho de que constituye una comunidad en ocupación plena: todos los hombres en edad de trabajar, tienen su puesto asegurado en las actividades pesqueras; esto es una ventajosa posición para impulsar el desarrollo económico de la tribu. Con relación a las mujeres, la situación no es la misma, pues la mayoría de las muchachas en edad de casarse realizan muy pocas actividades productivas; puede decirse que su responsabilidad económica empieza con el matrimonio.

Si bien todos los hombres seris son pescadores, existen también incipientes especializaciones, que actúan como complementarias o accesorias de la ocupación principal. Así tenemos entre los hombres:

Carpinteros constructores de piraguas	6
Curanderos	14
Agricultores	2

Y entre las mujeres:

Costureras	4
Agricultoras	1
Comadronas	22

No debe sorprendernos el número bastante elevado de comadronas y curanderos; la medicina popular seri está muy difundida y descansa principalmente en la propiciación mágica y como los poderes mágicos se adquieren por diversos procedimientos, incluso el sueño, y los rituales de la curación son, por otra parte, muy sencillos, no es de extrañar que abunden los curanderos. En cuanto a las comadronas, puede decirse que toda mujer que ha pasado por la experiencia del parto, se considera con capacidad para atender un alumbramiento; sin embargo, se dice que las mujeres con mayor experiencia son las que mejor pueden atender a las parturientas.

Problemas que deben atenderse

Además del problema sanitario al que ya se aludió antes, deben mencionarse el agrícola, vinculado con la necesidad de abastecer de alimentos a una población indígena que por tener como fuente principal de su actividad económica la pesca, necesita del complemento de la alimentación agrícola para lograr una dieta mejor. En estrecha relación con este problema está la falta de titulación jurídica de las

POPULATION ABLE TO WORK
(between 11 and 65 years)

Men, 74 or 69% of the masculine population. 464
Women, 76 or 70% of the feminine population. 162
462

We can add that, at least as far as the male population is concerned, the figure of 69% with a potential work capacity is equivalent, in general terms, to the percentage of the population economically active, since one of the singular characteristics of the Seri population is the fact that they constitute a community fully occupied: all the men of working age have a place set aside in the fishing activities; this is an advantageous position for increasing economic development of the tribe. With relation to the women the situation is not the same, since the majority of girls of marriageable age carry on very few productive activities; it could be said that economic responsibility begins with matrimony. [226]

If it is true that all the Seri men are fishermen, it is also true that there is the beginning of some specialization of jobs, which are carried on complementing or as an accessory to the principal occupation. Thus we have among the men: 463 462 162

Carpenters, constructors of *piraguas* (a kind of canoe)	6
Medicine men	14
Farmers	2

And among the women:

Seamstresses	4
Farmers	1
Midwives	22

The relatively high number of medicine men and midwives should not be surprising; Seri popular medicine is very well known and depends principally on magical propitiation and since the magic powers are acquired in a variety of ways, including dreams, and the healing rites are, on the other hand, very simple, it is not strange that medicine men should abound. As for the midwives, it can be said that every woman who has undergone the experience of childbirth feels herself able to help at a birth; nevertheless, it is said that the more experienced women are those best able to take care of those giving birth. 755 756 944

Problems which should be attended to

In addition to the sanitary problem mentioned above, mention should also be made of the problem of agriculture, linked with the necessity for supplying food to an Indian population which since economically it depends principally on fishing, needs to complement its diet with agricultural products to achieve a better one. In close relation 185 [262] [241] [423]

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tierras poseídas de hecho por los seris y que legalmente pertenecen a la nación.

En lo que se refiere al problema económico, es menester mejorar las técnicas de pesca, suprimiendo el viejo procedimiento de obtener la carnaza mediante estallidos de dinamita. Finalmente, como comenta el Dr. Marroquín, debe señalarse el hecho de que los seris al pasar bruscamente de la economía nomádica a la economía de cambio, carecen de los conocimientos necesarios para lograr éxito en sus operaciones, dentro del mercado nacional e internacional.

Es pues necesario atender éstos y otros problemas más, que salven a este grupo indígena de su completa extinción, logrando en cambio elevar sus condiciones de vida, haciendo de ellos ciudadanos capaces de contribuir al engrandecimiento del Estado de Sonora y de la República Mexicana en general.

NUEVO DIRECTOR DEL INSTITUTO LINGÜISTICO DE VERANO EN MÉXICO

El Dr. Benjamín Elson ha sido nombrado, para los próximos dos años, Director del Instituto Lingüístico de Verano en México. El Dr. Elson vino a México por primera vez en 1942 e inició su trabajo lingüístico de campo entre los indígenas de la Sierra Popoluca del Estado de Veracruz. Desde entonces, la Sierra Popoluca ha sido el principal objeto de sus estudios lingüísticos y ha publicado varios artículos como fruto de sus investigaciones. Se graduó en la Universidad de Cornell con la tesis "Sierra Popoluca Morphology". En ocasiones anteriores ha sido Director Asociado del Instituto en México.

El Sr. H. J. Klassen fue nombrado Director Asociado. El Sr. Klassen ha hecho trabajo lingüístico de campo en el Estado de Oaxaca, entre los indígenas de la Mixteca Baja. Ha fungido como Director Interino en diversas ocasiones.

VII MESA REDONDA DE ANTROPOLOGIA, CELEBRADA EN LA CIUDAD DE OAXACA DEL 1º AL 7 DE SEPTIEMBRE

Durante el pasado mes de septiembre se reunió en la ciudad de Oaxaca, Capital del Estado del mismo nombre, la VII Mesa Redonda de Antropología, dedicada al estudio de las culturas indígenas de Oaxaca. Existiendo en dicho Estado una elevada proporción de indígenas actualmente y habiendo florecido en su pasado prehispánico culturas tan importantes como la zapoteca y la mixteca, ya se deja ver el interés de esta Mesa Redonda.

En la imposibilidad de ofrecer, por falta de espacio, un informe completo acerca de dicha reunión antropológica, nos concretaremos a extractar los puntos más importantes de la misma tomados del Informe del relator general, Prof. Wigberto Jiménez Moreno. Pudimos disponer del mencionado informe gracias a la amabilidad de la Sra. Carmen Cook de Leonard, Vicepresidente del Centro de Investigaciones Antropológicas de México. La versión completa en inglés de dicho Informe puede verse en el *Boletín* del mencionado Centro de Investigaciones Antropológicas, (Nº 4, Oct. 1957, pp. 43-49).

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with this problem is the lack of legal title to the lands which the Seris own in fact but which legally belong to the nation.

Insofar as the economic problem, it is necessary to better the fishing techniques, doing away with old process of obtaining the catch through dynamite explosions. Finally, as Dr. Marroquín says, the fact should be noted that the Seris on passing from the nomadic economy to exchange economy lack the necessary knowledge to achieve success in their operations within the national and international market.

It is thus necessary to take care of these and other problems, to save this Indian group from complete extinction, succeeding on the other hand in raising their living conditions, making of them citizens capable of contributing to the progress of the State of Sonora and the Republic of Mexico as a whole.

NEW DIRECTOR OF THE SUMMER INSTITUTE OF LINGUISTICS IN MEXICO

For the next two years the Director of the Summer Institute of Linguistics in Mexico will be Dr. Benjamin Elson. Dr. Elson first came to Mexico in 1942 and began linguistic field work among the Sierra Popoluca Indians of the State of Veracruz. Sierra Popoluca has been the principal object of his linguistic studies since that time, and various articles have resulted from these researches. He took his degree from Cornell University with the thesis "Sierra Popoluca Morphology". He has on other occasions served as Associate Director of the Institute in Mexico.

The Associate Director will be Mr. H. J. Klassen. Mr. Klassen has done linguistic field work on Lowland Mixteco in the State of Oaxaca. He has served as Interim Director of the Institute on previous occasions.

VII ROUND TABLE OF ANTHROPOLOGY HELD IN THE CITY OF OAXACA FROM SEPTEMBER 1ST. TO 7TH.

During the month of September, the VII Round Table of Anthropology, dedicated to the study of the Indian cultures of Oaxaca, was held in the city of Oaxaca, capital of the state of the same name. Since at the present time there exists in this state a large proportion of Indians, and since during its pre-Hispanic past such important cultures as the Zapotec and Mixtec flourished there, the interest of this Round Table is evident.

Lack of space makes it impossible to present here a complete report of this anthropological meeting; therefore, we will limit our coverage to a summary of the most important points, taken from the Report of the recording secretary, Prof. Wigberto Jiménez Moreno. This report was made available to us through the kindness of Mrs. Carmen Cook de Leonard, Vice-President of the Center of Anthropological Investigations of Mexico. The complete version in English may be seen in the *Boletín* of the Center of Anthropological Investigations (Nº 4, Oct., 1957, pp. 43-49).

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Ethnography for Archeology: A Case from the Seri Indians[1]

Robert Ascher
Cornell University

121 Any case for close association among the branches of anthropology would surely include weighty arguments developed from comments on the relationship of ethnology and archeology. In one of his last collections of papers A. L. Kroeber (1957: 193) depicts interdependence of the two in terms of ultimate goals:

> It has become clear that in this matter of a reconstruction of the larger and long-range movements or developments in global human culture, the ethnographer or ethnologist needs the help of the archaeologist. The ultimate purposes of the two are the same: to discover the history or evolution of culture; but their instruments and methods are quite different. . . . The two approaches supplement each other so gratifyingly because they approach a common purpose with quite distinct methods.

In certain obvious areas archeology draws on general ethnographic information. The most elementary notions about behavior in ongoing nonindustrial communities form the implicit basis for all thinking about behavior founded on archeological evidence. From the vista of the urban mid-twentieth century, for instance, it would be difficult to imagine what existence was like in communities with but a single occupational specialty if it were not for ethnographies on food-gathering populations. Yet archeologists have expressed doubt concerning the utility of ethnography for archeology. What is the basis for this doubt?

By definition, archeological data consist of the results of human behavior. The initial objective of archeology is to reconstruct behavior from its results. In accomplishing this objective, the archeologist turns to descriptions of behavior and its products, where the products are similar to those which he excavates. Thus, by moving from the results of actions to actions which are known to yield similar results, it becomes possible to make statements about behavior in the absence of direct observation. To operate with this logic in such a way that the behavioral statements based on archeological data are reasonable, the correspondence between the results of observed behavior and archeological data must be high. The principal source for relevant descriptions is thought to be ethnography. Yet it is argued (Kleindienst and Watson 1956: 76) that ethnography is inadequate for archeological purposes because the literature describes either "ideal types without description of range of variation" or detailed material items without behavioral correlates, or because it describes no material items, i.e., no results of behavior.

8: Ascher E-5 (1960) 1962 NU31 Seri NU31

Elsewhere (Ascher 1961) I have disputed this portrayal of the potential of existing ethnography, citing examples where qualitative and quantitative models have been constructed from ethnography and suggesting that one task for archeology is to codify the literature in a manner useful to itself. Regardless of doubts about existing ethnographies for archeological purposes, the worth of future ethnography for archeology will depend on the acquisition of the relevant kinds of information. Although discussion on the subject has been recorded (Tax *et al.* 1953: 229-232), no specific guides have been produced. This paper provides and discusses an example, which can be used as a paradigm, model, or guide of the kind of information to be collected from ongoing communities which would be of general value for archeology. The subject culture is that of the Seri Indians of Sonora, Mexico; the example describes a persistent trait complex associated with fishing for the Pacific green turtle, with particular emphasis on one trait in the complex, the harpoon foreshaft.

Example from the Seri Indians

The Seri, who numbered approximately 200 individuals in 1960, occupy a band of coastal desert about four miles wide and seventy miles long in the state of Sonora in western Mexico. The band extends along the Gulf of California from Kino Bay in the south to Desemboque in the north, opposite the largest island in the Gulf, Tiburon. Although the region is desert, with an estimated average rainfall of less than eight inches per year, falling mostly in July and August, it is comparatively rich in succulents and small land mammals. The Gulf forms a natural trap for large fish and marine mammals and is a breeding ground for the Pacific green turtle. The scantiness of fresh water has constituted, in the past and present alike, the single crucial limiting factor to agriculture and human occupancy.

In the past the Seri may have comprised from four to six tribal groups, and they were certainly numerically larger, with a maximum estimated population of 2,000 (Kroeber 1931: 53, 30). Until very recently they also occupied Tiburon Island, and at some more remote period they extended south, north, and east over a territory whose bounds are uncertain (Kroeber 1931: 5). On the basis of linguistic change, Kroeber (1931: 54) calculated that the Seri could have inhabited this general region for 1,000 years. It is uncertain whether the original occupation stemmed from Baja California via the Gulf of California or from the north and west via an overland route or routes (Kroeber 1931: 39-51). The first contact with Europeans occurred as early as 1540 (McGee 1898: 51).

In culture content the Seri are most closely affiliated with the Pima (Kroeber 1931: 51), but they do not share the practice of agriculture with them or with their western neighbors. The Seri are primarily fishermen; secondarily they gather the fruits of succulents; and to a still lesser extent they hunt game. McGee (1898: 214)

McGee (1898:214)

estimated that maritime resources provided two-thirds of the Seri diet. Kroeber (1931: 20), approximately 30 years later, estimated the proportion at about three-fifths. In the winter of 1960, 30 years after Kroeber's visit, the Seri were obtaining at least three-fifths of their food from the sea.

In pursuit of their main source of subsistence, the Seri travel up and down the narrow coastal band. In the winter of 1960 they were occupying one temporary camp toward the southern end of the band and a permanent camp at the northern extreme. Seri women and children gather mollusks; fishing is a male occupation. In addition to gathering and fishing for their own needs, the Seri dispose of a portion of their catch on the commercial market. This enterprise began about 1930, and was encouraged by the establishment, in 1958, of the Sociedad Cooperative de Produccion Pesquera Seri with the cooperation of the Mexican government.

The Pacific green turtle constitutes the largest single item in the Seri diet for at least six months of the year—from January to June—and it is also caught occasionally at other seasons. In 1896 McGee estimated that it provided 25 per cent of the total food supply. Emphasizing the intimate ecological relationship between the Seri and the turtle, McGee (1898: 186-187) wrote:

> ... perhaps half of the aggregate life of the tribe is spent within easy reach of its [the turtle's] feeding and breeding grounds, and tribesman and turtle have entered into an inimical communality something like that of the Siouan Indian and buffalo in olden time. ...

Kroeber (1931: 20) believed that McGee stressed the Seri-turtle relationship too strongly and overestimated its contribution to the diet. McGee (1898: 187), in support of the importance of the turtle to the Seri, points to the fact that the turtle carapace is used for, among other things, a house covering and buckler, a cradle, a coffin, and footgear. The carapace is currently used for supporting and roofing houses and as a starvation food. The contribution of the turtle to the diet varies from year to year, but observations made in 1960 suggest a range of from 15 to 20 per cent as a reasonable estimate.

Seri men fish for turtle from boats, which are manned by two or three men and are propelled by oars, sails, outboard engines, or any combination of the three. The boats operate either individually or in groups. The men fish by night or day, depending on the weather and sea conditions. When they fish at night, they use a kerosene lamp to attract turtles to the surface. The principal implement is the harpoon.

The harpoon tackle of the Seri is illustrated in Figure 1. It consists of a foreshaft (c-h), a mainshaft (j-k), and an extension cord (i). The component parts of the foreshaft are a projectile point (c), a gasket (d), a wrapping cord (f), a hafting base (g), and a lead cord (e and h). In preparation for turtle fishing, the hafting base (g) is plugged into the socket (j) on the main shaft (k), and the extension cord (i) is looped through the lead cord (h).

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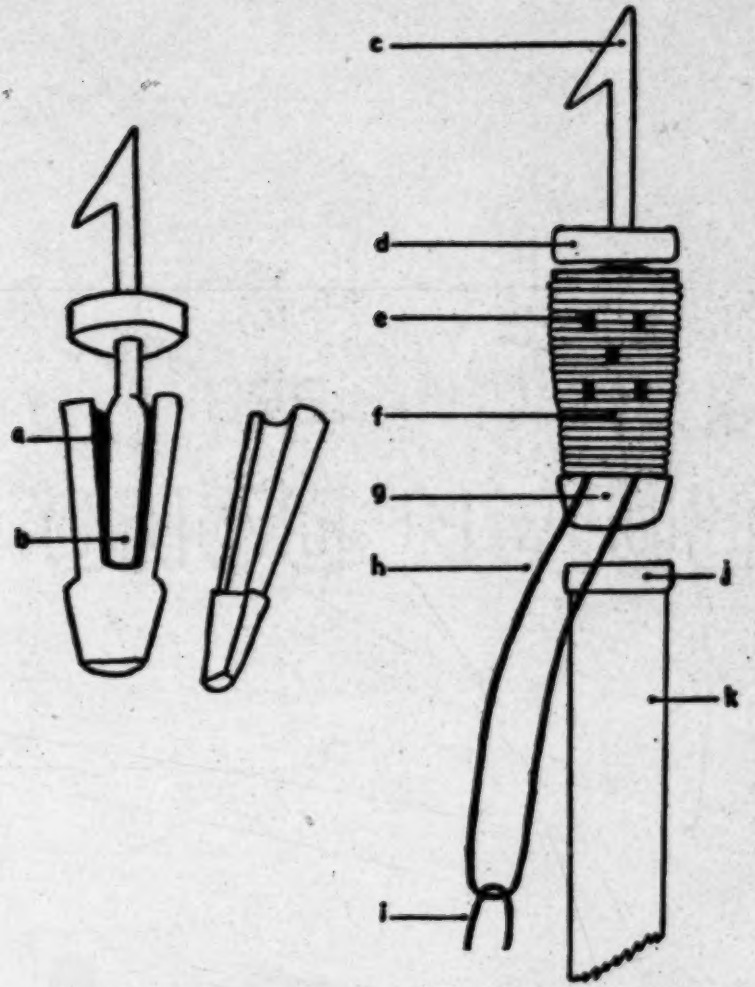
Figure 1. Seri Harpoon Toggle



a Mesquite gum sealing
b Point base
c Point barb
d Gasket
e Lead cord interwoven with wrapping cord
f Wrapping cord
g Hafting base
h Lead cord
i Extension cord
j Mainshaft socket
k Mainshaft

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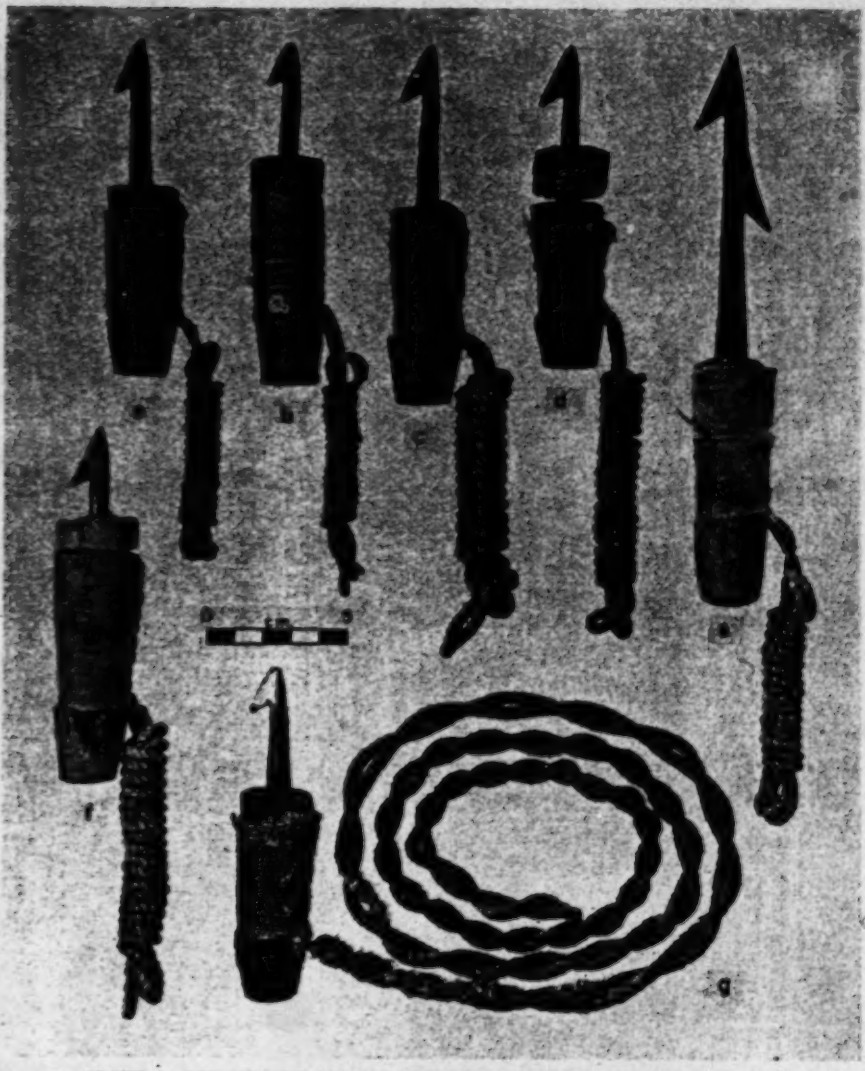

PLATE 1: FORESHAFTS MANUFACTURED BY SEVEN SERI FISHERMEN
(see Table 1 for specifications) A

[facing page 364]

A [Table 1 is on page 367, category 116: Analyst]

225 In fishing for turtle, one man stands at the bow of the boat, holding the mainshaft and extension cord in one hand. When he sights a turtle, he propels the mainshaft at the animal's carapace, retaining a firm grip on the mainshaft and the extension cord. If it is struck, the turtle lurches away, loosening the foreshaft and unplugging it from the mainshaft. Tired eventually by the tension [411] applied by the fisherman on the extension cord, the turtle is finally stunned by a wooden club and lifted into the boat.

225 There is evidence that the turtle-fishing complex has consider-175 able time depth and stability. The Seri were using similar apparatus and methods at least as early as 1825 (Hardy 1829: 296-297). At [501] this time they employed balsa boats rather than wooden boats with outboard motors and torches of cactus fibers instead of kerosene lamps. The complex continued, apparently with little change, through 1896 (McGee 1898: 187-193). Wooden boats and kerosene [177] lamps began to be adopted during the 1920s, and outboard motors were introduced in the 1940s.

411 During the entire period of 135 years (1825-1960), however, the 225 harpoon tackle underwent only one important innovation. The 176 gasket on the foreshaft was introduced by a Seri Indian about the year 1935. The addition of the gasket was related to, and coincided [439] in time with, the first attempts of the Seri to supply turtles to the commercial market. When they caught turtles solely for their own use, they did not need to keep the animals alive for very long, but when they began to sell them it became important to preserve them alive until they reached the market. The gasket acts like the hilt on a sword, preventing the entrance of the foreshaft hafting into the turtle's body. Through its contact with the carapace, it restricts the rotation of the point within the animal's body and provides a seal which inhibits the loss of blood, and thus prevents early death. After the turtle is stunned with a club and lifted into the boat, the foreshaft is removed and the hole which it made is stuffed with a piece of cloth.

124 Seri men were shown a harpoon foreshaft from a museum archive and asked what it was for and whether they themselves made similar 411 ones. If an informant acknowledged that he made them, he was asked, at the minimum, to detail the materials he used, the procedures he followed, and the approximate amount of time it would take him to produce one. Later he was requested to show the field worker examples of the foreshafts he had made. Of the approximately 40 adult Seri males, about 25 were available for questioning. Of these, approximately ten did not make foreshafts or had made them in the past but did so no longer; they were mainly older men and those [474] engaged in the administration of the Sociedad Cooperative de Pro-[887] duccion Pesquera Seri. Five men either would not or could not volunteer information. Data were obtained from the remaining ten adult men and from one eight-year-old boy; they include 21 foreshafts made by these eleven people.

411 The materials from which a foreshaft can be shaped and as-325 sembled vary within what is available in the Seri environment. Iron

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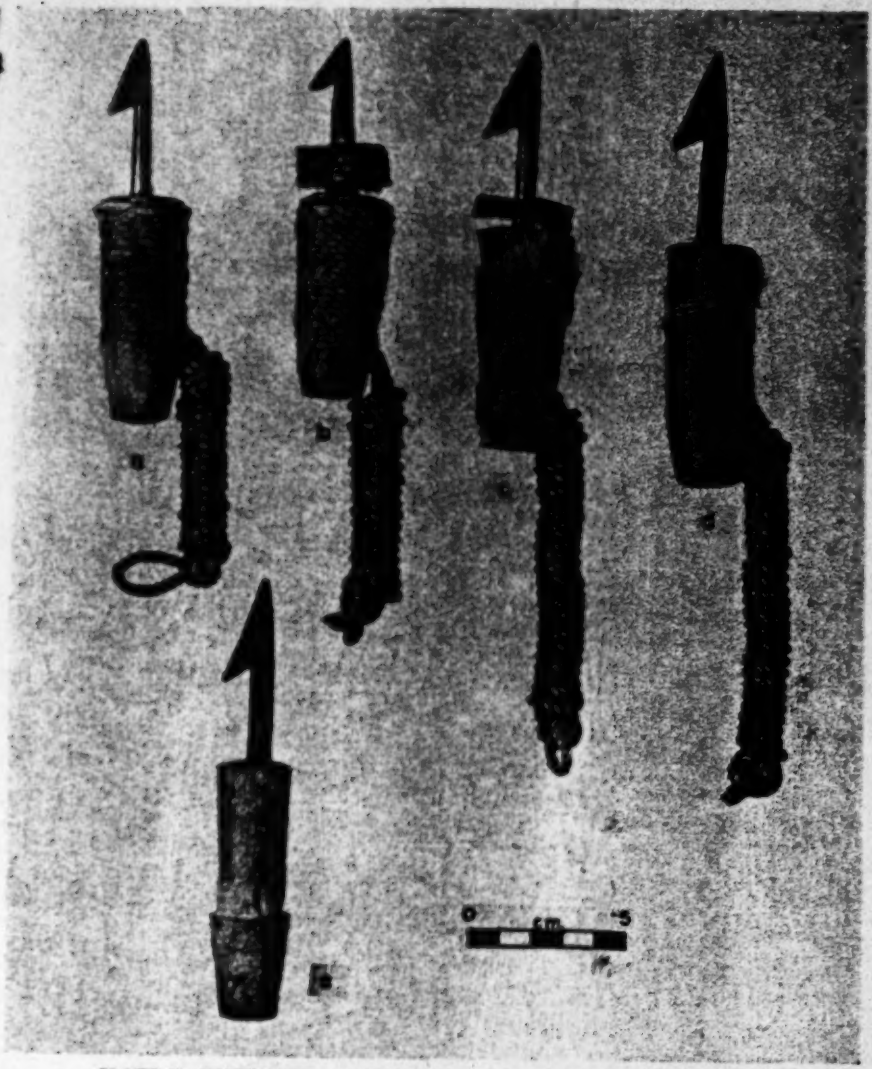

PLATE II: FORESHAFTS MANUFACTURED BY ONE SERI FISHERMAN, FRANCISCO BARNETT

(see Table 1 for specifications)

[Table 1 is on page 367, category 116.- Analyst]

[Facing page 365]

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for the point may come from the transmission of an abandoned car or from flotsam. The wood for the hafting can be mesquite or ironwood, both indigenous in the area; waste from boat construction or other scraps of wood may also be used. Rubber for the gasket may be obtained from a worn automobile tire. The wrapping cord and lead cord are store bought, and mesquite gum is used to seal the hafting.

In manufacturing foreshafts Seri fishermen use three tools: a knife, a hacksaw blade, and a triangular file. The hacksaw blade is used to cut an appropriate length of metal for the point and to rough out the barb; the triangular file is employed to finish the point barb and stem; the tang of the file is used to puncture the hole in the gasket which is to receive the point. The shaping of the hafting and gasket, and the cutting and wrapping of the lead corda, are accomplished with a knife.

With regard to the method of manufacture, all fishermen report essentially the same procedure. They describe the pattern as a series of steps under two headings: (1) shaping and (2) assembling. Two individuals did not mention steps 1c and 2b, and the others considered these two steps to be optional.

1) Shaping
   a) Shaping the metal into a point
   b) Shaping the wood for hafting the point
      α) Shaping the general form
      β) Splitting the form lengthwise and grooving each half to receive the point (see section in Figure 1)
   c) Shaping the rubber for the gasket

2) Assembling
   a) Placing the mesquite gum in the grooved portions of each half of the hafting (see section in Figure 1)
   b) Placing the gasket on the point
   c) Inserting the point base into the hafting and reuniting the split hafting form
   d) Wrapping with the wrapping cord and with it interweaving the lead cord
   e) Refinishing the hafting base to fit the mainshaft socket

Four men were able to explain the foregoing procedure in detail and were in agreement in the following matters. The point is shaped before the hafting because its length determines the length of the latter, and because the diameter of the point base dictates the grooving of the haft. The gasket is shaped after the point and the hafting because the diameter of its hole is determined by that of the point base and its total diameter by that of the hafting. The mesquite gum then secures the point and seals the hafting. Interweaving the lead cord with the wrapping cord secures the former to the hafting.

The amount of time required to complete a foreshaft shows marked variation. This is not primarily a function of the working habits of the artisan. If all the materials are present, the time it takes to make a foreshaft ranges from four to eight hours, but if all the materials are not available, as much as a year may be required. There may, for example, be a considerable lapse of time between the shaping of a point and the shaping of a gasket when material for the

411 461 gasket is not available. If a Seri needs a foreshaft for immediate use he can dispense with the gasket, but all the other materials are necessary to make the tool functional. As a result, a Seri may have one or several foreshafts in the same or in different stages of manufacture (see Plate II),[2] and he may also have a number of shaped or unshaped points or pieces of metal but few finished foreshafts.

411 If an archeologist were to excavate the remains of contemporary Seri culture at some time in the future his observational field would be limited to the results of behavior. Under ideal conditions, the data available to him for reconstructing the turtle fishing complex might include foreshafts, the materials from which and implements with which they were manufactured, and turtle carapaces.

411 184 All 21 finished foreshafts (Plate I),[1] exhibit an obvious general similarity despite the fact that they range in age from one to eight years. Twenty of them have a single barbed point. Plate II,[2] illustrates the general shape of the hafting, the place where the hafting has been split, a mesquite gum sealing, and a refinished hafting base—a combination of features that is exhibited in all 21 foreshafts. The manner in which the lead cord is interwoven with the extension cord is similar in all foreshafts except those in which either cord has been repaired. In nineteen cases (excluding one very long and one very short point), the length of the point beyond the hafting ranges from 4.4 to 6.1 cm. With three exceptions (one long and two short) the length of the hafting ranges from 5.8 to 7.8 cm. In all but two examples the hafting is longer than the point. The difference in length between the hafting and the point above the hafting varies within a range of 0.1 to 3 cm. Thus, with the exceptions noted, the maximal variation with respect to these measurements is small—1.7 cm. for the length of the point above the hafting, 2 cm. for the length of the hafting, and 3 cm. for the difference in length between the hafting and the point above the hafting (see Table 1).[3]

Examination of the three available sets of foreshafts produced by single individuals reveals a smaller range of variation within each set than within the entire collection. In four foreshafts of Juan Moreno the length of the point above the hafting ranges from 4.9 to 5.2 cm., and the length of the hafting from 6.1 to 6.7 cm. The sets produced by Francisco Barnett (see Plate II),[2] and by Miguel Barnett show a comparable restriction in the range of variation. A comparison of the three sets, however, shows that their measurements are similar enough to each other to provide little basis for distinction. The range in length of the haftings of Juan Moreno (6.1 to 6.7 cm.), for example, overlaps that of the haftings made by Francisco Barnett (6.4 to 7.7 cm.).

Variety in the 21 finished products taken as a group, other than that due to differential age and use, is most evident in one particular respect: eight of them lack a gasket. Each owner of foreshafts without gaskets was asked to explain this absence. Two could not or would not give an explanation; five replied that rubber was not available; and one man, Ignacio Molina, stated that he omitted a gasket be-

[1] [facing p. 364] [2] [facing p. 365] [3] [page 367]

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TABLE 1
Foreshaft Specifications

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Manufacturer	Plate Reference	Approx. Age of Artifact	Length of Hafting (Centimeters)	Length of Point (Centimeters)
Ernesto Díaz	Ia	2	6.5	5.3
José Estorga	Ib	6	6.5	5.6
Francisco García	Ic	4	6.5	5.8
Alberto Mendes	Id	5	5.8	5.7
Ignacio Molina	Ie	3	8.7	11.5
Louis Moreno	If	3	7.8	4.8
Ramon Porrales	Ig	3	7.0	4.4
Francisco Barnett	IIa	1	6.8	5.2
	IIb	2	6.4	5.3
	IIc	2	6.8	5.9
	IId	2	7.3	6.1
	IIe	–	7.7	5.8
Miguel Barnett		3	7.8	5.0
		3	6.0	4.9
		5	6.1	4.5
Ernesto Corrales		1	3.1	2.8
(8-year old boy)		1	3.0	4.2
Juan Moreno		7	6.5	5.0
		7	6.7	4.9
		8	6.7	5.2
		7	6.1	5.1

cause he did not believe it would help retard death. This man, interestingly enough, is the nephew of Alberto Molina, whom the Seri believe responsible for having introduced the gasket. The foreshaft produced by Ignacio (Plate Ie) is the most divergent one in the entire collection. It is, for example, the only one in which the point has two barbs and, except for those made by the eight-year-old boy, the only one in which the length of the point above the hafting exceeds that of the hafting. The finished products also show some variation in the source of the rubber used for the gasket and in the kind of wood used for the hafting. Six of the eight gaskets are shaped from an automobile tire, two from scraps of rubber of which the men did not recall the source. Three haftings (Plate Ia, d, g) are made of ironwood, all the others of mesquite, which is easier to obtain than suitable ironwood or nonindigenous woods.

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Discussion

The foregoing example is designed as a paradigm to illustrate how observations on ongoing cultures might be adapted to the problems of archeological reconstruction. It is, of course, imperative to focus on behavior where matter is changed in some way, because it is only in altered matter that behavior is protracted through time. The example is deliberately selected to capitalize on an important area

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of partial overlap between the observational fields of ethnology and archeology. Unlike endeavors which exclusively emphasize those aspects of culture which archeologists cannot learn about (e.g., Thompson 1939), it directs attention toward the archeologically possible.

The analytic unit in the example is the trait complex, with emphasis on persistence and change within it, rather than independent traits and changes in them, which are the kinds of data with which the archeologist often works. Recognition of the relevance of one trait to the other traits in a single complex, or of nonsymmetrical changes in the complex, poses a problem and a challenge for meaningful cultural reconstruction. Though it deals with a common observational field, the example extends that field by providing a series of behavioral linkages, which may conceivably prove useful in the formulation of hypotheses of less restricted scope.

The specific information on fishing and the context in which it occurs can serve as a basis for testing localized hypotheses by analogy. Conceptions about specific phenomena are usually tested by seeking descriptions of cultures which utilize and manipulate their environments in a comparable manner. The fishing complex and its ecological setting are particularly relevant to the archeological interpretation of the New World Archaic and, to a lesser extent, of the Old World Mesolithic.

The quantitative data on similarity and variation among foreshafts, both in the entire collection and in the work of particular individuals as compared with other individuals and with the group as a whole, are of some theoretical value. It is an archeological tenet of major importance that matter altered in accordance with a particular scheme exhibits similarities which allow its grouping into a class. Ideally, such a class should approximate a normal distribution since individual differences, e.g., in manual dexterity, represent variations from a norm or mean. In addition to supporting and amplifying these general notions, the data also confirm the proposition that behavior can be inferred from the quantitative analysis of its results. Thus the four men who independently described the procedure for making a foreshaft agreed that the length of the point determines the length of the hafting, and the finished foreshafts themselves exhibit a constant relationship between the length of the point (as measured from the hafting) and the hafting. More important, such quantitative data, if coupled with similar data from other cultural settings, are capable of being used to develop general statistical models of artifact typology which would facilitate making classifactory decisions based on behavioral realities.

The example provides a feasible guide for the kind of information to be collected from ongoing communities. Feasibility may be measured in two ways: by the amount of time needed to collect the data and by the generality of the guide in terms of the phenomena to which it can be applied. The time required to collect the kind of information indicated is brief in relation to the total time spent by the

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ethnologist in the field, and, used as a guide, the example can be applied to any behavior in which matter is changed. More investigations similar to that offered here are needed as the archeologist turns to interpretation, conceptualization, and synthesis, or to what Kroeber (1957: 193) has called "the larger and long-range movements or developments in global human culture."

NOTE

1. I hope it is not too presumptuous to dedicate this paper to the memory of A. L. Kroeber.

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Occasional Papers of the Idaho State College Museum, Number 7

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Seri Ethnozoology

by Boris Malkin

[Title Page]

POCATELLO, IDAHO
1962

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OCCASIONAL PAPERS OF THE MUSEUM IDAHO STATE COLLEGE

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Seri Ethnozoology

by

BORYS MALKIN

NUMBER 7

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Editorial Comment

121 This paper was originally written by Borys Malkin as a thesis in partial fulfillment of the requirements of the degree for Master of Arts in Anthropology at the University of Minnesota, 1960. It has since been 128 edited to verify scientific names and to drop some of the original introductory portions of the manuscript. Unfortunately, because of technical problems involved in reproducing them, the Seri names also had to be dropped.

At the time the manuscript went to press, the author was in South America conducting field work. It was not feasible to send various stages of proof to him for his personal attention, and the editors were not always certain of the appropriate decision.

000 *Seri Ethnozoology* represents an extension of the Idaho State College Museum's previous publishing policy in anthropology. However, its content and its quality are important and fall within our intent to publish items of wide as well as of regional scholarly interest.

E.H.S., B.R.B.

[p. iv]
[p. iii is blank]

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I

INTRODUCTION

The territory discussed in this paper is somewhat larger than the historical area occupied by the Seris. While Seri settlements are limited today to a quite narrow range, the Tiburon Island and the coast of Sonora immediately adjacent to it, they are familiar with a far larger region, owing to their periodic trips, either on their own after fish, turtle and game or, occasionally, in the temporary employ of the Mexican fish-traders and even farmers. The further away from Tiburon perimeter, the lesser their familiarity with a locality.

The area is limited by Hermosillo in the east, Punta Penasco and Porto Libertad in the north, and Nogales in the south, and finally it includes also the coast of Baja California which the Seris sometimes visit. It also includes all of the islands within that area, Tiburon, Patos, Rasa, Angel de la Guarda, San Lorenzo and San Esteban.

With very minor variations this entire region belongs properly to the Sonoran desert. *Palo Verde, Palo Fierro, Pithaya, Mesquite, Cholla, Sahuaro,* prickly pear, elephant tree and creosote bush are the basic planta. Among the vertebrates, such forms as the Sonoran bighorn, deer, cougar, jumping rat, badger, coyote, skunk, rattlesnake, sidewinder and Gila Monster are most conspicuous and diagnostic. Among the birds are the roadrunner, the raven, as well as many pelagic or littoral birds, the pelican and cormorant among them.

The region is one of very low rainfall, limited to the hot summer months, in some places occuring only a few times in a year. Winters are chilly and dry with persistent winds and dust, with the temperature falling down, on rare occasion, to just above the freezing point. Summers are intensely hot, with daily temperatures usually over 100 and the water temperature of the sea along the shore not infrequently as much as 85 degrees. There are great differences between diurnal and nocturnal temperatures, very much influencing the desert life.

Within this region there are several different ecological zones or perhaps sub-zones, varying from the alkaline flats like Playa Noriega, and the alkali-and salt-permeated soils of Desemboque to the more bountiful slopes of the mountains and the irrigated mud-flats around Hermosillo.

For the sake of distinction, I have selected several of the typical localities or zones as a point of reference either because of their ecological distinctions or because of their signficance as a landmark, readily delineating a peculiar habitat. Personally I am familiar only with some of the

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I

INTRODUCTION

[12] localities, but I think it is advisable to include others, whose nature is not so different from the main places of Seris' habitations.

361 13 I have selected then 25 localities and I shall give their main characteristics below:

1. **Punta Peñasco** — a village along the upper shores of the Gulf of California, close to the U.S., [491] connected by a paved highway from Gila Bend. Typical Sonoran zone with extensive sand flats. Very rarely visited by the Indians.

2. **Porto Libertad** — rocky shores, located some 30 miles north of Desemboque. A Mexican village frequently visited by the Seris.

3. **Desemboque** — Seris' main settlement after 1940, just north of and around Punto Tepopa, only a few miles from Tiburon. A narrow strip of poor land, thoroughly permeated with alkali and salt. Vegetation is very sparse. The mesquite, elephant bush, creosote bush, *Cholla* and *Sahuaro* are the main trees. No *Palo Verde* or *Palo Fierro*. *Ocotillios*, *Sahuaros* and mesquite are stunted and scarce, only toward the mountains increasing in frequency and size. Along the shores, sand dunes [172] with kitchen middens, partly covered by vegetation. An arroyo nearby is empty except on a few occasions during the year when flash flood after rains rushes through. Rainfall very scarce. During the summer of 1953 I spent there, it rained very little—only twice and that was short and feeble. [312] Water is obtained from a well, near which there is a Mexican ranch where, owing to irrigation, some vegetables are grown and weeds are present such as *Datura*. The coast is largely rocky. Narrow beaches lack wide sand bars. Hence the fauna here is poor.

4. **Estero Sargente** — alkali flats and mud flats some 25 km. south of Desemboque along the coast. Vegetation very scarce. *Sahuaros* and *Ocotillios* and other desert trees grow some distance from the shore. Short grasses in some places clump the coastal dunes. Breeding and feeding place of many shore birds, especially of willets and egrets. On the alkali flats near the shore are many peculiar insects, not found in Desemboque, particularly tiger beetles and Oedemerids.

5. **Campo Vivora** — little more than half way down toward Desemboque from Estero Sargente, also along the coast. So named after supposedly [103] numerous rattlesnakes. Clumpy grasses. Favorite encampment of the Seris and others while fishing and hunting turtle. The only loggerhead turtle I have seen was right here.

[491] 6. **Porto Kino** — fishing village directly due east of Hermosillo, nowdays connected with Sonora's

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9:Malkin E-5 (1953-1956)1962 MU31 Seri MU31

361 capital by paved road. Formerly, in the twenties and early thirties, Seris' chief mainland settlement. Now with the influx of the Mexicans, the Seris deserted the place completely as a camp site, although they still visit it occasionally. Distinct in the extensive sand beaches and sand marine flats which harbor peculiar bird, fish and insect fauna.

7. **Guaymas**—southernmost point considered here and probably also of the Seris' historical extension. Nowadays very rarely visited by them and probably only while cruising with the Mexicans. Large settlement, many tourists. Backlands; rocky desert.

8. **Tepopa**—spectacular rocky head just south of Desemboque, opposite to Tiburon. Caves, usual mountainous vegetation, *Sahuaro*. Many Seri hunting encampments and one of the places where the Sonoran bighorn is still hunted.

9. **Coast of Baja California**—very rocky area across the bay—almost never visited by the Indians.

10. **Tiburon**—island in the Gulf of California separated from the mainland by a narrow channel called "Infernillo," only a mile wide. Rugged, mountainous. By **Tiburon** is meant an overall island area in distinction from **Tecomate** or the mountains.

11. **Tecomate**—a water-hole and Seri campsite on the northern shore of Tiburon. Today this is the only permanent site on the island where these Indians, actually only a few families among them, still go to live for part of the year.

12. **Mountains of Tiburon**—rugged interior of the island, reaching up to almost 4000 feet. Usual vegetation cover with *Sahuaro* and other typically Sonoran floral components, fauna much as on the mainland except lacking cougar, bighorn and some other larger forms. The interior does have some "tenajas," that is water-holes and there is said to be a rivulet up in the mountains.

13. **Infernillo**—narrow channel between Tiburon and the mainland, often called locally "canal." For the terrestrial fauna and for birds reference is made to the mainland shores of Infernillo. For the marine fauna is meant either the open water in this channel or to the littoral off the mainland. The opposite shores and littorals are covered as "Tiburon." Maximum depth is said to be up to 25 fathoms.

14. **Isla Patos**—small island north of Tiburon and directly due west of Estero Sargente and halfway between Tiburon and Punto Tepopa. Visited by the Indians only occasionally, mostly in connection with the duck hunt.

15. **Isla Raza**—a small island between Angel de la Guarda and San Lorenzo.

16. **San Esteban Island**—a round island between Tiburon and San Lorenzo, up to 1700 feet elevation. Visited occasionally during fishing or turtle hunt trips or in search of a chuckawalla.

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13 17. **San Lorenzo Island** — a narrow long island along the coast of Baja, California, and opposite to Tiburon. Altitude up to 1200 feet. Fauna limited, owing to the distance from the mainland. Vegetation much as elsewhere but impoverished. Visited incidentally as is San Esteban.

18. **Angel de la Guarda** — large island along the coast of the peninsula, longer but narrower than Tiburon, slightly lower at its highest point, pretty much waterless. Vegetation as elsewhere, fauna limited. Visited by the Seris very rarely.

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19. **Desemboque (Mountains)** — high mountains immediately back of Desemboque, 5 miles away, rising perhaps to 1200 feet. Vegetation much richer than in Desemboque, with giant *Sahuaro* growing to considerable size. More moisture than immediately near the sea-shore. Full Sonoran fauna with cougar and bighorn. Frequently visited during hunts.

20. **Tepopa (Mountains)** — in distinction from Punto Tepopa as a whole, this refers only to the rugged head. The mountain reaching to over 1800 feet. Thus by Punto Tepopa are meant only the shores and the littoral.

21. **Buena Vista** — a ranch inland on the way to Hermosillo, newly deserted. Water present in the large well and periodically in the dry river. Willows, large mesquite, Palo Verde, etc. Now only incidentally visited by the Seris but formerly of some importance as a camp site.

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22. **San Francisco de Costa Rica**—a ranch inland halfway between Kino and Hermosillo near the main road, presently a large Mexican ranch. Formerly a frequent Seri campsite. The distinctive feature of this locality is extensive sandy areas with very peculiar fauna.

[361]

23. **Hermosillo**—capital of Sonora of some 40,000 people. Extensive agriculture, irrigation, river and water-dammed reservoir and cattle and cotton ranges. Once the Seris ranged almost as far as this town but presently they come here only on special business, to the hospital or for a ride to town, with the Mexican truckers. Their observations in Hermosillo are only incidental.

[484]

24. **Nogales**—U.S.-Mexican frontier town. Seris come here very rarely and only certain individuals. Observations less than incidental.

[484]

25. **Campo Utah** — large track of irrigated flat lands given up to cotton, operated by the Utah Construction Company between San Francisco and Hermosillo. Somewhat off the main road. Selected as a distinct region owing to the irrigation and cotton fields with their ecological peculiarities. Seris visit this only in transit or on most unusual occasions when they work a few days for the Mexicans.

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The Problem

121 The basic problem concerns the state of Seris' zoological knowledge, that is the general knowledge of the natural history of animals in its main outlines; of their ecology, habits, reproduc-

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121 tive behaviour, migrations, predation, distribution and the like. Existing ethnographic sources
114 on the Seri barely touched on these matters and such information as is available concerns only
121 a few economically important species and even then concern only the economy and fragments of myths in which animals are involved. This is not surprising. To my knowledge, there is not a single publication in existence dealing with the aboriginal knowledge of natural history as such, certainly not in the North American literature. Much less, yet such an approach had been followed in the standard ethnographies under the heading of "ethnozoology." It has been left to the ethnobotanists (Whiting on the Hopi, Chamberlin on the Gosiute, Robbins *et al.* on the Tewa are the best examples) to attempt something along these lines, but even this is on a limited scale.

121 Since the material for the present study has been obtained with this in mind, it inevitably suffers from the limitations imposed by the outline of the problem. The Seri material has been gathered as one of the series of studies undertaken among the selected Indian tribes (Sumu, Cora and Karajá are others) in order to have comparative material from cultures different in their basic economy and occupying different ecological niches. Thus, an analysis of the Seri material alone further limits the application of it and the conclusion one may draw from it.

The main intent then is to form an orderly and analytical presentation of the material which later may serve for comparison with the analogous material gathered among other tribes.

What then can be done with this type of material and what is the purpose of such work? For this, several different answers can be offered. To begin with, the factual data on the aboriginal knowledge of natural history of animals is sadly neglected. What there is, is fragmentary. Ethnobotanies outnumber ethnozoologies in the North American literature by better than six to one. Thus the present work and also other work I have done along these lines will fill in a gap in our knowledge.

Secondly and more importantly, this work, I believe, suggests a very novel approach toward ethnozoology, the sort of approach so far untried. This sort of systematization of the zoological knowledge among the primitives, makes a comparative approach possible, much as we have comparative studies, for example, of the social organization or of the political systems. In other ways such systematization also makes easier the internal analysis of the material.

Another important angle in this work is an attempt to relate aboriginal natural history knowledge to the general economy and to the natural environment. This is phrased as a question: how does the general economy of the people influence their knowledge of the natural history of animals? Specifically: what is the extent of their knowledge of various animal groups and how does this knowledge increase or decrease relative to their general economic preoccupations? Also: how does the general natural environment, climate espec-

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121 ially, limit the possible uses made of different species; how does it limit the knowledge of animals' natural history? How important are animals in their economy?

Such efforts to connect various phases of culture with the environment had long been practiced by archaeologists, but these lessons were largely lost on cultural anthropology, which, at present time, insists on concentrating on the social factors in splendid isolation, either from the natural environment or from the fact that man is a biological organism first and last. However, considerable revival of at least the ecology—stressing studies is quietly taking place in culture anthropology, viz: Kirschoff, Steward, Leonard Mason, to mention only a few of the contemporary students, and, of course, Kroeber and Sauer who stressed this approach long ago. But as Julian Steward (1938:260) points out, cultural and environmental relationships cannot be answered in a blanket, ready-made statement. Each of the ecological determinants must be examined separately as an empirical fact, and this is what I attempted to do. The Seri material alone indicates where the ecology is a limiting factor and to what extent, and where it is not. In the end, such study as I have undertaken should contribute to our understanding of man's relationship to his natural environment and his adaptions to it as well as his ability to escape from it.

Finally, this type of work indirectly suggests another line of questioning. How does human scientific knowledge evolve, and how is it formed? A set of comparative studies of this kind inevitably suggests some patterns in the evolution of men's biological knowledge. In this it may be of much interest to the zoologists or to the historians of biology. For in the knowledge of these simpler people we find our own predecessors historically, sometimes not so far behind us. Some of the Seri concepts are no less developed than those of the earlier Western naturalists, quite on par with the work of the 16th century men like Gesnor or Aldrovandi. In some ways even as superb as naturalist as John Ray who really laid the foundation for systematized natural history was not much ahead of them. As to the question of how such knowledge is formed, the problem is one for a psychologist and here, at best, only the barest suggestion can be found.

These are than some of the problems and questions which this study seeks to answer.

On the other hand there is a great deal that this study cannot do owing to self-imposed limitations, and there is a great deal which it can only hint at or answer in a most fragmentary manner. For example, there is no use to attempt functional analyses of the naturalistic concepts in the Seri culture. To do this, considerable extra field work would have to be done, with just this point in mind. The existing literature, owing to its diverse origins and approach and owing to its fragmentariness, is of little use. Nor can this study answer in a general way how the Seri knowledge of natural history developed. To anwser this adequately one would have to have first, the

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121 documentary data and second, also the archaeological data. The subject matter unfortunately
[172] is absent from the first. As for the archaeological
[114] data, there is none as yet to date for the area except Giffor's unpublished manuscript. Nor have we the kind of ethnography that would be of help—not until ethnographers will pay greater attention to the naturalistic knowledge of the people. Nor can the matter of the Seris' cultural connections be undertaken with the present material with any degree of reliability, simply because no such material exists for the neighboring group.

However, few suggestions outside the limitations and the main object of the present analysis can be made. From the fragmentary data available I shall try to show the change in utilization of animals by the Seris. I think I can also indicate a few points in support or denial of this or that idea of the Seris' cultural connections. I can also suggest the direction of the attitudes toward animals in the Seri culture, in a sphere which normally we assign variously within the domain of religion or world view. I can also indicate some of the major changes in the Seris' exploitation of general environment. All these can be suggested only fragmentarily, as only small bricks toward a generalized structure of our knowledge of the Seri culture. To this extent the present analysis should be helpful to the future student of the Seri culture and to our general understanding of it.

Procedure

114 The field work on which this material is based has been done during the summer of 1953, June-September and again for one week in May, 1955.
[164] The second visit took place at a most inopportune
[166] time, amidst bad measles, dysentery and a flu epidemic which completely disorganized the tribe and persuaded most of them to flee Desemboque into the coastal desert.

The work was accomplished mostly in Desemboque, the Seris' largest and most permanent settlement after 1940 where most of them lived. Occasional side trips were undertaken later to Hermosillo, Estero Sargente, Campo Vivora, Tiburon and some of the other places mostly with the view of evaluating their ecological nature and for the observation and acquisition of the zoological materials not available in Desemboque. These trips had been undertaken in the company of the Seris who then also doubled up as informants.

124 During the first two weeks of my stay in Des-
[126] emboque, I did no interviewing but concentrated on the collections of zoological material, occasionally and informally asking for the name of this or that animal. After two weeks regular interviewing work was commenced, first with an aid of Mr. Leo Sandoval, Mexican, U.S.—educated school teacher, but later on entirely without an interpreter. There are sound reasons for this practice. Direct questioning allows the interrogator to evaluate the replies in their less obvious nuances, the reactions of the informant to the question, his hesitations, uncertainties and the like.

In the event of well-known animals with those colloquial Spanish name everybody, Mexican and

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Seri alike, is acquainted (Cougar, Jaguar, Whale, etc.) questioning had been done by referring to such and such beast without the use of pictures or actual specimens. This procedure had been followed for the majority of mammals, which are well enough known in the area. But otherwise, questioning had been done with actual specimens in hand, alive where possible. This was owing to the fact that response may be different to the dead specimens than to the live ones and grew out of a conviction (entirely substantiated in the course of work) that many animals, of a small variety especially, are recognized more by their distinctive behaviour pattern, flight, selection of habitat, voice, running posture, etc., than by the shape and form alone. All invertebrates, all reptiles and all but the best known and largest fish had produced the data from actual specimens, dead or alive. Finally, where neither common colloquial name nor specimens were available, I resorted to pictures. That way I obtained data for a small number of animals and for a good many birds. This method has its weakness. The line drawings in the excellent guide to the *Birds of Mexico* by Blake I used are somewhat on the "dead" side and may be good aid in bird identification to someone who also will read the text, but they often fail to be of much use to someone who rarely has seen the drawings in any book, let alone a bird guide. From the replies it was obvious that a certain amount of misidentification took place in the naming of the birds or mammals from the sketches. I took account of this and eliminated from consideration all those forms where misidentification on the part of the informant was obvious. This in itself may be a worthwhile object of study but it was not my concern at the moment.

In working with the informants I studiously avoided giving them any suggestion that I already knew what the animal was or that I had a fair idea about the general features of its natural history. This is especially important in considering the Seris' knowledge of the animal distribution, ecology and other salient features. When available, I often brought along specimens of species I knew did not occur in Desemboque which had been captured elsewhere, in the absence of the Seris. This was in order to test better their recognition of animal forms.

Altogether 10 informants had been used. Of these the bulk were questioned in 1953, some again in 1955 and that year Chico Romero, now an old man of over 70, had been also added to the roster. Chico was Kroeber's star informant in 1930 and from him came the bulk of Kroeber's original information.

The two main informants were Miguel Barnett, then aged about 45 and one of the Seris' best hunters, and Jose Juan Moreno, a fellow about 25, recognized as their best fisherman. As expected, their preoccupations and interests slanted their replies. Accordingly, Jose Juan had the best knowledge of the marine animals and Miguel of the terrestrial animals. Jose Juan aided me again with some information in 1955.

Other informants were as follows: Juan Torres, aged 40 or so; Ramon Montayo, one of the

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115 oldest Seris then alive of over 70; Ramon Cor-
[165] rales, claiming to be 37 and on the dim-witted side; Jesus Montanyo, a quiet, cooperative man of 21; Natcheo Molina, aged 35 or so, whose interest in the protestant hymnals was unfortunately far greater than in giving me the information I wanted; Jose Manuel Romero, about 37 years old on his own claim; and Jose Barnett, Miguel's son,
825 aged 14. Inclusion of young Barnett was a lucky strike because it indicated clearly differences in the natural history knowledge between the older men and the young men, later confirmed also in the incidental questioning of several young boys.
[868] Young men start out with general interest in animals of all sorts, including the small invertebrates, but as they grow up they end up with solid knowledge of economically important species and slim, forgotten knowledge of the insignficant invertebrates.

124 I made an endeavor to obtain the same sort of information from several informants in order to eliminate as far as possible aberrant answers or peculiarities. The most solid information is available for the mammals, which are, of course, well-known. Here in some cases the same kind of information had been obtained from five individuals. In other instances only two to three were available and sometimes only one. What was surprising about the information given were not the differences, which I often indicated in the text, but the amount if identical agreement on almost every single item of data between different individuals.

Since it was impossible to obtain information on all animals from the same individuals, the questioning proceeded in "blocks." By this I mean, I would question for example two individuals about the entire order of mammals (every species of them) and another two on the birds. Two other individuals then would be questioned on half of the birds and half of the mammals, while the other two on half of the reptiles and half of the fishes; still another two on half of the insects and half of the marine invertebrates, while others would yet cover all of the insects or reptiles or fishes independently. This I believe is a useful procedure. It allows to test generalized concepts of natural history for several individuals for diverse groups. It is motivated by the question of no little importance. What does so-and-so know about mammals and what does he know about birds?
[825] What are his generalized ideas of each group? It had been soon discovered that when it concerns special points, the informants were apt to have standardized notions of what the animals did, regardless of the actual situation. The less actual observational knowledge they actually had, the more frequent were pat replies. Obvious demonstration of this helped a great deal to eliminate such pat answers or to recognize them for what they were and to account for them in the final analysis.

000 Another point in the procedure is of par-
[P.5A]

121 Another point in the procedure is of far-
amount importance in this type of research. Fair
[120] general knowledge of practical field natural history can have no substitute. The investigator must have this basic knowledge, to realize the range of possibilities in the answers and identify any answers not commensurate with the actual events. This way, even without interest in the mythology, one may get on the track of a myth. Although, in
825 general, anthropologists seem to think that na-
121 tural history knowledge of the primitive folks must be ridden with the mythology and must be different than ours, my rather extensive field work persuaded me that this is not so at all. Mythology there is, if one looks for it. But the bulk of their knowledge is based on sound observation as anyone acquainted with the natural history will readily discover. One must be able to disentangle the two qualities. That this is so is well indicated in a large number of animals where the informants simply replied to queries on this or that subject in the usual *quien sabe*. And indeed, the more obscure the subject, the more likely one got that sort of an answer.

128 In the analysis of the actual material a certain schematic programme has been followed. For the sake of convenience, material has been grouped according to the major divisions of the animal kingdom. Some may object to this saying that this is just our way of classifying animals but that aboriginal classification does not follow these lines. For certain purposes, this may be true, but for my own purpose I find my procedure more convenient. Regardless of the hypothetical native mode of classification, one may form a question.
128 How do the Seri distinguish different mammals?
825 I may say also that our own groupings are not different from those of the Seri or any other tribes. Their recognition of differences among animals may be at times hazy or from our point of view erroneous. But by and large, birds to them are birds and snakes are snakes and even within the insects, without actually naming differences, they tended to group together insects according to their order. Exceptional cases, bat, whale and the like, remain exceptions just as they were to the early Western naturalists, the 16th century Gesner or Alrovandi, for example, to whom their place in the scheme of nature was based on the analogies. But this didn't prevent these men from grouping other animals much the same as we do. In the same way, the South African Bushmen may regard Mantis as a supreme diety, but this does not prevent them to say that it is also like an insect.

128 The scheme I followed turned out useful. In the end I have obtained generalized ideas on the salient features of natural history of different animal groupings which I could compare with each other. The internal evidence is most interesting, more so that in some details it differs qualitatively and quantitatively from the materials I have gathered among other tribes.

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II

OUTLINE OF SERI CULTURE

Territory

Historically the Seri territory at its greatest expansion extended from the coast of Mar del Cortez to Hermosillo and from Porto Libertad to Guayamas and included also the Tiburon Island. Ethnically, the Seris represented a collection of dialectically distinct tribes, the Guyma, Tepoca, etc., perpetually at war with each other, whose common characteristic was their culture, and who were framed in to the north by the Pima Alto and Papago, to the west by the now extinct Cochimi, to the east by the Opata and Pima Bajo and to the south by the Cahita, Mayo and the Yaqui.

But their area had fluctuated much. After the bitter and disastrous wars against the Mexicans from the late 18th century through most of the 19th, the Seris lost out and were forced by the Mexican government to settle on Tiburon. This incarceration did not last long. McGee had already in 1894 found them on the mainland and Kroeber found them equally divided between Tiburon and Kino. In 1930 when he visited, evidently they lived largely in Kino Bay. As the Mexicans pressed on Kino moving in, in ever greater numbers, and as Japanese fisheries worked the Gulf out of Desemboque attracting the fish-loving Seris, their main settlement has moved once more. About 1940 most of the Seris moved into Desemboque and at the time of my visit, almost all of them lived there while only two families made Tiburon their "permanent" camp. School and availability of the medical facilities as well as the location of the Mexican traders in Desemboque, part of whose scheme the Indians have become, attracted the Seris. Only occasionally today they roam inland or visit other areas, either owing to the hunting or fishing expeditions.

Numbers

Seri numbers fluctuated as much as their territory and had suffered immense diminution. I shall list the estimates below, indicating the source of the information:

	Authority		Source
1780	Velasco	2,000	McGee
1824	Troncoso	1,000+	"
1826	Ratio (Tiburon only)	1,000-1,500	"
1826	Hardy	3,000-4,000	"
1841	de Mofras	1,500	"
1844	....	550	"
1846	Velasco	500	"
c.1855	Encinas	500-600	"
c.1865	"	250-300	"
1894	Mashem, native	250-350	"
1930	Thomson	175	Kroeber
1934	Mex. En. Cifras	160	Ethn. Synth. Mex.
1953	Smith, Jr.	248	MS. Univ. of Ariz.
1955	Malkin	236	Malkin

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II

OUTLINE OF SERI CULTURE

161 At the moment their number should have in-
164 creased again, after a disastrous epidemic in the spring of 1955.

Biological Background

142 The Seris are somewhat atypical among the peoples of the general area in that they represent a very slender, sinewy, tall type. This is true of both men and women. This physical type in general is apt to be associated with the desert habitat and the Seris answer the requirements very well. As shall be seen, their economy also repre-
133 sents characteristic adaptation to the desert conditions of pre-agricultural people.

Economy

The Seris readily fell into the category of the pre-agricultural hunters and gatherers with one variant, dependence on the produce of the sea, whether marine turtles, fish or littoral invertebrates.

[241] Here the Seri provide another exception for the region. They are the only group that never had any agriculture. McGee has pointed out their lack of agricultural sense and this has also been mentioned by Kroeber and by incidental Mexican visitors. Of late years, some efforts have been made by the Mexican government and the American Friends' Service Committee to persuade them
[648] toward agriculture, but to no avail. The Seris
[464] occasionally hire out to the surrounding Mexican or American rancher-farmers but grow restless after a few days of cotton picking and retire, with their advanced pay lost to the employer. On the other hand, efforts to teach them related practices, well digging for example, also failed to interest them. To this day they remain much in the original pattern of economy.

262 McGee (1898:214) who had a chance to observe
114 them from the first hand and who also had access to valuable information from the outsiders gives the following figures for their diet:

land game, large and small (incl. stolen stock)	21%
waterfowl and eggs, incl. pelican	13
sea-turtles	25
fish	15
shellfish	10
cactus fruit	9
other plants	6
miscellaneous	2
total animal 84%	marine 65%

Kroeber (1930:20) questions these figures and thinks that shellfish represents greater percentage than McGee indicated. He also thinks the use of turtles had been exaggerated. He figures the dependence on the animal diet as 75% and on marine 60% but he suspects that these figures are too high for a band with ready access to countless cacti and mesquite.

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I have no idea, of course, what the diet may have been in the past since only archaeology can suggest the answer. But I am sure that there has been much change in their diet since Kroeber saw them, not in the basic pattern but in the composition. With the introduction of hook and line fishing, the percentages swung in favor of fish, while decimation of the marine turtle cut down the importance of this animal. Simultaneously, the Seris now have available manufactured or imported Mexican food items: flour, sugar, rice, potato (when no one is looking; potatoes are not supposed to be sold to them because they make *tepache* from them which makes them grossly fish in cans, coffee and tea. Dependence on the products of the desert has dwindled. Rattlesnakes, desert turtles and chuckawalla still find their way to the Seri kitchen but not too frequently. Pelican and sea gull will be eaten only when rough times beset them but are disdainfully refused at other times. My own estimates, impressions not supported by any attempt to measure their diet, are as follows:

fish	50+%
turtle	8-
Mexican import	20
desert plant	7
desert land animals incl. stock	5
shellfish	10
total marine origin	68+
total desert origin	12
imported origin	20

Another important change in the pattern is the unquestionable decrease of hunting (other than marine animals) in Seri life, as of the domestic stock stealing, the place of which has been taken in a way by the dependence on manufactured foods and items. Hunting nowadays is done rarely and only few individuals will devote some months out of the year to it. Stealing of domestic stock has ceased for practical purposes, since in the past it lead to virtual extermination of these Indians. Occasionally the Seri kill off a semi-wild burro, herds of which run about loose in the desert or they'll get leavings off one, hunted down by a Mexican trader or fishermen.

The Seris' basic tools of game procurement have changed. Bow and arrow were still much in evidence and in use in McGee's time but seem to have gone out soon after. Kroeber did not mention them and by now they are quite extinct, except as clumsy toys little boys use to play with. The throwing stick is still used on rabbits—any stick one can scrounge on a moment's notice will do for the purpose. If any traps or falls had been used we do not know of them. Accidental stones may be used much in the same way as throwing sticks. In general, various sorts of fire arms, mostly .22 and .38 caliber are owned by a good many Seri men and have replaced other weapons in the terrestrial hunt.

More important are changes in the fishing procedures. Formerly spear and detachable harpoon were their only marine weapons. Even as late as 1930, during Kroeber's visit, the Seris made no use of hook and line. But now, hook and line of

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[apparently a line of type has been omitted here-Analyst]

226 411 179 commercial origin are their main instruments of fishing. To this they added dynamite, sometimes with disastrous results to themselves, mostly as a way of securing bait. Single-pointed fish-spears which loomed so importantly in McGee's account have gone the way of the Dodo for its original purpose and transformed into iron bar lances, now used largely as weapons against rattlesnakes that men encounter in their desert roamings. However, in the forties, when the Seris spent a great deal of time getting sharks and huge rays, they killed them with these weapons.

226 411 What retain some importance are the harpoon and the two-pronged spear called "puiero." The two-pronged spear is one of their oldest weapons. The construction is much the same as when McGee visited them. The spear is used mainly to stab large-size fish, the giant *bais* or *mero* for example, after it has been brought up on the line. The harpoon is now exclusively a weapon for the turtle [225] hunt.

226 179 [157] An interesting fate met an effort to teach these Indians net fishing in 1947. They tried, ruined the nets and never took it up since. The instigators were Mexicans, the fish traders. I suspect that Seri individualism had a great deal to do with their lack of interest in net fishing which after all demands a certain amount of cooperation. With the hook and line fishing, men can have much more their own way.

501 179 648 An added "tool" of the Seris is the plank boat. The balsa which McGee still observed during his visit, had already vanished by the time Kroeber came to the Seriland and had been replaced by these boats. The boats are flat bottomed but good sized. The material was provided by the Mexican government. Boats are usually propelled by 5 hp. motors leased from the Mexicans (no Seri is rich enough to purchase [439] one) who also sell them gasoline and oil at exorbitant prices and in return buy Seris' catch of fish and sea turtle for low prices. At the time of my visits these amounted roughly to less than a peso [435] per kilo of the flayed, degutted and cleaned fish (less than 8 cents) with fluctuation up and down the scale depending on the kind of the fish, and to about 30-50 pesos for medium to large size "cahuama," the live marine turtle.

501 648 The Seri boats are also propelled by paddles and sail—this is always the case with the families who wish to stay away on Tiburon for some time. The Mexicans will not lease them their motors for such trips even if the Seri, some of them at least, have enough knowledge of the motors to repair minor stoppages—a demonstration of the fallacy [114] of McGee's idea that they are genetically unable to handle tools. In this respect, Kroeber's (1930: 25) estimate of them is closer to the truth.

462 Sexual division of labor in procuring food goes on, much the same as it had 70 and 30 years ago, with the sole exception of the imported goods. [439] Here purchases are made either by men or women or by children, depending on who at the time has the cash and what one wishes to buy.

Fishing is still done by men and so is hunting. Women still concentrate on gathering, whether of

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desert plants or littoral fishlets from tide-pools or of the shellfish. Both men and women will bring in an occasional rattler, although women are more likely to do this because they spend more time in the desert. Children of both sexes are engaged in the female occupations here, but adolescent boys already join in their fathers' hunts on land or sea.

Housing has undergone some changes. In the desert or on Tiburon the Indians construct the kind of shelter they did in the recorded past, an ocotillo frame, bent over in the middle and covered up with dried plant debris and twigs from the desert, or with the sail cloth. But in Desemboque they have more substantial houses—of wattle and adobe, with flat roofs, rectangular or square, often with corrugated tin or drift planks and other debris piled up on top, or along the walls.

In the remainder of their material culture, not much has been left from years past although one must remember that from the very beginning of recorded Serian history it has been of a most meager sort. Pelican robes, which some Seris apparently still wore in 1930 are gone for good. So are the stone tools. So is the pottery which had probably disappeared in Kroeber's time. The human hair necklace with rattlesnake rattles is also a thing of the past. The rattlesnake skin belts McGee (1898:170) described and figured are probably all gone. I havn't seen or heard of any.

But what remains much as they had been in 1894 are the bone-awls. These are made of burros' carpals and the blossoming of basketry, owing to

[P 8A]

412 the stimulus of the tourist trade, has kept this
285 tool alive. Another survival from McGee's times
301 are *Olivella* shell necklaces.

Seri Antecedants and Relationship

174 For complete lack of archaeological information, little can be deduced about Seri antecedents. Speculations can be made only on the basis of similarities of their post-historic cultures with the cultures of the surrounding tribes.

171 Individual traits between the Seri and their
174 neighbors show discordant connections. Comparative data assembled by Kroeber, Beals and Driver & Massey suggest almost equal possibilities of derivation from the Cochimí, the Gila, Pima and the Yuman tribes but favor much less connections to the south. Much is made of the basketry. Archae-
[172] ological basketry has been unearthed since the work of Kroeber and Beals was published (Massey, MS.), but it is different from the Serian. Seri basketry shows closest relationship to Pima-Papago complex (Malkin, MS.). But part of this may be not only post-historic but certainly very recent and is hardly an argument in favor of the Pima-Papago connections.

Kroeber (1930:5) thought that on the face of it, the Seri showed greatest affinity to the Cochimí on the grounds of their general development of economy—the hunting and gathering subsistence. But he also pointed out that relationship with the Cochimí may rest ultimately on the linguistic analysis if the Cochimí language can still be recorded—which is most dubious.

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III

MAMMALS

Scientific	Common Name
Antrozous pallidus	Pallid bat
Bassariscus astutus	Ringtail cat (Cacomistle)
Spilogale gracilis	Spotted skunk
Taxidea taxus	Badger
Urocyon cinereoargenteus or *Vulpes macrotis*	Grey fox or kit fox
Canis latrans	Coyote
Felis concolor	Mountain Lion.
Felis onca	Jaguar
Felis eyra	Jaguarundi
Zalophus californianus	California sea lion
Dipodomys sp.?	Kangaroo rat
Erethizon dorsatum	Porcupine
Lepus californicus	Blacktailed rabbit
Sylvilagus audubonii	Desert cottontail
Pecari angulatus	Peccary
Odocoileus hemionus	Mule Deer
Ovis canadensis	Bighorn
Eschrichtius glaucus	California grey whale
Orcinus rectipinna	Killer whale
Tursiops gillii	Bottlenosed dolphin

Identification here has been obtained largely with an aid of field guides or by mentioning a colloquial local name of the mammal in Spanish. All these were later checked by Dr. Robert T. Orr of the California Academy of Sciences. While there is no doubt of the identity of the most common forms, such as peccary or sea-lion, there are also several of the identifications which can't be certain either because of inadequate line drawings or lack of specimens, either alive at a distance or even parts of them. In this somewhat dubious category are Ringtail cat, Jaguarundi and the Killer whale.

On the other hand, there is no doubt as to the identity of the following: Pacific pale bat, badger, bighorn, coyote, kangaroo rat, blacktail rabbit, cottontail jackrabbit, deer and dolphin. Live, free or captive individuals, or part of them, such as horns, hide or skulls were available.

Economic Uses

Food: Only 6 out of 21 species for which information is available are used today as food. Three more were mentioned as "eaten in the past" and one more as "possibly eaten in the past." Since the oldest of the informants who provided this data, Miguel Barnett, is a man in his fifties (and it is he who talked most often about the animals "eaten in the past but not now") we may surmise that these were part of the Seri diet 25-45 years ago, that is between 1910-1930.

Five species are important as a supplementary source of food: the bighorn, the deer, peccary and both species of rabbits. Some, the deer especially, are considered to be delicacies. The sixth species is the badger but it appears neither important nor frequently killed. I saw one badger captured by José Juan Moreno. The animal was tied to the pole, and kept as a pet, fed on fish, snake and

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III

MAMMALS

water for a week until it escaped. There was no intent to do away with it and serve it up for dinner later on.

The 3 species reported as eaten in the past are kangaroo rat, sea lion and the ringtail cat or cácomistle. Of these the little rodent had been supposedly "boiled in hot water with salt" which method of preparation may indicate that it happens quite recently yet. It is quite possible that in times of famine this animal is still used. The sea lion has been reported as "eaten once a long time ago. All of it. But not now. Its hide was once sold also but now it isn't used at all." This conflicts with McGee's statement (McGee, 189:202) that there was a taboo on eating sea lions among the Seris and there is no way to reconcile the information.

McGee's report may be as truthful as are the uncertain and hazy comments of the present day Indians.

On the other hand, the cougar belongs to a very dubious category, unless we can rely on Miguel Barnett's memory. All 4 of the younger informants emphatically deny that the cougar has ever been hunted for meat. But Miguel Barnett claimed that this has been done in the past, although he could not tell how long ago. Kroeber says nothing about this animal and this makes it difficult to date the events. At the time of Kroeber's visit, Miguel was at least 25 years old and the cougar could have been hunted either then or earlier. But today the Seris do not eat the flesh of the big cat and their abhorrence of it has been confirmed by the Mexicans to whom I talked about the subject, and who relish cougars' meat. This apparent distaste for the *el tigre's* flesh may well be a recent development quite unconnected with the lack of weapons. McGee (1894: *loc. cit.*) casually mentions that the Seris hunt both cougars and the jaguars but cites no evidence for it. Yet in his time Seris' almost only weapons were the bow and arrow and a lance which today has been replaced by firearms. I am unable to explain this contradictory behaviour.

Finally, there is the Ringtail cat or cácomistle. Although this beast has been reported as part of the diet, the information isn't too reliable. I had no way of checking whether this was the animal the Indians had in mind. Their description of it seemed to answer some other unspecified animal and their answers were confused. The fact is that the Ringtail cat does occur in the Seri territory and they are surely familiar with it.

Of the remaining 11 species none were ever mentioned by any of the informants as having been ever eaten. Their denial of eating the coyotes were most vehement. Coyote figures out probably

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Coyote figures out probably

as an important and perhaps disreputable figure in the mythology although nothing but scraps and bits of information suggest this. It is possible that there is actually a taboo on eating this animal or perhaps it is so disreputable that eating its flesh would put a gourmant in an inferior position.

How important is the Seri mammalian diet is hard to tell. It certainly looms more heavily during the winter, because in the cool season hunting is easier than during the heat of the summer and in fact this is when most of it is done by the ardent hunters. Too, winter subjects the Seris to greater hazards and is apt to increase their dependence on the desert resources over that during the summer, even if these resources are scantier at that time.

To all of these animals one should add the semi-wild burros running about the extensive Mexican rancherias. The Indians poach on them frequently using their fire arms, usually the .22 caliber rifles. In any case, it appears that during the summer when the field work was carried out, the mammalian diet figures quite lightly on the Seri table.

Food preparation: Very little is done in the preparation of the mammalian meat. All that I could observe was the boiling of it in hot water spiced with salt. The Indians were saying that in order to have the meat of a peccary, deer or bighorn ready to eat one must boil it 2-3 hours. The same procedure is followed with the meat of the burros. In contrast to this, as shall be seen later, fish are boiled as well as roasted while the turtles are also dried and salted. Preparation of meat is done by women, certainly at least in the encampments when they are present.

Food preferences: Some of the Seri food preferences have already been mentioned. At the top of the list as the desirables are the peccary, the deer, the bighorn and the blacktail jackrabbit; at the bottom is the badger, whose meat "is not much good." There is also preference by sex. Females of both the bighorn and peccary are preferred over the males "because they do not have the bad odor like the males." This sort of favoritism also occurs among the Mexicans. However, the Indians did not elaborate beyond this point.

Other economic uses: Apart from meat, hides are also used. The hides of the deer, bighorn and peccary had been used for sleeping mats although this matter has been expressed in the past tense. Miguel Barnett also suggested that the bighorn hides had been used for clothing by the Indians in the past—but he neglected to say how long ago. During Kroeber's stays, no Seris went about in the animal or bird (pelican) skins but earlier when McGee visited them they went about in these simple garments. Judging then by Miguel's memory, the use of the bighorn hide for clothing must be pushed back to the period of World War I or even earlier.[1]

[1] Miguel Barnett indicated that the "fur" of the bighorn had once been worn for the cold season "but not now."

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237 On the other hand, the hides of all of these three animals had been traded off to the Mexicans, [439] but this again was now discarded. This would [182] merely indicate the fluctuation of collapse of the demand from the outside rather than any intrinsic change in the Seri values.

Incidental use of the horns of the bighorn had been denied by all of the younger informants although admitted by Miguel Barnett. However, as [416] I observed, the horns of this sheep are sometimes used as drinking cups. Several of them were [181] lying around in the usual disorderly way of the Seris, now and then picked up for drinking and then again discarded. But the use of them struck me as most casual.

224 *Hunting:* Hunting takes a variety of forms and includes a variety of weapons, from .22 caliber and .30/.30 caliber rifles to spear, stone and throwing stick. Bighorn and deer are followed on foot but without dogs, probably because without dogs they may be easier to surprise. This hunt takes place in daytime. But the peccary is hunted with both the spear and the rifle and with a pack [231] of dogs, and only by the adult men. There is an [885] emphasis on the "adult," this surely owing to the certain amount of danger connected with the chase of the peccaries. The weapons of the chase dwindle to the throwing stick or a stone when it comes to the jackrabbit. Badgers, I was told, are also killed with the same weapons. But formerly, the informants said, bow and arrow was much instrumental in hunting the smaller beasts.

* 825 Other animals, according to the Seris, are not [224] hunted now, nor had they been in the past. Justification for this ranged from the usual "because it isn't done" to the more specific reasons. The skunk is "neither hunted nor eaten because it [225] stinks." The whale is considered "too big to kill" while the killer whale is "too fierce." The harmless *tonita* (dolphin)[1] was reported somewhat hazily as "sometimes killed" but the comments were inconclusive and were denied by other informants.

[224] Two other species had been reported as hunted in the past but not at the present time. The Ringtail cat was supposedly hunted with the slings while the sea lion was hunted down "with a rifle [225] or rock but not with the harpoon because of its great strength, it would break the harpoon." This, however, was "perhaps 25 years ago." Why the sea lion is no longer pursued is uncertain, unless there is again a lack of demand from the outside while the Serian economy is so much centered on fishing.

231 *Pets:* How many species of animals are kept as pets on and off is difficult to say. Like most hunting and gathering groups the Seris are fond of pets but their interest in them depends entirely on an accidental capture. Among the wild mammals of the region there are few that could be captured and tamed easily. The badger which I mentioned already was the only mammal I saw

[237] [362] [1] I have seen bones of beached whales used for stools and also the skull of the *tonita* used as a chair. But it must be remembered that these animals got stranded on the beach. They were not deliberately hunted down.

½ [Lie - deer, bighorn and peccary - Analyst]

231 which was kept around as a pet and it was interesting that the Indians who held it captive took considerable pains to look after it. This I noticed also with such few pet birds as they had. On the contrary, the large number of dogs which these Indians keep are left much to their own devices and are rarely fed. They are treated with lordly indifference and are treated as one Indian said to me "as you treat the dogs" which meant with a kick, stone and fist and forced to feed on the offal left on beaches. Yet, no Seri [273] would ever think of deliberately killing a dog, unless drunk. Although there is obviously little use for the dogs, each family keeps many of them. Sometimes as many as a dozen of these miserable curs live in the compound of one Serian family.

Taxonomy and Recognition

925 From the responses given, the Seri tend to split the mammals into two groups, the mammals proper and the group of animals which to them seem neither mammals nor fish. Evidently the possession of fur is of paramount importance here because it had been mentioned as a mammalian feature for several of the species. The Seri then put the *Cetacea* in a group of their own perhaps on these grounds. To be sure, the designation is somewhat hazy. The whale, the informants said, "is not fish nor mammal." The killer whale has also been referred to by them as a "whale-like animal." Finally, the dolphin one of the informants said was "like a shark. It lays eggs like a shark." But another informant thought it was "a mammal-like whale" although his response was obviously uncertain. That the presence of fur must be the main distinguishing feature is obvious in that they have no doubt about the mammalian position of the sea lion and that, while uncertain about the position of the bat, they are inclined to classify it with the mammals. As one informant put it "it can be of smilar kind to the coyote. It is not a bird because it has fur. Fur is not what the birds have."

Otherwise they are fairly good at the recognition of those individual species that are well known to them or that are frequently encountered in the area. The jaguar, called also *el tigre*, is known from hearsay only, owing to its extreme rarity in the immediate area of Desemboque. Porcupine is well recognized due to its peculiar features. But it must be rare and José Juan Moreno who saw it only once thought it was a "mammal." But he had no difficulty in recognizing a picture of it or associating the Spaniah name *porcospino* with it. A somewhat moot point is the cácomistle. This animal evidently is not well known and, from the report, had been surely confused with some other creature. Finally, while the jaguarundi is surely found in the area it is also little known. Having to work with pic- [124] tures I cannot in any way verify the Seri responses, especially since the picture used was not of the best kind for the identification purposes. A Mexican trader had a multilated skin of one, but he sold it to a visitor before I had time to query the informants about it.

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Sex Differentiation

* 825 Only a few kinds of differences do the Seris recognize between the male and the female mammals. Size differences have been indicated for 16 species out of 21. Of these, in nine species male are supposedly larger than the females (sea lion, cougar, killer whale, mule deer, fox, kangaroo rat, peccary, badger, bighorn). In four species the sexes are equal in size (porcupine, grey whale, ringtail cat and the desert cottontail) and in two the answer was "I do not know." These last two are the porcupine and the skunk, both of which are rare in the Serian territory and it is possible that the rarity of the animal prevents the formation of any decisive idea on the subject.

No data had been obtained for the remaining species but from the general drift of the replies, the general trend would probably be similar to that for the rest of the animals. This trend is obvious. To the Seris, the male mammal is larger than the female and in most instances this is true. But there also is a basic conviction that this should be so. In the *Cetacea* actually the females are larger than the males in varying degrees, but even here the Indians asserted that the dolphin's and the killer whale's male is larger than the female, and in the grey whale the sexes are supposedly equal in size. Since these animals are [225] not hunted and only in the rare opportunity can the Seris examine specimens in the beached individuals the unknown situation then is covered by the blanket idea—the males are larger than the females.

In coloration no sexual differences were indicated at all. In such instances where the answer had been provided it has been pointed out that the colors of both sexes were identical. On the other hand, in some of the land mammals presence of "dos suevos," that is testicles in the males, has been indicated, in the coyote and fox in that number. Presence of a penis in the male is considered another structural difference in some of the animals, among them, the kangaroo rat.

In several instances size and weight differences have been indicated quite specifically. For the three most important economic species, the peccary, the deer and the bighorn, the figures in weight and size for both sexes came remarkably close to the actual dimensions of these animals. Reasons for the Seris' ability to estimate the weight of an animal will be explained later on.

Few other structural differences were given. The Seri recognize very well that the male deer bears horns for at least part of the year and that the female is horn-less. They also indicated the differences in the size and the shape of the bighorn horns, those of the male being large and curved, those of the females being small and almost straight.

No temperamental differences were indicated between the male and the female mammals, with the exception of the deer. Here the Seris say the males are very belligerent and engage in combat duals in November, the mating season as some of the Indians suggested. But they also said that the bucks rarely fought during the rest of the year.

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Age

*925 Some information concerning the hypothetical length of life of the mammals has been obtained for the majority of the species. The results show conclusively that the Seris have little knowledge of the subject and indeed no way to estimate what it is. In more than half of the species they simply didn't know what the answer was. In several others, their uncertainty was only too clear from the hesitant answers. I had an impression that here we deal mostly with guesswork, not based on any observation or even perhaps any forethought. Such replies as were given also varied greatly from species to species and also within the species depending on the particular informant. The mule deer may live then a year and a half or ten or fifteen years depending on the answers to the question; the peccary is said to live a year only, but the jaguar twelve and the whale and the dolphin, according to those at least who ventured to say something on the subject—25 years.

These answers at once show two things. First, there is little knowledge of the subject and second, there is a certain gradation of longevity proportional to the size of the animal. On the other hand, these answers are in no way correlated with the ecology and they can't be. The mammals are present throughout the year without regard to the seasonal changes, and with the exception of the bat, the whale and perhaps also the killer whale, they are not migratory.

Size and Weight

A contrast to the nebulousness of the Seri knowledge of the age of mammals is their responses to the questions of weight and size. They showed none of the hesitancy and indecisiveness. Some of the detailed differences concerning sexes (on this subject) have already been mentioned. As a matter of fact, the Seri gave readily exact figures for all but two species of mammals, the exceptions being the jaguar and the bat. Jaguars are so rarely seen by them that some of the informants had an exaggerated notion about the *el tigre* giving quite extra-ordinary figures for its size—quite certainly from hearsay. Of the remaining 19 species all but two were described in the figures both for the weight and for the size which are very close to the actual size or weight of the animal. The two exceptions are killer whale and grey whale. Here the informants guessed and in the case of the California grey whale gave the following figures: 35 meters long, four meters high and weight four tons. The size, of course, is very much more than the actual size, the weight quite a bit less—both obviously subject to guessing. But it is interesting that the dolphin has been correctly described in both respects, which only indicates the opportunity to take close look and lift the animal.

Seris' ability to estimate correctly the weight of an animal is not surprising but it must be a fairly recent development, ever since scales for weighing fish were introduced. The Seris do

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*825 get paid for the fish or for the turtles at so much per kilo and they have the fish sealed for them on the spot by the Mexican fish traders. Some, in fact, developed a pretty good idea of the weights and have learned to make close estimates of the weight of the catch.

Their frequent attempts to guess the age of the animals even when they do not know it may well be in part due to their gambling talents. The [525] Seris are inveterate gamblers and it is possible that this habit enters into many other facts of their lives, not only at the games.

Development

According to the Seri, all mammals are born alive. On this subject there has been a remarkable uniformity of opinion among all of my informants. The only uncertain information concerns the porcupine where the informant who recognized this animal was unable to say whether it laid egg or whether it came forth alive. But as indicated, the porcupine is not well known to them and also does not resemble any of the familiar animals overly much. The size of the litter varied and in general corresponded pretty much to the actual situation in nature. Large litters, the Seris think, are typical of the coyote, the figure of 7-8 having been given by all informants which would indicate that this has been derived from actual observation. The coyote in this respect has been often referred to as "one like the dog." The kangaroo rat is next in line with six the most frequently mentioned number. Most other animals have a pair of offspring or only one. Bat, the Indians said, had two (which is just that). The killer whale is said to have only one. Interesting variation has been indicated in the bighorn. Here the ideas on the subject varied from 2-3 to one at a time. But one of the informants suggested that the female bighorn has only one young for the first time but at the next pregnancy delivers two young.

In general, the size of the litter has been indicated for the vast majority of species.[1]

The Seris are also aware of the limited or nonexistent parental function of the male. In at least half of the species the young, they indicated, "do not know the father." But the female parental functions have always been indicated, the suckling and the maternal care as well. On the subject of the aquatic mammals other than the sea lion there seems to be a certain amount of confusion—for here at least suckling has not been indicated or in the grey whale it has been indicated that there is not suckling by the female of the young.

Mating season was always mentioned but the informants could not always tell when mating took place. Further discussion of this subject will take place under the heading of *Seasonality*. Pairing apparently is not the mammalian feature, the Seri believe, as already indicated by their idea of the parental care. They elaborated more on the subject when discussing the sea lions, indicat-

[1]Jaguar is said to have "many," "maybe eight"—reasons already explained.

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* 825 ing that mating among these beasts took place indiscriminately and "promiscuously" as we might say.

Food Habits

The Seri have a pretty good idea of the food habits of the mammals. Consistent information has been provided for all but two species, the bat and the porcupine. The 18 species for which they gave unconflicting or full information are at once divided into the carnivores and the herbivores. Indeed, all of the carnivores they mentioned as feeding on the animal diet, usually of live animals. The two exceptions are interesting. None of the three informants questioned about the porcupine could tell what the animal ate and this may well be explained by its rarity in the area. As for the bat, the responses were altogether conflicting. Some informants thought it fed on the fruit of the *pithaya* cactus, others that it fed on the insects taken on the wing. As shall be seen later, elements of the folklore enter into the Seri knowledge of the bats and the conflicting reports may well be part of the mythology.

Among the carnivores, gradation can be established from Seri responses. The larger forms prey on larger animals, the smaller forms on the smaller. Cougar and jaguar will eat the whole range of animals but at the apex of their diet there will be a bighorn and a mule deer coming down in size to rabbit, ending with the desert tortoise which apparently seems favored by both big cats. Both also, the Seri think, will take on the peccary, although here the informants' reports were conflicting; some said these cats will attack the wild pig, some said they wouldn't "because it is too fierce and they are afraid." But below the size of the turtle the cats apparently will eat nothing. The informants invariably denied that they would take a frog, a lizard or a snake.

Scaling down in size, the smaller carnivores, the coyote, the badger and the fox, will eat smaller animals. The Indians think that these will eat all sorts of prey of smaller size, usually ranging from jackrabbit to lizard. The coyote tops the list and on occasion makes off with an adult badger. It is interesting that the coyote, the Seri say, scavenges the beaches eating up shore animals, catching fish, crabs and the like. Both the coyote and the fox are said to feed also on carrion, the carcasses of deer or burros they find in the desert.

All four species of marine mammals for which the information has been obtained, the dolphin killer whale, grey whale and the sea lion, are described as fish feeders without any particular preference as to the size. In connection with this there is also an interesting note given to me by José Juan Moreno. It concerns the killer whale and if true shows that the Seris may have had an opportunity to observe one of the peculiar habits of this animal — attacking and killing larger whales. He said that "19 years ago when a small boy, I observed a pack of these animals (killer whales?), 40 or 50 of them perhaps, attacking and killing a large whale." Such events are in-

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*825 frequent, especially in the Gulf of California where the killer whales are not too common, but José Juan Moreno may have witnessed one of those rare occurances.

The herbivores are uniformly described as feeding on the plants, a variety of cacti, palo fierro, cholla, pasture and so forth, and also on occasion seeds (on which they say the kangaroo rat feeds). There is never any deviation in the Seri knowledge from this idea, as far as I can tell. It is interesting that this category of exclusively herbivorous animals does include the peccary although the *javalia* is well known for its interest in the flesh of small animals such as snakes, lizards or any other that it can capture.

Few animals are considered free from predation—except by men, of course. Five head this list: the cougar, the jaguar, the skunk, the coyote and the dolphin, the first two, the Seris say, owing to the great size and strength, the skunk owing to its stench, while the last owing to great speed, and for the coyote also owing great wariness. The skunk, the Indians say, can effectively defend itself "because it can shoot the stench for 150-200 meters"[1] but they do not know where this shooting comes from. Also the peccary is relatively free from enemies, except the big cats. It has a fierce and nasty temper. This is also attributed to the badger who can supposedly hold his own against larger animals, even the coyote.

On the other hand, the herbivores are subject to constant attacks, the smaller they are the more enemies they have. The deer and the bighorn are taken, according to the Seris, only by the big cats and by the coyote when young. The young of these two species are supposedly taken also by an eagle, about whose size the Seris exaggerate immensely, and very young deer they think may be occasionally killed by the raven. But the smaller herbivores have a great many enemies. Both lagomorphs add hawks, crows and owls to the list, and, when young, also vipers. The kangaroo rat is subject to predation from every imaginable creature including larger snakes, sidewinders and smaller birds of prey but, significantly, is free from the attacks of larger mammals "because it is too small to see."

Finally, there is one more interesting point with the Seris' ideas of the mammalian food habits. Not one, they think, is poisonous to other beasts.

DISTRIBUTION

a) Geographical

The enclosed chart[2] shows the distribution of the mammals in the Seri environment as conceived by the Seris. On the whole, they have quite good knowledge of the geographical distribution of the mammals. The reliability of their knowledge is, of course, relative to their familiarity with the particular localities and the frequency of their visits to them. It must also be remembered that the rarity and abundance of animals are also impor-

[1] This is a gross exaggeration. Dr. Orr tells me that the maximum accurate distance for the skunk missile is 20 feet.

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[2] [see category 116, #61 - Analyst.]

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* 825 tant factors in their knowledge. At the one pole we have the kangaroo rat, an animal so abundant that it has been indicated for all 23 localities; at the other extreme is the jaguarundi, as already indicated, little known to them, for which no distributional data is available.

The chart shows at once that the informants thought certain animals completely absent from the islands in the Gulf. Thus the cougar, bighorn, deer, badger and cottontail were indicated as absent in the islands. This indeed is the case with most of these certainly, with the possible exception of the cottontail. Its presence or absence in the islands should be verified, especially in that the informants mention the jackrabbit as present in all three of the Tiburon localities although absent from the remaining islands. A number of other animals had been indicated as being absent from Tiburon. Here belong the peccary, porcupine and the sea lion. In the latter case, what the Seris must have in mind is the absence of the rookeries and "permanent settlements" of the sea lions. Individual specimens undoubtedly do show up on the Tiburon coast.

In several instances, the Seris indicated reasons for the presence or absence of a given animal in a locality, usually in the form of comments concerning the ecological features and preferences of the species. In several cases, it may be seen at once how the particular locality is related to the essential habitat features. The cougar and the bighorn are both found in the mountainous, craggy areas, hence the Seris cited Desemboque mountains and Buena Vista for the cougar, and the "big mountains" near Porto Kino, Punto Tepopa and Desemboque mountains for the bighorn. And likewise, all of the localities indicated for the sea lion are those that have rocky beaches.[5]

Local preferences within the sea were indicated also for all three of the marine *Cetacea*. This took the form of a blanket statement that they prefer deeper waters and for the grey whale also preference for more distant waters of the area, those surrounding the islands of San Lorenzo and Angel de la Guarda.

b) Seasonal

Although the mammals are less subject to the seasonal restrictions than other animals, the Seris have observed certain seasonality, at least for some of the species. Information is available for 12 species of mammals and in that number for six no differences in the seasonal occurance are known to the Seris, while preference for the cold or hot season has been indicated for three species each. Preference for the cold or hot season has been usually connected with the migratory habits. This has been indicated especially for the killer

[5] The coyotes, the informants thought, were more numerous on Tiburon and especially at Tecomate than on the mainland. This may be owing to the fact that these animals are intensively hunted by the Mexicans and the Americans on the mainland and near Desemboque because of the danger they represent to the domestic stock. As for Tecomate—there is a long standing Seri encampment there and a water hole—which two factors may attract the coyotes.

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*825 whale and the bat, both of which are said to be about more during the hot season. The killer whale, in fact, is supposed to be absent altogether during the cold season. On the other hand, the peccary and the bighorn are said to be more common during the cold season and the big sheep, the Indians say, "goes into the mountains of Eastern Sonora during the hot season."

For a few species, seasonal differences cannot be included in this type of analysis. The grey whale, the informants said, "comes here (to Desemboque) and Tiburon in May and disappears into the Gulf in late June." As for the porcupine, the sightings of these animals were few and the informants actually made a point of explaining that the beasts had been seen so few times that they couldn't tell in which season it is more common. José Juan Moreno summarized the situation best when he told me that "I have seen one two years ago near Kino in November. And before I saw it near Desemboque in March and before yet, a very long time ago near Tepopa in March."

So much for the gross seasonal occurances.

There are a few additional observations which indicate recognition of the seasonal differences in behaviour, although the observations here are sporadic and very few. Questioned about the time of the year when the mating of the mammals took [124] place, the overwhelming responses were "quien sabe?" In fact, only for two species, the sea lion and the deer, the Indians indicated this sort of information. Of the sea lion, the informants said "it gathers for mating in October. Everyone mates with everyone," but they gave no indication as to the time of birth of the young. More information they had about the deer where not only the mating season has been indicated but also a number of other phases of the life history of this ungulate, intimately connected with the season. Here they gave a whole sequence of events as follows: "Mating takes place in August. Young are born in May following this. In November the males fight. They (the males) drop horns in February or March, grow them in May."

The only other reference to the seasonality the informants gave was for the jackrabbit. Here, the young, they say, are born in May. Thus in the two only instances where the birth of the young has been indicated, this takes place during the summer. It is likely that if more information is available it'll tend in that direction.

It will be seen also that the two other species for which the Seri indicated a connection between the season and the life history were large species: the deer and the sea lion. It will also be seen that the animal about which they seem to know most is actually one that is perhaps of greatest economic importance and which is also common. Bighorn runs perhaps second in this respect, but it occurs only in certain limited areas and is far more elusive.

Finally, there is very little recognition of the seasonal changes in colorations in the mammals. In fact, not a single instance of such changes has been suggested to me. The replies varied from denials to the traditional "quien sabe?"

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* 825

Migrations

Here some suggestions of knowledge of the migrations of mammals turned up. There are many degrees of this, from periodical complete disappearance (killer whale and grey whale) to local migrations such as has been indicated for the bighorn.

All told, some form of migration has been indicated for half a dozen species: the bat, peccary, bighorn and all of the Cetaceans. Also some informants thought that "the coyote moves around in the summer more than in winter" although without any indication of the mass changes of the locality or greater frequency of appearance.

Daily Rhythm

In general the Seris' ideas of this subject correspond very closely to the actual situation in nature. As a rule, they'll accurately describe mammals as either diurnal or nocturnal or both, for the majority of the mammals, from the list, are equally active both in day-time and at night. Out of 16 species reported only two (peccary and badger) are described as entirely diurnal, four (ringtail cat, skunk, kangaroo rat and bat) as entirely nocturnal while the majority are active both during the day and during the night. The coyote is said to be especially active late at night.

What is much more striking to the Seri is the slow-down of the mammalian activity at midday. In almost all cases, and, in fact, in all of the terrestrial animals this, they think, is the case. This clear cut idea covering all of the mammals is surely related to the actual situation in nature and also to the peculiar desert environment. The Seri think that most of the mammals seek refuge from the heat of the sun sleeping in the shade, except for some of the burrowing forms such as the rabbit or the cottontail which sit out the heat of the day in their burrows. Another form of adaptation to the heat is, the Seri say, the bath that the coyotes take on especially hot days.

Habitat

Mammals are relatively little restricted to a particular kind of environment. This is even more true of the desert, perhaps, than of any other kind of environment. And, as expected, the Seri on the whole make little distinction in this field. I have been able to extract only incidental bits of information indicating their knowledge of the ecological preferences. For the purely aquatic forms, such few preferences as had been mentioned have already been discussed earlier. Here included are such matters as grey whale's preference for the deeper waters in the "channel" in the Gulf and the dolphin's predilection for the off-shore waters during the hot season and the deeper waters during the cold season.

For the terrestrial or semi-terrestrial animals, information is also scanty, so much so that it is worthwhile to list all these cases. Accordingly, the sea lion is always found in places where there

*Additional seasonal variant: the dolphin supposedly comes nearer shores during the hot season but stays out in deeper waters in the colder season. Its young are said to be born in March.

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* 825 are rocks but never on sand, and this, of course, explains its absence or presence in various localities as the Indians were prompt to point out. The kangaroo rat is said to live in the desert, sand or rock, but is never found on the sea beach —the later statement is particularly true. Coyote is supposed to be especially fond of the marine beaches where the Seris asserted "it eats dead marine animals and live crabs, or even catches fish if he can." Finally, the favorite resting place of the bats are said to be "caves" (cave shelter) and cracks in rocks but "not human houses." In fact, the informants denied that the bats ever lived in the human habitations. While this is surely true of their own houses it is not so when it comes to the Mexican habitations. I had numerous bats living under the roof of my own household. The probable explanation for this will be taken up later on.

In any event, there are only a few cases showing ecological preferences of the mammals and except for the obvious distinctions between the terrestrial and the marine animals—they do not form any particular pattern, at least from the available data.

Toxic Animals

The only mammal which some of the Seri consider toxic is the bat. But even here the ideas of the informants are conflicting.

The differences seem largely between the older and the younger informants. Miguel Barnett believes that the bat is venomous, that the venom is located in the tongue and that it can be also dangerous by spitting the venom out, which saliva having landed on the flesh may cause disintegration of it. He also thinks that there is no cure for this bat affliction. Not so with the younger informants who thought that bats could bite all right with their teeth when captured but otherwise were perfectly harmless. It may be also added that the only other mammal considered on certain occasions as toxic by the Seri is the coyote—when rabid. Here again they have no cure but they do know that a cure for the rabies can be obtained in the Hermosillo hospital.

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The belief concerning supposed toxicity of the bat seems to be associated with the older Seri concepts, so to speak. The younger men, those who know how to read and write Spanish and who had been around, are apt to disregard the idea. But even so, the belief in the toxicity of the bat is one of the few such notions held about the animals without any supporting evidence from nature.

Miscellaneous Attitudes Toward Mammals

The Seri have, in general, very little fear of mammals. Such as they do have concerns mostly large animals which can become dangerous under certain circumstances. Both the cougar and jaguar are considered dangerous to men and quite capable of killing them. But they are not apt to attack unless in defense of the young. Also the coyote, the badger, sea lion, as well as the bat, are considered dangerous owing to the bite they can inflict. The badger is especially combative.

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*825 the Seri think, but the captive badger held for a week certainly did not fit this description. Finally, the peccary is held in great respect by the Seris owing to its combativness, nastiness and aggressiveness while in the pack. For this reason peccary hunting is done only by the adults, the Seris [224] said.

Other than this and with the exception of the bat, the Seri do not particularly fear mammals. Their attitudes may be best described as being very much matter of fact and pragmatic.

The situation is slightly different with the bat. The older ones surround it with a great deal of [177] folklore, possibly related to or originated from

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#825 the Mexican, since it includes such well known
[177] European beliefs as making deliberate efforts
to get itself trapped in the hair and biting with
the tongue. The younger ones discarded these
ideas. But the residue of them or, at any rate, an
afterfeeling remains. The bats are somehow re-
garded with disgust. It is this attitude which
may well account for their denials that it lives
in the human homes and it may represent a con-
scious or unconscious effort to cover up a disrep-
[124] utable fact (to them). There had been some other
occasions where the informants denied, for ex-
ample, eating certain animals or else the knowl-
edge of certain matters which were both later ex-
posed by the sequence of events.

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IV

BIRDS

Scientific	Common Name
136 *Pelecanus erythrorhynchos*	White pelican
Pelecanus occidentalis	Brown pelican
Phalacrocorax	Cormorant
Fregata magnificens	Frigate bird Man-O'War Bird
Casmerodius albus	American egret or
Leucophoyx thula	Snowy egret
Botaurus lentiginosus	American bittern
Plegadis chihi	White-faced ibis
?	Duck, species?
Cathartes aura	Turkey vulture
Coragyps atratus	Black vulture
Aquila chrysaetos	Golden eagle
Haliaetus leucocephalus	Bald eagle
Pandion haliaetus	Osprey
Odontophorinae	Quail
Numenius sp.	Curlew
Scolopacidae	Sandpiper
Catoptrophorus semipalmatus	Willet
Larus occidentalis	Western gull
Larus heermanni	Heermann gull
Columbidae	Dove
Geococcyx californianus	Roadrunner
Tyto alba	Barn owl
Trochilidae	Hummingbird
Centurus uropygialis	Gila woodpecker most likely
Hirundinae	Swallow
Corvus corax	Raven

136 128 Identifications had been mine from sightings and from Blake's *Birds of Mexico* and a few other field manuals and then were checked by Dr. R. T. Orr. In many cases, especially where sightings were from geat distances or actual specimens were not available, the exact identification is uncertain and this fact should be indicated here. In several instances here are several possibilities and these are as follows:

Cormorant—Here there are three possibilities according to Dr. Orr:
1. Double crested cormorant (*Ph. auritus albociliatus*)
2. Mexican cormorant (*Ph. Olivaceus mexicanus*)
3. Pelagic cormorant (*Ph. Pelagicus resplendens*)

Egret—Two possibilities:
1. American egret (*Casmerodius albus*)
2. Snowy egret (*Leucophoz thula*)

Duck—Identification impossible since no specimens were seen. It is supposedly black in color. Undoubtedly it is a duck, but which sp?

Eagle—Probably either Golden eagle or the Bald eagle. The size militates against any other bird of prey.

Quail—No identification beyond the family possible

Curlew—Dr. Orr suggests that it is either the Long Billed Curlew (*Numenius americanus sp?*) or Hudsonian Curlew (*N. hudsonicus*)

Sand-piper—One of many possible species in the area

Sea-gull—Most gulls I have seen are Heermanns gulls (*Larus heermanni*) but some were the Western gull (*L. occidentalis*). These are the two common summer species. But there are also others and, according to Dr. Orr, also there are several others wintering in the region. So, Seris' generalized comments on the seagulls may well apply to several species.

Dove—Seri information applies to several species common in the area.

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IV

BIRDS

136 128 Woodpecker—There are several species in the area but Gila woodpecker (*Centrurus uropygialis*) is certainly one of them.

Hummingbird—Unspecified species, one of several occurring in the area according to Dr. Orr.

Economic Uses

262 Such use as had been made of the birds is largely in the form of an addition to the diet. Reading McGee, one gets the impression that the importance of the birds in the Seri diet, in contrast to the marine animals of all description, has declined greatly. We do know that in the past various birds and, most especially, the seagulls and the pelicans represented a significant item. But today out of the basic list of 24 species, only six has been reported as eaten and all, with an exception of the duck, in the past tense. The duck * [825] evidently is the only bird which the Seri consider really fit to eat and yet, even here, there is temporary avoidance. Moreno told me that this bird "we eat only when we visit the island (Isla Patos). [223] [252] But we do not eat it in September because it is too lean. We like it in December when it is fat. We then kill it at night with stones. It is roasted."[7]

All other birds were reported as eaten only in the past and this has been expressed more or less as follows: sea-gull eaten a few years ago, cormorant 8-10 years ago, pelicans 30-35 years ago. This would mean that the pelicans had been discarded as food, at least according to the official Seri version, in the early twenties, before Kroeber's visit. But the Seri disclaimers on the subject 183 of the bird diet are not entirely correct and re- 262 flect less the total rejection and more only low esteem in which these birds are held. For I have seen myself the sea-gull and the pelican eaten on few occasions when times were tough, and the [261] food supply was non-existent, owing to the choppy * [825] and windy seas. The Seris caught in the act of cooking the meagre flesh of the pelican or the seagull were obviously apologetic.

262 It is interesting that some of the birds present in the area, the quail or the woodpeckers, are not eaten although these birds figure prominently in the diet of some of the other groups. It may well be that the Seris consider them too small to bother.

[252] As far as I could find out, eggs of only two species of birds, the sea-gull and the heron, are collected, boiled and eaten. But the eggs of the

[7] His statement requires some explanation. There is no taboo on eating duck but the bird does not occur in Desemboque or any other place known to the Seris, with [136] the exception of Isla Patos. Here these birds winter, arriving in September and arrive worn out and lean, to * [825] recoup the fat, a few months later. The Seri unfamiliarity with their eggs is another indication that the birds come to Isla Patos only for the winter.

262 pelicans are not; they are regarded as "bad food," unfit for eating. No further explanation has been offered here and it might be that the same sort of prejudice works here as in the case of the adult birds. Otherwise, reasons for rejecting eggs for food are probably a matter of mere customary attitude without any particular rationalization. In a few instances, the dove being one example, the eggs were said to have been rejected because they were "too small to bother."

237 291 Other economic uses made of the birds are extremely few. At one time, the pelican skins were used for clothing and, in fact, in McGee's time they represented, perhaps, the most important item of clothing for the Seris, having been worn in shape of wrap-around robes, usually covering the lower part of the body. Moreno reported these robes as still in use "30 years ago or more," in the early twenties, but in Kroeber's time these [177] robes were already discarded in favor of the European garment. The Seri, nevertheless, still preserve skins of these birds—the white pelican, [439] larger of the two, always had been favored here—and occasionally sell them to the visitors. Another 237 use made of the feather is in the arrows. The 411 cormorants, heron and the owls had been especially mentioned in this connection. But it is certain that they were not the only birds so exploited and also that this particular use went out of business along with the disappearance of the bow and arrow as the principal weapons. The use of feather for arrows may well continue into the present in a somewhat degraded form. The Seri boys play a [857] great deal with bows and arrows, shooting them at any moving available target. They'll pick up any available feathers.

Pets

231 Somewhat desultory use is made of birds as pets. During my visit I have seen doves and an egret kept in houses as pets by the adults and fed quite frequently. The number and variety of birds which may become pets in households may well * 825 be larger. Pelicans and sea-gulls are less fortunate. They are often shot at and over-powered by 857 the boys. But instead of taking them to the households, the boys stage games, shooting them at point blank from bows and arrows and pea- shooters. These somewhat bloody executions take place almost every day. The pattern is the same. Only the subject of the game changes, depending on the available species of bird or animal.

Hunting

223 It is hard to speak of hunting in connection with birds, because there is so little effort made to go out and get them. The main exception is the duck and this, as I already mentioned, is hunted on Isla Patos and clobbered at night with sticks and stones in great numbers. This is one of the few instances in which the Seris will go out of their way to get a bird. Sea-gulls and cormorants and, more rarely, pelicans are dispatched by pea- [411] shooter (stone), sticks, small clubs and, on occasion, with a shot from a .22 caliber rifle.

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*825

Taxonomy

There is no question in the Seri mind as to what makes a bird. Feather and wings and ability to fly are their main criteria. As pointed out before, a certain amount of confusion arose over the bat, but even here, presence of fur has been considered by some of the Indians as an indication that the animal is not quite a bird, while by some of the others, that it is surely a mammal. Egg laying is also an indication of membership in the Aves if other requirements are also fulfilled. It appears, however, that the Seris show less tendency to group together various birds than they do to group various mammals.

Sexing

Not much can be said about the Seris' ability to distinguish sexes in birds. The tendency was to make no disinctions. Moreno and Montanyo, for example, specifically indicated that in all birds sexes are alike in size and color, but other informants specified that this was the case in 10 species, namely white pelican, brown pelican, egret, duck, turkey vulture, osprey, seagull, barn owl, humming-bird, and raven. For the rest, they simply provided no information or simply said "I don't know."

In general, this is certainly true. In most birds the sexes are so much alike that a professional ornithologist cannot tell them apart without dissections. But in a few species there are observable differences. In the birds of prey, the females are usually quite larger, and in the humming-bird, sexual dimorphism in color is considerable, the males being much brighter. But none of these latter birds are of any importance in the Seri economy, hence no great surprise that they ignore sex differences in the few birds in favor of the generally held concept of similarity of the sexes.

Age

The Seri, judging from the available data, have no idea at all about the probable age of birds.

Size and Weight

The size of the birds, the informants estimated quite correctly with only one exception. They know little about the eagle which they hardly ever see. What they know is hearsay, on their own admission. All they could say was that "it is much larger than any bird and could lift a man or a burro." This idea, of course, does not require commentary.

With estimates of the weight of birds, it is another matter. The Seris are pretty handy with such things from their continuous experience with weighing fish and marine turtles. But here, dealing with birds, they largely follow the rule of size. The larger the bird, the heavier it is supposed to be. This, of course, does not always follow. Hence, they estimated the weight of the white pelican at eight kg. which is a gross exaggeration. The pelican, as a matter of fact, is an extraordinarily light bird.

For interspecific differences in some instances, they suggested different sizes between closely re-

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*825 lated species; white pelican outright they describe as quite larger than the brown pelican and the turkey vulture slightly larger than the black vulture.

Development and Nesting

It is obvious from the outset that the Seri knowledge of the development of birds lags considerably behind this same phase of biology of the mammals. For the majority of birds about which they had been questioned, they were unable to provide any information at all. Only for 11 species they gave evidence of detailed knowledge of this subject. These are:

White pelican	Dove
Brown pelican	Barn owl
Cormorant	Humming-bird
Egret	Woodpecker
Sea-gull	Raven
Osprey	

Reasons for this difference may well be the fact that the birds' nesting habits make them more elusive than the mammals are. The birds are smaller and they are economically unimportant. The inclusion in the above listed group of all of the even remotely important economic species is quite suggestive.

Nesting

Nesting information has been provided for all of the 11 species from the above list. In contrast to the totally negative responses for each of the remaining 23 species, the information the Seris have is quite detailed. Unquestionably, this data is based on the actual observation: the nests are described in detail as to size and shape and location and even such matters as "careless arrangement of sticks" are noted. The location of the habitat of the nest and the habitat itself are frequently observed. Woodpeckers' nests, the informants pointed out, are found "only in the holes in the sahuaro" and one of them explained that this is the reason why the nests are not found along the shores of Infernillo. The cacti are absent there. Both the barn owl and the raven are credited with the choice of "caves in the mountains" for their nesting, and the Seri pointed out that "the barn owl does not inhabit the sahuaro holes like the woodpecker." In many instances, it had been pointed out that the bird nests only in certain places. Although I tried to indicate this in the chart of the bird distribution, it is worthwhile to go over their replies in detail because several show a great deal of observational acuity which confirms remarkably well to the actual situation.

Thus both pelicans are said to have "nests on rocks near the beach." The brown pelican apparently is getting rarer or his nesting grounds are disturbed. The informants denied its nesting grounds in several locations at Desemboque, including the suggestion that this is often owing to the lack of rock. "At present," they say, "this pelican nests only on Isla Raza but formerly has been also found on Patos." The cormorant likewise has no nest in the vicinity of Desemboque and is limited to the coast of Baja, California, and Angel de la Guarda. The egret, the informants observed

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* 825 unmistakenly, nests in the mangroves of the Estero Sargente. Finally, the seagull is supposed to nest only on San Esteban, Isla Raza and Isla Patos which is not surprising when we consider the Seris' interest in the sea-gull eggs and the relentless persecution to which the adults are subjected.

Eggs

Along with some knowledge of the nesting habits, the Seris seem to have fairly detailed knowledge of the birds' eggs. Undoubtedly the prowling habits of the Seri boys help the matter. In any case, they were able to give a fairly detailed account of the number of eggs laid by each of the 11 species discussed above and of the size and color of the eggs. The number varied from species to species, from four (raven, hummingbird) to 8-9 (pelicans). On the whole, the size given increased with the size of the bird, as one might expect, but not always proportionately. This suggests another evidence for actual observation of these matters. The humming-bird egg has been described as unusually large in proportion to the size of an adult bird which is quite so.

[857]

The time of the deposition of the eggs has been usually indicated as March or April. A nondescript comment "in hot season" has been given for the cormorant, but evidently less is known about this bird and it is said to nest, as already pointed out, on the distant coast of Baja California. The only exception to the rule seems to be the barn owl. Here November has been indicated for the egg laying activity.

Development of the Young

Not much information concerning the nestlings has been obtained and such as there is concerns the time of their emergence. The standard idea on the subject seems to be roughly this: the young emerge one month, more or less, after the eggs are laid, and fly out of the nest a month later yet. Thus the time of emergence has been given in almost always either April or May, and the time of departure in May or June. The only exception is the barn owl where these three events, the Seris think, take place in November, December and January respectivelv.

From this it is plain that the Seris once more actually observed these matters and that according to them, almost all birds reproduce in the spring after the passing of the cold season but before the onset of the intolerable heat of the Gulf region.

Feeding Habits

Information concerning food habits of the birds is available for all but nine of the species listed in this section. With the sole exception of the humming-bird, dove and the woodpecker, all of the remaining 12 species are considered carnivorous, either predatory or carrion feeders or both. This is not surprising; the shore or marine birds are the most conspicuous and noticeable components of the bird fauna of the region. A majority of the species are said to be fish feeders, although some, like

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#825 the sea-gull, the informants thought (and correctly), feed on both live and dead fish. The non-marine carnivorous birds, such as the barn owl or the raven, the Seri say, feed on a variety of the terrestrial animals, ranging from lizards, snakes and small rodents to cotton-tails. The eagle is credited with the predation on the burros, although this, unlike the previous cases, is based entirely on hearsay. Of the scavengers, both vultures are said to belong to this category and also, on occasion, the raven and the sea-gull.

The only three herbivorous birds in the list, the Seris thought, were the dove, the humming-bird and the woodpecker. Both the woodpecker and the dove are supposed to feed on the seeds of the pithaya, while the humming-bird feeds on the syrup from flowers.

All these observations show considerable degree of acuity and, in fact, are quite correct, with the exception of the woodpecker. It is interesting that for the nine species for which no data is available, the informants didn't even make an effort to guess what their food might be.

In trying to explain the feeding habits of birds, on occasion the informants would indicate reasons for avoidances; in such cases, size of the would-be prey was usually the factor. This, for example, has been said of the osprey. This bird, they say, feeds on "sierra, lisa, corvina and sardinera, but not on the baya which is too large to lift."

The Seri do not believe that birds are subject to much predation from either each other or other animals. Questioned about this, they usually replied that they didn't know the answer and in the only instance where some indication of predation has been made, it concerned the cormorant which they somewhat feebly suggested "may be preyed on by the coyote." The suggestion I shall make should be taken only as far as it applies to the material on hand. Unfortunately I have no data on the birds of prey other than the fish-eating osprey, the scavenging vultures, the small barn owl and the little known eagle. It might be that some predation on birds would have been indicated if I had data on any of the fairly numerous hawks. On the other hand, in no case has it been indicated that *gavilanes* were enemies of any of the birds for which I have information. The likelihood is that, the Seri think, flight is good protection for most birds whether they so indicated or not.

DISTRIBUTION

a) Geographical

Seri knowledge of the bird distribution rests to a great extent on their familiarity with the various regional localities, plus the frequency of their visits to them. With this in mind, it is possible to analyze a good deal of their knowledge.

It will be seen at once from the appended chart that only three species of birds, both vultures and the sea-gull, they believe to be ubiquitous and found in all of the 23 localities. In fact, in all these instances the informants thought that "the bird is

[P.20 A] ½ [see category 116 - pp 61-62. - Analysis.]

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* 825 found everywhere." All three of these had been seen in the coastal as well as the inland localities, which undoubtedly is true. Of the remainder, the most widespread and common apparently are the brown pelican and the cormorant which occur in all of the coastal localities but in none of the inland localities. Next in line are the osprey, the dove and the raven, which are found in a majority of the localities. But here, as in the preceding case, absence from a particular locality is associated with the ecological and geographical features, whether or not this has been always specified by the informants.

At the other end of the spectrum are the localized birds, much restricted in their distribution. Thus ducks are said to be found only on Isla Patos, over winter, the ibis in Estero Sargente and somewhat dubiously at Porto Kino. Of the tow pelicans, the brown, a smaller one, is omnipresent while the larger white is supposed to be found only at Tasane, Kino and Estero Sargente.

In some cases the informants indicated that birds nested only in certain localities. Both pelicans are said to nest only on Isla Tasane while the sea-gull only on the islands, Raza, Patos and San Esteban.

b) Seasonal Distribution and Migration

The data on adult birds' seasonality is very incomplete and available for only 12 species; of these nine, the Seri say, are equally commonly found in both the hot and the cold season; and three are supposed to be present only during the cold season. The three latter are the duck, the black vulture and the white pelican. In all cases it had been indicated when they come in and when they move out and this can be tabulated below:

Species	month of arrival	month of departure
white pelican	October	March
duck	September	March
black vulture	October	May

At least this meagre evidence suggests that the Seri associate the cold season with the presence of certain birds and the onset of the warm season with their departure. The direction of migrations for the duck and the turkey vulture has not been indicated but the white pelican is said to go south in October and north in March. The only other bird mentioned in conjunction with the migrations was the swallow which is said to "pass through Desemboque in great number in May. But where they go?" This then is a total Seri knowledge of the bird migrations, at least as applied to the present data and it certainly isn't much.

The birds which defintely had been indicated as the area's permanent residents are cormorant, osprey, barn owl, egret, brown pelican, woodpicker, humming-bird, dove and sea-gull.

So much for the adult birds. More seasonality has been indicated for the various developmental stages as already indicated. And here all of these evidently take place overwhelmingly with the onset of the hot season, in the Seri view at least, which, of course, does parallel the actual development in nature.

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Daily Rhythm

*825 Here again data are most fragmentary and available only for seven species. But what information the Seris gave overwhelmingly suggests good orientation in such matters. Six of the species were correctly described as diurnal and only one, the barn owl, as nocturnal. This is with a qualification for the brown pelican. Of it Moreno, who [115] provided the bulk of the ornithological information, said "it flies and feeds in daytime, but when it is hungry and when food is short it'll then feed at night as well."

Moreno's explanation is somewhat difficult to understand. How does he know that the pelican is hungrier at certain times than at others? But it is true that the brown pelicans occasionally float and fish at night.

But one must consider the limitations of the data. Out of numerous species of owls present in the region, we have information only for one. Nor is there any for the nightjars.

The usual explanation for the birds' inactivity at night is sleep. In few instances the place of rest has been specified. Accordingly, the dove sleeps on trees and the duck ashore.

Habitat Ecology

Some of birds' preferences for particular spots have already been indicated in discussing the nesting habits.

Habitat preferences had been indicated for the vast majority of the species under discussion, in connection with various activities. Almost all shore or marine birds were thus indicated. This knowledge included the curlew and the willet and the sand-piper, all of which were described as "walking along the shore," although nothing else had been said about them. The bittern, the ibis and the egret on the other hand, the Seris think, have a distinct liking for muddy locations and the mangroves—all of which the informants pointedly explained. This is why, they said, they favored [137] Estero Sargente, an area of evil smelling muddy mangroves where they find food and nesting grounds

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*825 grounds. On the other hand, sometimes absence of a bird, the ibis for example, from Desemboque has been explained by lack of suitable mud.

Another sort of explanation for the presence or absence of a bird in a locality has been the presence or absence of fresh water. This was true of the dove which is said to be found near fresh water (for example in the Desemboque arroyo) which it drinks. This observation is not entirely amiss. Regardless of how far from fresh water the dove will nest, it does like to congregate near it. Still another explanation has been offered for the woodpecker and the humming-bird and the osprey. The humming-bird, they say, is rare where there are no trees. (This in view of its nesting habits and its feeding habits is not surprising.) The woodpecker, they think, must have a sahuaro to live in (quite correct) and this is why it is absent from the region of Infernillo where there are no sahuaros. The osprey, they say, also likes to live more in areas where there are sahuaros because it nests on the dry ones.

Parental Function

Here such meagre data as are available show that according to the informants rearing of the young among the birds is entirely the female's preoccupation and that the male has nothing to do with it. They repeatedly emphasized that "young do not know the father" or that "they are fed only by the mother." This hardly reflects the *825 situation in nature, at least for a great many 562 birds and especially for the song birds. But there 182 is in the Seris, evidently, a streak of belief in the uselessness and uncooperativeness of the male in such matters. This belief is met up with time and again in many groups of animals, and probably represents a conventional attitude, not tempered by observational evidence.

Dangerous Birds

*825 With the exception of the eagle, no bird is considered dangerous and the eagle, who is supposed to be able to lift and attack a man, earns its reputation only on hearsay.

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V

REPTILES AND AMPHIBIANS

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Scientific	Common Name
Lizards	
Phrynosoma platyrhinos goodei	Horned toad
Callisaurus draconoides inusitatus	Gridiron-tailed lizard
Cryptaphytus wislizeni	Common leopard lizard
Cnemidophorus sacki	Spotted race runner
Cnemidophorus tigris aethiops	Race runner
Sauromalus obesus townsendi	Northern chuckawalla
Sauromalus varius	Chuckawalla
Dipsosaurus dorsalis sonoriensis	Northern crested lizard
Heloderma suspectum	Gila monster
Uta ornata linearis	Uta
Uta stansburiana steinegeri	Striped ground uta
Sceloporus magister	Fence lizard
Coleonyx variegatus sonoriensis	Variegated ground gecko
Xantusia vigilis	Desert night lizard
Snakes	
Crotalus cerastes cercobombus	Side winder
Crotalus atrox	Western diamondback
Micruroides euryxanthus	Coral snake
Coluber flagellum frenatus *	Red racer
Coluber flagellum piceus *	Black whipsnake
Salvadora hexalespis deserticola	Patch nose snake
Trimorphodon lambda	Lyre snake
Turtles	
Gopherus agassiz	Agassiz' desert tortoise
Sp?	Loggerhead
Sp?	
Amphibians	
Bufo alvarius	Desert toad

*These two are color varieties of the same species.

Reptile Identification

136
128

With the exception of the marine turtles, all species had been identified from preserved specimens either by myself or by Dr. R. Zweifel, Dr. C. M. Bogert, and Mrs. Hecht from the American Museum of Natural History, who also checked my identifications. There is then no question of dubious identification. But circumstantial evidence
* 825 suggests that belief in the mildness of the coral
136 snake bite, to themselves at least, may well be influenced by the proliferation of the false coral snakes in the area. Mrs. Hecht lists the following of these as likely to occur in the area:

Lampropeltis nelsoni
Lampropeltis pyromelana
Rhinocheilus lecontei antoni
Chionactis occipitalis organica
Chionactis occipitalis palarostris
Chilomeniscus cinctus

These snakes are very similar to the coral snakes and may well fool most observers, unless they know the differences in the color pattern. Unfortunately, I have not found any of them; there-

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V

REPTILES AND AMPHIBIANS

136 fore it was impossible to check the Seris' ability
* [825] to distinguish between these.

As for the marine turtles, there are several possible species in the area. There is no mistake about the loggerhead. I have seen one carapace and bones taken at Campo Vivora, while with the Seris. The others could be any two of the several species common in the Gulf.

Economic Uses

* 825 In 1956 I published data concerning economic
114 exploitation of the reptiles by the Seris which need correction. Eleven species out of 25 had been reported as used economically. Additional work done in 1955 and after the completion of the MS. indicated a much higher percentage: 17 species out of 26 are used. Thus the percentage increases from 44% to 65%. The percentage of the species actually used will probably rise with additional
[262] field work because some of the informants are dis-
inclined to admit eating certain animals or will
[124] simply say, "these had been eaten in the past but not now." However, close inspection and observation often contradict these statements.

262 The list of species reported as eaten is as follows:

Turtles and tortoises: all species
Snakes: both racers, patch nosed snake and both rattlesnakes
Lizards: both chuckawallas, Gila monster, race runner, northern crested lizard

This listing shows how much dependent are the Seris on the desert habitat for food. Even today, with all the available ready-made manufactured
[198] food or imported food from the *tienda*, they gather evidently most of the common reptiles to increase their menu.

Of the species in the list, only two, both smaller species of sea turtles, figure as really important items. McGee believed that here was by far the most important part of the Seri menu, with the marine birds running second.* Now, the importance of the sea turtles has declined, no doubt through a variety of outside influences. I doubt (on the basis of my observation) if altogether it comes to more than 10% of their total diet. The turtles had been replaced as number one food by
[177] the fish (with the introduction of hook and line fishing). But anther factor evidently is the depletion of the turtle population. The third species, the huge loggerhead, is so rare that during the entire
[225] summer of 1953, only one of them had been harpooned and that at Camp Vivora away from Desemboque. The two smaller species have also become very rare and hardly ever show up near the village. They can be taken on more distant expedi-

*Eggs of the turtles are considered a delicacy, especially of the smaller of the two. The Seris say that the loggerhead has been eaten once but now almost never, because it became so rare.

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262 tions to San Esteban or San Lorenzo. The turtles now are as much a food as a "cash crop." While [225] the Seris are camped at Desemboque, most of the turtle catch is sold alive to the Mexican fish trad- [439] ers who are headquartered in Nogales and Hermosillo and take the catch along with the fishes to the markets in these towns and sometimes even as far as Phoenix and Tucson.

Of the remainder, the most frequent items that show up on the Seri table are probably the rattlesnakes and the desert tortoises. The rattlers are eaten with relish—only the heads and the tails are discarded as poisonous. The larger chuckawalla is considered a particular delicacy but is rarely caught because it lives in a somewhat distant region. The remainder of the animals listed as "eaten" are collected only incidentially.

It is probable that very few species are really left alone and not taken as food at various times, especially when famine distress overruns the camp. As far as I could determine, only three species are rejected as altogether unfit to eat: the gecko, the night lizard and the toad. All three are believed to be highly toxic "in flesh and blood" although real harm could be caused only by the toad. Besides, the two lizards are really tiny creatures and would make little difference when a survival is at stake.

825 Few reptilians are ever used as anything but food. The sea turtles in a way are at certain times, [439] that is, when they are sold for hard cash to the Mexican traders, whether live or sliced and salted. 237 The only other creature I ever heard about as being used for anything at all was the coral snake. At least one informant suggested that in the past its hide has been used for hat decoration. But coral snakes are scarce and this again could be only incidental. It may be that the rattlesnake hide, especially of the large specimens of the western [439] diamondback, is sold occasionally to a passing visitor but this again is a rare occurance.

Food Preparation

252 Food preparation of the majority of animals in this group is no different than of most other ani- [263] mals. They are simply skinned, tossed into a pot of boiling water and cooked, occasionally with salt as the only ingredient. Larger individuals, notably turtles, will be quartered and then boiled or roasted on a grill. The chuckawalla and the desert tortoise are said to be fried, but whether this is the usual procedure I can't say, because only a few of them had been brought into camp in my presence. The tail of the Gila monster supposedly had been fried in oil "in the past."

Food Preferences and Taboos

262 It is obvious that some creatures in this group are considered better food than others. The chuckawalla is especially favored. When several were brought in from San Esteban, I couldn't persuade the owners to part with them, although I offered a huge price (for local conditions). The captors took

*Another use in the past—snake-skin belt worn. It is illustrated by McGee (1898:170, Fig. 7).

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262 them to their shelter and held them there for several days before they and their families finally ate them up. The turtles are also a well-liked item.

As already indicated in some instances there exists preference for a particular part of an animal. Of the Gila monster only the fat tail was said to have been eaten, and of both rattlers, the head and the tail are discarded on the grounds
* [325] that they contain toxin. Finally the toad and the gecko and *Xanthusia* are all rejected as completely venomous.

178 It is also evident that changes in the Seri
262 taste have occured in the course of the past several decades. Some animals are on their way out as food, and here we have the Gila monster, the whipcoach, the red racer and smaller lizards. In several cases, and this includes the Gila monster, the responses indicated that the animal had been eaten in the past. I also observed that on the sly, the Seris would eat them when other food was in short order. But they are reluctant to admit this and often altogether denied it.

Hunting

224 Most reptiles are captured by hand or else killed
[225] with a stick, stone or pea-shooter. Except for the turtles, the Seris will not make special expeditions. But it is certain that if they find themselves on any of the islands near the shores of Baja California they will go ashore deliberately in search of the chuckawalla.

225 The turtles are another matter. Here now, just as in the past, special expeditions are made in order to get them. These expeditions take place
[501] nowadays in the usual flat-bottomed plank boats, either motor or oar propelled. The hunt takes place only during unusually quiet and dark nights, when the Gulf is smooth and calm and there is neither wind nor ripple. With the slightest disturbance,
[354] turtle fishing is impossible. It is all done with the
[411] torch lights or Coleman lanterns. The principal and only weapon is the harpoon, identical with that described and illustrated by McGee. The turtles are then harpooned, dragged into the boat and either left alive, when the hunters have a sale of live ones in mind, or pounded to death with a
[251] club or oar, quartered and then either consumed on the spot or else dried and salted."

[224] While the collecting of the smaller animals us-
[462] ually falls to the children or women, turtle hunting is men's job. Men, too, usually get the chuckawalla because they usually visit more distant islands.

Pets

231 None of the reptiles are pets in a real sense. Those few that might be kept are only held until the day when they are butchered and eaten. It is motivated more by the wish to preserve fresh food than by any affection for the animal. The turtles, the tortoises and the chuckawalla belong here. Occasionally a Seri boy will string a lizard, a *Scel-*

"The loggerhead is hunted in the daytime because, owing to its great strength, night hunt would be too dangerous. Two harpoons are always used on it, while for the smaller species, one harpoon usually suffices.

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231 *oporus* or a *Cnemidophorus*, but even so, the life of the captive is short. Sooner or later it'll be slaughtered like any other beast played with by the Indian boy.

Taxonomy

* 825 In general the Seri recognize the major groupings of this class. Thus we have the lizards, snakes, turtles, sea turtles and toads. All these do correspond to the natural groupings with the sole exception of the horned toad. For some reason it is not classed together with the lizards but is supposed to be an entirely different animal. Some of the informants tend to keep the "vivoras," that is the rattlers, separate from the snakes but others think they are just a different kind of snake.

In distinguishing between one species and another, the Seris showed remarkable acuity. Out of 26 species listed here, they confused only two, both relatively small and similar looking Utas.[11] On the other hand, they were able to associate correctly specimens of the different sizes and often also colors of the same species. I frequently mixed up large number of specimens without telling them anything about them and yet invariably the informants were able to sort them out correctly.

124 * 825

It is also interesting that, when I showed to Barnett and Moreno a specimen of a small toad I brought along pickled from Needles, California, they both identified it with the *B. alvarious*, the local toad.

* 825 Moreno also told me that there are two species of *Dipsosaurus* on San Esteban and the one I had was the smaller of the two. I am unable to check this information and it may be that what he had in mind was the larger chuckawalla. I have obtained information about the chuckawalla from other informants but not from him. There are no larger lizards in the area other than the chuckawalla and the Gila monster; therefore this suspicion is justified.

Sexing

All reptiles or amphibians, according to the Seri, do have the male and the female sex and in most cases highly specific traits in the two sexes of the same species were indicated. Actually sex differentiating data had been obtained for 23 out of 26 species. The three species for which no data on this are available were spotted race runner, western diamondback and the red racer. For the first two it may be an oversight on my part in the course of questioning. As for the red racer, the answer simply was "I don't know" or "I can't tell." It is possible that other individuals could have provided a more specific answer.

In general a multitude of criteria to differentiate the sex in the animals were employed; size, color pattern, presence or absence of specific structures all were used either individually or together. For 16 species the informants indicated either differences in size or similarity in size;

[11] Gecko and *Xanthusia* go under identical Seri name, but, they say, they are different forms. However, they do separate the two racers, black and red variety, even if taxonomists today lump them as color forms of the same species.

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* 825 for the six remaining species no size data had been obtained but the sexes are differentiated there in other ways.

The criteria of size may be best tabulated as follow:

male larger	sexes equal	female larger
Callisaurus	Night lizard	Northern crested lizard
Race runner	Gecko	Sea-turtle
Leopard lizard	Gila monster	Side-winder
Northern chuckawalla	Fence lizard	
Chuckawalla	Loggerhead turtle	
Patch nose snake	Coral snake	
Desert tortoise*	Desert tortoise*	

*Conflicting reports from different informants.

It is difficult to see the generalized pattern here because in each of the above categories are representatives of the major groupings. Perhaps the only suggestion one gets is a tendency to rely on the color and pattern in distinguishing sexes in snakes, rather than the size.

When the size differences were indicated, it was usually expressed in terms of one of the sexes being larger. Sometimes, as in the case of the leopard lizard, indications of the actual differences in size were given.

The color is only one of the differences mentioned here. Yet, in nine species, the informants indicated that both sexes were alike in color:

Sea-turtle (smaller sp.)
Tortoise
Coral snake
Northern crested lizard
Fence lizard
Gila monster
Race runner
Northern chuckawalla
Chuckawalla

In few instances specific differences were indicated. The males of the black whipsnake and the *Salvadora* (patch nosed snake) are much darker than the females, the Seris say, while dark spots on the ventral side of the males are supposed to occur also in the side-winder and in the horned toad, in the latter on the femora. Information for the lyre snake is indecisive but there is a suggestion that the same sort of criterion had been employed in distinguishing sexes there. The only other color distinction the Seris make is the grid-iron-tailed lizard. Here the male has blue color underneath.

All this suggests that darker coloration in the male over the entire body or of the ventral side only is, in the Seri mind, somehow associated with the snakes rather than with the lizards. The *Phrynosoma*, after all, is not a lizard to them. As for the *Callisaurus*, the presence of the blue color is so clear that it requires no explanation.

Finally, few structural differences were employed by the informants in telling the sexes apart. Presence or absence of the femoral ridges on the ventral side of the femora has been employed in dinstinguishing the sexes in eight species of reptiles, all of them lizards. These are:

Gecko
Desert night lizard
Leopard lizard
Northern crested lizard
Race runner
Northern chuckawalla
Uta (two species)

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* 825 In the northern chuckawalla, the female is supposed to have lesser ridges than does the male but this is an exception. In all other cases, the sole possessor of this characteristic is the male. This, of course, is not so in nature, but it shows that certain structures are supposed to indicate male sex. It is also clear that this particular trait is associated with the lizards and in a way represents a kind of taxonomic character the Seri tend to associate with the male lizards.

The only other trait employed exclusively refers to the toad. Here the male is supposed to have "dos huevos," two eggs, outside, the same feature the Seris associate with the male of the mammals.

It is interesting that no structural differences were suggested for the side-winder.

Age

The age of reptiles and amphibians is really a great mystery to the Seri. Although they have given some sort of answer for 19 species in the list and for 16 they suggested definite length of life for the animal (for the other three they didn't know), no reliable replies suggesting anything else than the individual idiosyncracies of the informants could be established. The informants showed a distinct tendency to provide pat answers for all sorts of creatures. This tendency appears to be associated with the age. The younger informants usually gave brief prospective age of various species; the older ones gave longer age. Thus, Moreno, for example, usually gave hypothetical age of larger species as say 5-6 years while Chico Romero or Ramon Montanyo for the same species gave 70 or 80 years respectively. It is interesting that the two last men are close to the age indicated for the animals.

The only general tendency that could be established is a gradient of relationship between the size and longevity of the animal. The larger the beast, the longer it lives.

Seasonality to some extent enters here. Thus two of the informants said of the side-winder that "perhaps it dies with the cold season" although others thought it lived a long time. Similar suggestions had been made for a couple of species of lizards. It is clear that absence of such small creatures during the cold season must suggest to the Seri their early demise.

In one case, a definite manner of establishing age of an animal has been suggested. In the western diamondback and the side-winder, the age, the Seris think, can be established by counting the rattles on the tail. This belief is widespread among the Mexicans and it may well be that it represents an increment from the influence of the Spanish-Mexican culture.

[177]

Size and Weight

Seris' ideas of the size of reptiles is remarkably accurate. Time after time they made very correct estimates of the size which the animal can reach. They expressed this as a rule with a hand motion indicating the size of the animal. The accuracy is not surprising, because they see these animals

[804]

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*825 innumerable times at close quarters. The only exception was the loggerhead turtle. The size of this giant reptile had been given at the maximum as five meters and it is a gross exaggeration. But here again the factor of frequency of sightings enters into the picture. As pointed out earlier, this turtle became quite scarce in the upper part of the Gulf, so much so that it became a legend among the Seri.

Less astute are they in the estimates of the hypothetical weight of an animal and where detailed responses were given, it was almost invariably for a well-known and economically important species. In fact, I can find answers only for the marine turtles (all three), the tortoise and the chuckawalla. These five are the largest reptiles in the Seri environment. Chuckawalla's weight had been given with only slight exaggeration but, for some reason, all three species of marine turtles were subject of exaggeration and the giant loggerhead more so than the two smaller fellows. This is more surprising considering that the Seri do weigh these animals while selling them to the Mexican traders.

[439]

Development

The Seri consider the majority of the reptiles oviparous. But there are exceptions. The sidewinder, the toad and the horned toad, they think, are viviparous. This, of course, is true of the sidewinder which carries well developed young before birth. But it is not of the other two. Why the numerous *Phrynosoma* should be considered viviparous is not clear. It is true that some of the species of horned toads give birth to live progeny. But the species in question happens to be oviparous. As for the toad, here the Seris say "it has no eggs and young are born alive." They must proceed from an argument that they've never seen toads' eggs, which is easy to understand. Open permanent waters are almost non-existent in their country and the toads' eggs, inconspicuous as they are, may remain unnoticed. Since no eggs were seen, the logical conclusion for them is to believe that the animal must be born alive.

Outside these four there are four other questionable species. For the Gila monster and the spotted race runner, the informants couldn't tell whether the animal came out of eggs or was born alive, and for the leopard lizard and the fence lizard, there were conflicting reports. The data suggests that the dubious cases are usually small or little known and rare lizards. The exception is the *Phrynosoma*. But *Phrynosoma* is somewhat atypical in this context. The Seris believe that it does not represent the final stage of an animal but that it does develop into some other kind of creature, though I had been unable to find out just what it was. It was also indicated that *Phrynosoma* is not a lizard but a creature of its own kind.

For the majority of species the numbers of delivered eggs had been given as 1-6 with 4-6 being the most frequent figure which actually does correspond to the natural situation. But some species are considered to be more prolific. The tor-

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* 825 toise, they say, lays eight eggs, the chuckawallas (both species) a dozen or a little more, northern crested lizard 12-20. Greatest numbers are attributed to the marine turtles. The lesser species, they say, will deposit 60-70 eggs, the loggerhead from 60-300.

Knowledge of the time of when the eggs are laid is more limited. The data are available for fewer species. The month of May has been given as the time of egg laying for both species of chuckawalla, both lesser marine turtles, the tortoise and the northern crested lizard. Sometimes also location of the egg nest has been given or the manner in which this is done. The marine turtles and the loggerhead, they say, go to the beach at night and there bury their eggs. A few other species will bury their eggs, although on the dry and high land, among them the red racer.

Only in two cases were the Seris able to indicate the time of the mating season. These were the larger chuckawalla, which they say mates in May and lays eggs in June, and the lesser marine turtles, which they say mate in June.

In connection with the development, the Seris clearly see the limited parental function in the reptilian world. Only rarely have they indicated that the adults would look after the eggs or after the progeny, and in each instance it was a female. This has been cited by the informants for the following species: chuckawalla, race runner, gridiron-tailed lizard, both species of uta and side-winder. We can see then that almost all of these are lizards. It is apparent that they arrive at this idea by observing the adult female with the freshly delivered eggs or tiny young immediately after delivery.

Food

The majority of the reptiles and amphibians, according to the answers of the informants, are carnivorous. Only seven species are described by them as herbivorous, and, of these, one, they think, also partakes of flesh. The six species described as entirely herbivorous are all of the turtles, both species of chuckawallas and the northern crested lizard. Of these, the marine turtles, the Seri say, feed on the sea weeds, while the tortoise feeds on the various sorts of desert plants. They emphatically denied that any of these ever feeds on flesh. A similar diet is ascribed to both chuckwallas. Finally, *Dipsosaurus* is supposed to feed on the foliage of Palo fierro. Actually, the diet of this lizard consists largely of insects of various sorts, and, on occasion also, of its own kind, smaller specimens or smaller lizards of other species. What may have given the Indians an idea that it is feeding on the foliage of Palo fierro is the fact that it often climbs this bush.

Confusion arises only in the case of the leopard lizard (*Callisaurus*). Some informants claimed that it feeds on other lizards, another that it does not but feeds on the fruit of certain trees, while one of the informants thought it fed on flesh and and on the fruit of the sahuaro as well. Actually,

*825 this lizard is a well-known cannibal and smaller lizards make up a very large proportion of its diet.

But if the Seri missed on the type of diet of two species out of seven, which they ascribed to the herbivorous category, they didn't on the remainder of the animals. Here the diet is in fact entirely carnivorous and they indicated so. The sort of animals eaten was largely associated with the size of the beast. Small snakes, coral snake for example, and all of the remaining lizards and the toad were said to be insect feeders and the insects on which these fed were variously described as "insects, spiders, ants, beetles (usually referring to the darkling beetles *Eleodes*), moths, flies" and so on. The Gila monster, they said, also feeds on the beetles (*Eleodes?*). Actually, the coral snake feeds mainly on other smaller snakes and on small lizards, in the grown up stage at least. As for the larger snakes, the racers and rattlers, the informants suggested larger animals, such as large lizards, small hare, jackrabbits, mice, kangaroo rats, as well as larger insects and beetles. It is interesting to note here that the red racer is supposed to overpower the rabbits by choking them to death. This is somewhat an exaggeration because the snakes may use a "loop" of the body to hold up the prey, but it does not use the fatal squeeze.

From the above data it will be seen at once that the majority of the cold blooded vertebrates are regarded by the Seri as carniverous and that among the carnivores are all of the snakes, the toad and the majority of the lizards, while on the other side are all of the turtles and some of the lizards. Among the lizards this is in no way related to the size—the two largest, the chuckawalla and the Gila monster are herbivorous and carnivorous respectively, while the three next in size, the northern chuckawalla, the *Dipsosaurus* and *Callisaurus* are considered either as herbivores or of mixed diet, although in truth both are carnivores. It may also be seen that where the misinformation arises over them in the Seri ideas, it has a great deal to do with the arboreal habits from which they conclude that such an animal must climb trees largely in order to get the fruit of the tree.

There is a great deal of information about the Seris' conceptions of the predation on the reptiles. The most frequent predators, the informants thought, were hawks, raven and coyotes. These, in fact, were repeated as preying on the half or so of the species from the list and by far the majority of those for which data is available. Fox, cougar and coyote were also mentioned among the mortal enemies of the lizards and snakes. In the case of the lizards, other snakes and especially the vipers were frequent on the list of enemies. Eagles and domestic cats and occasionally other lizards were also mentioned although there seemed to be little knowledge of the diet of the eagle. It is interesting that the leopard lizard has been mentioned specifically as feeding on the gecko—an undoubtedly observed fact. In some instances, the animal is subject to only limited predation.

[p.26B]

* 825 According to the informants, the only predator on the tortoise is the cougar and it is known that cougar relishes an appetizer of a tortoise.

In some instances, the Seris indicated that this or that animal is entirely free from predation. In such cases, they usually indicated the reasons for it, without actually being directly asked about it. Thus the marine turtles are free of predation, they say, because of its size and strength. Of others, are the chuckawalla and *Dipsosaurus*, the first because it is too strong to be lifted and overpowered, the second because it lives on Palo fierro away from persecution. The lesser of the chuckawallas, they claim, is free from most enemies, even such animals as the badger, because it sticks flat under rocks and can't be dislodged. This is an interesting observation, because this lizard has a habit of inflating itself in crevices, expanding the ribs, and, indeed, it is hard to pull out of its hideout.

DISTRIBUTION

a) Seasonal

Just as clear cut as the differentiation between the daily rhythm of activity is the seasonal distribution. This is obvious from the tabulation of the comments for each species:

	No. of species
present hot season only	13
present more in hot than in cold season	7
equally in both seasons	6
more in cold than in hot season	0
cold season only	0

It is clear that none of these animals shows any perference for the cold season of the year. The overwhelming majority occurs during the hot season and this distribution is strengthened by the fact that the species indicated as occurring occasionally during the cold season were largely described as "very rare in cold season."

In line with a lizard's preference for diurnal heat, they seem, in the Seri view, more likely to show up during the hot season than do the snakes. Of the species that were mentioned as occurring in equal numbers in both seasons there are coral snake, lyre snake, both utas, northern chuckawalla and *Dipsosaurus*. Perhaps the inquiry from more informants than the four questioned on the subject of reptiles and amphibians may reveal responses disputing the lack of preference for the hot season. The seven species which the informants indicated prefer hot season to cold were patch nose snake, side-winder, black whip-snake, spotted race runner, leopard lizard and two smaller marine turtles. That leaves all the remaining 13 species in the list described as entirely summer species and among them there are eight species of lizards against two species of snakes.

These sharp differences should be no surprise to anyone who has been in the Sonoran desert both during the summer and during the cool, wintry, rainless winter. The differences in the variety and numbers of animals are immense.

Disappearance of the reptiles or amphibians for the winter is variously interpreted by the Seris. Many answers indicate real puzzlement as to the reasons for this and, on an occasion, the

* 825 informants suggested that maybe the animals die with the onset of cold. But in such cases it does not occur to them to figure out how the species may carry on from the fall to the spring. The eggs, they know, usually are laid in the spring and if the adult dies off in the fall before depositing eggs, then what? To this Seri idea we have no answer. The usual reply is often "in winter not seen."

But occasionally more specific beliefs are advanced, of which the most common is that the adult sits out the cold season underground (just as it may sit out the heat of the day or cool of the night, depending on its requirements). The toad thus "lives underground. It goes underground in October and comes out in May." It also "comes out when it rains and then it makes the noise—raurrau, rrau, rrau—the male and the female make it." The cold season, to the Seri, lasts from [805] October till May and frequently May through October has been indicated as time of occurrance of the animal. Like the toad, the tortoise and the race runner disappear underground for the duration of the cold season and there had been a few feeble suggestions from the informants that the patch nose snake does the same. As for the sea turtles, they go to deeper waters for the winter. Nothing much of this sort had been said about the loggerhead turtle, undoubtedly owing to its extreme rarity.

Sometimes the informants went beyond mere statement of the absence or presence and indicated where the animal may be absent during either of the seasons. Thus, for example, the black whipsnake is common in Desemboque during the summer but very rare during the winter.

In some instances, association between rains and sudden activity is made. The tortoise and the toad both come with the rains, they thought.

b) Geographical

The appended table of the distribution of animals as seen by the Seris requires few commenta. Four species had been described by the blanket statement "found everywhere" and this is indicated in the chart. But while it may well be true of the utas, very small and ubiquitous lizards, it is less likely to be true of the patch nose snake and the western diamond back. Unfortunately, the exact distribution of these reptiles in the area is little known, even in the islands of the Gulf. What basis there exists for the Seri statement is hard to tell.

On the whole, the distribution often reflects the Seris' acquaintance with this or that locality rather than peculiarities of the fauna. Hence, Desemboque, Kino and Tiburon are most frequently mentioned localities, while Punto Peñasco least, [484] and these are really localities most and least frequently visited by them. But, in other instances, there is a real reflection of the natural situation. It is known that the fauna of Isla Patos is extremely limited and also that some species, chuckawalla, for example, are found on three of the larger Gulf islands toward the coast of Baja California, but not on the Sonoran side of the Gulf

[P. 27 B] / ½ [see category 116, p62. - Analyst.]

9:Malkin E-5 (1953-1955)1962 MU31 Seri MU31

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nor on Tiburon. The distribution on Tiburon of the toad, as suggested by the informants, indicates that it is found in the localities where there are *tenajas* or less permanent water reservoirs.

The ecological factors in the distribution of animals, as observed by the Seri, have already been discussed. But it may be added that these explain the Seris' belief in the rarity of the gecko and the night lizard. Both are actually very common in the dried-up sahuaros. But small and nocturnal, they may scarcely be noticed by the Indians.

Daily Rhythm

The Seri have a clear cut idea of which animals are nocturnal and which are diurnal. The total breakdown by species is presented below in a table:

	No. of species
active in daytime only	14
more in daytime than at night	0
equally in day and night	3
more at night than in daytime	1
at night only	8

The majority of the forms are considered diurnal. But this is not significant here. The important thing is the breakdown by groupings and here the pattern of the Seri beliefs emerges clearly: the majority of the lizard, with the sole exception of the gecko and the *Xanthusia*, are considered diurnal, which—indeed, is so, while the two just—mentioned lizards are well-known night prowlers. The majority of the snakes, on the other hand, are considered nocturnal. The exceptions here are the lyre snake and the red racer, both of which, the Seri think, are diurnal and the black whipsnake which they think is largely nocturnal, but which, they say, also will wander about on occasion in daytime. The two racers, indeed, are largely diurnal but the lyre snake is active mostly at night and early morning. It may well be that my informants have never seen this creature prowling at night. Of others, the toad, of course, is ascribed to the nocturnal group.

The turtles, on the other hand, are either creatures of daylight (tortoise) or else will be active both in day and night (sea turtles).

The lizards, on the whole, are considered creatures of the sunshine and this fact had been emphasized time and again by several of the informants for several species. Nights, they say, the lizards (majority of species as indicated by their individual responses), spend in burrows or *Dipsosaurus* also on the trees. Few, it has been indicated, tended to rest in the midday when heat is greatest—in the shade or other covered place—an indication that they well observed the slowing down of the activity during the midday heat. On this subject, of the red racer they say that it often climbs trees and bushes during that part of the day, in order "to escape hot ground," as indeed it does.

Of the hiding places of the nocturnal animals similar ideas are entertained. The large rattler spends daytime coiled in the shade of the bush. The gecko hides in dried-up trees—an altogether

9:34alkin E-5 (1953-1958)1952 MU31 Seri MU31

\# 825 accurate observation. I have collected several of them after cracking out dried-up, dead sahuaros.

Habitat

As already suggested, the Seri will indicate quite accurately the sort of habitat in which the animal lives. This has been often described as sand, rock, tree, sea-beach, underground, and of course, various sorts of waters. Furthermore, this sort of argument has been used frequently to explain either presence or absence, rarity or abundance, of an animal.

Some animals had been described as rare while others as quite common to very common.

Specifically, the Indians indicated for a considerable number animals preference for the sandy or flat country. Horned toad, gridiron tailed lizard and Gila monster, they believed, prefer sandy areas. So, evidently, does the coral snake and the patch nose snake, because, they explained, the former does not occur on San Lorenzo Island and the latter at Estero Sargente for just that reason—absence of sands. In fact, the absence of the patch nose snake from Estero Sargente area, has been explained as follows: "there is no sand there, but too much mud." While few animals are credited to the marine beaches and usually their presence there is denied, the gridiron tailed lizard actually is claimed to be common on them (and in fact it is). Another creature found on sands and playas is the spotted race runner.

Other animals, according to the Seris, prefer rocky ground: here are especially the tortoise and both species of chuckawalla—which undoubtedly is true. The lyre snake is supposed to be more frequently found in the mountains. Finally, the toad is forever found near the water, the Seris think, and this does not require any comments. As for the smaller marine turtles, their seasonal preference for the deeper (cold) or shallower (hot) waters had already been mentioned as well as the loggerhead's preference for the deeper waters at all times.

Seri knowledge of habitat preferences is not always very accurate. According to my informant the northern crested lizard likes rocky ground. Yet all those I shot or have seen were on the sands of San Francisco. The same lizard is supposed to live on the rocks on San Esteban, but this may well have been confused with another animal.

Social Life

Just as they recognize lack of parental function in the reptiles, so they do consider these animals creatures of solitude, and, with the few exceptions, they believe that they are solitary or, as they often express it, "live without family." The only exceptions are both species of rattlers, both of the lesser marine turtles and the tortoise, all of which they say are gregarious. Western diamondback, they say, live in packs of 20-25, while the side-winder lives in somewhat smaller groups of 15-20. The marine turtles, they also

* 825 say, travel in packs while the tortoise gathers in large numbers, sometimes as many as 100 at once. The only other creature that ever appears in more than single individuals is the toad. This one, they said, "walks in ones or twos sometimes."

It appears that the gregariousness of the ratliers actually refers to the large aggregations that show up in the early spring for the mating purposes or in the late fall for wintering. But the informants gave no indication that they ever recognized transitoriness of these gatherings.

Migrations

With the exception of the marine turtles, none of the animals in the list is in any way considered migratory. But the Seris attribute to the sea turtles a certain amount of migration. This may well be in line with their reasoning about other marine creatures which they also consider by and large migratory.

Toxic and Dangerous Animals

According to the Seri, a fair number of animals in this group are possessed of venom, although not all of them will make use of it, and some, even though toxic, will not bite. This matter may be best presented in the chart below:

Species	Venomous	Not venomous	Bites	Does not bite	Venom in body	Venom in teeth	Venom in flesh (eating)	Venomous by touch	Fatal to animals	Fatal to men in general	Fatal to Seri
Crotalus atrox	x		x		x	x			x	x	x
Crotalus cerastes	x		x		x	x			x	x	x
Micruroides	x		x		x	x			x	x	
Coluber flagellum	x[1]	x[1]	x							?	?
Masticophis	x		x			x					
Trimorhadon	x			x	x	x					
Phrynosoma	x		x[2]	x[2]							
Callisaurus		x	x								
Crotaphytus	x		x			x			-	?	x
Sauromalus varius		x	x								
Dipsosaurus		x	x								
Heloderma		-		-							
Coelonyx	x				x		x			x	x
Xantusia	x				x		x			x	x
Loggerhead turtle	-		x								
Marine turtle (2 sp.)			x								
Bufo alvarius	x		x[3]		x		x	x	x	x	x

[1]Conflicting, minority thinks dangerous, majority that it isn't.

[2]Conflicting, minority thinks not dangerous, majority that it is.

[3]Bites with tongue but some think it doesn't bite. But all agree that it is dangerous on touch and to eat and that it has venom.

Thus 11 species from the list are considered toxic and another seven dangerous but non-toxic. All of the latter, with the exception of the Gila monster, are said to be able to inflict a nasty and painful bite, but apart from that they don't need to be feared. The Seris respect the marine turtles for their strength, not aggression. The Gila mon-

9:Malkin E-5 (1963-1965)1962 MU31 Seri MU31

*825 ster is really a curious case. The Seris deny that it is venomous or that it bites. Reasons why this really venomous beast is considered harmless by the Seri is probably twofold. First, it is quite rare in their territory; the area of Kino and Desemboque is near the southern-most boundary of its distribution. Second, it is sluggish and slow moving and quite unaggressive, and, as the Seri know it, it probably never has bitten any of them within their memory.

To break them down by the groupings, the toxic species are six species of snakes, four of lizards and the toad, and the non-toxic, all of the turtles, 10 species of lizards and one snake. It is clear then that almost all snakes are considered toxic, although in one instance, the red racer, there seems to be disagreement on the subject. But when the figures are broken down to the fatalities, this pattern disappears. For here, only both rattler, *Xanthusia*, *Coelonyx* and *Crotaphytus* are considered potentially fatal to the Seris, and the sixth, the coral snake, is supposedly fatal to the Mexicans but not to the Seris. There are good grounds for believing that, under certain circumstances, the bite of both rattlers, especially of the diamondback, can be fatal and there are cases on record [165] when a young child (Seri) from Desemboque and a young man were killed by the large rattler—within the past few years (1950-1954). The sidewinder is slightly less feared, no doubt because it is smaller, but they think it does always cause illness. Both rattlers inflict the toxic bite with the two large teeth in the front, where the venom is stored. They both have venom also stored in the head and in the rear section of the body two inches or so from the anus. So, at least, the Seri think, and when they deliver the rattlers to the frying pans, they always are careful to cut off the head and the tail and throw them away. This belief in the location of snakes' venom in the head 171 and the tail, in a variety of species and generally *825 of snakes (whether actually toxic or not), seems widespread in a good many parts of the world in areas where snakes, especially the large ones, make up a favorite dish of the aborigines.[12] Of course, this belief in the location of the venom in the head and tail of the rattlers is also shared by the Mestizos of their area.

*825 The coral snake represents somewhat a special case and is a good indication that many such ideas may owe their origin to the actual observation. This snake is greatly feared by the local Mestizos and is considered by them to be at last as deadly as the ratttlers, if not more. The Seris also think that it is venomous; they believe that it harbors venom in the head and tail and also that it inflicts venom with the fangs. But they also say that it does not bite as readily as the viper and that it is fatal to the Mexicans but not to the Seris. It is not hard to guess that the basis for this difference in the toxicity is the fact that the snake probably never has bitten any of the Indians. But the Seris

[12] I have observed this, by the way, among peoples of Victoria and Duala in the Cameroons—except that the belief there was associated with the large African rock python.

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Schaldach E-5 (1953-1959)1962 MUSI Seri MUSI

* 825 heard the Mexicans talk about the dreadful consequences of its bite, and they took them at their word!

However, it will be seen that not one of the snakes is considered to be dangerous in any way on mere handling of its body. Coral snakes, though actually potentially fatal, do not bite readily and often may be handled with impunity.

This then leaves the three lizards and the toad in the category of potentially fatal animals. This is mysterious because not one of these lizards is in any way harmful.

Of these, the leopard lizard (*Crotaphytus*) is dangerous simply through biting and through venom which it has in its teeth. The Seris seemed dubious, somewhat, if this beast could kill other men, but they were sure it could kill them (the Seris). They also denied that wild animals could die from its bite. This situation is difficult to explain except perhaps by an existence of some sort of myth connected with this lizard. It may be also that the vile temper of *Crotaphytus* when captured has persuaded the Seris that any animal so vicious must be dangerous.

But the two little perfectly harmless nocturnal lizards, the gecko and the *Xantkusia*, represents a different stripe of danger, but they are feared just as much as any of the really venomous snakes (rattler) if not more. Neither of them will bite, [753] the Seri say, but they'll cause an illness on touch which can be fatal and at best they'll cause an illness of the lungs which can also be fatal. In addition, touching them will cause flesh to fall off one's hands and body. This, the informants explained, was the reason why they were not eaten. That both of them are terribly feared, the gecko even more than the *Xantkusia*, I had examples galore. While collecting with the Seri in the dried-up sahuaros, we encountered a great many of these lizards after breaking up the logs. Invariably the Indians fled and retreated obviously alarmed at the sight of the wiggling little creatures and when I picked them up bare-handed they were altogether shocked. I could not persuade them to touch even later specimens killed in alcohol. Some showed clear fear of picking up or touching the vial in which these lizards were preserved. A good 171 possibility is that this belief is in some ways con- * 825 nected with the European folklore about the salamander. The gecko is called in the local Spanish *salamanceso* which means salamander. And the salamander, in the European mythology, may inflict harm on people in the very same manner as the gecko is supposed to do. The Mestizos, a good many of them at any rate, also hold similar views. There is a general similarity in the appearance and outward behaviour of the gecko and the salamander and, perhaps, we have here a transfer of

[P. 30A]

Kalkin 3-5 [1953-1956]1961 MUSI Seri MUSI

#825 [171] an idea from one animal to another.[12] The *Xenthusia* does not share this similarity to the salamander in appearance, but it is found along with the gecko and behaves much like the gecko when exposed to the light. Hence, perhaps, comes the association.

I excluded here from the discussion the red racer because the notions concerning it are conflicting, with some informants insisting that it is toxic and can cause death and others that it is not. But all agree that it'll bite—and painfully so.

Finally the toad. The toad, although unaggressive and considered as such, is feared a great deal as a repository of all sorts of toxic traits. There was some disagreement as to its ability to bite, with some informants thinking that it does bite with its tongue, others thinking it can't bite at all. But all agree on the following attributes of the amphibian: venom in body, toxic on touch, always fatal to eat to most animals and to all men. In this the toad joins the gecko and the *Xenthusia*. [262] These too are believed to be fatal to eat and these three represent the only animals in this class that are considered inedible.

It is interesting that the list of toxic (though non-fatal) animals should also include the *Phrynosoma* although here there seemed to have been again disagreement between the informants. The lizard is perfectly harmless and actually will not [763] bite even in self-defense. But the Seris say it causes swelling.

752 For the rattlesnake bite, the remedy is a plant 278 called *Kásox*. An extract of this plant is made after boiling it in hot water and then it is taken orally. It is also applied to the wound and, the Seri say, it must be taken all day long for a full day. The Seris take this when they are harmed by these snakes. This plant is supposed to be found in the mountains near Kino but not in the Desemboque or Tiburon area. But in addition to their own medicaments, the Seris, especially the younger fellows, will make use of the regular anti-venom available at the school or mission.

Attitudes Toward Reptiles and Amphibians

#825 With the few exceptions, these animals are not particularly feared. Those that are feared are considered dangerous in some ways, and, in fact, most of them are either by their ability to inflict painful bite or by possession of venom. But otherwise, their attitude seems to be very much a matter of fact and one of unconcern, which seems to corroborate Kroeber's opinion of the Seris' psychological makeup in other matters.

[12]Since this has been written, I have plenty of evidence that the gecko is similarly dreaded in many parts of the world.

[P 30B]

Pribilkin E-4 (1953-1955)1962 MUSI Seri MUSI

VI

FISHES

Scientific	Common Name
Stereolepis gigas	
Mycteroperca jordani	
Cynoscion macdonaldi	
Epinephalus analogus	
Trachinotus paitensis	
Verrunculus polylepis	
Myrichthys tigrinus	
Gymnothorax castaneus	Moray
Bairdiella iciatius	
Anchovia macrolepidota	
Cynoscion parvipennis	
Mugil sp.	
Cetengraulis mysticetus	
Lythrulon flavigutttatum	Flounder?
Paralabrax maculato fasciatus	
Paraques viola	
Sphoeroides annulatus	
Anisotremus davidsonii	
Girella simplicidens	
Abudefduf saxatilis	
Gobiosox pinniger	
Hypsoblennius gentilis ricketti	
Gillichthys seta	
Scorpaena sonorae	
Malacocteuus zonifer	
Cypselurus sp. or Fodiator acutus	Flying fish
Neothunnus albacares	Tuna
Ogilbia sp.	
Lutjanus argentiventris	
Cynodon serrifer	
Manta birostris	Horned manta
Urolophus halleri	Sting ray
Mustelus lunulatus	
Shark undet.	
Shark undet.	
Shark undet.	Dogfish?
Shark undet. A.	
Shark undet. B.	
Shark undet. C.	
Sphyrna	
Galeocerdo cuvieri	

The largest number of specimens were identified from preserved specimens by Dr. W. I. Follett of the California Academy of Sciences. This included all smaller fishes. But the largest were determined solely from the well-known vernacular names. The large fishes of the Gulf are well-known and have established local names among the Mestizos. These names are also much in use among the Seris. In several instances, however, it was impossible to determine the species of animal. In such cases, no scientific identification has been made, but their distinct traits were drawn from the Seri comments about them, their natural history, behaviour and ecology. Seris' clear-cut recognition of many of these features as applied to the fishes makes most such differentiations fairly easy.

Out of 42 species in the list, nine are sharks. There are, of course, many more species of sharks in the Gulf. But Seri recognition of nine speaks pointedly of their interest in the fishes.

[P.31A]

McMakin E-5 (1953-1955)1962 NU31 Seri NU31

VI

FISHES

Taxonomy

* 825 The Seri have considerable skill in differentiating between different species of fishes. There are two main groups which they recognize but which in their own mind are entirely unrelated, the fishes and the sharks. It is also certain that they consider the mantas and sting rays as creatures allied to the sharks and not to the fishes. To the Seri sharks and mantas are not fishes at all but entities of their own. It appears that there are two bases for this distinction. Fishes, as Seri see it, always lay eggs; sharks and mantas do not but instead deliver young alive (in fact some do and some don't). Secondly, the peculiar dimorphic structure in the sharks and mantas, the claspers present in the males of both, not only suggest to the Seri the male sex but also an association with another group.

On the whole, the Seris were able to distinguish as separate species almost all of the fishes for which they were questioned. There is confusion in a few instances. Although *Totuava* and the *Pinta* they think are separate, the evidence suggests that here they actually distinguish merely individuals of different age that belong to the same species *Epinephalus analogus* and that the mature individuals are called *Totuava* and the immature *Pinta*.

An interesting situation arises with the *Myrichthys tigrinus*. This peculiar and remarkably snake-like fish is considered not a fish at all but a snake. The Seri know nothing more about it, and this is where the association ends in their mind. For taxonomic purposes, this fish is included among the fishes but it should be remembered that this is not what the Seris think.

With the exception of three more species of fishes, *Ogilbia*, *Lutjanus argentiventris* and *Conodon serifer*, the Seris had at least some knowledge of the natural history of each species. But in these four cases they could say nothing, nor have they recognized the last three.

Economic Uses

226 177 According to McGee, the sea turtles and the marine molluscs are most important in the Seri economy, with the fish coming in the third place perhaps. Today the situation has changed radically. The fish became the very basis of the Seri subsistence, with the marine molluscs falling into third or fourth place in order of importance. One good reason for the change has been the revolution wrought in their fishing method with the introduction of the hook and line. This must have come into the fore after 1930 and became the dominant method of fishing after 1940. The Seris did learn to use hook and line from the Mexicans

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226 177 [411] [225] and, from all accounts, also from the Japanese whose trawlers worked in the Gulf in the late 1930's. Today, hook and line fishing from plank boats almost completely replaces earlier methods, the spear (pueiro) and the harpoon (barilla). Harpooning is still done in hunting marine turtles while spears are occasionally used on larger groupers and also on sharks and mantas. Harpoons were also used in connection with the latter. But since World War II the shark fishing has declined, owing to the development of synthetic vitamins and abandonment of sharks and mantas' liver oil as a source of vitamins. In these operations, the Seris were for a while involved to a considerable extent. But now they have completely switched to commercial fishing which supplies not only food but also ready-made cash from [439] the Mexican traders, and with it the Seris can purchase luxuries of life in the Mexican *tienda*.

262 Altogether, out of 42 species listed here, the Seris reported taking for food 20 species which are as follows:

Malacoctenus zonifer
Firella simplicidens
Anisotremus davidsoni
Paralabrax maculofasciatus
Lythrulon flaviguttatus
Mugil sp.
Cynoscion parvipinnis
Anchovia macrolepidota
Bairdiella icistius
Stereolepis gigas
Mycteroperca jordani
Cynoscior macdonaldi
Epinephalus analogus
???? (Pescara)
Trachinotus paitensis
Verrunculus polylepsis
Gymnothorax castaneus
Hypsoblennis gentilis ricketti
Abudefduf saxatilis

The most important of these are the groupers, the *baya, pinto, totuava* and *mero*—the latter a giant fish often in excess of 150 kg. and nearly three meters long. The most important of these is the *baya*, a medium size fish taken daily in varying amounts. [226] I suspect that this fish accounts for more than half or maybe even 2/3 of the total Seri catch, weight-wise. Of others, none is of any importance except seasonally.

* 825 Another sort of use is made of the sharks and mantas in connection with the already mentioned exploitation for liver. Five species of sharks and the horned manta were listed by the Seris, with *chata, gato* and *composo* most frequent and perhaps most important.

Trading, as already mentioned, is of considerable importance to the Seris. Some fish are eaten [439] only occasionally, but they may be traded off to the Mexicans.

262 Not all fish are eaten. In most cases no particular explanation had been offered for the rejection. But, in some, specific reasons were mentioned. The *Scorpaena sonorae* and *Cetengraulis mysticetus* are so rejected because they "are too bony to eat." *Gillichthys seta* are considered unfit to eat because of its tiny size while *Sphoeroides annulatus* is refused because of its supposed toxicity, of which more later. Finally, the sharks are not eat-

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262 en simply because their flesh is disliked and unfit for human consumption. But it may also well be that some of them, especially of the giant variety, are not eaten simply because they are far too large to tackle and the Seris fear hunting them.

The Seris indicated also in some cases that larger specimens of fishes are eaten when they reach the size which would justify the effort. This is true of *Malacoctenus zonifer* which they indicated is "eaten when large," that is when at least 10 cm. long.

[226] Although only sometimes did the Seris specifically indicate that certain fishes are used for bait, it is very likely that almost all small or lesser fishes are so used.

262 178 In some cases the Indians indicated changes in preference for given fishes, with the time. For unexplained reason *Gymnothorax castaneus*, the morene, has been claimed to have been eaten in the past but not for the last 11 years. It isn't clear why the figure of 11 had been used and why suddenly in the early 40's they should stop eating it while the Mexican drool over it. But it may be also that here we have merely personal preference of the informants, as so often happens. As for the *pescara* it was formerly taken for food [439] but now it is merely sold to the Mexicans. This practice is increasing also to include the immense *mero*, even larger than the *pescara*. The fish is mainly sold but rarely eaten by the Seris themselves.

Food Preparation and Preferences

252 Food preparation is simple and in the main differs not at all from the preparation of other animal diet. The fish are either boiled whole or in part or else are roasted over slow fire on a grill. The entrails are usually discarded, but otherwise the beasts are eaten entire, eyes, brains and the rest, while the tiny fishlets are eaten complete with the scales and guts.

262 As for the preferences, as expected, there are some fishes that the Seri like better than others. The *bama* in the first place and the *pinto* in the second lead the list. The Seri prefer them to all others and consider them a real delicacy. On the other hand, there are some fishes that they'll eat only under protest, meaning when times are hard. *Girella simplicidens* is one such creature. The *Puerco* or *Cochi* is another. I have seen boat loads of puercos brought in with the other fish and un- [231] ceremoniously dumped out on the beach to the dogs. Literally! The Seris took to this fish only when fishing was poor during the wintry days when they were held ashore by the weather. Even [183] then, they tried to eat the despised creatures on the sly, avoiding being seen doing this, and when I or the Mexicans picked up fresh fish from the beach to take home they laughed saying that we acted as a *cochi* (pig) would!

Other Economic Uses

4 825 237 322 One use made of fish concerns two species of sharks, the *chato* and *camposo*. Here, the informants claimed, the oil from their liver had been used in earlier times for polishing wood. This is

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* 825 quite possible but I couldn't substantiate the story
237 from contemporary evidence. Perhaps during the
height of the shark hunting for the liver oil, the
[322] Seris used the oil also for wood polish, although
it isn't very clear just what sort of artifact they
make would require such treatment. The wooden
tools or artifacts among them are in short supply
at all times. Finally, the huge horned manta was
supposedly hunted also for its hide but just in
what circumstances it was not explained. It is the
only fish which the Seri ever mentioned as having
been put to such use.

Fishing

226 As already mentioned, fishing nowadays is
largely accompanied from flat-bottomed boats
with hook and line. The old ways of getting fish by
spearing are almost gone for good. Recently, an
[177] attempt has been made to teach the Seris siene
fishing, but 10 years of these endeavors accom-
plished only ruination of a number of expensive
nets and of much fishing gear and the desertion
[157] of the project by the Indians. It may be that their
individualistic and almost anarchistic attitudes
preclude cooperation, essential in this type of
fishing.

The bait is obtained in any one of the three
ways: by dynamiting fish in tide pools or
along the shore, or by catching small fry with
small hook and line, or finally by collecting small
fishlets in the tide pools, prying them out from
[857] under rocks or simply—and here the Seri boys ex-
cel—by shooting them in the tide pools with tiny
toy arrows or simply spearing them with a stick.
[177] The dynamiting is done with the purchased sticks
of dynamite which the Seris obtain in the tiendas.
The procedure is often risky and down right dan-
gerous. Some of the Seris have blown themselves
up with dynamite. I have seen one of them, who
lost both arms and had a jaw broken during a
dynamiting trial. He went about with a dirty rag
tied up over his head to support the wrecked
[164] jaw-bone. He was carried off by measles two years
later in the 1955 epidemic.

226 The Seris' commercial fishing is pretty much
648 controlled and exploited by the two or three Mexi-
can fish traders from Nogales and Hermosillo.
439 These have their tiendas in Desemboque, which
at set price sell things to the villagers. They also
443 provide the Indians with the five horse-power mo-
tors for fishing trips and pleasure cruises and with
[501] the oil and gasoline essential to run these—also
at set price. They finally purchase the fish—at a
set price—and from the proceeds the Seris pur-
chase goods at the tiendas, completing the cycle.
Not all Seris are compelled to work for the Mexi-
cans, and, in fact, they do not always do so. Some
[501] families stay away from Desemboque and depend
on the sail and oars for propulsion. They come to
the village only once every few months to obtain
supplies. Even when in the village, the Seris make
little effort to fish for more than they wish to get
in order to satisfy their immediate needs.

226 Fishing expeditions usually take place in the
morning. Most Seris will set off before daybreak
and will return with the catch by 11 a.m. or noon.

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226 Occasionally they'll stay a little longer and when far off in the Gulf, they will return only in the afternoon. But this is not frequent. Some of the bait catching is done during the night by the light of torches or Colemans.

As already mentioned, unfavorable weather may put off fishing for several days and when that happens, famine becomes a real menace to the Indians because they have no supply of food stored away for the lean day and no cash for such purposes.

[731]
[251]

Sexing

* 825 Sex differences in fishes have been observed by the Seri probably in the majority of the species from the list, although for several there is no data available. The tabulation breaks down by the number of species as follows:

	number of species
Sex differences observed	22
Sexes alike in all respects	6
Didn't know what differences there are	6
No data	8

The six species in which sexes are considered indistinguishable in size and color and in other respects are *Pescara*, *Pinta*, *Baya*, *Pinturera*, *Smyrna* and the undertermined shark *sp. C*. The inclusion here of the most important economic species such as *Pinta* and *Pescara* and of the sharks is interesting. It shows, in the main, probable lack of information rather than ignorance of differences on the part of the Indians. It was probably an oversight in questioning, for surely the sharks' sexual differences are usually known to them and it is improbable that they could never tell the difference between the sexes of their most important marine game.

The species in which they expressed puzzlement over the differences and simply indicated that they didn't know the answer were largely little known forms about which they could tell very little anyway, either because they occurred far away from their territory like, for example, the flying fish and the tuna, or otherwise were obscure species, too small to pay attention to, or finally, the huge monsters, too big for them to hunt and approach for more careful inspection.

In more detail, a number of different sexing criteria seem to be employed by the Indians. These differences are tabulated below:

Males larger	Females wider, larger in bulk, but length the same
Abudefduf saxatilis	*Cydoscion macdonaldi*
Gymnothorax castaneus	*Trachinotus paitensis*
Girella simplicidens	*Cynoscion parvipinnis*
Anisotremus davidsoni	*Mugil sp.*
Gillyehthys seta	*Bairdiella iniatina*
Sphoeroides annulatus	
Pareques viola	**Males more brightly colored**
Females larger	*Paralabrax maculofasciatus*
Epinephalus analogus	*Hypsoblennius gentilis*

Other sex differences considered by the Seri are structural and appy to the sharks. They associate the presence of the "2 penises" in the sharks and mantas with the males and their absence with the females. The "penises" are, of course, sex claspers present near the vent in the male sharks which aid them in holding up the female during the mating. These differences had been observed

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\# 925 by the Seris in most species of these creatures and in the few in which they couldn't tell what the differences were, all, as already mentioned, were species they consider too dangerous to approach. Otherwise, they think the tendency for the sharks is to have both sexes equal in size.

The tabulation above throws interesting light on the Seri notions and suggests presence of cultural stereotypes in many cases, rather than of empirical observation. Where data are available, the indication is strongly in favor of considering the males larger than the females, the very opposite of the natural tendency in the fishes. Another of these has to do with the coloration and when color differences were indicated at all it had been suggested that the male was brighter in color than the female. It is instructive that this is where two different fishes had been confused for this very reason. *Hypsoblennius* is considered a male of *Malacoctenus* because it has a red throat. Both the tendency to view the male larger than the female and the tendency to ascribe brighter coloration to the male appear again and again in various groups of animals.

Concerning the size differences, where indicated, the difference often had been expressed in numbers, such as a foot or half foot longer and so on.

The tendency to consider the female fish bulkier and the male fish leaner and narrower may appear independently of any other criteria. This is well explainable on the grounds of temporary increase in bulk during the time when the female carries eggs, although the informants did not always indicate this. However, in some other instances, this fact has been pointed out by them. The difference between the male and the female was one of the female being filled with eggs.

I could not account for any other differences between the sexes in fishes. They consider both sexes no different temperamentally and either equally harmless or equally dangerous. They also indicated no differences in their own preference for the flesh of either sex in fishes, not even at the time when the female is gravid. This would indicate no special predilection for the fish roe in their diet.

[262]

Age

Only in three instances the informants made a stab at guessing the life span of the fish. The age span of the *Lisa*, *Corvina* and *Pinta*, the informants estimated at roughly 5-7 months. For the remainder they simply said "I don't know." The answers, such as they are, indicate individual ideas of what the length of life in fishes might be rather than any sort of generalized cultural concept. Of course, there is no way for the Indians to guess even anywhere with a near accuracy the hypothetical age of fishes. As a matter of fact, little is known among the biologists about the upper limits of longevity in fishes and only beginnings had been made in a few economically important species to ascertain the rate of annual growth for immature fishes.

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Weight and Size

*825 Far more accurate and more detailed information the Seris gave for the size and weight of fishes. Here specific and varying data was suggested for the majority of the species about which they were questioned for almost all about which this question had been asked. The conspicuous lack of data here is for the flying fish and the tuna, both of which are known to the Seris only from hearsay.

The responses then ran pretty close to the actual figures, both as regards the size and the weight. Only in some of the outsized sharks, the informants showed a tendency toward exaggeration in both respects, which shows clearly how the opportunity for close examination may influence their ideas of the subject.

Occasionally they showed good orientation concerning the range of size of fishes within the certain groups. Thus the dog-fish had been indicated as the smallest of all sharks.

Food

Food had been indicated for the vast majority of fishes. Only in a few, the replies were the customary "quien sabe." The diet of fishes, the Seris think, is almost entirely carnivorous because for only two, *Lisa* and *Scorpaena*, they suggested herbivorous diet. The *Lisa* is supposed to feed on soil but not on algae or animals while the *Scorpaena* feeds on the *Sargasso* (sea weed).

Among the carnivorous and cannibalistic fishes, the kind of animals eaten by fish as a rule has been pretty much scaled down to the size of the predator. The larger the fish, the larger animal it'll eat. In the majority, cannibalistic diet of fishes has been indicated. Thus the range is all the way from the *Anchoa* which they say feeds on tiny animals the size of sand grain, to the *mero* and large sharks which they say feed on almost any creature smaller than themselves. Some fishes had been indicated indirectly as bottom feeders, as crabs and octopi are supposed to be included in their diet. The *gato* shark is said to feed on some sort of non-descript animal which the informant described as "neither fish, nor octopus, not shrimp, nor bird." From their description it was impossible to divine just what sort of animal it could be. The upper limits are reached by the *Camposo* shark, which they say take not only fish but also full size sea-lion. Curiously, they have never suggested that any of the fishes habitually feed on the humans.

Predation

All sorts of animals will prey on the fishes, according to the Seris. Majority of the predators are fishes of other species. But they include the sea-lion and various birds, especially the pelican. Although elsewhere they said that the coyote will feed on marine fish, they never indicated just what kind of fish the animal takes. The predators are usually scaled up and down according to the size of the victim. The birds and the pelican, of course, will feed on small fish. Among the

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*825 fishes, the larger the species, the larger prey it takes. *Lisa*, *sardina*, *sardinera*, small *pinta*, *puerco* were most frequently mentioned as victims of predation. The *sardinera* is supposed to feed on the sardina, hence, they say, it takes its own vernacular Spanish name. Finally, in the upper size limit, among the largest, mantas and sharks, they say there are no enemies—the size of the fish eliminates any danger.

226 The frequency of predation has been noticed by the Indians and, as a result, they often use appropriate kind of bait for the kind of species they wish to capture. Thus different kind of fish or an octopus will be used as a bait for the species they think feeds on these rather than on other animals.

Development

*825 The division of fishes into viviparous and oviparous is clear cut. Of the 33 species for which detailed responses are available 23 are considered oviparous and 10 viviparous. All of the latter are sharks and mantas. The knowledge of this fact stems unquestionably for the most part from the relatively recent experience in hunting these animals for the liver. Even though at present this occupation went into disuse, the knowledge gained in the course of it still persists.

The responses indicated that the larger the shark or the manta, the fewer young it will have. And, in fact, the informant indicated this by a blanket statement to this effect. The largest creatures in this group has, they say, two young as a rule; the smallest, a dog-fish, will have 12-14. An exception is the smaller sting ray which they claim will have 1-2 young .

The rest of the fishes carry roe and deliver eggs. The number of the eggs has always been indicated as "many" but sometimes a stab at a figure was made and, for example, *Anisostremus davidsoni* is supposed to have about 1000 of them. It appears that the Seris were convinced that a fish which is not a member of the shark family is automatically an oviparous creature. Even when not familiar with the roe of a certain species of fish they were apt to indicate that it must have it.

There were few negative responses and these were largely associated with the little known forms. Tuna, flying fish and the snake-like fish *Myrichthys tigrinus* which they think is a snake and not a fish belong to this category. Exceptionally, one of the better known fishes, the *corvina*, was also in this group and it is difficult to explain this ignorance of its natural history.

When the fishes mate is a mystery to the Seris, and, for some reason, there is little association between the mating and delivery of the eggs. This is all the more strange, because mating takes place immediately after the delivery of the roe. This suggests that the conventionalized Seri idea includes a time lapse between mating and delivery of the egg or the live offspring in most animals. How this works could be seen in the birds and mammals. The only instance when mating season has been pinpointed by the informants concerns the horned manta which they say mates

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*825 in May. But then, the mating antics of this huge creature are quite spectacular.

Although two of the informants made the blanket statement that "all sharks mate in May," the detailed information concerning the season for the delivery of the young does not entirely support this belief. Only a few species had been specifically described as delivering the young in May. The sting ray does this in March and the undetermined shark *sp. C.* in November. This then gives a great deal of latitude to this activity (among the sharks). On the other hand, among the fishes proper, roe laying, the Seris think, is associated essentially with two periods, spring and fall, with none in the winter and very little in the summer. The tabulation below shows the breakdown by species for those for which the data are available:

Cynoscion macdonaldi	March
Epinephalus analogus	April
Lythrulon flaviguttatum	May
Paralabrax maculatofasciatum	May
Sphoeroides annulatus	May
Girella simplicidens	May
Verrunculus polylepsis	"?
Gillichthys seta	August
Paroques viola	September
Mugil sp.	October
Hypsoblennius gentilis ricketti	October
Stereolepis gigas	October & November
Pesaora	October
Bairdiella icistius	November
Anisotremus davidsoni	November

There is little indication that they have any idea of the time elapsing between the delivery of the roe and the emergence of the fishlets. Only in one species this has been indicated. The *lengvado* (*Lythrulon*) "lays eggs in May and the young emerge right away." But what is the basis for this statement I do not know.

In several instances different growth forms within the same species are recognized under different names, while simultaneously the identity of these forms is well understood. This is especially true of the large economic species. Small *totuava* (*Cynoscion macdonaldi*) is called in vernacular Spanish *macharros* and in the Seri *tc.kokái*. It is interesting that when the *totuavas* come to the bait, first come the *macharros* and the real *totuavas* follow. Somewhat similar distinction is made for the bayas. The adult *baya* is called *Kanx* in the Seri language, and likewise at the head of the *baya* schools come the immature individuals, the *ot'tasa*. In another way, evidently, there is also a distinction drawn between *pinta* and *sardinera*, appearing to be the mature and the immature forms of the same species, *Epinephalus analogus*.

The Seris recognize that there is no parental function among the fishes beyond the delivery of the roe and mating. This is implicit in their responses even if they make no explicit indications. In no case they ever suggested that either one or both of the parents ever look after the young. Rather a contrary notion is obvious. The fish will feed on their own kind and are notorious cannibals and this, to them, is obvious from baiting fish while fishing.

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Migrations

825

Clear differentiation is made between local and seasonal migration. Several of the fishes, the Seris say, do migrate locally, keeping on the move all the time, but these movements, according to them, are not directional, that is, the fishes do not go away with the season. *Cochi*, *pinta* and *Sphyrna* sp. and one of the undetermined sharks belong here. Sometimes, the *cochi* gather in "millions," as the Seris say, but just keep moving.

Another kind of migration well recognized is seasonal. Here belong 13 species which include most of the sharks and also the following: *bagre*, *totuava*, *sardina*, *corvina*, *lisa*, *anchoveta* and *chano*. There are several facets to this event. Sometimes the migration is indicated as taking place between north and south; in others it is supposed to proceed from the shallower to the deeper waters. Three of the sharks and the *choveta* proceed north in the spring, May or April, and go south in the fall (November or October). *Totuava* and *sardina* travel between the "deep of the Gulf" and the "shores" in April and November respectively. The *gato* shark does the same thing in May and October (May to the bank, October to the deep). All this indicates connection with the seasons and search for warmer waters during the cold season. There are also other sorts of migrations. *Lisa*, which the Seris say is not highly migratory, goes to the Esteros during the cold season. This migratory habit accounted in the Seris' view for the presence or absence of certain fishes in the localities such as Kino or Desemboque, although even more frequently they explained this in terms of ecological factors, as shall be seen later.

On the whole, the migratory fishes are usually the large species that live in the deep waters rather than the small ones that habitually live near shores. The migratory fishes, excepting sharks, usually gather in great numbers, in "million" as the Seris say. The sharks, on the contrary, may migrate but they do so singly, especially when large.

In some cases there seem to be the reverse of the generalized trend. *Pinta*, for example, is said to spend the cold season in shallower waters. The big manta (horned manta) shows up near Tiburon in October but next month returns south.

Seasonality

Some suggestions of seasonal occurrance of fishes already showed up from the data. But for many fishes, greater or lesser frequency of given species is associated with the season while in nearly half of the total number of species, there is no difference in this respect. The data is clearly available for 29 species and the breakdown is as follows:

Either more numerous or present only in cold season	5
Equally common in both season	17
More numerous or present only during the summer	7

Some of this is connected with the annual migrations, as already indicated. A tabulation of some of the forms may be useful, as it may go

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*825 some length to explain the Seris' seasonal dependence on certain species.

Summer forms	Winter forms
Scorpaena sonorae	*Epinephalus analogus* (*pinta*)
Epinephalus analogus (*sardinera*)	*Bairdiella iniciatus*
Anchovia macrolepidota	*Cynoscion parvipinnis*
Anchoa sp.	*Manta birostris*
Urobatis halleri	"*Pescara*"
Mustelus lunulatus	
Shark sp. A.	

The inclusion of *Epinephalus analogus* under both headings suggests even more clearly than anything else that here we are dealing with the mature and immature form (*sardinera* being immature, *pinta* mature) of the same species of fish which the Seris think represent two distinct species. There is some other information given by them which also supports this contention.

The distinctions just mentioned are not absolute. Sometimes it is merely indicated that the fish is more common during the winter than during the summer; sometimes it is completely absent during the winter.

Other seasonal distinctions have already been discussed under other headings and there is no point in going into the detailed argument about them. It is enough to remember that there is also seasonal recognition of the time when the eggs are delivered and in some, very few species in fact, also of seasonality connected with the mating.

Rhythm

There is very little data available concerning the time of the day favored by the fishes. I have it only for seven species of these *Pescara* and *Sphoeroides annulatus* are considered diurnal in their activity, while for the remaining five species both day and night had been indicated. The suggestion is that the Seris think fishes are active both during the day and during the night. This represents a striking contrast with the terrestrial creatures where there is fairly clear dichotomy on the whole. It is also different from the ideas of the inland peoples who fish on fresh water fish and who recognize considerable differences. Although the Seris themselves prefer to fish in the morning, it may well be as much owing to the distance they have to travel to the fishing grounds as to the feeding habits of the fishes.

Ecology

Some of the ecological factors already have been indicated: the preference for the deeper or shallower waters in association with the season. These will be discussed in a greater detail here. But there are also others and one of the most frequent factors is a matter of background habitat of the bottom over which the fishes live. This is usually indicated either as sands or as rocks, with clearly indicated differences. There is no doubt that these matters are very familiar to the Indians.

One of the informants made a blanket statement that most species of fish live on rocky shores and not on sand, and his idea is supported by the

4 825 analysis of the data given for the individual species. Where such data are available, for 21 species, fully 15 show preference for this kind of habitat and only six, it is said, prefer sandy bottoms. In many instances, such ecological preferences had been very emphatically pointed out and the informants denied that the animal lives over either rocky or sandy bottom, as the case might be. Geographical distribution has often also been indicated in the same manner, and explanation for the presence or absence of a fish in a certain place has been represented in just these terms. But this will be discussed later on. On the whole, the rock-loving fishes are all of the small species and economically not particularly important. The six sand loving species are:

Sphoeroides annulatus
Lethrulen flaviguttatum
Myrichtys tigrinum
Mugil sp.
Cynoscion parvipinnis
Bairdiella ronciina

There are a few more factors introduced into the ecological considerations. Sometimes ecological preferences had been indicated for the large and immature individuals of the same species. Thus the big *mero* "live in deeper water 25 meters or more deep" while the "little *meros* go to the Esteros." The large shark *pinturera* is said to be absent from Desemboque because "it is too shallow there" and this presumably holds true also for other sharks. A similar situation pertains to the sting ray where the smaller individuals do come to the bank. Sometimes the fish may keep to the deeper waters but stay on its surface, and here, the Seris say, belongs the *choveta*, a small fishlet, traveling about in countless schools.

Distribution

The distribution charts of fishes indicate in the main the Seris' familiarity with the coast. The locality near which they live or places where they fish show the great number of species listed by them as present. The further away from Desemboque and Tiburon, the fewer species are listed. [484] [226] The Seris do not go to the coast of Baja California to fish, hence no species are listed for it. Those that are marked so are the species which the informants included under a blanket statement "present everywhere." The basis for this kind of statement seems to be the frequency and numbers of fishes that are encountered.

On the other hand, there are a number of such records that are indicative of the ecological preferences and frequently a fish might be marked

[P. 37 A]
1 [see category 116 - pp 63-64. - Analyst.]

*825 for Desemboque or Porto Libertad but marked negatively for Porto Kino and reverse. Kino is sandy, Desemboque is rocky. Hence the difference.

With two exceptions, all sharks are marked as ubiquitous but sticking to the deeper waters of the Gulf or as the Seri would express it "found in the Gulf." This sort of thing is hard to mark on the chart and therefore a blanket statement covering all such is indicated.

Toxic or Dangerous Fishes

Very few fishes are considered really dangerous or aggressive. There is a generalized notion, undoubtedly not entirely unfounded, that the large sharks are dangerous and that they'll make dinner of humans if given an opportunity. They are also feared for their strength and for the size of their teeth, regardless of whether or not they are aggressive. The huge sharks, most likely the whale sharks, had not been hunted by the [226] Seris, so the informants say, owing to their size and brute strength. Larger real fishes, *mero* and *totuava*, are also considered large enough to throw men into water, though not aggressive. The same goes for the manta.

The smaller mantas and the sting ray are greatly feared, owing to their possession of a nasty spine with which they can sting badly. The smaller sting rays are particularly feared in this respect because they bury themselves in the shallow sandy beaches and cannot be seen. The sting is painful and is also considered toxic although the toxicity is actually due to the accumulation of slime and danger of infection.

Two other fishes are considered toxic but harmless. *Myrichthys tigrinus*, which, as already mentioned, is believed to be a snake, is said to have venom but is harmless because it does not bite. *Scorpaea sonorae* is also believed to be venomous and "the venom is located in the spines in the fins." This creature, the Indians say, may inflict pain which will last for a full day. Finally there is the odd case of the little *Sphoeroides annulatus*. [262] This one is thought to be venomous in the flesh and therefore dangerous to eat. The explanation for this was offered as follows: "100 years ago a Seri man ate one and died of its venom. It was very long ago. Maybe 100 years."

It is difficult to account for this story unless someone actually ate a fishlet so utterly rotten that septic reaction set in and the man died of food poisoning. It is also not likely that such a trivial event would be remembered as far back as 100 years ago.

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Scientific	Common Name
Octopus bimaculatus	Two spotted octopus
Tetibranchiata	Sea-hare
Ischnochiton Magdalenensis	Gulf Chiton
Ischnochiton lucrignatus	Chiton
Codakia distinguenda	Clam
Cardium consors	Cockle
Laevicardium elatum	Giant Cockle
Cardiltamera affinis	Ruffled clam
Acmaea dolliana	Limpet
Crucibulum spinosum	Spiry Limpet
Chione undatella	Frilled chione
Chione californiensis	California chione
Pteria peruviana	Wing shell
Isognomon chemnitzianus	Pouch shell
Volsella capax	Horse mussel
Crepidula aquana	Boat shell
Olivella dama	Olive shell
Cypraea annettae	Annette's cowry
Tegula rugosa	Turban shell
Conus regularis	Cone shell
Phyllonotus erythrostomus	Pink-mouthed Murex
Turritella broderipiana	August shell
Polinices reclusiana	Southern moon-shell
Phallium abbreviatum	
Chlamys subnodosa	Noded scallop
Atrina maura	Pen shell
Naicula pacifica	
Turbo (Callopoma) fluctuosa	Turban shell
Solenostira pallida	Top shell
Cerithium stercusmuscarum	Spindle
Knefastia funiculata	Spindle
Neritina luteofasciatus	Nerite
Columbella fuscata	Dove shell
Trivia radians	Coffee bean
Tellina rufescens	Tellen shell
Ficus ventricosus	Fig shell
Niocke bistriomico	?

While most specimens were identified from live material collected in tide-pools and kept in buckets as long as they lasted, some dead shells had also been used, especially those from the kitchen-middens rather numerous in the immediate Desemboque area.

By far most of the species had been identified by Dr. J. P. E. Morrison of the United States National Museum. To these I added a few identifications of my own, while Dr. Grace Pickford of the Osborn Laboratories, Yale University, identified the octopus and Dr. Rudolf Stohler of the University of California identified the chitons.

Economy

A very considerable proportion of the molluscs is used by the Seris in various ways. The tabulation will present the data much more clearly than could be done in a discussion.

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Stalkin E-5 (1953-1955)1962 NU31 Seri NU31

MOLLUSCA

VII

USES

Species	Food Prom.	Food Past	Decoration Prom.	Decoration Past	Trade Prom.	Trade Past	Bait
Octopus bimaculatus	x	x				x	x
Codakia distinguenda		x					
Laevicardium elatum		x			x[1]		
Carditomera affinis	x	x					
Acmaea dalliana			x	x	x		
Crucibulum spinosum		x	x	x	x		
Chione undatella	x	x					
Chione californiensis	x	x					
Pteria peruviana	x	?	x	?	x		
Volsella capax	x	x					
Olivella dama			x	x	x		
Cyprea annettae				x[3]			
Tegula rugosa		x		x		x	
Conus regularis		x[2]		x	x	?	
Phyllonotus erythrostomus		x				x	
Turritella broderiana		x[2]			x	?	
Polinices reclusiana	x	x					
Chlamys subdudosa	x	?					
Atrina maura	x	?			x[4]		
Navicula pacifica		x					
Turbo fluctuosa	x	?			x		
Solenosteira pallida			x	?	x		
Ceritium stercusmuscarum			x				
Trivia radiata			x				
Ficus ventricosus	x						
Nucella biotriunoca	x	x					

[1]Occasionally used as dip spoon

[2]Supposedly used in the past for money

[3]In the past "giants of 300-400 maybe years ago have eaten it."

[4]Only pearls

These figures show then 26 out of 37 species exploited economically in some way, that is 70%. These figures show increase over the figures I have published previously (1956) which were 21 out of 36 species and 58% respectively. The corrected figures are the result of brief additional field work in 1955.

Food

A good part of the molluscan forms are used as food. Altogether 19 species are listed as such, although out of these, only 11 were reported as being part of the diet today while the remainder only in the past. It is obvious that there has been progressive decrease in the Seris' dependence on the molluscan diet within the past few generations.

Four of the species reported as part of the Seri diet at various times had been collected from the kitchen-middens. There are: *Pteria peruviana*, *Chlamys subdudosa*, *Volsella capax*, and *Navicula pacifica*. Of these four, *Navicula* has been reported as eaten in the past "maybe 100 years ago, but not

262 now," while the *Volsella* has been eaten in the past
172 just as much as it is now. The find of these four species in great numbers in the kitchen-middens only indicates that they probably were an important part of the Seri past. Historical records are scarce and no archaeology had ever been done in the region, except for Gifford's (as yet unpublished) excavations at Caborca. But Caborca is far away from the coast. Strong circumstantial evidence suggests that a good many of the kitchen-middens represent relics of the Seris' past encampments.

262 The verbal data for the Seris' past use of some species of molluscs in their diet is uncertain or unavailable. But it is safe to assume that if the animal is eaten today, then it certainly had been
[174] also eaten in the past. It is not probable that the Seris should suddenly develop a taste for obscure kinds of animal food, while the entire trend had been in the other direction.

Of the different species the augur shell and the cone shell were said to have been "eaten in the past by the giants. Maybe 300-400 years ago." It is
[173] hard to account for this idea except that it probably refers to a myth.

Preparation

252 Preparation of the mulluscan food differs little, if at all, from any other food of animal origin. The animals are simply separated from the shell, the meat is dropped in water and boiled, usually
[263] for half an hour. Few ingredients other than salt are added and their use depends entirely on the availability of cash and on the individual tastes of the Indians. As far as I could tell, there is no differentiation in this for people of different sexes
262 or ages. Also there is no preference for different parts of the body.

Preferences

Some species are more liked than others, but this is related to their size rather than anything else. There does not appear to be any belief in the toxicity of molluscs and the occasional justification of the inedibility has been expressed in terms of size. Some species, it had been asserted, are not eaten simply because they are too small to bother. Only *Cardium consors*, as one of the in-
* [825] formants suggested, is venomous, but even this, to him, seemed uncertain and dubious for he said "maybe it is venomous."

Other Uses

301 a) *Decoration*: A considerable number of shells
* 825 were reported as used for decoration. The tabulation indicated altogether 10 species that had been or still are used for ornament. Three of these are discarded now, seven still in use. This is mostly in the form of various sorts of necklaces, which the women string on ordinary thread. *Solenastira pallida* is supposed to be worn as such by women and children, while *Cerithium stercusmuscarum* by the boys only. But I have never seen either of them make use of it in any way. On the other hand, *Trivia radians* and the *Olivo* shell are much

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301 worn. I have observed women wearing necklaces
+ 825 of the former and women and very young boys of the latter. The olive shell, incidentally, is made into two sorts, the natural, unroasted shells which retain a greenish-purple, mottled color and the white. The white pallid color is achieved by roasting the shells over fire. The necklaces are mostly made up of either colored or white but occasionally they may be made of mixed shells and then they are usually alternately interlaced, now with one, now with another.

+ 825 b) *Utensils:* Two species had been reported
[412] used as occasional drinking or dipping cups and
[415] spoons. *Lavicardium elatum* and *Ficus ventricosus*. *Ficus* is presently discarded, but the *Lavicardium* is still occasionally used so. There is no doubt that the incidental use of these shells increases during longer fishing expeditions when the Seris are apt to lose some of their gear.

[436] c) *Money:* Interestingly, the brown cowry was supposed to have been used as a means of exchange, as money—in the past. If this is so, then the selection of this shell for such purpose is not
[171] surprising considering its widespread use throughout the world.

439 d) *Trade:* Altogether 12 species had been re-
+ 825 ported as traded off either in the past or present. The trade importance of various species of shells varies with the demand of the market and sometimes may be only sporadic and short-lived. Only a few of the species had been indicated as having been of any trade importance in the past, and it may well be that the Seris did not register the species which may have been briefly sold to and outsiders during the short-lived fads of demand. It may be said in general that the trade importance of the shells increases and that greater variety of them are exploited now than formerly. This is surely owing to the increasing accessibility of the Seri country and the increasing tourism, not only, visitors from Hermosillo,
[177] but also from such far flung places as Tucson, Phoenix and even Los Angeles.

In some instances, the Seris had no idea what the shells were sold for. The augur shell is on and off sold to some American traders who show up in Desemboque once in a while and for whom the Seri women accumulate these shells. But what uses were made of these, the Indians surely didn't know. Neither did they know what uses were made of the *Murex* shell and the *Turbo*, both of which were periodically sold in bulk to Hermosillo. On the other hand, they had some idea what uses were made of some other shells. *Pteria* and *Atrina* contain pearls and these are much desired. Especially the pearls of *Atrina* which are sold to the
[435] Mexicans or to the visitors for 25-50 pesos each and therefore have immense value, for the local market. The *Pteria* shells are said to be used for
[237] button making, and the Seris themselves claim that they make buttons of this shell. The most important of all, however, at least at the time of my visits in 1953 and 1955, was the olive shell. It was easily the most commonly and most numerously collected shell of all that the Seris ever
[226] collected. Owing to the scarcity of it in Desembo-

*825 439 [226] [415] [435] que (as a result of the ecology of the coastal waters) it is gathered in huge quantities largely on the shores of Tiburon where it is said to occur in great numbers. This animal is gathered in large bulk in 5 gallon gasoline cans and then sold either as finished necklaces at the rate of five pesos each, or as bulk, by the liters, with 20 liters for each gasoline can. There is a steady market for these shells.

226 e) *Bait:* Only the octopus has been reported as used for fish bait for the *pinta*, *baya* and *pescara*, and I have seen it used in that manner. But it is certain that on occasion the Seri will use also for bait the flesh of some of the shelled smaller molluscs, especially when they wish to capture live fishlets for bait.

Hunting

[462] [857] Collecting of molluscs is almost invariably a job of adult women and of the children of both sexes who at low tides scavenge the exposed mud flats and gather or dig out various marine animals. Some are collected on the surface only. Among those that must be excavated are the octopus and *Nioche* which hide in burrows or mud, respectively. A large shell is usually used as a tool to pry the *Nioche* out.

Taxonomy

*825 Molluscs on the whole are recognized as one group of animals. However, this does not include the octopus and the chitons which are considered as different sort of creatures. Some sort of feeble association between the *Pelecypods* and the *Gastropods* is recognized and various species of both are placed together. I noticed a tendency to consider some of the *Gastropods*, the limpets and *Crepidula* for example, as supposedly having two valves while in fact they are both univalves. The explanation offered for this was "it lost one side," meaning one valve.

Although *Chitons* spend most of their time motionless attached to rocks they are both considered animals. The motions of these animals may not [857] have been observed by the adult, but the Indians, young boys especially, certainly noticed the changed positions after a period of time.

In some instances the Seris observed quite small differences between animals—recognizing them as different species. In the *Neritina* two different forms were correctly identified as representative of the same species, although they differed considerably in size and color. On the other hand *Columbella* and *Solenostira* had been given the same Seri name palémex[s] but were recognized as different kinds of animals.

Sexing

A distinct tendency to consider the molluscan males larger than the females emerges readily from the Seri answers. This can be shown in the table below:

[P. 40 A]

* 825

Male larger	Don't know
Chlamys subnudosa	*Nicche histrionica*
Acmea dalliana	*Cardilumera affinis*
Solenostria pallida	*Chione undatella*
Isognomon chemnitzianus	*Phyllonotus erythrostomus*
Chione californiensis	*Volsella capax*
Polinices reclusiana	*Cypraea exutina*
Kuefastia funiculata	*Turitella broderipiana*
Pteria peruviana	*Lacrycardium elatum*
Turbo fluctuosa	*Crucibulum spinosum*
Atrina maura	*Neritina luteofasciatus*
Octopus bimaculatus	*Tegula rugosa*
Female bulkier but smaller	*Ischnochiton laevigatus*
Atrina maura	*Ischnochiton magdalenensis*
Sexes alike in size	
Pinna ventricosus	
Male more colorful	
Eurytellina ruboscens	

For the remaining 11 species there is no data. It is obvious then that here cultural stereotypes are at work in suggesting tendency toward larger size of the males. The fact that not once the reverse had been said makes this so much stronger. Where differences between sexes are hard to notice, the Seris will tend to think the male as the larger of the two. A faint suggestion also works in the direction of some of the other ideas on the subject already expressed in the data for the higher animals. In one species, at any rate, it had been suggested that the male is more colorful and in another that the female is bulkier if smaller. Similar sort of ideas had been expressed also for some of the fishes.

Weight and Size

These had been indicated usually as merely "this is the size to which it grows," pointing toward the animal on hand. The informant went little beyond this in the case of an octopus, saying that it grows up to a foot across the tentacles.

Age

No indication of the hypothetical age has ever been made for any of the species.

Development

That the Seris consider *Mollusca* oviparous animals is clear from the information they gave. Although the data are available only for 12 species, they all were indicated to be oviparous. Little indication has been made as to the total number of eggs delivered. The sole exception is the octopus which the informant said lays 1000 or so eggs, another way of the Seris' saying that it lays many. At other times they merely said "many."

The egg laying activity, the Seris think, takes place mainly during the summer as the table below shows:

Species	Season		
	Eggs in hot	Eggs in cold	Doesn't know
Eurytellina ruboscens	x		
Chlamys subdudosa	x		
Chione californiensis	x		
Kuefastia funiculata	x		
Phallium abbreviatum	x		
Ceritium stercusmuscarum	x		
Crepidula crepidula squama	x?		
Octopus bimaculatus		x	
Polinices reclusiana			x
Solenostiria pallida			x
Trivia radiana			x
Columbella fuscata			x

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Bidalkin E-5 (1953-1956)1962 MUSI Seri MUSI

#825 In a few instances the informants indicated where the eggs were laid. The octopus, they say, lays its eggs under abandoned shells, while *Polisices* lays on the bottom.

Only in the octopus the informants showed more detailed knowledge of the developmental sequence. The eggs, as already stated, are laid in the cold season, while the young hatch out in the warm season, in April. No parental function had been indicated at all.

Food

Very little indication has been made concerning the food of the mollusc, as well as of the predation on them. Information had been given only for a handful of species and even that often hesitantly and sparingly. Only for two species a specific kind of diet has been suggested. *Ficus ventricosus* is said to feed on the "white soil" (meaning white sands) while *Carditamera affinis* feeds merely "on earth." No suggestion occurred at all that any of the shellfish might be predatory and even to the question of what the octopus ate, the reply was "I don't know." Yet, in fact, great many of them are carnivores.

Predation

Here again there is very little information. For the vast majority the reply was the familiar "don't know." Only for three species the informants suggested a detailed answer. The predator of *Nioche bistriunoca* and *Chione undatello* is the *puerco* but what else the informants could not tell. The octopus, the informants said, is consumed by the *baya, pinta, sardinera* and *pescara* but not by the *tiña, culon* or birds. The reply suggests clear distinction between predatory and unpredatory fishes. How the Seris have arrived at this idea about the octopus is not clear, but they do use these animals to bait the above mentioned predatory fishes.

Seasonality

An association between the reproductive activity of the *Mollusca* and the summer season have already been indicated, and in this the Seris' generalized ideas do not differ essentially from their ideas about other animals.

Far fuller data are available for the seasonal occurrance of the mollusc, in fact for all but two species.

	Species
Hot season only	7
More in hot season	3
Equally in both	21
More in cold season	2
Cold season only	2

The table shows that more than half of the species are equally common during summer and winter seasons but otherwise the tendency is toward greater abundance during the warm summer. This again is much in line with the generalized, if somewhat obscured idea, that there are more animals of all sorts present during the warm months, whether on land or in the sea.

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*825 [172] [263]

Because seasonal deposits of shells may differ archaeologically and because they do make up an important part of the Seri diet, both now as also in the past, the dominant species for each season are listed below:

Occurring in Summer only	More common in summer
Isognomon chemnitzianus	*Chione subundata*
Cardium consors	*Eurytellina rubescens*
Codakia distinguenda	*Acmaea dalliana*
Pinna ventricosa	
Phallium abbreviatum	
Crepidula crepidula	
Tritia radiata	
Occurring in Winter only	**More common in winter**
Pteria peruviana	*Turbo fluctuosa*
Polinices reluscicosa	*Octopus bimaculatus*
No data	
Volsella capax	
Niacha histrionica	

In three of the species which are present only during the hot season the Seris indicated that they winter buried in mud.

Rhythm

There is a clear suggestion that to the Seri the *Mollusca* show no predilection for either diurnal or nocturnal activity but that they are active both day and night. Data for this had been obtained for 10 species and this answer has been given in every case—merely saying that "it walks day and night." This falls in line quite closely with the Seris' ideas about other creatures of the sea in contrast to the terrestrial animals. There is but very feeble suggestion that some of the fishes are either nocturnal or diurnal. Vast majority are both.

Distribution

Familiarity with the geographical distribution of the molluscs is for the Seri in a way a function of their familiarity with the particular locality. The largest number of species they cite for the localities in which they regularly camp, the smallest for those they know very little. Thus, the records indicated for the coast of B. C. are only those where the informants indicated by the blanket statement "found everywhere." But this does not mean that they actually cited the animal from such a locality.

In many instances presence or absence of a molluscan has been explained by presence or absence of its favorite habitat. The informants repeatedly pointed out that excessive sandiness of the Kino's shores is responsible for an absence of a great variety of animal there. In other cases, presence of rocks is a requirement for several others. But these matters will be discussed in greater detail under the heading of ecology.

Ecology

The Seris have a very clear-cut idea concerning ecological preferences of the *Mollusca*, a matter which is not too difficult for them to observe.

[P 418] [see category 116, pp 64-65 for distribution charts- Analyst.]

Walkin E-4 (1953-1955)1962 MU31 Ser1 MU31

+825 To them the animals break up into the sand lovers and rock lovers and they choose the habitat accordingly. Out of the total of 37 species the breakdown is as follows:

	Species
Rock habitat	15
Sand habitat	20
Mud habitat	1
No data	1

The mud-loving creature is supposed to be the *Nioche bistriatnocu*. No data is available for the *Columbella fuscata*, while the 15 rock-loving molluscs are:

Ischnochiton magdalenensis
Ischnochiton lagrigatus
Isogaemon chemnitzianus
Tetibranchiata
Octopus bimaculatus
Velaella capax
Pteria peruviana
Neritina luteofasciatus
Acmaea dalliana
Tegula rugosa
Cerithium cerosmuscarum
Solenocstira pallida
Crucibulus spinosum
Phyllonotus erythrostermus
Carditamera affinis

All the remaining species are sand loving. The sand-loving species are on the whole regarded as slightly more mobile and were often referred to as "crawling on sand." Several of them were said to crawl in the up-right position, this especially true of the bivalves, which observation I had been able to confirm. Sometimes other details had been added to the knowledge of the movements of these animals. *Laevicardium* and *Naricula*, the Seris say, walk under ground, the latter 5-10 cm. deep. But some are considered almost sessile and the *Atrina* does not walk at all. On the other hand, *Ficus ventricosus* is said to walk in the straight line.

Most of the sand-loving species are also, according to the Indians, shallow water inhabitants. But some, and here we have *Phallium*, *Codaria* and *Caridum*, spend winter buried in the ground. *Nioche* as already indicated is also a burrowing

[P.42 A]

* 825 creature but of a permanent variety and is said to stay buried in the mud 12 or more cm. deep—as already mentioned.

The rock-loving animals occur equally on rock and under rock and they are almost equally divided into this sort of habitat (by species). Among them the *Tagula*, *Solenostira*, *Carditamera*, *Octopus* and *Tetibranch* are considered particularly forms that make their homes under the rocks.

Toxic or Dangerous Molluscs

None of the molluscs are considered dangerous either owing to venom or otherwise. Only hesitant suggestion has been made concerning the *Cardium* that it is venomous although nothing was said about it being fatal. It is also said about the octopus that it mildly bites with teeth but that is not dangerous.

Miscellaneous

Gregariousness: Not much data are available whether the molluscs are considered solitary or gregarious in distinction to mere presence or absence of large numbers. *Nioche*, the Indians say, lives in large numbers together, while the *Octopus* is solitary and this is the extent of the available data.

Anatomy: There is little data concerning the anatomy and most of it refers to the octopus which evidently is best known of all molluscs to the Seris. The Seris recognize different major sections of the body in this animal. They think that the sack is its head, the mouth at the opening of the mantle, the teeth are to them the black marks. The octopus also has eyes and suction cups and the purpose of the section cups is well known. Otherwise the Seri occasionally will indicate whether the animal is a univalve or a bivalve, although this, as already suggested earlier, with little accuracy.

[P.42 B]

9:Malkin E-5 (1953-1958)1962 NUSI Seri NUSI

VIII

CRUSTACEA

Scientific	Common Name
Cirripedia	Barnacle
Axius vivesi	Mud-shrimp
Leptodius occidentalis	
Microphyrus platisoma	
Spelaophorus schmitti	
Petrolistus armatus	
Callinectes arcuatus	
Glyptoxanthus meandricus	
Pilumnus townsendi	

All animals in this group are considered live animals—and not plants. This interestingly includes the barnacle. The only way one may account for this is probably the Seris' observation of the cracked barnacles and of the moving flesh inside. Barnacles growing on the marine turtles are also classed as animals, though of a different kind than the barnacles growing on rocks or on the mangroves. They are called *piojos de cahuama*, literally, turtle lice.

The Seris regard *Glyptoxanthus* and *Pilumnus* as the same kind of animal. *Pilumnus* is considered to be merely a large specimen and "maybe an adult," the other *Pilumnus* "is young." When questioned about the reason for the identity the informants pointed out the hairiness of both crabs.

On the other hand, although *Spelenophorus* and *Microphyrus* have the same Seri name, they are considered two different species.

Economy

Crustaceans play little role in the Seri diet. Very few are eaten at all and when they are, the amounts are insignificant and they are considered an inferior sort of food. The informants denied that they have eaten any of them in recent years, but allowed that two species, *Callinectes* and *Axius*, had been part of their diet in the past, although how long ago they didn't specify. There is no doubt, however, that in time of frequent sub-famines, the Indians resort to these lowly creatures.

In addition to this, *Microphyrus* had been mentioned as a fish bait. It is possible that in a pinch other forms are also so used. Finally, the most frequent function that the crustaceans play in the Seri life is as objects of play for the boys who spear them with the miniature two-pronged "pueros."

Sexing

For three species of the crustaceans the Seris indicated distinction differences between the sexes. In the two crabs, *Callinectes* and *Leptodius*, the males have narrow center plate while the female's center plate is wide, which in fact is a well-known sex difference in crab. In *Glyptoxanthus* and *Lep-*

Natalkin E-5 (1953-1958)1982 MU31 Seri MU31

VIII

CRUSTACEA

* 825 *todius*, they say the male is also much larger than the female although colors of both are alike. We then have here one of the general sexing criteria that runs through the entire animal kingdom.

For the remaining five species, the informants simply din't know how to tell the sexes apart, although they asserted that they are both present.

Age

No data are available for this topic.

Size and Weight

There is little information for this. It appears that the Seri considered the specimens shown to them as representing the usual size for each species. Only in *Callenectes* they indicated that "it grows a little larger."

Food

The Seris have very little information about the feeding habits of the crustaceans; with the exception of two species they simply didn't know what the animals eat. The two, *Leptodius* and *Callinectes*, they believe, are scavengers feeding on dead fish. Of course, with the lot of offal floating along the shore in the Seri encampments such observation is not difficult.

Development

The tendency is to consider the crustaceans as oviparous animals. In half of the species, it is true, the informants didn't know the answer. But the remaining four they indicated laid eggs. It is not amiss to point out here that in these matters, as also in general in matters concerning obscure marine invertebrates, the young or adolescent [857] boys did much better than older men. Older men devote their time to fishing, boys to the gathering and persecution of all sorts of small animals. The adult men simply may have forgotten some of the things they learned in their younger age. In any event, *Callinectes*, *Leptodius* and *Glyptoxanthus* and *Pilumnus* are all egg-bearing species in their view. The female of the *Callinectes* carries the eggs under its carapace. The *Glyptoxanthus* delivers its eggs in the cold season, which is the reversal of the usual Seri idea about the reproductive season of the marine invertebrates and other animals.

Seasonality

Here again there is distinct tendency to associate the rarity or abundance of animals with the season. Half of the species, according to the informants, are equally common in the hot or the cold season but the other half occur predominatly

* 825 during the warm season and are very rare during the cold time of the year. To this second category belong *Arius*, *Microphyrus*, *Petrolistes* and *Leptodius*.

Rhythm

There are no data on this subject among the crustaceans and there is no indication that the Seris believe in any differences in the amount of crustacean activity from daytime to night.

Ecology

Here there is more information because the Seris were able to provide ecological data of some sort for each of the species in the list. They pointed out that each of the species was exclusively a sea-dwelling animal and that the majority of them are associated with the rocky habitat. In fact, not one appears to be a sand dweller. The only exception is the mud-shrimp *Arius*, which animal they say (and in fact it does) lives in deep burrows in mud, some foot and half deep. All except the mud-shrimp and the barnacle live under rocks, the barnacle on the rock or on the marine turtle. All prefer shallow waters although some are also found in deeper waters. They walk under rocks but do not like to wander away and some do not even move much under rocks. The informants indicated that presence of some species in a given locality depends on the presence of suitable rock habitat. In addition to this, they credit *Callinectes* with a particular fondness of the Esteros.

Distribution 1/4

Even from the small numbers of species it is clear that once more the general knowledge of the animal distribution is related to the frequency of visitations. The Seris' rare trips to the larger outer islands, San Esteban, San Lorenzo and

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1/4 [see category 116 - p 65 for distribution chart - Analyst.]

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#825 [484] Angel de la Guarda or to Guayamas and Punta Peñasco, result in little knowledge of the fauna and habitat, and for such localities they answer usually in a form of a question mark. On the other hand, localities with which they are well familiar, Kino, Desemboque, various places on Tiburon or Isla Patos and the Esteros between Kino and Desemboque, have to them then much greater fauna, and also the informants are able to state reasons why an animal may or may not be present. Again, we have the familiar explanation for the absence of certain creatures from Kino, "too sandy" or "no rocks." The mud-loving *Axius* they say is especially prolific in the muddy esteros of Estero Sargente, and in Tecomate it occurs only in one spot where there is mud. Finally, absence of *Leptodius* from the Isla Patos' shores is due to unusually turbulent waters, an explanation offered also for the absence from that spot of several marine invertebrates.

Anatomy

An interesting idea has been suggested in connection with the identification of the body parts in *Leptodius occidentalis*. (The informants correctly identified the mouth.) They also said that the animal has two eyes, no teeth, two legs and eight arms. The front enlarged legs (pincers) they think are legs, the eight smaller limbs behind them are arms. The reason for this division has been advanced, namely that legs are large and arms are small. This is yet in contrast with the real function.

Dangerous and Toxic

Not one of the crustaceans is considered dangerous or toxic. None have any venom. *Axius* and *Leptodius* bite mildly with their forelegs but do no harm. That is the extent of information I could get.

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IX

MISCELLANEOUS

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Scientific	Common Name
ANNELIDA	
Annelid worm (tube)	
POLYCHAETA	
Eurythoe	Stinging worm
ECHINODERMATA	
Heliaster sp.	Star fish
Holothurioides	Sea cucumber
Encope grandis	Sand dollar
Echinometra vanbrutti	Regular sea urchin
COELESTERATA	
Anthozoa	Sea-anemone
Medusa	Jelly-fish
PORIFERA	
Porifera	Sponge

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136 All these miscellaneous animals are grouped together and discussed together simply because only few species from each group are represented and any generalized comments are not reliable.

The following individuals identified the material. Annelid worm (from tube only)—J. E. P. Morrison, U.S. National Museum.

Sea-urchins — Elisabeth Deichman, Harvard University.

Remainder—Borys Malkin

Taxonomy

* 825 With an exception of the sponge, all of the forms listed here are considered animals and not plants. The criterion is movement and when questioned for reasons the informants invariably replied "this is an animal because it moves." It applies equally to the jelly-fish and the *Echinoderms*. The *Annelid tubular wôrm* is also considered an animal and its shell is instantly recognized as an animal shell. This is surely owing to the movement of the worm in and out of the shell, although the worm does not move with the shell, being imbedded on rocks.

[824] The sponge, on the other hand, was said to "stay on rocks for 5-6 years. It does not walk. It is an alga or plant, not an animal. There are several different kinds, different in color." Thus the minutest sort of movement is shown again to be the basic criterion for the distinction between animals and plants.

Sexing

The Seris know nothing about sex differences in these groups. Of course, several of these beasts are hermaphroditic and self-fertilizing, and there are no visible differences. But in any case the informants simply didn't know what the differences between the sexes are.

Food

No knowledge.

[P.45A]

Waldkin E-5 (1950-1955)1962 NU31 Seri NU31

IX

MISCELLANEOUS

Predation

* 825 The marine turtle and the *puerco* (but not shark or octopus) are mentioned as predators of the jelly-fish. What is the basis for this statement I do not know.

Development

The usual reply on this subject was "I don't know." One of the informants suggested, however, that the Sun Dollar urchin has eggs. This is pure guess. The urchin has eggs all right, but they are too tiny to be seen with the naked eye.

Seasonality

In contrast to some of the previous categories, a great deal of distinction is made concerning seasonal occurrance of animals. This breaks down as follows:

	species	Number
Hot season only	*Eucope grandis, Medusa*	2
More in hot than cold season	*Heliaster*	1
Equally in both	*Porifera, Echinometra, Eurythoe*	3
Cold season only	*Holothuroides*	1

There are few embellishments on the subject of seasonal distribution. Regular sea urchin, the informants said, is rare in Desemboque in both seasons, while the sea-cucumber is rare in the cold season but altogether absent in the warm season. This last statement is not correct since I found many of them under rocks. It may be related to habits of the animal and its tendency crawl about in the cold season. For the older Seri not interested in scavenging after intertidal animals, they may well have disappeared from sight. Finally, there is a specific idea concerning the presence and absence of the jelly-fish. This beast, they say, first shows up on May 16th and on November 16th, disappears from the shore line waters. It spends the cold season in the deep waters.

Rhythm

Almost no data. However, the informants said that the sea-cucumber and *Heliastes* are "active day and night."

Ecology

Here again, the Indians were able to provide some informantion for each of the species. All of the species listed in this category are lovers of rocky habitat with the exception of the jelly-fish and the sand dollar. Jelly-fish, they say, swims at all times, the sand dollar lives on sandy areas and crawls on sand. The tubular *Annelid worm* they recognize as a rock-lover also, but they say it also likes to attach itself to the shells. And

9:Malkin E-5 (1953-1955)1962 NUSI Seri NUSI

\# 825 surely the specimens which I showed them were collected off *Codaria distinguenda*. On the whole, and with the exception of the jelly-fish, all animals here are inhabitants of the shallow waters—that is intertidal.

Distribution

Again familiarity with the locality increases the detailed knowledge of the distribution of animals and reasons for their absence or presence. Once more in several cases such indications had been made. Once again Porto Kino has some animals present in large numbers (like the sand dollar), or absent altogether (*Anthozoa*, *Eurythoe*, *Helistere*) because of its sandy beaches.

The distribution of the *Encope* and the *Annelid worm* as given in the table is somewhat dubious. The basis for this is a statement that it is "found everywhere except . . . etc . . .." But the informants who made it lacked good knowledge of many localities and they evidently were in a habit of phrasing the matter in this way.

Anatomy

The sea-anemone and the *Echinometra* are said to have mouths in the center. The *Medusa* has arms but no mouth, eyes and ears. But it does have a stomach. The Anthozoan mouth is in the center but it has no eyes, teeth or arms. The *Echinometra* has mouths in the center and inside the teeth, in the same way as the starfish. The *Polychaete* has no mouth, but it is supposed to have two tiny

1/4 [see category 116, p 65 - Analyst.]

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Ritalkin E-5 (1963-1965)1967 MUSI Seri MUSI

+ 825 eyes in front of the body. These are small spots which are different organs but the Seris think they serve as eyes.

Toxic Forms

753 This group of miscellaneous marine animals
+ 825 contains, according to the Seris, an unusual number of toxic and dangerous forms. Three are considered as nasty and toxic, the *Medusa*, the stinging worm and the regular sea urchin. The least dangerous of these is the sea urchin. Its spines are "sometimes poisonous. When broken off, they stay in the body and it never heals." The Seris, however, are more fearful of the other two. The *Medusa* "is very venomous and dangerous when touched." "It causes great pain," irritation and swelling" and then "it is not fatal. Just 12-13 hours of illness and then . . . nothing." The stinging worm is equally bad, the Seris say. "It has spines which sting badly. It causes local swelling for 2-3 days. It has much painful venom but is not fatal."

All these comments are based on observation and reflect pretty much the real situation. There is no exaggeration in them.

Miscellaneous

+ 825 Movements of animals had been observed at least in a few cases. The sea-cucumber they say "walks like the viper," leaving marks on sand. The regular sea urchin walks on its spines which are called *xeppe nosymx* or *xeppé*, meaning sea.

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X

INSECTS AND ARACHNOIDS

Scientific

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COLEOPTERA
CINCINDELIDAE
Megacephala
Cicindela carthagena
calosoma
Cicindela lemniscata
Cicindela californica
brevihamata
Cicindela californica
mojavi
CARABIDAE
Chlaenius erbus
Calosoma prominens
HISTERIDAE
Saprinus discoidalis
HYDROPHILIDAE
Hydrophilus insularis
ELATERIDAE
Chalcolepidius smaragdinus
Melanotus cribricollis
Horistonotus sp.
MELOIDAE
Meloidae-gen? sp?
CLERIDAE
Cymatodera sp. A.
Cymatodera sp. B.
OEDEMERIDAE
Oxacis sp.
BUPRESTIDAE
Polycesta velasco
Hippomelas sp.
DERMESTIDAE
Dermestes maculatus
TENEBRIONIDAE
Eleodes sp.
Asidina confluens
Cryptoglossa verrucosa
Steriphanus punctatus
Edrotes testriceus
Glypotus sp.
SCARABAEIDAE
Trox suberosus
Diplotaxis knausei
Cyclocephala longula
Anoplognatha donnianus
Liggyrus gibbosus
Strategus
Scarabaeidae, gen? sp?
CERAMBYCIDAE
Monilema sp.
Anelus prolixus
Anelus
Derobrachus geminatus
Achryson surinamum
Acanthoderus peninsularis
BOSTRYCHIDAE
Apatides fortis
CURCULIONIDAE
Eupagoderus sp.
ORTHOPTERA
Acheta assimilis
Eremopedes bilineatus
Insara covillae
Cirmatodes larreae
Periplaneta americana
Arenivaga sp. nov.
Anconia integra
Diapheromera calcarata
Stagomantis limbata
Stagomantis californica

HEMIPTERA
Rhytidolomia osyi
Lethocerus dolpentei
Ranatra thoracicus
Triatoma rubida
Leptoremus sp.
Reduviidae, gen? sp?
Hemalocoris minutus
HOMOPTERA
Decerapecta sp.
Acanalonia sp.
FULGORIDAE
Scolopsella rotimulata
DIPTERA
Eras argyrosoma?
Hermetia sp.
Stratimyidae
NEUROPTERA
Parathaclisis hageni
Scotoleon cangener
HYMENOPTERA
Chlorion serrarius
Hemisia sp.
Bee
Ptiloglossa mexicana
Dasymutilla klugi
Dasymutilla magna
Photopis sp.
Pepsis sp.
LEPIDOPTERA
Ascia sevata
Danaus gilippus strigosus
Agraulis vanillae
Amblyscirtes sp.
Phlegethontius sexta?
Sphingidae, gen? sp?
Sphingidae larva
Erebus odora
ARANEIDA
Artema atlanta
Synpira celectica
Menemerus bivittatus
Latrodectus mactans
Aphanopelma
SCORPIONIDA
Hadrurus hirsutus
SOLPUGIDA
Eremobax calexicensis
MYRIAPODA
Scolopendra malkini
Orthorus sp.
ACARINA
Acarina, gen? sp?
IXODOIDERA
Ixodidae, gen? sp?

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X

INSECTS AND ARACHNOIDS

114 Altogether information has been collected concerning 92 species of insects, scorpions, ticks, myriapods and arachnoida.

Economic uses

262 McGee says that "good many insects" are part
[114] of the Seri diet, although he does not specify just which they were nor how significant. There is no doubt that in his days, the insects played some role in the Seris' food and that they were probably far more important in the distant past, in the
[177] XVIII and early XIX centuries, before large flocks of livestock, horses and cattle of the Spanish rancheros offered excellent opportunities to supplement the usual diet.

Of all this but minor traces remain today. The Seris even have forgotten which insects had been eaten by their ancestors. Apart from the bees, only the Sphingid caterpillar has been indicated as "eaten in the past, but not now." As for the bees,
[263] their honey still is part of the Seri diet. But with the availability of sugar, even this addiction dwindles.

+ 825 Other than this I have been unable to discover
857 any uses whatever, except perhaps as playthings of little boys, with the usual torture in view. The *Cicada* is most significant of these, of which more later.

Pets

231 The only insect pet is a *Cicada*. This insect is usually tied to a long thread, its forewings partly clipped off and then released into the air like a
[171] kite. Local Mexicans also provide their own boys with a similar kind of toy.

Hunting

222 Only bees are hunted. They are usually flushed out of the cave shelters in the mountains. The operation is accomplished without the use of smoke. The honey is cut out with a knife.

Taxonomy

+ 825 Seris' ideas of association of various insects are very loose. Few insects are recognized to form natural groupings; bees, butterflies, wasps, spiders are most distinct. However, there are all sorts of gradations blending confusedly with each other, often dependent on the knowledge and interest of particular informants.

Simple recognition is not always present. Out of 92 forms, 13 the informants could not identify, simply saying that they didn't know them. *Cicindela lemniscata, Melanotus cribricollis, Horistonotus, Meloid, Ozacis*, both species of *Cymatoderu, Photopis, Scolopsella*, tiny Scarab, *Leptoremus, Homolocorus*, and *Reduviid*—all these were in the

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*825 "unknown" category. Reasons for this lack of recognitions were sometimes stated, namely, that the creature was too small. But with some insects, for example *C. lemniscata*, the animals evidently do not occur right at Desemboque and the specimens came from Estero Sargente. Interestingly, the informant could identify other species of tiger beetles without trouble.

On the whole, all these "unkowns" are of small size and most of the recognized insects are medium to large size.

Nomenclature alone is not always the basis for distinction. Occasionally the Seris pointed out that the insects were different, yet they had the same name for them. Here belong the following groupings: *Trox, Eleodes and Asidina; Anoplognatha dunnianus* and *Arenivaga*;-small mantid and the walking stick; *Lethocerus* and *Hydrophilus;* three spiders, *Artema, Syspira* and *Menomorus*, all considered identical yet all different from the Black Widow (*Lathrodectus*). One might suppose that various general features suggested differences, in the case of *Eleodes* and *Asidina*, the extreme hairiness of the former. In the three above mentioned species of spiders and the Black Widow, the informants specifically mentioned that "they are different because they do not sting" (referring to the three).

A considerable number of insects the Seris see as identical, even if they really are different animals. A table will indicate the identical pairs or groups.

Achryson surinamensis and *Acanthoderus*
Diapheromera calcarata and *Stagnomantis limbata*
Arenivaga and *Edrodes*
Parathaclisis hageni and *Scotolcon compreser*
Diplotaxis knausei and *Eleodes*
Cicindela californica, C. brevihamata and *C. colossae*
Polycesta and *Hippomelas*
Hippomelas, Dermestes and *Steriphanus*
Asidina and *Cryptoglossa*
Cotalpa and *Strategus*
Hydrophilus and *Stratagus*
Menomorus, Artema and *Syspira*
Chlaenius orbus and *Eleodes*
Ascia arvata, Danaus gilippus and *Agraulis vanillae*
Isoara corillae and *Eremopedes bilineus*
Arenivaga and *Anoplognatha dunni*
Trox and *Asidina*
Aneflus pyeliz and *Derobranchus geminatus*

The striking feature at once is the association of closely related animals. In general, the confusion does not arise between different orders. An exception is *Arenivaga*, a small roach, confused with *Eleodes* and *Anoplognatha*. Since the female of the roach is flightless and hides under stones and debris, like *Eleodes*, and is dark in color, the association is not surprising.

Some of these confusions are not easy to explain, for example, that between *Staratgus* and *Hydrophilus*. As I avoided giving the informants clues about the animals, I showed them separately. *Strategus* is a land-dwelling beetle. *Hydrophilus* is an aquatic beetle. Possibly, in their own habitats, the beetles would have been classed as different.

Incipient differentiation had been suggested in some forms. The three butterflies listed above were said to be "the same but only different in color." The smaller tiger beetles, *Cicindela cali-*

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* 125 *fornica* and *G. brevihamata*, were described as young of *C. colossae; Glyptotus* as young of *Monilema; Diplotaxis* as young of *Eleodes*. Smaller size in these instances obviously suggested age differences. Both Buprestids, *Polycesta* and *Hippomelas*, the informants suggested, were the same only "different little in size and color." However, why *Hippomelas* should be regarded as identical with *Dermestes* and *Steriphanus*, both much smaller beetles and also from vastly different habitat, is not clear. Finally, I had been told that the *Asidina* and *Cryptoglossa* are merely a female and a male of the same thing but the informants could not tell me which was which. Likewise paired were *Cyclocephala* and *Ligyrus*, both as a female and a male respectively of the same animal.

In *Clematodes* larvae, the Seris insisted they knew the animal but not its name.

In *Apatides fortis* they recognized two kinds, one light chocolate, the other black. But no nomenclatorial distinction was made.

There remain few species which had been obviously confused with something else. Confronted with the specimens and queried about their natural history, the Indians gave the answers obviously fitting another insect altogether. *Cyclocephala* was thus obviously confused with something else, perhaps the scavengering *Dermestid*, as was also *Rosabus*, while *Arenivaga* was confused with the *Triatoma*. Since the aberrant roach, with its apterous, rotund female and its oblong, flying male, had been confused now with one, now with another kind of insect, it only suggests little knowledge on the part of the informants.

Indications of classes of insects:

Erebus and *Proteparce* considered one class—both butterflies
Anopheline—a spider
Solivagid—a distinct creature of own
Striatymyid larva—a creature of own

Only one kind of cricket exists.

Sexing

Information concerning sex has been obtained for slightly half of the insects in the list. Of these, for only 17 species some sort of sex differences were indicated; for the remaining 28, the reply was simply "I don't know." The most obvious suggestion of sexual differences was the size. In 13 species male has been indicated as larger than the female; in no instances was the reverse situation. The species with supposedly larger males are:

Tetracha carolina
Hippomelas
Ligyrus
Anconia
Diapheromia
Mantid (small)
Triatoma
Chlorion
Mesomorus
Latrodectus
Hadrurus
Eremorhax
Bee

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*825 It should be pointed out that this concept does not necessarily reflect the real situation. For example in the Black Widow, it is the female who is much larger. Also in some cases, different species are considered males of smaller forms merely because they are larger; thus *Mopacephala* is the male of a smaller tiger beetle *Cicindela curtigena*, *Colossus* (interestingly smaller yet species of tiger beetles are believed to be young) and *Ligyrus* as male of *Cyclocephala*.

Presence of bright colors had been indicated as a male characteristic only once; it is asserted that the male Black Widow had red marks, not the female. Dark, somber coloration, usually ascribed to the males, also turned up as a cultural fiction among the insects. This has been indicated as the reason for considering *Ligyrus* a male of *Cyclocephala*. In *Eremorhax*, the male is also supposed to be larger and in the moth *Erebus odora*, the males are supposed to have black stripes on the inner side of the fore-wing.

One more interesting item concerns the bees; bees are said to have chiefs. The chiefs are males and are larger than the common populace, the Seris say. It is dubious that they actually could tell that drones are the males. There is no question that here the cultural fiction once more operates; male *is* larger. Also the drones are less numerous, hence the chiefdom. What relation there is between associating larger size with the chiefdom is not clear at the moment.

In no account, temperamental differences had been uncovered between the sexes. In insects, the Seris fear the Black Widow and the *Triatoma*; both sexes are considered equally dangerous. Likewise no apterous condition has been hinted for the female.

Age

As expected, the Seris have little knowledge of the age of insects. Information concerning this matter has been obtained for 27 species. For 19 of these the answer was "quien sabe" and only for eight, longevity has been indicated. Almost all of these were larger insects, including the Black Widow, Scorpion, the Tarantula hawk, Tarantula, Mantids, Phasmids and a few larger Orthopterans. Almost invariably the answer was six months; only the *Cicada* there had been hesitation and difference of opinion; one informant said four months, others didn't know. In any event, the replies suggest two things; there is the usual standardized answer "six months" and also the insects live only through the hot season. This is because the Seris have no way of finding out which of them actually hibernate.

Development

Information concerning some aspect of the insect development has been obtained for 45 species, with the familiar results. No knowledge at all for 32, some sort of knowledge for only 13, less than 15% of the total.

Of the 13 species, only five are said to be born from eggs. These are four spiders (*Latrodectus*,

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*825 *Syspira, Mesomorus, Tarantula*) and the bee. It is certain that the informants observed the egg sacks carried by the spiders. But it is not likely that they have ever noticed bees' eggs. In this instance, a cultural concept must be present.

The remainder are said to be born alive. This includes the tick whose "mother has many young, when born it is very small" and the scorpion, whose mother "carries the little ones in the back." It is interesting that for the *Cicada*, the informants denied presence of eggs although they did not volunteer to say how it developed.

Knowledge of insect metamorphosis is limited and includes only three disconnected isolated cases. The cricket *Acheta* is a moot point; some informants believed that it turns into a larger animal (though they didn't say what); another informant simply didn't know. The *Sphingid* larva "turns into a butterfly in 10 to 20 days if it rains, but if rains fail, it continues in its present state." Finally, in only one species, the blow-fly, the Seris correctly associated maggots and the adults. But this knowledge either came to them from the Spaniards or else it was a matter of easy observation, considering the amount of offal in the village and the number of flies and their progeny. Conversely, the Seris could not tell anything about the *Stristomyid* larva.

Food

The Seris have quite a bit better knowledge of the food habit of insects than of their development. Information obtained for 49 species showed some knowledge for 22, negative responses for the rest. Certain amount of association between a class of insect and its diet is made. The true *Orthopterans* feed on "flowers and some small plants," although the cricket for some reason is not mentioned here. The Mantid feeds on "ants sitting on the mesquite" but they denied it was cannibalistic. Butterflies and some moths either drink water or sweet, (here also Tabanid *Hermetia*) from flowers,[14] but *Erebus* is an exception in that it "drinks only water." Wasps, the Seris observed, are also fond of water and the derivation of the Tarantula killer's name has already been discussed. But *Dasymutilla magna* they think feeds on "soil and flowers." It is not difficult to see why they think it should be geophogous since it perpetually scurries on the ground. Spiders on the whole feed on flies, although the *Tarantula* also takes scorpions and a fruit of *pechitas* (?). Finally, there are blood-sucking insects, *Arenivaga*, *Triatoma* and tick. Of these, ticks and *Triatoma* attack not only dogs but also humans. However, *Arenivagas'* blood sucking propensities are the informants' invention. Perhaps it is confused with an assortment of other forms. At the end there are scavengers; here are listed *Hipponiclas, Trox, Cyclocephala*. Of these, only *Trox* actually is a scavenger. The other two aren't even found anywhere near carcasses. It is interesting in this connection that neither *Demestes* nor *Saprinus* are

[14]Bees collect sweets from flowers, especially in hot season and make honey for food. This is from four informants.

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*825 mentioned as scavengers, yet both habitually are associated with dead animals, even if *Saprinus* is really a predator.

Of course, insects have also enemies. Out of 41 species for which data are available, affirmative replies came for 16; for the remaining 25 the Seris didn't know the answer.

Birds are listed as most frequent lovers of insectivorous diet, but neither birds of prey nor sea-birds are among them. Most of these, one would suppose, are too large to be bothered with the tiny morsels. Lizards are occasional predators and among the animals, as most frequent gourmants of insects, the Seris mentioned badger, coyote, rarely dogs or cats. Not all are equally palatable. Cats, for example, will chew the smaller spiders but eventually will spit them out. Or the habits of the insects provide a good defense. Thus the diurnal butterflies and *Erebus* are free from most enemies because they fly a great deal. Finally, the bee falls victim, they say, to scorpions and spiders, while the cricket only to birds, although it hasn't been explained.

DISTRIBUTION

a) Seasonal

In contrast to the clear recognition of the seasonal fluctation in the occurrance of other animals, Seri ideas concerning insects are on the dim side. This will be clear from the following table:

Hot season only	12
More in hot season	15
Equally both seasons	32
More in cold season	1
Cold season only	0
Total	66

On the other hand it is somewhat impresaive that they had been able to volunteer the information on more then 75% of the total number of species.

From the table it is clear that while they distinctly notice the connection between warm weather and the presence of insects, their impressions are not as clear as one would expect. Insects perhaps more than any creatures are associated in the Seriland with the hot season. Yet for 32, more than a third of the total, they indicated no seasonal preference.

By orders, the distinctions are clearer. All species of *Lepidoptera* for which information is available they think turn up during the hot season, including the *Sphingid* caterpillar; same is true of the *Neuroptera*, *Myriapods* and ticks and mites. Most of the *Cerambycid* beetles are also in this category. The remainder, however, are split haphazardly and there is no pattern to their preferences. It is interesting that the only animal which is supposed to show preference for the cold season is *Triatoma* but perhaps the information available is not reliable on this subject.

As expected, at times the informants indicated insects' preference for the rains. *Erepemodes* and *Clematodes* among the *Orthoptera*, *Orthorus* of the Myriapods, the Red mite, both Neuropterans, and the Sphingid larvae—all these they say come

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*825 out during or after rains. The Red mite indeed is a habitual water lover and it does come out after rains in the desert. Actually, probably far greater numbers of insects are associated with the rains, and, of course, there are tremendous flights of insects to the lights following a great downpour but somehow the informants didn't seem to have associated this phenomenon or perhaps the matter eluded my questioning.

In some instances, the Indians indicated where the insects may be found during cold season. *Asica*, *Danaus*, *Agraulis* and *Amblycirtes*, all of them *Lepidoptera*, are supposed to spend their cold season in an inactive state "in the caves in the mountains," a most dubious proposition indeed. The *Hydrophilus* water beetle, on the other hand, "goes underground" for the cold—another invention. Finally the bees are active all year around but their "work" of honey gathering is limited to the hot season.

But what is most important, the scantiness of the insect sample should be kept in mind and any further work may undermine the conclusions suggested here.

136 *825 Even more dubious are the conclusions reached concerning the Seris' knowledge of the distribution of insects. Not only the sample represents but a tiny fragment of the Sonoran insect fauna, which even in the impoverished Seriland must number many thousands—at least 3-4,000 for the *Coleoptera* alone, a most conservative estimate. Not only our own knowledge of the existing forms in the area is most limited, but we know even less of their distribution from place to place, from one ecological zone to another. The best that we may do is to guess the probable distribution of some forms on the basis of what we do know of their ecological preferences. As for the remainder, especially the strong fliers, we may assume that they occur everywhere within the area, unless there is special reason to believe otherwise. However, these special preferences, when they are known and exist, are of greater significance in the selection of specialized niches and host rather than in the overall distribution pattern.

*825 The 25 localities in the charts as will be remembered have been selected because they represent either important landmarks or because they represent a specific type of habitat to which different faunal elements are restricted.

An explanation of the chart may not be amiss. Species for which no distribution symbols are indicated are those which the informants simply didn't know. On the other hand, those that show up in practically every square are those which the Seris covered with a blanket statement like "found all over the world . . ." or "found all over the world except in . . ." etc.

From the very first glance at the chart it is obvious that the greatest number of species are ascribed simply to the localties the Indians know best and where they spend most time: Desemboque, Porto Kino, Buena Vista, Tiburon and the mountains back of Desemboque. One would be also tempted to include San Esteban island in this

[P. 50B] [see category 116 - pp66-68 - Analyst.]

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* 825 list. The number of negative replies is impressive but it is difficult to say whether this is due to the poverty of the fauna or simply the shortness of the Seris' visits. The fauna is undoubtedly impoverished even by comparison with Descmboque but we know really nothing about it.

As will be seen, frequently the informants indicated that such and such species is rare in a given locality or sometimes that it is common. In this they are often correct, since certain forms, for ecological reasons, are more or less common in a particular locality. Some of this will be discussed under ecology.

Rhythm

What had been said of the reasons for incomplete data on insects concerning their geographic distribution may also be said of the present matter. However, the chart will help to analyze the material:

Daytime only	18
More in daytime	1
Equally day and night	25
More at night	3
Night only	11
Total	63

Although data are available for almost 75% of the total number of species, the results are most inconclusive, the breakdown falling almost equally into all three major categories with certain amount of preference for either completely nocturnal or diurnal activity. In fact, considerable number of purely diurnal forms had been described as "nocturnal" and several purely nocturnal forms as "diurnal." In the latter case, several of them are those that spend daytime in hiding under debris, stones or logs, and when disturbed, will show a great spur of agitation trying desperately to hide from the sunlight. This may well suggest to the informants that they are active also in daytime. Only the species that are active at night but go into undiscoverable hiding during the day may appear to them as purely nocturnal.

Group association between the time of activity is rare. It can be detected for the *Lepidoptera*, the diurnal butterflies which are so described. The Tenebronid beetles the Seris seem to regard on the whole as more nocturnal, and this, of course, is perfectly true. *Erebus*, the huge Noctuid moth, belongs here and so does *Amblycirtes*, the skipper, which, although diurnal, looks enough like a moth to result in confusion. Larger spiders, the Black Widow and the *Tarantula*, are among the night prowlers, according to the Indians, and so—and correctly—is the Soliphugid. But inclusion of the *Pepsis* (the Tarantula hawk) among the dubious is unaccountable.

Sometimes reasons for the preference of an insect for day or night had been indicated. Some, *Hydrophilus*, *Cyclocephala*, *Derobrunchus* and *Chalcolepidius*, are all believed to be artificial light and a few more, are not supposed to be attracted very much to light. Others, *Rasahus*, *Lethocerus* and a few more, are not supposed to be attracted to lights when, in fact, they very much are. As for *Chalcolepidius*, the beetle is so very rare that

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* 825 what the informants say about it may be dubious. What is important, though, is the fact that there is far greater number of insects attracted to the lights—immense in fact.

[513] In some cases, the Seris' idea of midday siesta which everybody, the animals included, take, turns up in their entomology. Thus, the *Tarantula* spends mid-day underground. The *Cicada* does not sing during the hot noon hours. *Chlenius* and *Diplotaxis* also rest at midday although really both are very much nocturnal animals anyway. As for the animals inactive during either time of the day, it had been suggested for some that "they sleep," the same motif showing up in the Seri knowledge of other animal groups.

Anatomy

Little information is available concerning Seri knowledge of the insect anatomy. But where inquiry has been made the Indians showed good knowledge of some of the gross morphological traits of the insects. In all species for which the data are available—a dozen altogether—the following are present: six legs, two wings, two horns (antennae), head and mouth parts usually in the front. An exception here for unaccounted reasons is Tettigonid *Erepemodes* which was said to have four legs. Of course, the Myriapods have "many legs."

Biting outfit is variously located. The wasps and the larger spiders (*Tarantula* and Black Widow) will bite with the fore end of the body but will sting with their rear. The Soliphugid (perfectly harmless in fact) "stings" with the rear end of the body while *Scolopendra* will bite like a viper. The Mutillid also stings. Inclusion of the spiders and Soliphugid as "rear stingers" is unexplainable unless their curving movement suggests a wasp to the Seris.

A most peculiar trait is ascribed to *Tetracha carolina*. This beetle, the Seris say, "has two red light spots on the body which are bright red at night like light." In daytime they indicated the two reddish marks on the elytra. Of course, the insect has no luminescence of any kind even though it is most active at night. This suggests that some sort of really luminescent beetle, a Lampyrid or most likely a *Pyrrhophorus*, does occur in the area and is mistaken for *Tetracha*, although the *Pyrrhophorus* lights are green and located up front.

Miscellaneous Behaviour

In general there is a clear cut recognition of which insects can fly and which cannot. Sometimes, however, this does not correspond to the real situation. If the insect is likely to fly off only at night, while during the day it will seek refuge in crevices from the light, *Saprinus*, for example, it is likely to be included among the supposedly apterous forms.

Web makers are only spiders, the smaller species. Of the Salticid, the informants said that "it sits in the web, only descending down the line to grab a victim." This is not exactly true of the

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* 825 jumping spiders but it is certainly true of some others that the Seris had an opportunity to observe.

With the exception of the bees, all insects for which information is available had been described as solitary, and quite correctly. As already mentioned, there is little recognition of the parental function, which would eliminate any suggestion of gregariousness.

For the same reason, there seems to be little notion of insect migration. The informants suggested that *Anconia*, the Orthepteran, appears at times in great number and "moves." But it had not been indicated how or where, and this seemed to be the closest I had been able to come to the suggestion of insect migration.

Ecology

Although in very sketchy outlines at times, the informants were able to give some sort of ecological information for 62 out of 92 species, a fair number when we consider that several of the total were among the "unknown." It is difficult to arrive at any consistent classification of the ecological habitats of insects—as seen by the Seris. The data is erratic and incomplete. The most consistent pattern seemed to be absence of insects from the marine beaches. Presence of species after species in this habitat had been denied by all informants. The only exceptions were the tiger beetles, the *Tetracha* and its presumed brood, the smaller species of *Cicindela*. These are supposedly more common on playas near the sea than near the fresh water, an observation not supported necessarily by facts. On the other hand, such creatures as *Hydrophilus* very emphatically had been described as fresh water inhabitants.

Very frequently, the locality for a given species had been explained in ecological terms. Both wasps (*Chorion* and *Pepsis*) and the *Hydrophilus* and *Lothocerus*, the giant bug, are said to be found always near water, a perfectly valid observation. The Red mite and the Millipede *Orthorus* are supposedly inhabitants of wet soils who come out after rains or during rains—an incontestable fact. Also some of the butterflies, notably *Danaus*, are supposed to be found in the vicinity of water which they drink—also a valid observation.

A number of insects are inhabitants of the sandy regions in the Seri view. Here belong the Mutillids and certain of the Tenebrionid beetles, the *Asidina* (which also occasionally comes to the sea beach) and *Eleodes*. In general the Seris observed that the Tenebrionid beetles prefer sandy to the rocky ground and in a way they connect this with their digging habit.

Another loose association of some forms with the habitat is with the millpas and arroyos—the richer vegetation. Some of the Orthopterans, particularly *Clematodes*, and small mantid and the Sphingid larva belong to this group—and in other ways the Indians connect this with the presence of water.

Finally, there are forms living under the debris; *Saprinus* is one of them. The tick is another;

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* 825 it is said to live "in refuse, fish and fish offal and only in the fishing camp." This is one that one must reconcile with the Seris' simultaneous belief that it is parasitic on dogs and that it sucks human blood as well. More difficulty here creates their belief that it is found only in the camp but that the dogs on Tiburon are free from it.

The Phasmids interestingly are associated with trees and sticks, a very correct notion and the Mantids also with the trees.

However, the information is incomplete and apart from the few cases cited above usually contradictory and hazy.

Toxic Insects

Only 19 species out of 92, or little more than 20% of the total, are considered toxic in anyway. Unlike in most of the other phases of the Seri knowledge of the natural history of insects, the natural groupings are quite clear. The three main groups the Seris consider toxic or harmful are the Arachnids, the Arachnoids (*Acarina* included) and the *Hymenoptera*, all very much as one would expect. In addition few beetles and bugs complement the list of the dangerous creatures. tures.

Among the *Hymonoptera* are all of the species listed, with the exception of the bee. This may be due to the fact that the bee in the Seri country is the stingless Melipoind (?). Of the toxic kind, *Pepsis* (the Tarantula hawk) is probably most feared. The sting the Seris think is very painful but disappears after a few minutes as it contains little venom. A plant is applied to the bite and also taken internally with hot water. The *Pepsis* must be really feared because the informants assured me it was one insect the children preferred not to play with—an excellent confirmation of the caution. *Chlorion aeriatus*, the Sphecid wasp, induces similar symptoms by its sting. Here as a cure, Vic's mentholate tablets were said to be used, smeared on the injured spot. This cure is also applied by the Mexicans and the Seris probably adopted it from them. The sting of this wasp is considered more dangerous to children than to adults. The Velvet wasps[15] (Multillids) are also supposed to sting with the rear of the body causing some pain. Finally the *Hemisia*, and Anthrophorid bee inflict a good bite but otherwise are harmless.

[752] [857] [752] [177] [753]

Arachnids on the whole are more feared than the *Hymenoptera* and include what the Seris believe to be the most dangerous of all terrestrial arthropods, with a very good justification. The effects of the damage inflicted by these creatures is more lasting and overpowering. The Black Widow easily takes first place and is feared as much as the gecko or the rattler. Some Seris even claim it is the most dangerous of all creatures. It may cause death, they say, although usually one can do with a 2-3 day illness. However, to small children the bite (or as they say "sting" owing

[753]

[15] *Ptiloglossa mexicana* causes swelling and much pain lasting 2-3 hours and is considered most unpleasant of all Hymenopterans.

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* 825 to the belief that the spider stings with the rear of the body) may cause death in 2-3 hours. It may [753] also kill chicks and one of the informants, Jose Juan Moreno, claimed to have been paralized by the sting of the Black Widow for eight days . . . . [158] However, Juan is a good hypochondriac, and even when not apt to exaggerate, he may have suffered a genuine trauma owing to an encounter with this spider. While smaller spiders are not considered too dangerous, the *Tarantula* is. It can both bite with its jaws and sting with the rear end of the [753] body and it is said to be more dangerous to children—it may cause their death at times. The adults will weather its attack but will become quite ill. [752] As remedy for its bite, a plant *quivira* is used as a hot extract taken in a small glass for 2-3 days.

Almost all of the animals closely related to the Arachnoids, the scorpion, the Sun spider, *Scolopendra* and the tick, are also venomous in the Seri view. Of these, the scorpion is most feared, and in adults it will cause illness lasting up to a week while to very small children it may be fatal. As a proof the informants mentioned a six months old [165] girl recently stung by a scorpion who died in less than six hours—the fact confirmed by the Mexicans in the village. Remedy for this is similar to [752] others—a plant called *amxxuháy* is drank with hot water for three days, a glass per day.

The Sun spider, also armed supposedly with a sting at its rear, is said to be fatal to horses for whom there is no remedy. This is a pure fiction, [177] but the belief is common among the Mexicans and the Seris certainly took it up from them. But no one suggested that the Sun spiders are in any way harmful to men although they are avoided, just in case.

The *Scolopendra* is considered very dangerous, much like a viper. It bites badly but is not fatal. Actually, the story probably concerns another species, for *Scolopendra malkini* has only recently been described and is rare in Desemboque.

The tick's unpleasant traits had already been discussed under another heading. All that is essen- [753] tial to add is a belief that in addition to other exploits it can enter a person's ear causing much pain and that for this reason it is particularly bad for the children, as there is no remedy.

There remain three more species of various degree of toxicity. Of these, the *Triatoma* is most conspicuous both for its effects and factual observation. This blood sucker bites with its mouth parts [753] and introduces illness called by the Seri *syexhis. ?e . kemep* which may end fatally. People of all sexes and ages are subject to it equally, and the illness may last three months, and there is no

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known remedy. This bug is actually a vector of the Chagas disease. Its repeated bites may cause allergic sensitization. For lack of clinical observation it is impossible to determine the exact nature of its effects, as the Seris describe them.

The remaining two creatures are both beetles. *Calosoma* is thought a nuisance rather than a danger. Its disagreeable habit is spitting out poison through the rear end of the body which may cause headache for a brief while. To this I may readily attest having on more than one occasion be subjected to *Calosoma's* bombardment. However, at worst it is a mere irritant. Finally *Hippomelas*, sometimes confused with the *Steriphanus* and *Dermestes* are supposedly evil smelling but not harmful.

Finally the male *Arenivaga*, considered separate from the female, the Seris claim also bites with the mouth but it is not dangerous.

What is little surprising is that the Seris did not include in their list a few other insects that could have readily found their way into the "dangerous" gallery. The huge water bug *Leptocerus* of course bites, although the Seris claim it does not. An aquatic insect par excellence, it simply never had a chance to prove to them what it can do. The Pentatomid bug *Rhytidolomia* at least may be included among the stinging variety, although it is perfectly harmless. Finally there are various Reduviid bugs, notorious carnivores, which when disturbed and offered an opportunity will sting painfully. But here again, the Seris may not have played enough with them to find out.

On the whole, the Seris are well informed concerning possible dangers from various insects. As a matter of practical application, they do in this regard far better than the Mexicans.[16]

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[16] The Seris may have used a concoction of insects in arrow poisoning. McGee quotes Hardy who had visited them in 1825 as follows:

> "It is believed that the Ceres Indians have discovered a method of poisoning their arrows and that they do in that way: They kill a cow and take from it its liver. They then collect a number of rattlesnakes, scorpions, centipedes and tarantulas, which they confine in a hole with the liver. The next process is then to beat them with the sticks in order to enrage them, and being thus infuriated, they fasten their fangs and exhaust their venom upon each other and upon the liver. When the hole mass is in high state of corruption, the old women take the arrows and pass the point through it. They are then allowed to dry in the shade and it is said that the wound inflicted by them will prove fatal. Others again say that the poison is obtained from the juice of the yerba de flecha (arrow wort)."

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XI

SUMMARY

* 825 [114] In 1956 (Malkin 1956:74) I published tables indicating the degree of economic exploitation of the animal world by the Seris. These tables were incomplete and also need corrections. Therefore below I am reproducing the revised version.

Class	Species Reported	Species Exploited	Percentage
Mammalia	21	9	40
Birds	24	6	25
Reptiles and Amphibia	25	17	68
Fishes	44	23	52
Mollusca	37	27	70
Crustacea	10	2	20
Insects	92	—	—
Miscellaneous	9	—	—
Totals	262	82	30

These figures show as yet remarkable degree of exploitation of the products of the sea and also of the reptiles with correspondingly lesser interest in the terrestrial animals in general. Of course, mere listing of animals does not tell the whole story. In the first place, it does not indicate the changes that took place nor does it suggest the relative importance of any group or species. Historically, the situation is different now. Out of nine 262 177 species of mammals reported as eaten only six still figure out in the diet. The reduction is even more striking in birds where only three are admittedly eaten and two of these only furtively. More yet, only 12 species of marine molluscs out of 27 are eaten while the rest get discarded. All this is tied up then with the changes in the economy, with the importation and increase of the trade foods and goods and also with increasing preoccupation with the commercial fishing at the expense of hunting and gathering.

262 Individually, by far the most important in the Seri diet and economy are the fishes with half a dozen large commercially lucrative species leading the list. Next come the marine turtles and following these for the third place tie the molluscs, the mammals (lagomorphs, bighorn and peccary) and probably the rest of the reptiles of which the rattlers are probably most important by volume. Insects do not figure any longer in the Seri economy in any way, although at one time they probably had some significance. On the other hand, while the food importance of the molluscs de- [439] creased immensely, their trade importance is on [177] the upswing owing to the demand from the outside. Thus the basic changes in the Seri patterns of exploitation of animals has been a result largely of an outside stimulus.

Fishing and Hunting

226 185 Fishing is practiced mostly to satisfy the immediate needs of petty cash and food. Once these are satisfied, there is no incentive to fish until the need arises again.

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XI

SUMMARY

224 Hunting is very decidedly secondary to fishing, although it is still much practiced by certain individuals and in a desultory way probably by all.

462 There is a clean cut division of labor in all these occupations. Fishing and hunting are men's occupations, gathering of the desert animals and beachcombing for the intertidal animals is largely the job of women and children. Boys get broken [868] into men's occupations in adolescence, girls into women's jobs very much earlier.

224 Avoidance of fishing or hunting certain creatures appears much more a matter of custom than of well defined and socially rationalized attitude. Frequently an animal is not hunted simply because the Seri feel it is too big and too strong for them to tackle.

157 Through all these activities, Seri individualism is curiously woven and accounts for the failure of anything that might resemble a collective effort.

Food Preferences and Preparation

252 Seri food is prepared in a simplest sort of way. Boiling in water is usual with salt and sometimes [263] a few other spices added. While most food is prepared that way, snakes and fishes are usually fried, without any ingredients. There has been a notable shift toward greater fanciness in the in- [178] gredients, as they have become more readily available.

262 There are many preferences. Animals are scaled in desirability. Some fishes, marine turtles, chuckawalla, deer and peccary and duck are at the top of the list; lower animals, smaller fishes including puerco in the middle, while the sea gull and the pelican are probably at the very bottom of the pit. This again reflects temporal changes in tastes [178] although not necessarily a direct influence from the Mexicans.

Pets

231 Few pets are kept, other than dogs. Such animals as come are those captured accidentally. In most cases they are bird nestlings.

Taxonomy

+825 Differential criteria are applied in the classification of different groups. There is less tendency to group birds than to group different mammals and classificatory ideas break down almost completely in smaller animals, especially insects and molluscs. Considering the economic importance of the molluscs, poor ability to distinguish the Gastropods from the Pelecypods is striking.

The classificatory criteria differ for different groups. Mammals are generally recognized by the furiness, birds by the ability to fly and the pres-

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*825 ence of feather. Uncertainty about the bat then is significant, considering the combination of traits. Other criteria may also be employed. Crabs are distinguished from some of the other marine crustaceans by their hairiness. Differences among the insects are suggested by general shape, hairiness and habitat although also certain features of behaviour sometimes suggested affinity.

Distinctions made within the groups coincide on the whole with the natural groupings, at least for the more conspicuous forms. Hence, comes the breakdown of fishes into two major categories: fishes proper on one hand, and mantas and sharks on the other, snakes and lizards among the reptiles and mammals proper and Cetaceans among the mammals. In a way the Seris' greatest talents appear to be in their ability to recognize the reptilians and amphibians. Here they confused only two species: the two small inconspicuous Utas.

[182] As for the ability to identify an animal, it is directly related to its economic importance and relative degree of frequency in the territory, as one may well expect.

[824] A movement represents the basic difference between animals and plants to the Seris. This is why a sponge is considered a plant while sessile molluscs are animals.

Sexing

Three tendencies distinguishing sexes run through the entire gamut of the animal forms, through all the classes except in the birds: the males are larger, darker and more brightly colored than are the females. These tendencies the Seris may combine in different ways. In the reptiles it is color pattern rather than size that suggests to them the male animal and while the male snakes tend to be darker than the females, in the lizards they tended to indicate the prevalence of the bright color in the males.

Then also in several groups very specific diagnostic traits are employed, as a rule in form of all sorts of extra appendages which are supposed to decorate the males. This is interesting, because it suggests the presence of such extra structures in the males rather than in the females, and, as has been seen from the text, these structures are often attributed to the males regardless of whether or not they really exist in them. The femoral ridge in the male lizards is an especially good illustration of this principle.

[182] There is also a suggestion that in one instance at least the Seris transpose their own social situation on the animals. The bees they claim have "chiefs" and these "chiefs" are males and they are also larger. Here socio-anthropomorphic interpretation is very clear.

But as indicated in the text, the sexing criteria differ often in different groups and it is only fair to show that birds represent an exception to the three major tendencies. The birds have sexes all right but the Seris cannot tell them apart. This requires no further commentary if we reflect why the Seris must think that way.

[182] [562] [P. 55 A] Finally, there is one more interesting point:

* 825 [182] [562] no temperamental differences between the sexes can be detected which would only suggest that here the Seris do not introduce the interpretations from their own social situations, because they do have very clear cut ideas of the temperamental differences between men and women.

Age

Here aboriginal knowledge is virtually non-existant nor have the Seris made much effort to try a guess. There are hints that sometimes they associate the length of life of smaller animals with the season, obviously because these disappear for the cold season. Another feeble tendency was for the older informants to suggest greater longevity of an animal than it was customary for the younger informants. Finally, what little knowledge there was, it was still perceptibly greater for the reptiles than for almost any other class and this is quite in line with the general state and complexity of the Seri knowledge of the natural history of these creatures.

Size and Weight

[182] Here occupational influences are overwhelming. The weight of fishes and mammals was on the whole correctly estimated — this associated with the economic importance of these animals. Same features in the reptiles came out only so-so on the general scale and here, surprisingly, not too well on the economically important marine turtles. A rule of thumb is applied (usually incorrectly anyway) to the birds while the remainder of animal groups is covered by gross ignorance and disinterest in this respect.

Development

In general Seri knowledge of the mammalian development is far ahead of the rest of the animals and progressively becomes more and more obscure with the decrease in size. Within this range, specific ideas differ and often are associated with the particular group of mammals. One classic example is fishes which they divide into the viviporous and oviporous with sharks and mantas in the first category and the rest of the fishes in the second. The distinctions between the egg laying animals and those that are born alive run pretty much through the entire kingdom. Insects are the sole exception here but this is largely because of the lamentable lack of knowledge by comparison with the other animals.

Sequential development generally also runs through all of the groups. The belief in the time sequences is so striking that it covers even such groups as the fishes, for here the details of the mating sequences are not understood and, according to the Seris, there **must** be a time lag between mating and the delivery of the eggs by the female. At other times, such sequences are expressed in another sort of cultural fiction. I have in mind the birds where one month each elapses between the delivery of the eggs, hatching out of the young and the flight of the nestlings.

Knowledge of the young litters or the number of eggs laid by the birds or the oviporous reptiles

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*825 on the other hand usually falls very close to what happens in the natural situation. Here cultural factors enter: the Seri boys habit of collecting eggs. [857]

In general, in association with the development, the insignificance or complete absence of the male's parental function is well recognized. Only in the birds and mammals occasionally male's interest in the young had been indicated but even that rarely.

Food

In this field the Seris' knowledge is much better than their knowledge of the development. Herbivores and carnivores are usually quite correctly identified, at least for the majority of the animal groups. Crustaceans they think are largely scavengers—with great degree of accuracy. Predators and their victoms are as a rule scaled down according to the size. Some animals are considered relatively or completely free from predation and when this is so, reasons were usually stated in terms of some peculiarity of structure, size or behaviour. Power of flight figures strongly in this, because only a few birds, they thought, are subject to predation.

DISTRIBUTION

a) Geographical

[182] Knowledge of the geographical distribution of animals as expected is a function of the acquaintance with the particular area or locality and of the frequency of visits to them. It also indicates strong association with the ecology of the habitat, with such features as presence or absence of sand, rocks, types of bottom in waters and so forth. On the relative scale, once more the mammals are best known, insects least.

b) Seasonal

General suggestion of the greater number of species occurring in the hot than in the rainy season runs through all classes of animals. But while in most. birds included, the suggestion is only slightly in favor of the hot season, for the reptiles and amphibia it is overwhelmingly in favor of the summer. Oddly, there is no such clear cut association between the presence of insects and season except for few select groups. The *Lepidoptera* and *Neuroptera* are, according to the Seris, largely creatures of warmth. while the *Orthoptera* are of the rains. In general this short of knowledge is quite conspicuous.

c) Ecological

Here the Seris excell and this knowledge of habitats of a very large number of animals is considerable and perhaps more solid than any other feature of the natural history. In species after species, in all groups, habitat preferences were stated (and correctly). It is interesting that the detailed information here was available for practically all listed species of birds, molluscs and fishes. Great deal of information was also pro-

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825 [182] [857] [193]

vided for other creatures and even 2/3 of the insects. This indicates on one hand the connection between this type of knowledge and economic activity of the adults and on the other hand between the Seri boys' habit to collect and play with all sorts of animals from very early age. This knowledge of the habitats sometimes is even reflected in the aboriginal name of the animal such as for example the use of suffix or prefix ax meaning water in several forms associated with water.

Migrations

In contrast to the ecological distribution, knowledge of animals' migrations stands somewhere very near the very bottom in the richness, detail and accuracy. There is but bare suggestion of migration among the mammals and birds and where it does exist among the latter it curiously includes all three overwintering species. This is in contrast to this lack of knowledge or perhaps interest (or both) of migrations of all other animals, Seris' knowledge of the fish migration is much richer. Here at least there is a distinction between the migrating numbers and the size of fish: large fishes migrating supposedly singly, little ones in "millions."

Rhythmic Activity

Rhythmic differentiation is interesting because it clearly divides animals into the nocturnal, diurnal or those that are active in day and at night and because there is a clear association by the groups. Thus all marine animals are considered as both diurnal and nocturnal. But there are also differences in the relative degree of knowledge of different classes. While reptiles, amphibians and mammals stand at the top, the knowledge of this type of behaviour in birds is very fragmentary and in the insects scant and inconclusive, while for the molluscs non-existent.

In this respect, the reptiles probably are most clearly defined and best known.

There is also a clear recognition of the existence of the noon siesta or at least of slowing up of the animal activity. But this applies to the terrestrial animals and there is no suggestion of the siesta for the inhabitants of the sea.

Toxicity

At the apex of toxicity as a group stand unquestionably reptiles and amphibians, with the insects coming next and the marine animals which I loosely brought together under the heading of "miscellaneous" a poor third. Of the reptiles and amphibians 11 species are considered toxic, in various degrees and another seven as dangerous, 44 and 28% respectively, making the total an impressive 72% of all reported species. Among the insects about 20% are considered dangerous and fewer yet toxic; among the mammals fewer yet, with the bat only listed among the toxic forms and that on a disputed evidence; among the birds the eagle as the only dangerous beast and that admittedly on the hearsay; and finally among the molluscs none at all.

The fact is that only rarely these ideas were amiss and only few forms are believed dangerous

*825 or toxic contrary to their genuine nature. When such contrasts exist, the beliefs cannot always be explained as a matter of the influence from the Mexican folklore. The reasons for this I discussed in the chapter on the reptiles and amphibians. The explanation for such beliefs depends mostly on additional field work. It is also interesting that in some of these instances (bat for example) there is a suggestion that the belief in the toxicity or other unpleasant traits not only is not associated with the Mexican folklore but is basically
[178] aboriginal, and it is on the way out among the younger men.

Attitudes

*825 182 With rare exceptions Seri attitudes toward animals are remarkably sober, pragmatic and matter of fact. This is evident in how little folklore or irrational fear is connected with the animals. It all runs pretty much along the line of their generalized attitudes, world view and religion as suggested by other investigators (Kroeber 1930:4; This is also the opinion of Spicer, personal communication). Elements of mystery are almost completely absent and this is probably not
[114] entirely due to the disintegration of their religion and culture as Kroeber (*Ibid*) thinks.

*825 171 In other ways, their attitude toward animals ranges from indifference (adults) to downright deliberate cruelty (little boys). In this, the Seri boys differ markedly from the boys of some of the other groups I studied (Malkin 1958:89).

[P. 57 A]

9:Malkin E-5 (1953-1955)1962 NU31 Seri NU31

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Conclusions

From the presented evidence it is clear that Seri knowledge of the natural history of animals is disharmonic, that some animal groups are better known than others and also that there are great qualitative and quantitative differences in the degree of the knowledge of the special features of natural history within the groups.

Both cultural and environmental factors account for these differences. On one hand, the knowledge is related to the Seri boys' interest in the animals and to the adult's preoccupation with the economically important species. The direction of the change runs from the first to the second but in the final shakedown it is the gross economy that is more important. On the other hand, environmental factors, such as animals' behaviour, habits, and structure and most of all climate and generalized ecology influence and set the limits to the exploration of natural history by the aborigines. But careful distinction must be made in assessment of which factors and when are of dominant importance. It is never an none-or-all proposition.

Finally, there are temporal changes, related mostly to the shifts in the economy and these figure importantly in some of the features in our data.

It is true, that much of this can be only feebly hinted at from the Seri data alone. It is my conviction that all these things can be brought into much stronger relief only through series of comparative studies. Fortunately, a beginning stab in that direction has already been made (Malkin 1958).

[P.57 B]

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[P. 58]

9:Malkin F-5 (1953-1955)1962 NU31 Seri NU31

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APPENDIX: DISTRIBUTION CHARTS

[p. 59]

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*825 MAMMALS A

	Punta Peñasco	Porto Libertad	Desemboque	Estero de Sargento	Campo Vivero	Porto Kino	Guaymas	Topaga	Coast of B. C.	Tiburon	Tecomate	Mts. of Tiburon	Infernillo	Patos Isl.	Rasa Isl.	San Esteban Isl.	San Lorenzo Isl.	Angel de la Guarda	Desemboque (mountains)	Topaga (mountains)	Bisna Vista	San Francisco	Hermosillo
Cat			c	x		x			c		x					x					?		x
Jaguar									x	-	-	-	-	-	-	-	-						
Cougar			-	-		x-	-		-							-			?	x		x	? ?
x Jaguarundi																							
Ring tail cat											x												?
Badger			x -			x					-	-	-	-	-							?	?
Skunk	x	x	?	-	x	x	x			x	x	x	x	x	-		-	-	-			?	x
Fox	x	x	x	-		x	x	x	x	x	x	x	x	x	-		-	-	-	x	x	?	x
Coyote			x	x	x	x		x		x	x		x		-		-		x	x	x	x	x
Sea Lion	x	x	-	-	-		x		x	-	-	-		x		x	x	c					
Peccary			x	x		x		-	-	-	-		x		x	x	c						
x Porcupine			x			r	r	-							-								
Cotton tail	x	x	x	-	x	x	x	x	-	-	-	-	-	-	-	-	-	-	-			?	x
Jackrabbit	x		x	-	x		x		x	x	-				-	-	-	-				?	x
Kangaroo rat	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	?
Deer			x	-		-		?	-	-	-	-	-	-	-	-	-	-		x		x	x
Bighorn																							
Gray whale																							
Killer whale ?																							
Dolphin ?																							

r-rare
c-common
x-present
- absent
?-don't know
1-because no rocks
2-at St. Louis
3-on level ground
4-big mountains near Kino
5-and all coastal waters
6-deeper waters, esp. near Katoban
7-in deeper waters but in hot seasons comes near shore

	Punta Peñasco	Porto Libertad	Desemboque	Estero de Sargento	Campo Vivero	Porto Kino	Guaymas	Topaga	Coast of B. C.	Tiburon	Tecomate	Mts. of Tiburon	Infernillo	Patos Isl.	Rasa Isl.	San Esteban Isl.	San Lorenzo Isl.	Angel de la Guarda	Desemboque (mountains)	Topaga (mountains)	Bisna Vista	San Francisco	Hermosillo
White pelican				x		x										c							
Brown pelican	x	x			x	x	x	x	x	x	x	x		x	x	x	x	x					
Cormorant	x	x	x	x	x	x	x	x	x	x	x	x		x	x	x	x	x	x				
Frigate bird				x																			
Egret			x	x	x		x							x	r		x	vrs					
Bittern				x																			
Ibis 2)			-	x	x?																		
Duck																x							
Turkey vulture 3)	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Black vulture	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
(Golden) Eagle																							
Osprey	?	?	x	x	x	x	?		x			x			x	x							
Quail																							
Curlew 4)																							
Sand-piper 5)																							
Willet																							
Sea gull	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Dove	?	?	x	-	x	x	?		x	x	-	x	-	-	-	-	-	-					x
Road-runner																							

n-nesting
r-rare
vr-very rare

6)- all mainland plus as indicated
2)- also other esteros
3)- nesting?
1)- also everywhere along the coast
4)- along sea-shore-unspecified
5)- as above

[P.61]
[P.60 is blank]

1/1 [These Distribution Charts show the distribution of animals in the Seri environment as conceived by the Seris. - See Cat. 116, p 13 B - Analyst.]

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BIRDS II

	Punta Peñasco	Puerto Libertad	Desemboque	Estero de Sargento	Campo Vivero	Puerto Kino	Guaymas	Topopo	Coast of B. C.	Tiburon	Tecomate	Infernillo	Mts. of Tiburon	Patos Isl.	Raza Isl.	San Esteban Isl.	San Lorenzo Isl.	Angel de la Guarda	Desemboque (mountains)	Topopo (mountains)	Bacuna Vista	San Francisco	Hermosillo
Barn owl		x												x	x	x	x	x					
Hummingbird	?	?	x	-	x	x	?	x		x		-	-	-		x	x	x	x				
Woodpecker		x	x		x	?			x	x	-	-	-	-	-	-	-	?	1				
Swallow																							
Raven				x	x	x		x		x	x	x		-		x	x	?	?				

REPTILES I

	Punta Peñasco	Puerto Libertad	Desemboque	Estero Sargento	Campo Vivero	Puerto Kino	Guaymas	Topopo	Coast of B. C.	Tiburon	Tecomate	Infernillo	Mts. of Tiburon	Patos Isl.	Raza Isl.	San Esteban Isl.	San Lorenzo Isl.	Angel de la Guarda	Desemboque (mountains)	Topopo (mountains)	Bacuna Vista	San Francisco	Hermosillo	Hayden
Horned toad			x	-	x	x				x				-		-					x	x	?	
Gridiron-tailed liz.			x	x		x				x						x			x				x	x
Leopard lizard			x	-		x				x	-			-		-			-				x	
Spotted race runner	?	-	x	?	x	x	?			x	x	x	x	-	?	-	?	?	x					
Rhco runner			x	x		-	x				x			-		-x	x	x						
Northern chuckwalla	?	?	x	x	-	-	?			x	x	x		-		-	-							
Chuckwalla																x	x	x						
Northern crested liz.			-	-	-		-	-		-	-			-		x	x	x	-		x	x	-	
Gila monster			x	x	?	-x	x	?		-	-			-		?		?	x		?	?	?	
Uta 2)	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	
Striped ground uta	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	
Fence lizard			x	x	-	x	x			x				-		x		x			x	x		
Ground gecko			?	r	x	x	x	?		x	x			-		?	?	?			?	?	?	
Night lizard			?	r	-	x	x	?		x	x			-		-	-	-			?	?	?	
Side winder			?	x	x		x			x				-		x		xx			x		x	
Western diamondback 2)	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	
Coral snake	?	?	?	-	x	x	?			x	x	x	-	-		-	-	-	x				x	
Red racer			-	x	x		x			x				-		-x		x			x			

1)-mountains back of Desemboque
2)-"found everywhere"
r -rare
c -common

REPTILES II

	Punta Peñasco	Puerto Libertad	Desemboque	Estero Sargento	Campo Vivero	Puerto Kino	Guaymas	Topopo	Coast of B. C.	Tiburon	Tecomate	Infernillo	Mts. of Tiburon	Patos Isl.	Raza Isl.	San Esteban Isl.	San Lorenzo Isl.	Angel de la Guarda	Desemboque (mountains)	Topopo (mountains)	Bacuna Vista	San Francisco	Hermosillo
Black whipsnake			c	-		?				-						-	?		-?		x		?
Patch nose snake 2)			x	-		x			x							-??	?						?
Lyre snake	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	
Desert tortoise	?	x	x	-	r	-	r	-	c	x	x	x	x	-		-	-	-	x		x		c	
Desert toad			x	x		-	x			x	x		x	-										

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FISHES I

	Punta Peñasco	Puerto Libertad	Desemboque	Estero Sargento	Campo Vivero	Puerto Kino	Guaymas	Topolobampo	Coast of B. C.	Tiburon	Tecomate	Patos Isl.	Bara Isl.	San Esteban	San Lorenzo	Angel de la Guarda	Inferrillo
Pescara	x	x	x[1]	x	-	x					[2]	-	x		x	?	
Mero			x	x	-	x	x				x	-	x		?	?	
Pinto	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	
Sardinera		x	r	r						c	x	x					
Baya			x	x	x	x	x			x	x	x		x			
Totuava s)	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	
Cochi	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	
Sardina			a	[3]		x											
Corvina			x	x	x	x	x	x			x	x	-		-		
Anchoveta			x	r	c	x	x	x			x	x	-		-	-	a[4]
Lisna			x	x	x	x	x	x			x	x	-		-	x	
Palometa			x	x	x	-	x	x			x	x	x		?	?	x x
Chano			x	x	-	-	x	x			x	x	x		-?	?	
Hypsoblennius			x	c	x	-					x	-	-		-	?	
Lenguado	?	x	x	x	x	c	?				x	x	-		-	-5-5x	
Mereno	x	x	r	x	-	-	x				x	x	x		x	x	x x
Syrichthyc tigrinus	?	?	r	x	x	x	?				x	x	-	?	-	?	x
Sphoeroides annulatus			x	c	x	c	x	?			x	x			?	?	

1)-few
2)-near Alcatraz Mts.
r -rare
c -common
a -everywhere in winter, none in summer
a[1] -rare in summer
4)-here largest of its kind
5)-too rocky

FISHES II

	Punta Peñasco	Puerto Libertad	Desemboque	Estero Sargento	Campo Vivero	Puerto Kino	Guaymas	Topolobampo	Coast of B. C.	Tiburon	Tecomate	Patos Isl.	Bara Isl.	San Esteban	San Lorenzo	Angel de la Guarda	Inferrillo
Gillichthys seta		x	x	x	-			x	x	x			?	?			
Scorpaena sonorae		x	x	x	-				x				x	?			
Malacoctenus zonifer		x	x						x				x	?			
Ophioblennius sp.																	
Lutjanus argentiventris																	
Paroquet viola			x	x	x	-	-	?			x	x	x		x	?	
Tuna	found south in the ocean																
Flying fish	in the ocean (hearsay)																
Sting ray				x													
Horned snota			x	r	x	x	x	x			x	x	x		x	?	?
Corvuda	everywhere but stays away from banks																
Pisturero	as above																
Gato	everywhere in deep waters																
Dogfish	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Chato	in all deep waters																
Cangrejo	in all deep waters																
Apion	as above																
E--p?pax (?)	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

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FISHES III

	Punta Pâtasco	Porto Libertad	Desemboque	Estero de Aeropuerto	Campo Vivero	Porto Kino	Guaymas	Topopo	Coast of B. C.	Tiburon	Tecomate	Infiernillo	Puton Isl.	Rasa Isl.	San Esteban	San Lorenzo	Angel de la Guarda
Anisotremus davidsoni	x	o	c	-	-	?				x	x	x		?			
Girella simplicidens	x	x	x	r	-	?				x	x	x		x[4]			
Caesodon semifer																	
Abudefduf saxatilis	x	r	x	-	-					x	x	x		?	?		
Cotylis piniger	x	c	x	-	-	?				x	x	-		x		?	
Paralabrax maculatofasc.	x	c	x	x	-	?				x	x	x		-			

MOLLUSCS I

	Punta Pâtasco	Porto Libertad	Desemboque	Estero de Aeropuerto	Campo Vivero	Porto Kino	Guaymas	Topopo	Coast of B. C.	Tiburon	Tecomate	Infiernillo	Puton Isl.	Rasa Isl.	San Esteban	San Lorenzo	Angel de la Guarda
Octopus bimaculatus		r	r	c	r	●	?			c	c	●		?		?	?
Trifibranchiata		x	c	?	?					?	?			?			
Ischnochiton magdalenais	?	x	x	x	x	●				x	x	x	x	?	x	?	?
Ischnochiton laevigatus	?	x	x	x	x	-				x	x	x	x	?	x	?	?
Codakia distinguenda 1)	x	x	r	x	x	x	x	x	x	x	x	x	x	x	-	x	x
Poliricus reclusiana			x	x	x	?				x	x	x					
Phallium abbreviatum	?	x	x	x	x	x	?				x	x	x		-	x	?
Phyllonotus erythrostomus			x	-	x						c			-	-	x	?
Chlamys cubbedosa		x				?				x	x	x					
Atrina maura		-	r	c	c	c	-			c	x	x	-	-	-		
Laevicardium elatum		x	r	x	x	x				x	x	●		-	-		
Chione californiensis	?	x	x	Cm	x	x	?			x	-	x	x		x		?
Navicula pacifica	x	r	-	x	-					r	-	-	-	-	-	?	?
Turritella broderipiana	?	x	c	x		Cm				x	-	x	-		-	?	?
Crucibulum spinosum			x	x	x	?	?			x	x		x	?			
Cardium reasesa			x										?		-	x	
Turbo fluctuosa			r			●								●	-		
Cerithium stercusmuscarum	x	c	x	x	x	-				x	x	x	-		?	?	?
Solenaetra pallida	x	x	x	x	x	-				x	x	x			?	?	?
Chione undatella		-	r	x	x	Cc				-	-		-		-		

●-island too small
●-no rock
1)-everywhere except S. Est.
c-common
Cc-most common
r-rare
●-only on east shore
●-turbulent water
●-too rocky

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MOLLUSCS II

	Punta Peñasco	Puerto Libertad	Guaymas	Estero de Kargento	Campo Tiburon	Puerto Kino	Guaymas	Topolobampo	Coast of B. C.	Tiburon	Tecomate	Infiernillo	Punta Isl.	Roca Isl.	San Esteban	San Lorenzo	Angel de la Guarda
Cosmo regularis 1)	x	x	x	x	x	x	-	x	x	x	x	x	x	x	-	x	x	x
Calumbella fusata																	
Tegula rugosa	?	x	x	x	x	x	-				x	x		x		x	?	?
Knefastia funiculata	?	x	x	x	x	x	?									-	x	?
Trivia radians			x									x	x	x		x	x	?
Neretina lutecfasciatus	?	?	x	x	x	x	?	?			x		-	-	?	?	?	?
Cypraea annetiae			x	x	x	x	?	?			x	x		x				
Tellina rufescens 1)	x	x	c	x	x	x	x	x	x	x	x	x	x	-	x		?	?
Olivella dama			x	?	-	-	-				x	x	-	-		-		
Crepidula aquosa				x	x	x	x					x	x	x	x	-	x	?
Carditamera affinis				?	c	x		?			x	x	x	-	?	-	?	?
Acmaea dallinus			x	x	x	x	-					x	x			?	-	
Isognomon chemnitzianus	x	x	x	x	x	x					x	x	x	x		?	x	?
Volsella capax			x	x	x	x					x	x	x	-		x	x	x
Pteria peruviana	?	c	?	x	x	x	?	?			x	c		-		-	?	?
Ficus ventricosum		-	Cx	-	-	-	?				x	x	-	-		-		
Nucha bistrinalis	?	-	x	x	x	x	?					x	-	-		-	-	?

CRUSTACEA

	Punta Peñasco	Puerto Libertad	Guaymas	Estero de Kargento	Campo Tiburon	Puerto Kino	Guaymas	Topolobampo	Coast of B. C.	Tiburon	Tecomate	Infiernillo	Punta Isl.	Roca Isl.	San Esteban	San Lorenzo	Angel de la Guarda
Cirripedia 1)	x	x	x	x	x	x	-	x	x	x	x	x	x	x	x	x	x	x
Axius vivesi		x	c	x	-	-					-					-		
Leptodius occidentalis		?	x	x	x	x					x	x	x	-		?	?	?
Spalocophrys schmidtii	x		x		x						x	x				x		x
Microphyrus platycoma			x	x	x	-					x	x		x		?		
Petrolisthes armatus		?	x	x	-	-	?				x	x				-		
Callinectes arcuatus	?	x	r	x	-	-	?				x	x	-	x		?	?	?
Glyptoxanthus acumbricus		x	r	x	-						x	x	x	-	-	?	?	?
Pilumnus townsendi		x	r	x	-						x	x	x	-	-	?	?	?

1)-everywhere except at Kino
2) -in one part of it only
3) -too sandy
4) -too turbulent
5) -less than in Descanboque

MISCELLANEOUS

	Punta Peñasco	Puerto Libertad	Guaymas	Estero de Kargento	Campo Tiburon	Puerto Kino	Guaymas	Topolobampo	Coast of B. C.	Tiburon	Tecomate	Infiernillo	Punta Isl.	Roca Isl.	San Esteban	San Lorenzo	Angel de la Guarda
Annelid worm 1)	x	x	x	x	x	x	?	x	x	x	x	x	x	x	x	?	x	x
Eurythoe		x	c	x	x	-	?				x	x		-		?		?
Heliaster		x	Cax	x	-	?					x	x		x		?		
Holothuroidea		x	x	x		?					x	x		-		?		
Mesepe grandis 1)		x	r	x	x	c	x	x	x	x	x	x	x	x	x	-	x	x
Rhinocrotra vanbruti		x	r	x	x						x	x						
Asthenosa		x	c	x	-	-					x	x		x				
Nudosa																		
Porifera		x	c	x	x	?					x	x		-		x		

1)-Descanboque and everywhere else
2 -too rocky
3 -more than in Descanboque
4 -no rock

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INSECTS I

	Punta Peñasco	Puerto Libertad	Desemboque	Estero Sargento	Campo Vivero	Puerto Kino	Guaymas	Topolobampo	Coast of B. C.	Tiburon	Tecomate	Infiernillo	Mts. of Tiburon	Palos Int.	Kino Int.	San Esteban Isl.	San Lorenzo Isl.	Angel de la Guarda	Desemboque (mountains)	Tepopa (mountains)	Kino Vista	San Francisco	Bermejillo	Hayden	Campo Utah
Hagenophala carolina		r		c						-					- ?						x	x			
Cicindela cartagena col.	x			x						x x									-						
Cicindela californica Hah.	x			x						x x									-						
Cicindela lemniscata																									
Cicindela californica brev.	x			x						x x									-						
Chlaenius erbum	x	x	x	x	x					x	x	x	x	-	-						x	x			
Calosoma prominens		x	-		x					r					- ?		x	x							
Dasycnus discocidalis		r			?					x					-			x			?	?			
Hydrophilus insularis		x			?						9				-						x	x			
Chalcolepidius smaragdinus	x	r	?	x	?					r	-	x	x	-	-						?	?	?		
Halomelon erthrocellia																									
Euristenetus sp.																									
Meloidae sp.																									
Cyrtodera sp. A																									
Cyrtodera sp. B																									
Gnesia sp.																									
Polycesta velasca			x		x					x						- ?		x	x	?					
Hippomelas			x		x					x						- ?		x	x	?					
Barmostes maculatus			x		x					x						- ?		x	x	?					

INSECTS II

	Punta Peñasco	Puerto Libertad	Desemboque	Estero Sargento	Campo Vivero	Puerto Kino	Guaymas	Topolobampo	Coast of B. C.	Tiburon	Tecomate	Infiernillo	Mts. of Tiburon	Palos Int.	Kino Int.	San Esteban Isl.	San Lorenzo Isl.	Angel de la Guarda	Desemboque (mountains)	Tepopa (mountains)	Kino Vista	San Francisco	Bermejillo	Hayden	Campo Utah
Elcodes		x	x	x	x	x				x	x	x	x	-	-						x	x			
Anidina confluens		x													- -										
Cryptoglossa verrucosa		x													- -										
Steriphanus punctatus		x		x						x									x		x	?			
Sibrotus ventricosus		x		x						x					-	?					x	-			
Glyptotus sp.	?	x	*	x	x		x			x	x	x		-	-	?	?	x	x	x	x	x			
Trox suberosus		c		-	x					x					-			x	x		x				
Diplotaxis knausei	x	x	x	x	x					x	x	x	x	-	-						x	x			
Cyclocephala longula		c	x		x										x		-		?		?	-			
Cotalpa consobrina		x			?					- -					-						x	x			
Scarabaeidae sp.																									
Anoplognatha dunningsa			r	-	x	x				?	?	x	?	-	?						?	?			
Ligyrus gibbosus		c	x		x										x		-		?		?	-			
Strotogma		x			?						-				-						x	x			
Neotiloma		x	-	x	x		x			x	x	x		-	-	?	?	x	x	x	x	x			
Anoplus prolixus		r	x	x	x	x				?	?	?	x	- -		?					?				
Anoplus sp.																									
Dorybrenchus gemmatus	x	r	?	x	x	?				x	x	x	?		-	?	?	x			x	?	x	?	
Anhrysus serianamus																									

- r -rare
- c -common
- 1)-only in arroyo and near water
- 2)-not even at will
- * -distribution not indicated
- 3)-creosbore and arroyo
- 4)-in interior near tenajas
- 5)-only when rains in arroyo

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INSECTS III

	Punta Peñasco	Puerto Libertad	Desemboque	Estero Sargento	Campo Vivora	Puerto Kino	Guaymas	Topolobampo	Coast of S. C.	Tiburon	Tecomate	Infiernillo	Mts. of Tiburon	Punta Isl.	Rasa Isl.	San Esteban Isl.	San Lorenzo Isl.	Angel de la Guarda	Desemboque (mountains)	Topolo (mountains)	Bahia Vista	San Francisco	Hermosillo	Magdalena	Campo Utah
Acanthoderus pruinosularis																										
Apatides fortis x		x	c	x	x					x	x	x	x	x		-?	?		x		x	?	x			
Hopagonoderus x			x	?		x				x						-			x		?		?			
Asheta similis	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Brosopsolus bilineatus	?	?	?	x	x					x			x	-	-	-			x							
Insara covillae	?	?	x	-	x					x			x	-	-	-			x							
Clematodes larvae		?	x	-	-	x													-							
Periplaneta americana			r	-		x				x				-		-	?					-		x		
Arenivaga sp.			r	-		-				-	-	-	-	-		-	?	?	-					?		
Anconia integra	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	-	?	x	x	x	x	x	x	x	x	x
Blapherosoma calcarata			r	-		-				x												x		x		
Stagonomatis limbata			r	-		-				x																
Stagonomatis californica			r	-		x				x																
Nautidae sp.			r	-		x				x						-			x					x	r	
Nhytidolomia cayi																										
Lethocerus delpontei			r	x		-				-						-						x		x		
Hesohum thoracicum			-	-		r				x						-			x			-		x		
Tristoma rubida			r	-		x				x						-			x		?	?				
Lepteremus sp.																										
Reduviidae sp.																										

INSECTS IV

	Punta Peñasco	Puerto Libertad	Desemboque	Estero Sargento	Campo Vivora	Puerto Kino	Guaymas	Topolobampo	Coast of S. C.	Tiburon	Tecomate	Infiernillo	Mts. of Tiburon	Punta Isl.	Rasa Isl.	San Esteban Isl.	San Lorenzo Isl.	Angel de la Guarda	Desemboque (mountains)	Topolo (mountains)	Bahia Vista	San Francisco	Hermosillo	Magdalena	Campo Utah
Hamalocaris minutus																										
Dicroproctia sp.	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	-	-	x	x	x	x	x	x	x	x	x
Acanalonia		?	r	x	x	x				x	x	x	x	-	?						?	?	?			
Scolopostla reticulata																										
Erax argyrosoma		x	r	-		x				x	x	x	x	-	?						x		?			
Hermetia sp.			r							?				-	-											
(Stratiomyidae larva)																										
House-fly (blow)																										
Paranthaclisis kaszni			r	x		x				x					x									x		
Scotoleon congener			r	x		x				x					x									x		
Chlorion serarium			r	x		r				x					-						?			e		
Hemisia sp.			r	-		?				?					-	?	?				?			?		
Bee	x	x	x	-	x	x	x	x	x	x	x	x	x	-	x	-	x	x	x	x	x	x	x	x	x	x
Ptiloglossa mexicana		x	r	x	x					-	-	x	-	-							?			?		
Dasymutilla klugi			x		?					x						-	-		x					?		
Dasymutilla hagra		x	x	-	x	-				x	x	-		x		-			x							
Photoppia																										
Popsis			r		?					e						x								x		
Ascia sevata *																										

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INSECTS V

	Punta Peñasco	Puerto Libertad	Desemboque	Bahía Kino Nuevo	Campo Vivero	Puerto Kino	Guaymas	Tepopa	Coast of S. C.	Tiburon	Tecomate	Infiernillo	Mts. of Tiburon	Punta Isl.	San Luis	San Esteban Isl.	San Lorenzo Isl.	Angel de la Guarda	Desemboque (mountains)	Tepopa (mountains)	Bahía Kino	San Francisco	Hermosillo	Bagdad	Campo Verde
Ommatius gilippus strigosus			1		x				x							x	?	?	x		x				
Agromia vanilis			2		x				x							x	?	?	x		x				
Anthrax sp.			x	x	?				r							r					x		r		
Phlogotheutes costa			1											-		x	?		r				?		
Sphingidae			x						-							-									
Erebus odora			r		-				x							x			x				r-		
Artona atlanta			x													-	-								
Syspira colactina	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	?	x	x	x	x	x	x	x	x
Nemocerus bivittatus			x		x				x							x							x		
Letrodectus mactans	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	?	x	x	-	x	x	x	x	x	x
Aphonopelma			x													x			x				x		
Rudyrus hirsutus	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	-	?	x	x	x	x	x	x	x	x
Brumbax calexicensis	x			x					x							?	?				x				
Scolopendra malkini		-	r	-	x				-				-	-		-			x						
Orthorus sp.			3						-										x				x		
Asurina			2						-													x	x		
Ixodidae			x						-																

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/For detailed information on Seri beliefs about native animals, see category 116, pp. 10B-16B, 17B-46B, 47B-57B, 61-68.

10: Davis E-5 (1922-ca.1939) 1965 NU31 Seri NU31
[R5]
[PR 1-4 NOT processed]

Edward H. Davis

And the Indians of the Southwest United States and Northwest Mexico

A harvest of photographs, sketches and unpublished manuscripts of the indefatigable collector of artifacts of these border Indians

Introduction by

Carl Schaefer Dentzel

Director, Southwest Museum, Los Angeles

Arranged and Edited by

Charles Russell Quinn

Elena Quinn

Published by Elena Quinn *Downey, California, 1965*

[Title Page]

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Section V

The Seri Indian

Unfinished Book Manuscript

War Chief of the Seris

The Pelican Skin Robe

175 131 *Three centuries ago they were a friendly people living along the banks of the Sonora River from Hermosillo to where the flow of water sinks into the marshy banks along the coast of the Gulf of California.*

175 717 *The great Padre of the Pimas, Eusebio Francisco Kino, first visited the Seris in 1685, and found them "a very gentle people." After a short preachment to them he noted that "With very great insistency they begged me to remain with them and baptize them saying they would give me horses, fish and many products of the country, and that they would build me a house and a church. On three different days I said Mass in their country."*

The Padre could not remain but two years later (1687), he sent Father Adan Lily to them. Lily established a mission---Santa Maria del Popula---on the banks of the River near what is now Hermosillo. The Seris remained faithful to the Padres when the whole country rose in revolt some years later.

175 [13] *The withering hand of time worked against them, however. They were pushed farther and farther down onto the barren lands along the gulf coast until, finally, in a fierce and desperate retreat out into the sea and onto the desert Island of Tiburon. The swift and deadly channel between the Island and the Sonoran mainland gave them protection. They retrogressed through the centuries into a fierce and, perhaps, cannibalistic tribe.*

114 [23] *As late as 1922, when Edward Davis first visited Tiburon Island, a man was putting his life on the line when he stepped on the Island. But perhaps the quality of the man had something to do with it. As did Father Kino, Edward Davis was able to make friends of them.*

The following manuscript is an incompleted book on the Seris which was found among his papers.

[pp. 6-138 not processed]

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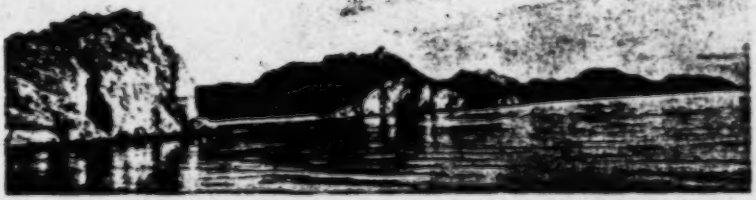

Tiburon Island - 1936

Unfinished Book Manuscript

114 At the Museum of the American Indian, Heye Foundation in New York City where I was staying temporarily _____, I was asked by Mr. Heye where I would like to go on my next collecting trip for the Museum. I had already covered the whole of southern half of Arizona and had made thorough collections from Pima, Papago, Maricopa, Apache, Hualapai and other tribes, and had also covered Southern California and its deserts.

For many years I had read every scrap of information about the treacherous Seri Indians of the Island of Tiburon---off Mexico, and was greatly intrigued with these wild primitive natives. My theory has always been that the farther away from civilization a tribe is located, the better chance to secure original or aboriginal material, so I asked Mr. Heye if he had anything from the Seri Indians of Tiburon Island, and he said: "Not a thing, nor any other museum."

"Well, I think I'll go to Tiburon in March," I said.

He said, "I wouldn't advise it. You know their reputation. No white man landing on that mysterious Island has ever returned. They are the most treacherous Indians in North America, and Tiburon Island is a good place to stay away from."

114 Nevertheless, I went to Hermosillo, capital of the State of Sonora,
123 Mexico, and there I met and engaged Roberto Thomson, whose father had
[115] treated with kindness some of the Seris who had reached his ranch, and he, Roberto, thought we could land on the Island and, by considerate treatment, make friends with these wild *Tiburones*. It seemed as if we were flying into the face of certain death from their reputation, but we met these people, and by gifts and fair treatment, we became good friends, and from that time in 1922 to the present, that friendship has endured unbroken.

I have the absolute freedom of the Island, and have visited there at least six times. I have been through the Island on all its coasts and am familiar with its wild inhabitants.

123 As a concrete result of that first trip to Tiburon, I secured a
115 *balsa* (boat) made of *carrizo* canes lashed together with native fibre,
501 which *balsa* Mr. Heye said it was the finest one in North America.

[226] This *balsa* was given to me without hesitation, although it furnished one or two families with sea food.

115 I wish to pay tribute to Senor Roberto Thomson who has been my constant companion, friend, guide and interpreter during the past twenty years, on all my trips to Tiburon and various parts of Mexico. I found him absolutely dependable, using excellent judgment in critical situations. He was honest, fair, intelligent, looking out constantly for my safety and comfort always, enduring hardships cheerfully. A better all-round out-door man I have never seen equaled. In short, he is a real *hombre*, and my *simpatico*.

13 Tiburon, or *Shark Island*, long noted for its evil reputation as
181 the home of the most savage and treacherous Indians of North America,
193 lies in latitude 29°north and 112°30' west longitude, in the Gulf of California. It is shaped like a parallelogram about thirty-five miles long and eighteen to twenty miles wide, and lies parallel to the coast of Sonora, Mexico, of which, no doubt, at some remote period, it once formed a part.

It is separated from the mainland, for the most part, by a strait
[127] called *El Infernillo*, or The Little Hell, through which the rising tides pour a resistless flood. It is a desert island and supports a desert arboreal vegetation which includes several varieties of the cactus family and the *mesquite, palo verde, palo fierro, torote, palo blanco, ocotillo* and others. The giant *saguaro, sarbuezo* and *pitahalla (pit-a-haya)* cactus are found here also.

Two desert ranges run lengthwise of the Island, which, on its westward or windward side, terminate in sea-worn cliffs against whose ramparts dash the heavy breakers of the Gulf, and on its eastern side, by long alluvial aprons from the foot of the mountains, sloping gently down to the lovely shell-strewn beaches. From this side the foot of the mountains lies from two to five miles distant. On this, the leeward side of Tiburon, the sea is much calmer, and often, in the early morning, it is as smooth and placid as a lake, reflecting each rosy, lavender and purple tint of the rugged Sierra Seri along the Sonoran coast, as in a mirror. The exquisite loveliness of marvelous sunrises over the pure limpid waters of the *Estrecho Infernillo* is mystical.

134 The soil is loose and sandy, unsuitable for cultivation, and im-
241 possible for producing domestic crops of any
142 kind.

000 possible for producing domestic crops of any kind. There is no water
312 for irrigation, and drinking water is very scarce, rising in only a few parts of the Island in places known only to the Indians.

648 For centuries these nomads of the wastes have borne an evil repu-
[91] tation as killers and cannibals, and many an expedition to the Island for trade or exploration has never left its beautiful shores. Lured away from their boats by friendly gestures of the Indians, every last man has been killed by arrow or rifle and the expedition never heard from. No survivor has ever returned to relate his experience and, up to the time of my visit, a man risked his life to go among the Seris on their Island.

Time after time, for four hundred years, the Spaniards, and later the Mexicans, have tried to exterminate them. They have been ambushed, hunted, killed on sight for years; diseases have decimated them: they have been the Ishmaelites among the native tribes of Mexico, with every man's hand against them. Now only a small remnant survives.

[13] They have also taken heavy toll of those who have invaded their territory, which at one time extended from Altar on the north to Guaymas on the south, and from Hermosillo to the coast. When hard pressed, they retired to their Island sanctuary where, deep in the rugged ranges, they have defied pursuit. They are strong, brave, neither asking nor giving quarter in battle---men of marvelous endurance, tireless walkers, swift runners, wonderful trackers.

Within the last few years the Government has definitely set aside Tiburon as their exclusive home and sanctuary, with a strip along the mainland as their hunting and fishing ground, and where they can harvest the fruits of the giant cacti without fear of being killed. No person is allowed on this Island without special permission from the Governor of Sonora, or their Superintendent and devoted friend, Roberto Thomson. The Government has declared a permanent closed season on Seris.

175 As to the reputation of these nomads of the wastes of being can-
648 nibals, I quote the following extract from the *Life of Bill Fain:*

266 After I had been in Yuma some time, a Yuma school teacher asked what I knew about Tiburon Island and the Seris. He said he had heard there was gold on the Island and he in company with a sailor intended to go down there. I said "Partner, I have been at the head of the Gulf several times, and interviewed many Mexican sailors and fishermen. These Seris are murderers and cannibals and my advice is, don't go, for as sure as God made little apples, you and your friend will make a fine feast for the *Tiburones.*"

He said the sailor would manage the boat and they would prospect on the Island and pack the gold out. And besides, they were going unarmed and trust themselves to the tender mercies of the most treacherous Indians in North America. I told him, "My advice is to stay just as far away from that Island as you can, if you want to teach school any longer." My advice was thrown away.

Some weeks later several mining men in skirting the coast opposite Tiburon, came across a place where the Seris had evidently been feasting on human flesh,

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near the narrow channel called *Infernillo*. They knew about the missing school teacher and sailor and without doubt this was the place where they had been eaten. There were the bones of two human beings, and there seemed to be a sort of cross, with hands severed at the wrists, nailed to the ends of the cross with big spikes, with a piece of leather, about as big as a dollar, to keep the nails from pulling through. The hands were from a white man, and many scattered papers from a valise near by, with the man's name stamped on it, was ample proof that the remains were those of the Yuma teacher and this sailor friend. The holes cut out of the valise fitted the leather washers. Even the bones were broken to extract the marrow. The teacher never showed up and everything happened just as I predicted. This was about 1893.

About a year after this, five other men left Yuma in a boat, called the *Examiner*, for Tiburon. Clark was an old frontiersman, O'Brien was a good man too, but not so old at the game; Charley Cowles was a mining man and the two *Examiner* reporters wanted to write up the Seris and the Island and hunt deer. All were fully armed. I gave Clark and O'Brien the same advice as I gave the school master and said on no account to all desert the boat; for O'Brien to make some excuse and stay in the large boat with a shot gun loaded with buckshot and land the reporters with the small skiff. I told Clark not to land but to stay in the skiff. I said they were all flying in the face of sure death once they landed. Charley disembarked at the mouth of a river and left for the interior.

When the boat got close to the Island, it was anchored according to my instructions and Clark and the reporters got in the skiff and were rowed close to shore, when the reporters jumped out and waded. Twelve or fifteen wild natives had emerged from the brush and were making signs of friendship and they shook hands all around with the reporters. One of the men could talk Spanish and he asked about deer and one of the Indians pointed to the mountains of the interior and said, "*'Si Senor, bastante venado.*" So they all started inland and were soon concealed by the brush.

Of course, even two men fully armed and good gun men, would stand no chance with that number of wild natives.

Soon after they had disappeared around the point of a hill, the men in the boats heard the crack of a gun, followed by the scream of a man in mortal anguish. The men never showed up and Clark started for the big boat in his skiff. About this time, a great buck Indian started out in a dugout canoe to cut him off. O'Brien had kept himself concealed until the Indian came within range, when he raised up and threatened to shoot, and waved him back.

He went back all right, and as soon as Clark came aboard, they raised the anchor and sailed south to Guaymas, sold the boat and returned by train. They gave me the details as here recorded. Friends of the newspapermen took the matter up with the authorities at Washington and they had some diplomatic exchanges with the Mexican Government. Mexico answered: "If you don't want your Americans killed, keep them away from Tiburon."

[*Life of Bill Fain*, unpublished manuscript from the Davis collection.]

About 1893 George Porter and John Johnson fitted out the small sloop *World* in San Diego, to go down in the Gulf for shells and curios, and trade with the Seris. They came to grief in the same way. The men were lured ashore by the friendly attitude of the natives, led up the beach, then retreat cut off and they were shot down and "eaten by the Seris."

Dr. [W J] McGee of the Smithsonian Institute of Washington, in 1895, visited the Island with a party of scientists to study the

[text continues on p. 146]

10: Davis E-5 (1922-ca. 1939) 1968 NU31 Seri NU31

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Seri Indians

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175 698 266 Indians. Dr. McGee, confirming Bill Fain's story of the disappearance of Robinson and Logan, the San Francisco newspapermen, secured the facts from a Seri who spoke Spanish, as follows:

> On reaching the Island, Robinson and Logan asked the natives if there were any deer to be shot and receiving an affirmative reply, they started for the interior toward the mountain with several Seris as escort, leaving the two other men with the boats. On the face of it, this was a most foolhardy performance and Robinson actually loaned his rifle to one of the Seris, who accompanied him. The Seri shot Logan in the back and wounded Robinson who called for help. In trying to escape he stumbled and fell and the Indians beat his brains out with rocks.

On the Gulf Coast, this list of killed and of course eaten, could be greatly enlarged and leads to the fact that, up to recent years, no stranger---American, Mexican or Indian---could land on Tiburon and live. Ever since Sonora was settled, two or three hundred years ago, the Island has borne a sinister reputation and up to recent years, it has lived up to its reputation. Even now, no one is allowed to land on the Island without permission of the Governor or the Superintendent.

[181] The Island of Tiburon is isolated, its approaches guarded by deserts and sea, and its people the wildest and most primitive race in North America---every man's hand against them, and they against every body.

175 648 266 114 Dr. McGee's investigations in 1895 failed to convict the Seris of cannibalism or of eating any part of either whites or Indians, killed on the Island or killed in battle. This reputation of cannibalism is prevalent in Mexico as well as in the United States, but the charge has never been proven.

It is true, they eat the flesh of animals raw as well as partially cooked, and that may have given rise to this gruesome reputation, but my own investigations covering several visits on the Island and on the Sonoran coast, failed to convince me that they had eaten human flesh. They told me themselves they had not, and if all reports of cannibalism by the Seris were traced back to their source, they would end in surmise or guesswork. No one, so far as I have been able to find, has actually seen a Seri eat human flesh. Until such a witness can be produced, the Seri remains unconvicted.

Let us examine the so-called evidence of the mining men, as quoted by Bill Fain: the finding of a white man's hands spiked to a cross, and the schoolmaster's papers scattered on the Gulf Coast of Sonora. This evidence is too circumstantial. The discs of leather even fitted the holes in the bag.

In the first place, nails are scarce in Sonora, and no Seri at that time would risk his life to procure nails or spikes at any ranch. Nearly all woods in that region are hard and would almost certainly turn a nail. The Seris had no axes to chop trees to make crosses, and

175 if they were as hungry then as they are today, they would not stop to
648 spike a man up preparatory to serving him. Their only tools then were
266 rocks to use as hammers and hoop iron for knives, and these are in
114 universal use today.

[412] There is no doubt that the men were killed, but I think these mining men purposely exaggerated their findings, if any.

648 There is no doubt that the Seris were brave fighters, treacherous
721 murderers, sparing neither men, women or children on their raids,
727 killing ruthlessly. But there is one charge which cannot be brought against them, which cannot be said of many tribes north of the border. So far as I could find out, they never tortured nor scalped.

648 The Seris never took prisoners and they never inter-married with
721 other tribes, so their strain is pure.

727 There was one exception. Sixty or seventy years ago, the Seri
563 Chief Coyote Iguana and his band of warriors held up the stage between Hermosillo and Guaymas, and killed all except a handsome Spanish girl of the better class. This girl, Coyote Iguana made his wife and by her raised a family. One granddaughter still survived in 1924, and while more attractive than the general run of Seri, her complexion was fully as dark.

800 The Seris, Ishmaelites among the native tribes of Mexico---the most fascinating Indians in North America!

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123 *Reception Committee, Tiburon Island - 1935*

115 On the twenty-fifth of April, nineteen twenty-two, I engaged the services of Roberto Thompson, who with his father and grandfather

[text continues on p. 149]

10: Davis E-5 (1922-ca.1939) 1965 NU31 Seri NU31

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Rafael Ysabel with Gila monster - 1922

[123 [115] before him, has been a friend of the Seris for years. It was his father who brought McGee to Tiburon in 1895, and in many ways they have shown kindness to the Seris.

[122] I hired an auto-truck for fifty dollars to take the necessary people and supplies. These supplies consisted of some fine-tooth combs, needles, thread, one bolt of white muslin, 150-pounds of flour, panoche, saws, nails, harmonicas, little round mirrors, fish twine, hooks, 2-bits and other things.

We left at 6:30 a.m. With us was the driver Ricardo, his friend Rafael Ysabel, son of an ex-governor of Sonora. When we reached Bob's ranch, *El Providencia*, five or more miles out, we added a one-eyed Mexican and Bob's brother.

After a simple dinner at the ranch house we drove across the mouth of the Sonora river, a broad, flat alluvial plain probably four or five miles across. We circled about and turned north, stopping at the edge of a broad shallow bay. The tide was down and the shore was slimy mud and filled at places with sharp-edged clam and oyster shells. There were oyster flats at the edge of the mud, so Roberto and the Mexican waded out and secured enough of them for supper.

[136] During the day we ran close to a Gila monster, a horrid looking black and orange mottled fat lizard who waddled along. Rafael held his head with a rifle, reached down and caught him in back of the head, and held him up. He hissed like a snake and bears a bad reputation.

[133] The country was flat and the road pretty good. Detached mountains we passed during the day and one range called *Siete Cerros*, Seven Mountains, with peaks all in one row, reached for fifteen or twenty miles. We passed a few ranches where the people were pumping water from wells or hauling in the old turn-table way with a mule and rawhide buckets. Then we made camp, got everything ready for an early start the next day and turned in.

At dawn three men took the boat with all our traps and groceries and fifteen gallons of fresh water, and Rafael and I walked up to the point to meet it. Louis and the driver and truck returned to the ranch. The weeds and ground were very wet and we came to some sloughs filled with soft ooze. These were impossible to cross, so we went around them and then decided to strike for the ocean side and go along a sand bank. This we did, and when we reached the end we saw the boat waiting for us half a mile or more across a great flat.

[133] The ocean view was grand. A great rock, *Alcatraz Island*, protruded from the sea a short distance out, on which countless cormorants roost and raise their young. Bob often gathers their eggs.

We reached the boat and climbed in and pushed off into deep water. There was no wind and the tide was part way against us, but we rowed, three of us, for many many miles. We landed in a small cove, drew up

[text continues on p. 15]

10: Davis E-5 (1922-ca. 1939) 1968 NU31 Seri NU31

Roberto Thomson waving white bandera as signal of peace. In the Gulf - Sonora. April 26, 1972

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Pulling the boat up the beach above high tide - Kino Bay and Alcatraz Island - 1936

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123 the boat and took dinner. Afterward, we pulled out into the Gulf and skirted the coast, rowing for miles. We passed great red mountains with the sea beating against their rugged breasts, hollowing out deep caverns; then sandy bluffs with mountains receding, but the horizon was always notched with rugged, pinnacled desert ranges.

We landed for the night on a sandy point and made camp. After our supper two fires were built, Roberto's signal that he was on hand. [202] Also a white scarf was tied to a long pole as a signal of friendship. No answering signal appeared. Probably the people were on the opposite side of the Island.

At sunset the sea became calm as a pond and the mountains on Tiburon in the distance turned purple and lavender. The sea reflected all the sky and mountain colors like a mirror.

The next morning we got an early start and it required our united strength to push the boat down to the water as it was low tide. The beach was strewn with various shells and a lot of colored pumice stone which had drifted in from seventy-five miles north, where there are some pumice hills near the sea.

The nearest point of Tiburon was only one and a half miles distant, a short row across. The water was pure green, indicating a shallow sea. [361] We rounded the point and rowed into a bay and then to the head of the bay where there were a few huts called *Rancheria Tinajanita*, or Little Tanks. The water was so shallow in places we had to get out and push the boat a long way out and walk up a long muddy beach over shells and a sort of coral that bruised and cut our bare feet, so that we went as if walking on eggs.

342 The rancheria was built on the shore with no shade; each hut facing
361 the water. The huts were very crude---the frames of *carriso* reed and ocotillo, covered with coarse brush and blankets of dried seaweed.
[35] Around the bottoms, or sides, of each hut were piled sea turtle shells three and a half feet high and two and a half feet wide. Over these were piled seaweed and brush, not fastened. Round about were turtle bones and shells, and sea shells, bones and anything that contained meat.

This was just a temporary camp of about eight huts.

123 We left this camp, raised the sail, which consisted of several
202 flour sacks sewed together, and lay in the bottom of the dug-out, while the one-eyed Mexican steered with a paddle. Before leaving, Ricardo left his sign---a sign agreed between him and the Seris. Since he and his family had been so kind to them, they would never harm him or kill his horses and cattle. He erected a stick with a rag to call attention, made a circle with his heel, and inside the circle made the tracks of his right bare foot and right hand.

123 At the bow we carried the white banner always to signify peace.
361 We crossed the bay to a sandy point and came upon another small

[text continues on p. 153]

137

Giant Saguaro

Pirahalla

123 rancheria of about ten or fifteen huts, half tumbled down, all facing
361 the sea and surrounded by turtle shells and deer bones, and sea shells. Things were dropped wherever they ate. This rancheria was deserted also.

We set sail again and landed on a sandy beach near another deserted rancheria called *Palo Fierro*. We hauled the boat way up and took out all our things and carried them up to the huts. In this place there were twenty-one huts---sometimes three built together. Many of them were in a good state of preservation. They were all in a long row with bleaching bones and turtle shells on all sides. From the inside of one hut I counted thirteen turtle shells around the base. There must have been about a hundred turtle shells here, and a few land tortoises.

123 There were two or three fragments of painted parts of a boat---
[64] probably remains of a boat belonging to seven fishermen who got drunk and landed here, and were all killed by the Seris two years ago. Six months ago a single Seri was captured by some Mexican fishermen and killed in reprisal.

As the wind increased it kicked up an ugly sea and we decided to camp over night. As we were reduced to about six gallons of water, Roberto suggested we take two empty five-gallon cans and go for water. I had offered to stay with the boat but was told the Seris would kill me if they found me alone.

[312] A Seri had told Roberto to follow a certain trail from the rancheria and go between the mountains and he would find a *pozo*, or well, not far away. Ricardo left his private sign and the five of us marched away, following a well-worn trail. For the full distance broken shards of ollas lined the trail at short distances, so we knew we were on
137 the right trail. Brush began at the sea shore and we passed various
123 kinds of desert vegetation---several kinds of cactus, especially the *sarbueso*. This starts with a single great trunk two or three feet in diameter, and then branches out like a vase, running up fifteen to twenty or more great columns like the *saguaro*. They were thirty or forty feet high. In some of these were piled a great accumulation of sticks and trash ten feet high or more, and on the top where the sea eagle makes its nest. There were a number of these.

Then we came to the *pitahalla*, *cholla*, *ocotillo*, and others, and the strange *terote* tree. This tree is the *Bursura Microphylla*, and has an odor like turpentine. It is a fat, dropsical tree like stuffed sausage, with crooked ungainly branches coming out at all angles. There are three varieties---the *terote colorado*, *blanco*, and *negro*, according to the color of the cut bark. Another strange tree was the *palo blanco*. Then there was the *palo verde*, *palo fierro* and *mesquite*. The *mesquite* was rare.

123 A number of signs were marked in the sand. We could not translate
[212] them. We walked single file, rifles in hand, and revolvers handy.

[text continues on p. 155]

10: Davis E-5 (1922-ca.1939) 1965 NU31 Seri NU31

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Alverto Mendoza and Lupe Astorga getting water from cactus - used for cooking

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Child leading Petra - blind woman, Kino Bay - 1936

123 Mile after mile. We got very dry and had almost given up finding the
[133] water. We had gone up a sandy wash for miles, barren arid mountains terminating in regular saw tooth pinnacles on all sides, some of beautiful red rock---red as blood; some gray and some lavender.

312 At last we came to the water hole which had also been frequented
123 by coyotes, skunks and other animals, and their flavor was easy to taste. But we had ceased to be critical long ago. The hole was really a crooked shaft and led down crude steps worn into the rock for ten or twelve feet. It had been dug by clam shells and bones and sticks, and may have dated back many years. Part of it was through rock and it was a work of great patience to dig with such primitive tools.

123 At the foot, a seepage came through the sand and formed a shallow pool from which, in the semi-darkness, we dipped water and filled our cans. After a rest, all partook of a generous drink. It took us two and a quarter hours---six miles to go there, and we were probably the only white men who had ever been there. I am glad I went for the experience, but we were all completely exhausted on reaching camp. Ricardo and the Mexican carried the cans of water six miles on a stick balanced over the shoulder. Roberto left his sign along the trail. We slept in the Seri huts, all tired out. My feet were tender from walking on the sharp shells and my shoes had shrunk from being wet in salt water, and that pained my feet greatly by cramping them too much.

We heard many interesting tales about the Seris: their wonderful endurance, their susceptibility to disease, their marvelous feats of tracking and swimming, their habit of getting food only when necessary and laying up none ahead, and other queer customs.

The breaking of dawn brought a marvelously beautiful sunrise. It was very low tide and the boat was stranded nearly two hundred feet from water. The sky and sea were crimson and the mountains purple on the Sonora side. The sea was calm, without a ripple, and mirrored every peak and color and made a picture of indescribable beauty.

We ate a hasty breakfast and strained ourselves to the utmost to move the boat. It slowly slid over the grass and shells to the water's edge, and then we had to push it out seventy-five feet in the water to get it deep enough to float. A slight breeze was blowing, so we raised the sail and rounded the point and headed across for another point, across a stretch of water five or six miles.

[202] At last we saw a few huts and as we neared shore we saw two men with rifles. We waved the white banner, laid our rifles handy, fixed our revolvers, and ran the boat ashore. The men had darted back into the brush as experience had told them to beware of strangers. Roberto and his brother Nene leaped out, leaving their rifles, seized the white flag, ran after the men and called to them and said they were friends who had come to see them. They recognized Roberto, returned to the brush shelters, left their rifles and came to the boat bare-

[text continues on p. 157]

Blind Seri Indian, 1939
Best paddler we had

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Candelario completes his decoration
one of our paddlers - 1938

123 handed to show their friendliness.

142 One was a young man with rather pleasant features, his braided
281 hair hanging below his shoulders. His name was Antonio Herrera. The
133 other was a wild-looking specimen called Ramon Blanco. His hair was a
[302] tangled mat with a short braid behind, suspicious black piercing eyes,
[411] long sparse moustache and chin-beard hiding a broad cruel mouth. He wore the remnants of an old sweater, a short dirty kilt, or skirt, nearly to his knees, a belt full of cartridges, mostly empty, and a long knife in a rawhide scabbard.

123 The young man had been baptized and given a name by Roberto, who
[705] had acted as godfather or *patrona*, many years ago. He wore a hat,
[291] jacket, and pants of blue denim, and *guaraches*, or sandals of rawhide.

We shook hands all around and then they called and halloed in the brush and soon three women and a lot of children, wild and half-
[415] clothed, filed into camp. The women were tall, gaunt, unkempt, ragged
[402] and barefooted, paying us not the slightest notice. They were bearing
[422] on their heads large baskets filled with all their earthly possessions---cooking ollas, scraps of cloth, pieces of turtle meat, bone
[854] brads, hair brushes, and odds and ends. They carried, also, an infant
[231] or two wrapped in odd bits of rags. Several gaunt dogs followed in their wake.

342 In all, three families came trailing in, removed their household equipment from their heads and resumed their interrupted and primitive
[592] housekeeping. Each family occupied its apartment in the row of brush shelters, separated from each other only by brush partitions with a total lack of privacy. These shelters, always open to the sea, serve as shade from the fierce rays of the sun, and also as windbreaks, but
[361] are no protection from infrequent rains. They are occupied only for a brief period and then their nomadic tenants move on to fresh *cahuama*, or sea turtle range.

123 Soon, a third man arrived while we were near the huts, Manuel
[142] Encina. He was a man of sixty-five, gray hair and mustache, seamed features, and not evil looking. He was out of breath. He had gone for water to the same water hole where we had been yesterday, struck our tracks, had left his water cans and hurried back to warn his people. He was greatly relieved to find friends.

Since he had gone for water, inquiry revealed there had been no water in camp for two days, and six adults and one girl of thirteen and six children were thirsty. We gladly gave them one of our five-
[225] gallon cans of water and they were very grateful. They had caught a
[262] sea turtle the day before and gave us some turtle steaks which looked like beef or mutton.

312 As the camp was without water and we were running short, the young
402 man and Encina offered to get some. Each took a *palanca*, or short
123 shoulder pole with knotched ends, fitted empty five-gallon cans in

123 312 [482] nets of twisted fiber, hooked the nets in the ends of the notched stick and started off nine or ten miles to the water hole in the heart of the mountains.

Water carried so far over loose, sandy soil, dodging cactus, threading a devious way among the *talus* thrown off the cliffs and slopes of canyon walls, with the water-bearer barefoot, acquires a value absolutely unknown to the man who draws an unlimited supply from a faucet.

The two men were gone six hours and when they returned they were almost staggering under the heavy loads of water, each man carrying at least one hundred and ten pounds of water, as the cans were full. In addition, one man had a canteen full.

The thirsty people drank sparingly, and a little Seri maid poured some of the precious liquid into a cooking olla for a thirsty dog. After the dog had lapped sufficient to allay his thirst, she carefully poured the residue back into the can, never losing a drop. One drop of water could not be spared after that arduous trip.

484 147 648 Bob says a man goes to Hermosillo occasionally and returns to the coast, ninety miles, with two to five cans of *mescal*. It takes probably four days to do it, but it is a wonderful feat of endurance. He said about thirty years ago a woman walked the ninety miles during one night, afoot, and reported to the Government House when it was opened at nine in the morning that about fifty of her people had been shot by Roberto's uncle at various times. This uncle was a very hard rough man and the Seris were fond of his mares and steers for meat, and used to steal, so he began shooting a goodly number. Fearing a man messenger would be shot, as men were frequently shot while going along the road, they sent a woman.

Ysabel was Governor at the time. Judgment was rendered against the uncle, and it is probable that a hanging squad would have been sent out to execute him. The Governor, a great friend of the family, sent for him, and he rode ninety miles at night on horseback and was saved with the Governor's help.

Roberto saw twelve Seris pack meat from two mares, two steers and two yearling heifers, for four or five miles to their boats. Their endurance and strength is phenomenal. The question naturally arises, "Why are not burros used by the Seris on the Island to ride and pack, as they are by their Mexican neighbors on the mainland?" It has been [482] tried, but things were reversed; the Seris packed the burros around in their stomachs.

261 262 Roberto said: "These people, living on the verge of starvation, never having a continuous food supply, would kill and eat every burro, and it is a common thing on the mainland, if a cow or horse dies, and Seris are in the neighborhood, they will try to beat the buzzards to it. They will gorge in times of plenty, and when food is scarce they

[text continues on p. 160]

Seri - wild boy - 1924

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[297]

Seri child

261 will exist on very small rations, bear burdens, and walk long dis-
262 tances. Their food is anything that walks, flies, crawls or swims,
[252] and they eat it raw with the same relish that we eat it cooked. There is but one thing they will not eat; they draw the line on the Gila monster. They are the most perfect type of human being adapted to desert conditions that exists today. Convey them blindfolded many miles into the heart of the desert, empty-handed, remove their blinders, and they will find both food and water where others would perish. The Papagos and Yaquis do almost as well."

302 We gave the women a small bag of flour and three or four cubes of
[123] sugar around, and the men three packets of tobacco each and two boxes of matches. Matches with them are very precious and are rarely used. Rather than use a match a woman came over to our fire and borrowed some coals to rebuild her fire. From this point the nearest matches are a good deal over one hundred and twenty miles distant, so they have to economize in every thing.

422 Each rag is valuable, and flour, sugar, coffee and rifle shells
[434] are absolutely priceless. While they know money, it has no value here.
[437] Only commodities go here. The most highly prized things are boards to
[389] make boats and rifle shells to get game and protect themselves. All empty shells are saved, the primer punched out, straightened, a match head put in, a little pinch of powder on top, the shell filled up, a long bullet inserted, the shell pinched tight, and a fresh set of ammunition is made.

142 The women and children certainly did look wild. Their hair was
291 frowsy and unkempt, their skirts and waists a patchwork of dirty rags
302 coming just below the knees; their features seamed and hard and cruel. Their complexion was very dark. They had no under garments. The children wore only a dirty shirt coming a little below their thighs, and even that is ragged. One or two of the women had a dirty bandanna over their heads. How I wished I could have seen them in their ancient, picturesque pelican-skin kilts!

302 I happened to witness the operation of a Seri beauty parlor. A
[924] mother brushed the hair of her thirteen-year-old daughter with a brush
[283] made from the fibrous roots of a certain grass tied together with
[515] sinew. During the operation if she came across a *piojo*, and she found several, she plucked him away from his feeding ground and dropped him in the fire.

The hair neatly brushed, the mother then mixed paint in a small vessel and with a tiny stick painted a bright blue design under the eyes and across the cheeks and nose, and then she added narrow white stripes, which, contrasting with the blue and the dark skin, produced a very striking effect. This paint is easily removed and the women often paint and remove three different face designs in one day.

304 I did not see tattoo work on either men or women, nor did they
301 wear ceremonial feathers as did our western Indians.

000 wear ceremonial feathers as did our western Indians. I saw no skin or
164 cutaneous disease, or evidence of tuberculosis or of trachoma---the curse of our Indians.

142 One boy-child of five years was a handsome child---fat, round,
302 sturdy, with roving great black eyes, large thick lips, a picture of
[241] perfect health. He was almost naked. His hair was done in a pigtail
[857] with a red string braided into it. His face like all the others was dirty, but he waded into the shallow water with a short spear and I saw him catch two crabs with his little harpoon. The water did not bother his face.

415 They had no plates or eating tools, except large deep clam shells,
412 cast up by the sea, which served as cups and dippers. Their long, keen
264 belt knives were used for cutting, carving or skinning, and always the
[258] fingers for eating. They gathered in a circle around an olla of seeds of long grass growing on the sea bottom prepared by winnowing, parching and grinding, and then cooked with turtle oil. Each one dipped his or her fingers into the olla and conveyed them to the mouth without losing a drop, and licked them off with great relish.

231 The dogs eat with the family. There were six or seven half-starved
264 ones. If someone picked up a piece of turtle flipper the dog often took the first lick at it, bit off a piece or licked it before it reached the owner's mouth. The dogs were not punished. They were just slapped to keep them out of the pots.

123 We had a great time that evening in Seriland. The young man played
534 his violin. This consisted of a hollow box cut out of a *palo verde*
[824] tree, and a piece of pine about sixteen inches long; terminating in a
[283] hollow where a single peg was fitted. The one string was twisted deer
[237] sinew, and the bridge was a small round clam shell at the far end. The
[533] bow was a small bent stick and some black horsehair. On the handle was a wad of rosin fastened underneath. By fingering this string a few weak squeaky notes were made, and this was the classical music of the Seris.

Manuel Encina seized his gourd rattle and began chanting. Herrera tapped a tin can and I beat on an inverted basket and the orchestra
535 was in full swing. A young girl, Rosa, dragged out a turtle shell and
123 standing on it began to dance. This dance consisted of stepping up and down quickly with each foot alternately, and this stamping, barefooted, emitted a hollow sound. Every once in a while I let out an
[126] Indian yell which pleased the Seris very much. For two hours they had a real swell time. We took one flashlight of the proceeding.

[342] Each family was in their hut, which afforded very slight shelter
[362] as they were only partially roofed over and the sides were broken
[354] down in places. The huts were all adjoining and each had a little
[361] campfire, which did not give much illumination, so the dancing was in semi-darkness.

[text contineus on p. 163]

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Carrying firewood

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Seri basket maker - 1934

semi-darkness.

Soon two little boys joined the dance, stepping up and down in the sand. Lighted only by the flickering flames of the driftwood fires on the shores of this mysterious and dreaded isle, the soft murmur of the sea as a refrain to the wild chanting, the weird circling of glittering eyes, and wild dark faces, presented a scene of uncanny and savage fascination witnessed by white men probably for the first time.

After each stanza there was a short rest. The singing was similar to most other tribal chanting.

Bob made the remark that the girl was old enough to be broken in by the old Chief. I said, "How?"

He said, when a girl thirteen or fourteen has her menses, the Chief takes her and goes through the family act. This is called 'breaking her in'. She is then eligible for marriage. A young man desiring marriage has to purchase the girl by giving the father a boat or rifle, both being necessary to the Seri's existence and protection. At the wedding they have sort of a fiesta and much mescal is drunk, which properly solemnizes a wedding.

When a girl has a baby it usually comes very naturally and easily, but I remember one girl's first baby was three days in coming, and she suffered a great deal. This was on a subsequent trip. She was staying with many of her people on the mainland and someone asked them if they didn't want a doctor or other help. They said: No, they had one. It was a Medicine Man who chanted over the girl and dug hollows in the sand to fit her heels into. He said that the legs had to be kept apart. This was all he did. But ordinarily there is no trouble, and if a baby is born at noon the mother is up and doing, and cooks supper for her lord and master. The men treat their wives with kindness and each shares with the other any delicacy.

In Seriland domestic duties are reversed from the usual Indian methods. The men get the water and the women get the wood. This consists mostly of driftwood gathered along the shore, and it is a picturesque sight to see a string of women and girls bringing in loads of wood in baskets on their heads at sunset.

There are no plural marriages, but sometimes when a Chief is old, or rather when his wife is old and can have no more babies, he can take a younger woman as his wife. The present Chief is getting old now, almost too old to break in the girls, so they may get a younger man. This might be called the perquisites of office. He takes the cream.

They hunt lice in the head and eat them. This is said to increase the amorous desires. The penis of the male turtle is cut out and dried. This is pounded and pulverized and placed in the food of the women. This is said to create a desire for a man and the family act.

157 The women are virtuous and faithful and perform all the duties of
152 wife and mother and bear their share of hardships. The hard life,
[145] exposure and struggle for existence soon causes hard features, wrinkles
[165] and ugliness. Many babies die young and the tribe probably numbers
[167] only about two hundred.

The dancing by the driftwood fires continued as we turned in to
123 rest, our eyes constantly drawn to the flame and the glittering eyes in the wild dark faces, while the waves of the sea accompanied the chanting in that mysterious isle of Seriland.

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Seris - off to the fishing grounds - December 1934. Alcatraz Island in distance.

222 In Seriland most of the food comes from the sea. During April and May, at the time of my first visit, a green grass growing on the sea bottom was detached and washed ashore. The women dragged it up on the bank near camp and spread it out to dry. Some of the stalks contained about seven fine green seeds the size of a pin head. When dry, the women threshed them out with sticks on a piece of canvas. These are
[285] cleaned by the deft use of the *batea*, or winnowing basket, of which these people are pastmasters.

252 A pint of these fine seeds were parched in an olla over coals of driftwood and constantly stirred to prevent burning. It was then ground
262 on a flat rock like a *metate*---any flat rock---into a green meal which was very nourishing. This was cooked in an olla with turtle oil, making a porridge like thick green paint. It was then drunk or eaten with the fingers. If there is plenty, two fingers are used; if not, only one finger.

10: Davis E-5 (1922-ca.1939) 1965 NU31 Seri NU31

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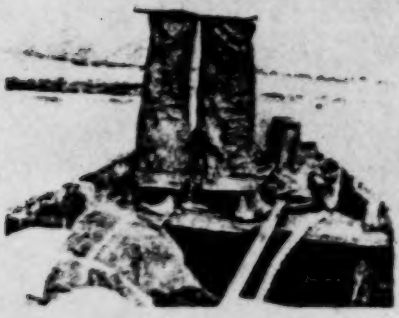
Poised for harpooning sea turtles off Tiburon Island - 1936



[302
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The catch

262 The Seris also eat the fruit of the *cholla* cactus, *pitahalla* and sag-
222 *uaro*, and probably many other plants in season, but they are wild to get flour. But the principal diet is *cahuama*, or sea turtle.

225 After a day or so with the Seris, their food supply became exhaust-
123 ed and they made arrangements to take our boat (all they had was a
[177] *balsa*) and get a sea turtle. So at four o'clock in the morning, with Roberto and Nene, his brother, and myself, they shoved off for the fishing ground. It took two hours of hard rowing to reach the Sonora
[133] side, as the tide was racing up the *Infernillo*. Most of the waters are shallow, with patches of dark and light sandy bottom, with seaweed or grass. On this green grass the turtle feeds; it is their alfalfa field, and it takes a keen-practised eye to see a turtle at the bottom and harpoon him before he escapes.

225 Once on the hunting ground, water, one of the Seris stood in the
[111] bow with a harpoon twenty feet long, a detachable barb on the end of it, and a heavy line attached. The Seri in the bow motioned with his hand this way or that, slow or fast, and watched the bottom. At last he plunged his spear and withdrew the pole. The turtle swam awhile
[111] until exhausted, and then he was drawn alongside, his head pounded with an ironwood club, and then he was turned on his back and drawn on board. This called for great skill in balancing the cranky, smooth-bottomed boat to keep it from shipping a wave.

225 When a Seri goes in his native *balsa*, which only holds one man, he
50 straddles the middle part on his knees, resting them on seaweed. The craft is light and is a good sea craft, but it is low in the water and the man is wet all the time. He uses a double-bladed paddle, and his harpoon rests against pegs set in the *carrisos*. A rock which serves to quiet the turtle, two pointed stakes and a heavy fish line complete the equipment. He has to paddle across to the other side in that cramped position, say eight or ten miles, very early in the morning, then watch his chance to harpoon. If successful he brings up the turtle, knocks him on the head with the rock, pulls him on the end of the craft by skillful manipulation, cut slots in the front flippers, put stakes through and into the *carriso*, pinning him firmly in place, then paddle back.

225 The wind came up strong when we started to return from our turtle
123 hunt and with wind and tide against us we rowed across the Island. Bob and his brother disembarked and took it afoot for camp, a distance of ten miles, reaching there at two p.m. The Seris made a tump line and towed the boat, one towing and two warping off-shore until we arrived at camp about four p.m.

When the bow was run up on the shore everybody came down, the women and children talking a steady stream in their strange jargon.
123 They soon jerked the heavy turtle out, dragged him up the beach on
262 his back, and began immediately to cut him up. Bob spoke for the breast, which is a white plate on the underside of the turtle with

[text continues on p. 168]

123 the flesh attached. This we roasted, or broiled, by standing it on
262 edge against two stakes in front of the fire. The breast was white and tender, somewhat like roast pig, but much more delicious.

262 The Seris cut off the great flippers, dug out the entrails, and
252 whenever there was a crack in the crowd of men, women and children, there was a dog lapping the blood and chewing a shred of meat before being driven off. Men, women and children tore off pieces of the tender
[251] meat and ate it raw. The blood which gathered in the hollow of the shell was baled out and saved in an olla.

A woman took out the coils of entrails, ripped them open with her finger, squeezed out the half-digested sea grass, which resembled closely-packed boiled greens, and rinsed them in the sea. The head
[251] was skillfully disjointed, and with flippers, entrails and liver, put up on the brush roof away from the sand and dogs.

Then began the feast; half the turtle being devoured immediately.
[264] To see Blanco, which name fits neither his complexion or character, gnaw the bone and tear away the raw flesh of a turtle flipper with his strong white teeth and cruel mouth, would not require much imagination to substitute the shin bone of a human being.

All parts of the sea turtle are utilized except the bones and portions of the head. The white, flexible under-shell is roasted and eaten, but how they can masticate and digest it is a mystery. I tried it and gave it up, as did all our party. It might have been a Goodyear tire, for all the impression we made on it, but even the Seri children
237 eat it. The carapace is broken into small pieces and dried out in an olla, and this yields a green oil. The shell is nearly one-half inch thick and filled with minute cells which carry oil. This oil is evidently a provision of nature to prevent barnacles and marine growths from attaching to the shell. This oil is poured into a previously cleaned section of intestine, fastened at one end, and then is bottled, ready for transportation or use.

The skin of the flippers is used for sandals. The broken pieces of carapace are also used for firing ollas. The shells are used for windbreaks, for receptacles for transporting household things on women's heads, and possibly for other needs. The stomachs are stretched, probably with sand, and when dried are used for transporting water, the same as we use a canteen.

185 The Seris are always improvident. They raise no cattle. They plant
261 nothing and the only crops they raise are children and dogs. They
[291] store no food away, eat when there is plenty, go hungry when there is
[231] nothing to eat. When they will eat raw turtle meat like animals, their
[262] taste is not refined. This is evidenced when they will eat a horse or burro dead, several days---scrape off the maggots to get a chance at it.

262 Burro meat comes first in their estimation, then mares, then steers, but they take what they can get and no questions asked. Burro deer or black tail is a great article of diet, and these deer are on the Island. Wolves and coyotes are on the Island also. I do not think they eat them.

266 As I have said, the Seris are reputed to be cannibals, or to have been. Since those who furnished the meals cannot speak, it is a matter not entirely proven.

648 177 There is a war on between Mexican fishermen and the Seris. The Seris are wild for boats and will do almost anything to get one, so two years ago a chance occurred and they killed seven drunken Mexican fishermen and seized their boat. Last summer, some fishermen surprised the Seris, killed one, and recovered the boat. They mourn this boat a lot more than they do the dead man.

648 Twenty or thirty years ago, Governor Ysabel came here with some troops to capture some Yaquis who had joined the Seris. The Governor told the Chief he would have to give up the Yaquis, as they were outlaws. The next day the Seris brought in six right hands. They said they had killed the Yaquis. Asked how and why, they said they had killed them while they slept and they wanted their guns. They cut off the right hand of each as proof.

With all their apparent friendship, we never go without arms. When we sleep our rifles are alongside of us, and we wear our revolvers with us. Sometimes we roll in with our clothes on. But they have never, by sign or act, shown anything but friendship.

851 123 177 A baby boy about four months old was in camp, so Rafael Ysabel baptized him and gave his name Rafael, and presented him with a little gold cross of which his mother was very proud. She held the baby while he poured a little precious fresh water over its head and repeated:

"In the name of the Father, Son and Holy Ghost, I name thee Rafael. . ."

123 Curious black eyes follow us always. When we eat, the Seris often squat around us and watch every mouthful. If there is any bread, gravy, grease, beans or meat left over, we pass it on and they certainly clean up.

While we eat, the waves are always lapping on the shore upon which many pretty shells are thrown by the tide, besides water-worn pumice stone in all sizes down to a small marble.

Our meals are very simple. We bake biscuit in the dutch oven for every meal, cook turtle meat, if we have it, or beans or rice or spuds.

[text continues on p. 171]

10: Davis E-5 (1922-ca.1939) 1965 NU31 Seri NU31

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Nene Thomson, Poncho Oliveria and Roberto Thomson at Tecomate, on north coast, upending whale ribs cast up on the beach. Although thoroughly dried and bleached for years by a semitropic sun, it took their united efforts to elevate these ribs.---E.H.D.

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Roberto Thomson, Santo Blanco and Edward H. Davis

123 We have given the Seris so much we are now short ourselves. Variety is very restricted. We haven't enough tin dishes or tools to go around, but that does not trouble us at all. All the cleaning is done in salt water and sand. Fresh water is only used to drink. Nothing else. We can't even take a shave. Not a drop of water. We are very lax in our personal toilets and appearance. We are barefooted always in the boat, as we have to wade to get the boat in deep water, and often the waves slosh on board.

This boat is made of a hollowed log twenty feet long and three feet, three inches wide, and she is very cranky. She almost upset with us several times. When everybody is placed in it, it is difficult to even change a posture without endangering everybody. She has no keel and leaks some, so we have to bail out often. But she is a good sea boat and rides the waves well if they are not too rough.

123 One evening we decided to get a message through to Juan Tomas, the 439 Chief, some twenty or thirty miles distant. Herrera promised to go if [203] we gave him twenty thirty-thirty cartridges. He would go one day and [404] return the next, a round trip of about fifty miles. We gave him the message to tell those people we had a lot of things to trade for the things they use in every day life. Pelican skin kilts, bows and arrows, ollas, baby cradles, hair brushes and other interesting things. I had already made a trade with Blanco for his *balsa*, promising him sufficient lumber, nails and tools, to make a boat large enough to carry five men. This promise I fulfilled to the letter, and later on another expedition to Seriland I had the pleasure of sailing in this boat, which was well built and seaworthy. The unusual part of this bargain was that Blanco permitted me to deprive him of his only means (apparently) of making a living in hunting *cahuama* for himself and his family, freely and without hesitation, simply on my promise of lumber in the future. I was deeply touched by the trust reposed in me by this old sea rover.

322 These people are splendid mechanics with the crudest of tools--- [50] rocks, fire, bones, knives. For instance, the pole of the harpoon was composed of five pieces of driftwood and a seagoing boat which I saw in Guaymas, captured by Mexican fishermen after killing the Seri crew, was composed of fully one hundred pieces of driftwood fastened with nails made of wire, and tied with fiber, and all the seams were filled [325] with a black composition of native origin resembling pitch. Previous to the use of old iron, harpoon points were made of ironwood, but now iron is universally used.

283 I asked old Blanco for some of his native rope. He gave me some of [123] it. He said they get the slender roots of the mesquite and peel the bark, and then the girls and women chew the fibrous wood. This is shredded and twisted into small two-stranded ropes. It is this rope, tied around and around, that holds the *carriso balsa* together.

285 [324] I watched a woman make a basket. She used young branches from the terote tree, I think *terote blanco*. The bark was peeled and shredded into two parts, the heart taken out and kept separate. The coils of the round part were put in a pot of hot water to soften, and the edge of the basket was soaked a little in hot water. The center of the coils or woof consisted of six or eight strips of heart while the outer sap wood was woven around in regular coil-weave fashion.

[287] [312] A brad of deer shin-bone sharpened on pumice to a needle point was used as a brad. With this brad she split the fiber, held one piece in her mouth, and stripped the back down. Then she punched a hole in the bone brad, inserted the sharp end of the fiber and pulled it almost through. She then repeated the operation, adding a strip of heart once in a while. These baskets are coarse and unattractive, but they are hard and tough and stand heavy use.

323 [237] [372] Cooking vessels consist of two or three cooking ollas that nest together to facilitate transportation. These are made of coarse clay, solely for utility without regard for beauty of shape, color or design. In burning these ollas they use the shell of the sea turtle. The cells of the shell are filled with a fine oil and this burns the ollas. On most of the other places on the mainland, the Indians use cow chips, or dried droppings to fire the clay.

263 184 123 [277] We proposed to shift camp to Tinajanita, our first landing place, where Herrera was to meet us in two days with the Chief and some of his men. Since it was blowing, he said the men couldn't fish and they would be on land probably hunting, so he would be able to see them. At this time they gathered *sescal* on an island off the west coast to make the liquor they used at fiestas, weddings and other celebrations.

Herrera left at five o'clock in the morning, with a swinging gait, for the opposite side of the Island. The distance around by boat would be fifty miles, and across, only about twenty or twenty-five---a full day's trip and hard, as mountains would have to be crossed and the rocks were sharp and the way difficult.

123 We had breakfast on rice and bread. Our rations are running low and we expect to move this morning. We made arrangements about the native boat and saw Blanco trot off with two five-gallon cans for water, a distance of ten miles. We went to the camp to get a few things---an old basket, a Pelican hide and other things, and then we asked the help of everybody to get the boat down to water---the tide was very low. The one man, the women and five of us were required to drag and push the boat to water.

We waved goodbye, loaded her up and then rowed against the tide and wind for miles, and finally landed in a lovely sheltered lagoon, built our fire and had lunch. A few crabs were speared, and late in the afternoon the wind shifted. We loaded the boat again and pushed off for Tinajanita, our first landing place. After rowing, we raised

[text continues on p.174]

10: Davis E-5 (1922-ca.1939) 1965 NU31 Seri NU31

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Edward H. Davis with a rattlesnake around his neck - 1922

123 the sail, a very delicate operation in so cranky a boat, and between rowing and sailing, we reached our destination about eight o'clock, all worn out. Before landing, we called and halloed to notify possible strange Seris that we were friends. After a bite we turned in.

In the morning we started for the *carrisal*, as the water hole was called because *carriso* grows there, as we were almost out of water. The nearest *carrisal* was five miles away. We each had a rifle, revolver and extra cartridges, besides two five-gallon cans and a canteen with some water in it. Nene, Bob's brother, had been there and knew the trail, so we all followed him. The most traveled trail from any camp always led to water.

After going a couple of miles we entered the mountains, and from there on the trail was stony and later rocky as we entered the canyon.
[13] On the way Rafael caught a light gray diamond-back rattler. He held the head with a stick, reached down and grasped it tightly just in back of the mouth. It rattled viciously and twisted itself about his arm, but to no purpose. I took his photo with it coiled about his neck, and the rattle buzzing on his breast. Later he took my photo, I holding the rattler while his tail was coiled around my neck. Later, we killed it and drew the skin off like a kid glove. When we reached camp I filled the skin with sand to cure it, so I could take it home.

[13] There seemed to be several zones of vegetation as we advanced. First came brush, then *pitahalla*, ironwood and various cacti, then *torote*. In the mountains, *mesquite, palo blanco, "wild fig"* and several varieties of brush. The roots of a certain variety of brush furnished us with tea, as our coffee had disappeared. This washed and boiled, made a very good drink.

At the latter end of our arduous trip we had to climb over boulders, and then we arrived at a few pools of water in the rocks and a bunch of *carrisos* in their midst. Beneath the *carrisos* the creek bed was as dry as a bone. We climbed up higher, looking for tanks in the rocky bed. We found one tank but it was filled with green algea. In some places there were great caves in the cliffs and everywhere the scenery was rugged and fascinating. The main mountain above us seemed to rise five hundred feet, with very sparse vegetation. We climbed up some very steep places, almost perpendicular, but as we found no more water we returned and filled our cans.

I had brought shaving tools with me, except soap. However, one of the men knew of a certain root that would produce a lather. This was handy and I mascerated the root. Bob put it in my bandanna and by manipulation produced a good suds. With this I reduced a week's growth of whiskers.

On the way we passed several places where burro deer horns had been stuck in the trees and well bleached out.

Bob and the one-eyed Mexican, Oliverria, carried the water, two

five-gallon cans full. They were fastened one each end of a *palanca*, or shoulder pole, and thus brought to camp. If anyone thinks this is easy they should try it over rocky, uneven, sandy, stony ground, dodging thorny vegetation at every step. 123

The colors of the mountains were mostly red of volcanic character, with great streaks of yellow and pink, deeply cut with side canyons and sharp ridges, all similar to other desert ranges. [133]

The men caught a few crabs and gathered clams in the afternoon, which helped out our larder. One of them told about his wife being shot. He said they had a big fiesta and during the drunk, a Seri shot at his head. He happened to be stooping alongside his wife and the bullet buried itself in his wife's thigh. We could feel it through her clothes.

A good many years ago when stages ran between Nogales and Guaymas, the Seris held up the stage, killed the men and captured one Mexican girl. She was brought here and made the wife of one of the chiefs, Coyote Iguana, and she bore children. Some years later her brothers came here to induce her to return, but she refused, saying that she was ashamed to go back and she had children here. About fifteen years ago in a battle with the Papagos, two of her sons were killed. 648 727 563

The Papagos have taken toll of many Seris, these hunted Indians who are such fascinating and ingenious companions, whether they are harpooning turtle or packing water through the thorny wastes. 648

372 516 291

Seris making fire (with fire drill) on Island of Tiburon

10: Davis E-5 (1922-ca. 1939) 1965 NU31 Seri NU31

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Seri faces

10: Davis E-5 (1922-ca. 1939) 1965 NU31 Seri NU31

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Seri young man

Seri Indian

123 [202] It was a beautiful morning in early May, and the water was still as a pond, reflecting all the sunrise tints like a mirror. After a breakfast of clams and broth, bread and sand and bronco tea, we made a big smoke and were answered by a similar smoke two miles off, so we knew our friends were on the way.

123 492 [415] In one hour they began trailing in, the women each with a load on her head, walking graceful and erect. On one head was an inverted turtle shell containing nearly all the family belongings done up in rags. On the top was the most precious belonging of all---the rifle. The man carried two or three ollas and other things on a shoulder stick. Everything necessary for their home was carried on their heads.

123 Soon the Indian Blanco was seen paddling in his *balsa;* he also had a load and had paddled all the way from Ironwood camp against wind and sometimes tide. As they were all very thirsty we gave them water around. They immediately went to the shore as it was low tide, and began gathering small oysters from the rocks. Soon each woman returned with a half bushel of them on her head.

About three o'clock and for an hour or so thereafter, Antonio Herrera, the Chief's son Chico, the old Chief Juan Tomas, two other men and one woman, came drifting into camp with their dogs. Each one was loaded with things. They were a pretty wild looking bunch. There was very little food and little water for so many.

648 731 The Chief said that a day or two before, some of his men had a fight with some sailors (Mexicans) on the Island of San Estevan four or five miles off the south west corner of Tiburon. Nobody was killed, but the two boats, the wealth of the Island, had drifted away and were lost, leaving eight men marooned on the Island. They had gone there to gather *sescal* to make drink to celebrate a wedding to come off soon. Three men were five days without water. They sent up frantic smoke signals every day. At last they were seen, and help went for them in the only remaining boat on the Island. They were rescued.

648 484 123 The Chief and his men and women, with us, are going to Hermosillo ninety miles afoot with all their belongings to ask the Government for food and help.

142 [622] The Chief looks to be seventy years old, a grim dark-skinned individual with a thin fringe of hair on his upper lip, broad nose, wide nostrils, small black eyes. He is well-built and erect. None of these that I have seen so far have any fat. They are lean and sinewy. [302] The young men are of large build, high cheek bones, some with hair on [291] their lips, their long black hair braided; sometimes with a strand of red worsted. All were either barefooted or wore sandals. I saw one pair of sandals made out of turtle hide; another of burro hide.

648 123 When the Chief arrived, the sail of a vessel was seen over the beach. Bob recognized it as belonging to a launch of a Yaqui Indian

[text continues on p 180]

10: Davis E-5 (1922-ca. 1939) 1965 NU31 Seri NU31

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Fastening feathers on arrows with sinew held tight in his teeth.
1929

[283]

648 friend of his from Guaymas, although only the upper part of the sail
123 was visible. This greatly frightened the women who began packing to escape to the interior. They thought they were friends of ours and it was a plan to have them land. Bob proposed to go out and meet them, and if possible get provisions. With the Chief and two other Seris, Bob and his brother, leaving the firearms behind, hoisted the sail and headed for the mouth of the bay.

When they reached the Infernillo the sloop veered away, its crew being afraid of being killed by the Seri. There were six men and boys and they mustered all the rifles and stood ready to fight. They had just had trouble three days before at San Estevan. At last the wind veered and they had to stop and Bob waved his cap. Finally they got close enough to talk, and then came on board and secured some provisions---a little coffee, sugar, fresh onions, tomatoes and rice, and a little flour for the Chief. They had a fair wind back and returned about dusk.

123 At night everybody was happy. I had gathered two pails of oysters that are exposed on the rocks at low tide and I had built a fire over them so they would open readily, and then had cut them out. We made a sort of stew then, enough to go around the crowd.

123 After supper the Indians gave a dance, a very weird affair. I
534 have seen nearly all the musical instruments used by the Indians of
[535] the Southwest and Mexico in their ceremonial dances, but the Seris were the first tribe I had ever seen use the bow and arrow as a musical instrument. A six-foot bow with a tightly stretched bowstring of twisted sinew was held, back down, on two inverted bowl baskets by
[533] one of three men, all of whom struck the string with arrows. This emitted a musical baritone note like the vibration of a piano wire, in perfect rhythm to the weird chanting of the three musicians, singing a wild plaintive air.

535 The dancer, Manuel Encina, a grim old boy, facing the orchestra,
123 mounted the back of a turtle shell resting over a hollow in the sand, as a resonator, with a long staff held in his right hand to steady him, and gave one of the prettiest exhibitions of the double shuffle on the rounded top of an oily old turtle shell that I have ever seen. At the end of each *canto* there was a rest, and then they went at it again. This lasted two hours, and was lighted by a feeble camp fire and moon and was danced on the shore.

123 Before daybreak the following morning we arose, loaded the boat, and then the Indians brought a lot of things, besides three or four rifles. Then two young Indians jumped in. We were so crowded that we could not move. The two Indians and two of our men used paddles as we were too crowded to row. There were seven men besides all the junk, and the boat was so loaded and so cranky there was imminent danger of capsizing. At the least movement she would dip to the edge of her

[123] gunwales, and then in trying to balance, she would dip the other way.

As we got to the point, the swells were larger and the danger so imminent we stopped the boat in lee of the point nearest Sonora, and Bob and I landed.

Old Blanco had paddled his *balsa* with some of the freight to the Sonora side. The boat put off again, and rode the sea better and it landed all right on Sonora side. In the meantime, several of the women and children, with their loads, had reached the Seri point ready to be ferried across. The boat returned with two Seris paddling. We loaded a lot of Indian junk, Bob and I and several children, the Chief and a woman. Nine in all. We reached the Sonora side, all right.

By this time breakfast had been cooked and we sat down to drink black coffee and eat rice and onions. The wild-looking Seris sat around us watching each mouthful, hungrily. When we finished we gave them all that was left and they cleaned it up.

[231] As we left the Seri point, and as their masters left, the dogs trotted to the water's edge and howled. Bob said that when all had crossed, the dogs would plunge in and swim across the swift current.
[134] The water was infested with sharks, so it was possible that some of them would not reach shore. At last everybody got across, dogs and all.

[402] The Indians carried their packs; the men with the shoulder sticks and the women balancing their loads with marvelous dexterity on their heads. Two men packed twenty gallons of water in five-gallon cans.

When we had all our things in the boat, Juan Tomas jumped in with his pack. We were well loaded before, but this made us a little too deeply laden. Nevertheless, we pushed off and raised the sail to take advantage of the wind. We sailed parallel to the shore for a few miles until the waves got too overpowering and the boat had a lot of water in her. The mast was unstepped---a very delicate operation---and we made for the shore after shipping some of the waves.

My heart was in my mouth most of the time as each time the boat rolled, one side almost dipped up a wave. It was a matter of personal safety as well as safety of what few things I had already collected. One olla I had bought was smashed. The waves looked like clear green paint.

We finally landed without mishap and pulled the boat up, but it was so rocky we had great difficulty in walking in our bare feet. Our legs and feet were bare when we were in the boat and mine were badly scalded by the sun.

The Seris had made camp one quarter of a mile down the beach from us, and the old Chief shouldered his pack and strode down to them. We were very thankful.

[225] Soon some of the men came back to borrow the boat to hunt for

123 225 *cahuamas*, or sea turtle. After two or three hours' use of the boat they had harpooned two and brought them to shore. Then the whole bunch went to the shore and dragged them out and began cutting them up as they were all hungry and had had nothing to eat hardly. They gave us one breast, the most delicate part of the turtle. It is tender juicy white meat.

123 We soon had the boat loaded again, paddled to the Indian camp, and took the *carriso* boat in tow. We raised the sail and a good wind sprung up and we made a fast run before the breeze. This also whipped up a nasty sea, and the great green rollers would come and slop against the freeboard to an inch of coming on board. At a critical time our slight tow-line parted and we stood a good chance of being swamped in order to hold the *balsa* until we could bend a heavy fish line with great fishhooks which we jabbed into it.

The boat, all the time, was ripping through the water, the boom was slopping in the waves, and each green roller threatened to come on board. We dared not spit overboard for fear of dipping up a wave. The wind and waves got so nasty we decided to make a landing. To add to our anxiety, the *balsa* had broken loose again, but we held it with our hands despite the waves. We unstepped the mast after dropping the sail, and just in time, as the seas got bigger and the wind stronger. We were so cramped we could not row, so the paddles were used, and eventually we reached a sandy beach, all safe and sound, and pulled the boats up out of the water.

I had sent a note ahead, in English and Spanish, to the car to meet us at a designated place on the coast to the south about fifteen or twenty miles. He had stopped to eat *cahuamas* to give him strength. He was a big raw-boned man, Chico Romero, son of the Chief.

123 133 On the two points nearest Tiburon and Sonora, the most beautiful rocks had been washed up by the sea, that I ever saw. All colors of the rainbow were represented, but lavender and violet prevailed. The sands were a delicate lavender while the shore at Tinajanita, up the bay, was a deep lavender. Many beautiful shells were left by the tide as well as various colored pumice.

Our present camp was at the foot of the granite hills, and the sand was almost white. It was made much whiter by tiny shell fragments only as large as grains of sand.

680 Ten or twelve years ago Bob's uncle and cousin were captured by the Yaquis. They suffered the most inhuman tortures. The soles of their feet were sliced off and they were made to walk over sharp rocks. Their eyes were gouged out and they were scalped.

Another captive was used like a piece of beef. He was staked out and one Yaqui would ask the other:

"What cut would you like?"

"I'll take a piece of leg," the other would answer.

A chunk of living flesh would be cut out and piece by piece the captive was hacked to pieces.

Only two or three years ago Bob and two friends had trouble. Bob escaped by a very narrow margin, but they tracked him like hounds for twelve miles. His friends were captured and stripped of clothes and everything, and expected every moment to be shot. They caught a hog, hung it up alive and cut a long strip off the back and left it hanging. They got frightened away suddenly and left the two friends unharmed. His uncle was captured on his way to Royon, on the San Miguel River twenty miles south of Opodepe.

648 The Yaquis and the Seri Indians have been enemies for untold years. What grim scenes the eyes of the desert have witnessed in the past!

133

Entering cave - Tiburon - 1936

123 One night when the sea was quiet Bob and his brother went sea turtle hunting but didn't catch any. We made a bright fire of drift to guide them back. The sea murmured gently, accompanying the crackle of the fire.

We turned in on-shore in the clean white sand. We roasted the turtle breast that the Seris gave us, by standing it on edge in front of the fire. It was tender and elegant. For bread we made pancakes, mixed with sea water. We were out of baking powder. The green coffee secured from the Yaqui fishermen was wasted in a frying pan until it

123 was black. He then ground it in the frying pan by rolling it with a tin can. When made, the coffee was black and bitter, but they were used to it that way.

At three thirty in the morning we were up from our sand beds and drank coffee. At four we pushed off, towing our *balsa* on which we lashed our turtle shells, antlers and other things. Our boat rode the waves like a duck.

As we glided by the foot of some mountains we could hear the surf break sullenly. We had the sail up but soon had to resort to the oars as the slight wind died out. Day soon began to grow light. The sea was glassy, reflecting the rosy morning tinge. There was a swell on but the waves were smooth.

136 The cormorants, in threes and fives, began flying to their feeding grounds with swift wings and necks outstretched. Then a few Pelicans drifted idly by on lazy wings. A school of sardines fretted the water near us, chased by a hungry fish from its depths. A few porpoises rose and dived, rose and dived, rose and dived, time after time. At one time eight of them came within twenty feet of us and one dived right under our bow, bouncing the boat up and down.

139 123 Soon we were passing some red volcanic hills, with caves and blow holes in the cliff and sea caves below, in which the sea roared. Giant cactus secured a precarious footing in the crannies of the cliffs. Then a long beach, then *Cerro Prieto*, another red cliff descending to the sea, penetrated with numerous caves and roosting places for cormorants.

123 As we neared Alcatraz *(Pelican)* Island, we saw a fishing boat in the distance. The wind had freshened and was ahead and the waves seemed almost to come in board, but the hollowed tree arose and rarely shipped any water. A boat put off from the fishing boat and was rowed to shore, and as we came up we hailed the crew and grounded our own boat. They had seen us from Alcatraz Hill, and seeing the balsa thought the Seri Indians had stolen a fishing boat and were towing their own boat. Each man had a belt of cartridges and if the Seris had been there instead of us they were going to kill them. Bob knew them from Guaymas.

We pushed off from shore again, and after rowing a half or three quarters of a mile further we beached our boats, cooked dinner and waited for our auto truck. Our provisions were almost gone. We had only enough for one meal left. No meat at all. Water was almost gone. None other for miles.

415 264 262 One of the cherished vessels used by the Seris is an agate chamber pot. It is black from much use. When I saw it, it contained a green slimy mess made from meal of seaweed seeds and the green fat or oil of the turtle. The Seris stick their fingers into the pot and then lick them off. If any is left the dog licks out the pot. No vessel is ever washed; it is licked clean.

ooo ever washed; it is licked clean.

415 One time a bunch of Seris camped near a ranch and spied a white
197 porcelain chamber pot sunning itself. They immediately secured it and began cooking in it, without washing it first. The rancher saw them and told them that it was dirty and told them not to cook in it. They said they would clean it up after they got through and leave it as it was before they finished with it. When they come to Hermosillo they get pots from heaps of city refuse and carry them back as prizes to the Island.

123 We made smokes to attract attention, but all to no purpose, until
501 about three o'clock the car appeared. It could not come close to the beach as the sand was too soft, so we had to pack everything two hundred yards in soft sand. The *balsa* was very heavy and some distance away. It also had some things tied on it, so Bob pulled off his pants and we pushed it into the surf. Bob first stood up, but it rocked so he got on his knees and pushed out with a pole and got it headed to the rollers, after which it rode easier. He then lost his pole, and in struggling to recover it the *balsa* rolled over with him and dumped him in the surf, but he grabbed the side and rolled it right again. He could then touch bottom, so he came in through the surf with it and we dragged it up and unloaded three turtle shells and a few other things. There were four of us and we put oars under it and gradually lifted and carried it to the truck.

It must have weighed six hundred or seven hundred pounds, a good part of which was water. I must say I was glad to see it started on its long land-journey.

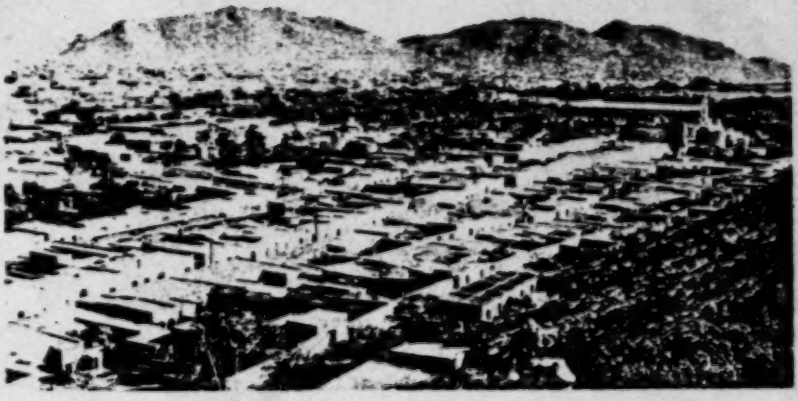
123 The Indian messenger had arrived with my note which brought the truck. Bob, Luis and the Mexican took the boat and tried to go into the place where they hid it, but it was low tide and the boat could not enter, so they beached it and walked to Agua Sarco where we had preceded them by two or three hours. We had, over the last of our grub, a little rice and beans. As many doves were flying about the water, I shot fifteen or twenty. One of my shots brought down seven doves.

439 Before night all the Seris were camped near us, and when Bob came,
123 Louis had brought all our trade stuff, so I began bartering right away.

As all were hungry we gave each man and woman three cups of flour, and three pieces of *panoche*, cakes of coarse brown sugar. They were wild for this, so when they had finished they were well disposed.

On the Island I had been called a cheerful liar for promising things, but now it was different. Three new butcher knives, all bright and shiny, I traded for three rusty homemade affairs. Two were made of barrel hoops and one from the piece of a shovel. This was a way-up knife. For the violin I traded a harmonica, and for three carved

(text continues on p. 187)



View of Hermosillo, Capitol of the State of Sonora, Mexico, from Ceppo Compano. A city of about 18,000 inhabitants.

439 123 little gods I traded some muslin, a harmonica and some *panoche*. For native hair brushes, I traded three fine-tooth combs for catching *piojos*, or lice, easier. I gave each woman a little round mirror and they were greatly pleased.

To the old Chief I presented a good pocket knife and a mirror. For the bow I traded a spark lighter. By striking the edge of a small wheel with milled edge it strikes a spark from a small flint and lights a wick.

123 535 [534] [252] [415] We asked for a dance, and the Seris, using the bow and striking sticks for music, the slender girl jumped up and down on a flat piece of tin which served, instead, of a turtle shell and also served for baking flour cakes upon also. A while before, Louis had seen a woman wash her head and that of a child in the chamber pot, empty the water and then cook in it.

After the girl had danced a while on the tin, old Manual Encina pushed her away and hopped on himself and did the double-shuffle for half an hour, after which we left for our camp.

197 194 The language of the Seris is the most difficult and peculiar I have ever heard. It is spoken deep in the throat with the mouth open and sounds like no other language I have ever heard except that there are some sounds like Papago.

439 123 Even before breakfast of the next day we were still trading with the Indians, and in an hour or so I possessed nearly everything they had except their rags. They seemed happy and contented and postponed their trip to Hermosillo. I left some stuff with Louis Thomson to be traded later for bows and arrows, Pelican skin dresses and baby cradles.

We then arranged our loads, said *Adios* to the Seris, and left for Hermosillo, where we arrived without accident about six-thirty p.m. The sun was very hot and the road heavy and the sun glaring, and we were all very tired when we reached town. I stored my stuff with Mr. Marks at Hotel Cohen, and will crate it before leaving for Yaqui River.

123 202 Before leaving the Seri Chief I told him that whenever he saw this sign---Circle Bar D and left hand below it, it was me---their friend, and not to shoot at me. He said he would tell all the Seris, and I left him my card with the same sign on it. When will I see him again!

Senor don Rafal Felix, Hermosillo - making hair rope

123 In February, nineteen-twenty-four, my son Stanley and I were on our way to Tiburon Island. At Nogales we went to see Mr. Holler, Custom House Broker. We asked about the entrance of firearms and revolvers, and he said a permit could only be secured through Secretary Hughes at Washington and President Obregon at Mexico City. However, I had read assurances from a high official that the first could be arranged. I would have to take chances with the second.

When I stated where I was going he said he would not care to go to Tiburon Island, among the savage cannibals, but that he would certainly carry a gun somehow, and his square jaw snapped while his eyes flashed. He had been a United States marshal in New Mexico, where there were a lot of bad *hombres*.

That settled the matter. The next morning we arose early, returned to the Montezuma Hotel where we had been staying, and I fastened my gun and cartridge belt about me in such a way that it did not show and its location would not be suspected. Where? That's a secret. Stan did likewise, in another part of his anatomy, and his could not be detected either. Not a bunch or a lump.

We passed inspection at U. S. Custom House and no questions asked, and then crossed the line to the Mexican Custom House. Here we opened our grips and unrolled our blankets and they were punched and jabbed and passed, rolled up and checked. Then we boarded our train which pulled out after a long delay for Hermosillo and Guaymas.

For a distance of one hundred and seventy-five miles, there were clusters of adobe and stick mud houses around each station, thronged with Mexican women and children standing in their doorways gazing at the train, which was always a source of wonder and speculation. Some of the places such as Santa Ana, Magdalena, and Carbo, are quite large adobe towns with streets and straggling houses, but the people and towns looked poverty-stricken enough.

The women and girls wore faded blue *rebozos*, or scarves, draped gracefully over head and shoulders, and many of their faces and forms were remarkably beautiful.

A crowd of people gathered about the cars at Santa Ana, and I noted a saddled horse standing facing the cars, riderless, reins over the horn, but standing as if tied. He never altered his position, he was so well trained.

Dr. Kessler who attended me at the hospital last year in Hermosillo was on the train, and directly behind us was a Mexican officer, large and dignified, trimmed in brass and silver braid, with an automatic swinging from his belt and shoulder, and several clip pockets.

Whenever I bent over, my cartridge belt was outlined across my shoulders and was plainly visible, if he looked. I expected to be tapped on the shoulder any moment and told to turn over my firearms,

123 but nothing happened.

123 We reached Hermosillo at three in the afternoon, and as we landed
622 Roberto and Sara met us, and Roberto embraced me. Then the Seri
[116] Indian Chief rushed up and fairly hugged me in his joy at seeing me again. A timid wild-looking Seri boy, of fifteen years of age, shyly shook hands with the *Americano*, while all the Mexican men and women, fully one hundred in number, looked on open-mouthed and wide-eyed, to see the Chief of the wildest and lowest of savage Indians in North America, rush up and embrace a white man.

We all climbed into Roberto's auto-truck, and my things were brought to Hotel Cohen, and then we all went to Roberto's home and stayed all the afternoon. He had just returned from the coast the day before, and Juan Tomas was determined to come also and greet me, and the boy---a nephew---hung on to the Chief, and finally Roberto said he would have to return on foot if he brought him. Juan Tomas said that made no difference. He would walk to the coast eighty or ninety miles, if only he could come.

[291] He was probably seventy-five years old. He wore a hat, but his
[302] hair was straggly and he had a slight moustache. He wore shirt and trousers and a dirty kilt---remanent of the Pelican-skin-kilt---around his waist, and he was barefooted. The boy had a not unpleasant face, long wild hair, shirt, pants, and a cotton kilt reached to his knees. He, too, was barefooted.

I gave the Chief a knife, and the boy a red crayon and fifty cents. With the crayon he made a V on his kilt. He was very shy and always kept in a shadow, or in the background, and he spoke no Spanish although he knew the Spanish alphabet.

Sara showed some photographs and postcards in a baloptican in a dark room, and among them were pictures of some Seris and myself. These created much excitement with the Chief and the boy, and they jabbered together in the Seri language with animation. They recognized some of the subjects, their own people.

584 Juan Tomas is to be married soon to an elderly Seri dame, and we
622 have been invited to attend the fiesta. He has been laying in the
648 trousseau for the bride, and several gallons of mescal. A steer or
123 burro will have to be provided, and all the fixin's and nothing will be left undone to make a very festive occasion. When asked to show us his gifts he reluctantly brought forth a package which he carefully unwrapped and disclosed eighteen yards of *manta*, two red pieces and one pink piece of Calico, some red handkerchiefs, and one box for painting the face. He carefully wrapped these up again and put them in the room set apart for him and the boy.

[608] The woman he is to marry has no male relatives from whom she can
[583] be bought, so the Chief appointed a man and created him Uncle *pro-tempore*, and to him the Chief is going to give a rifle and a blanket as the purchase price. Pretty high!

464 Last year the Seris and their families worked on the ranches
431 gathering corn and beans and made three thousand *pesos*, and then they
484 came to town to spend it. They go back and forth much more than they used to.

123 We ate supper with Mrs. Thomson and then we went to the Plaza to watch the carnival. Much confetti and *cascaroni* was thrown on boys and girls, and the square was thronged by a mass of weaving people, while the military band played seductive Mexican pieces.

The next morning after breakfast we started shopping and kept at it all day, purchasing things to trade with the Indians and groceries for them and ourselves.

While at one of the stores six or eight Yaqui Indians, from their town about one hundred and thirty miles distant, came to buy things for the Easter period. This is the one big fiesta of the year for them. The women were bare-footed and the men wore rawhide sandals. One Yaqui soldier came with them, and he wore three belts of ammunition. They were very dark, with short hair. Rather gaunt, fierce, striking faces.

We walked into a cigarette factory and saw them manufacture cigarettes by machinery. Four machines were running, turning out one hundred and sixty each per minute. Altogether, twenty-three thousand packets of fourteen each every eight hours. These packets are usually tied together in the shape of a solid wheel, one hundred packets each called a *ruedo*, or wheel.

After dinner we went to Roberto's house and they told us there that the Indian boy Pascual had gone out alone and was lost. The Captain left to hunt for him and later brought him in, and then he went out to hunt for us. We finally saw him on a side street and sent him home to his dinner.

Last night, Roberto said they slept up till midnight, then waked up, opened the bride's bundle, and gloated over the bright colors. Later on they opened it twice again. Then they sang and talked for a while before going to sleep again.

On the following day it was nearly three in the afternoon before we got the car repaired and all supplies on board, including our blankets and grips and lumber for a Seri *balsa*, or boat. This was a heavy load for the Ford truck besides five men, which included the two Indians. Every item had to be considered---food for ourselves and the Indians, all the trade things, lumber for a boat and tools to make it, gas, oil, cans for water and many other things.

We soon left the city behind and rattled through the outskirts of poor adobe or stick mud houses, many half in ruins but still sheltering some family.

After about fifteen or twenty miles we arrived at one of Rafael Ysabel's ranches, *Europa*, where Senor Feliz is the foreman or *Mayor*

123 *Dono.* It has fallen into sad decay---many buildings in ruins, ditches gone, mill and machinery idle; no water, very few people and a general appearance of slow, peaceful and painless disintegration.

The one redeeming feature is the daughters of the *senor.* Two of them were remaining at home, and in all Sonora I do not believe there are two more charming, modest, industrious as well as lovely maidens than are Laura and Clara Feliz. In addition, they are perfectly artless and very unassuming and retiring. I had with me some slight gifts for Laura and her father whom I had met before, but nothing for Clara, a tall handsome girl of sixteen. Laura thanked me with grace and charm.

After a visit of half an hour we continued on our journey, and after we had travelled about twenty miles more, passing the end mountain of *Siete Cerros,* or Seven Mountains, we reached San Carlos Rancho, another of Ysabel's ranches, containing four and a half square leagues or about forty square miles.

Another very sweet daughter of Feliz's---Lupe, or Guadalupe, lived here. She teaches school with twenty-six Mexican children and a night school for older boys. The school building is a low one-story structure of *carriso* reeds and earth roof. Both wind and sun can come through the cracks. The tables are built of rough boards and the benches had no backs. Everything was as neat and clean as conditions would permit.

At a little Mexican house, whose owner was a friend of Roberto, the wife cooked our meat and coffee and dished up the ever-ready beans. We ate outside the house by the light of a camp fire while a crowd of men and children stood gaping at us and drinking in the news that Roberto brought from the great metropolis. The conversation was a rapid-fire Mexican and sounded like machine guns going off, and this kept up long after Stan and I retired. We slept under a shed. Roberto insisted that I sleep on a bed, instead, with rawhide springs.

The Indians curled up around the camp fire, blankets on top, earth below.

In the morning we ate breakfast in the living room of the stick-mud house, which was poor---so poor, but hospitable. Tortillas of flour and corn, beans and meat were our fare.

We bought a sack of beans and one of corn, twenty pounds each, and then we took a photograph of the school. There were a few extra little girls whose fond mothers had decked out for the occasion. The children had swept the grounds clean and pulled outside the tenderly nursed vines in a jar inside the window, so that they also could be taken.

[31] [32] The dry parched desert is unkind to domestic plants and flowers and these are always blooming in jars or ollas or tin cans under ramadas or in other shade. They secure their share of precious water

[text continues on p. 194]

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Giant Zarbueso cactus and Roberto -
Tiburon Island - March 20, 1926

123 the same as do children and dogs, even though it may be hauled for
[132] six or eight miles on mule-back.
[137]

With gifts and hand-shaking all around, we bade goodbye to Lupe and the children and started on our way.

After leaving San Carlos we travelled through a cholla and giant cactus country until we reached Roberto's ranch at Santa Cruz. We had picked up Pancho Oliverria at San Carlos.

Just before leaving the ranch several men lifted a poor woe-begone mare to her feet. She was so poor and weak she could not get up by herself, but once up she managed to stand and finally staggered out into the *mesquital*, the place of mesquite. One eye was missing and watery matter was oozing out and running down her cheek. A night or two before, a lion caught and destroyed her colt, and probably in an effort to protect it the mare came too near the scene and the lion tore out her eye with one sweep of its paw.

Midway to Santa Cruz we stopped a moment at Blevens ranch *Costa Rica*. Blevens is a large, florid white-haired American who has lived in this country for fifteen or twenty years and hasn't much use for the Seris as they have killed so much of his stock.

[261] At one time he noticed a dead cow which was all swelled up and badly spoiled. No white man could stand the smell. He told some Seris about it, and they flocked around it, and when they had finished all that was left were the hoofs and horns.

Nene's wife cooked dinner for us at their house which was composed of *carrizos* and mud roofed with earth, all supported by mesquite logs. Surrounding it was a hog tight mesquite fence, and in this corral was a fifty-foot deep well which furnished the water supply. Half a bull's hide laced on to an iron hoop and holding about fifteen or twenty gallons, was the water bucket. This was hauled up by a long rawhide rope passing through an over-head block drawn by a mule.

After leaving Santa Cruz with none added to our crew, we wended our way through a maze of mesquite, cottonwood and other timber, gradually working out of the timber to more open country where traveling was not so strenuous. The steering gear was worn so that the old truck would often head for a saguaro or mesquite and stop just short of being smashed.

At last we reached a region of flat baked lake-beds, covered in flood times. Sometimes we could travel fast at fifteen miles and then again we would go in the low where it was soft. About three miles from our destination we took off half our load and piled it to one side and jogged along through a wild desert country with no roads or trails, through chollas, desert brush and torote trees.

123 When we neared a hill of dark volcanic rock a number of Seri In-
312 diens darted out, and with their help we reached a camp near the coast
361 where Roberto had recently located a small well of sweet water.

123 Clustered near this well were brush windbreaks joined together, divided
[361] by brush partitions all open on one side. Here were gathered several
[371] Seri families. There was no such thing as privacy or seclusion.
[372]

As soon as we stopped and unloaded we were immediately surrounded by a curious, half-starved mob of forty men, women and children, about fifteen to twenty children. All dirty, all ragged, all hungry. Some of them I recognized: others were new to me.

While preparing and eating our supper this motley crowd formed a circle about us and hungrily watched every mouthful. We gave them a little food and an orange all around, and they finally left. By that time we had also finished our bread and coffee and followed to the brush shelters.

535 A dance was immediately started. A place was hollowed in the sand,
123 a few short planks placed over it, and the dance was on. Music was
[518] furnished by men tapping on an inverted basket and chanting. Only one man danced at a time. Sand was thrown over the planks and the Indian danced a shuffle, scraping his bare feet on the boards. He held a staff in his right hand and danced to a song called in Spanish *El*
[171] *Toro*. Later on other dancers performed, then gave us the *venado* (deer) dance, taught them by the Yaquis.

This dancer represents a timid deer, hopping up and down to the time of a rattle held in the right hand, and the chanting of the singers. The *venado* dancers stooped over frequently, turning first to one side and then the other to look behind. Manuel Encina was the *venado* and Chico Romero, a very large young Seri, acted the part of a coyote, crawling and jumping on all fours and barking and every once in a while biting the calf or thigh of the *venado*, then jumping back and barking. It was acted with great realism, and the onlookers, especially the children, enjoyed it immensely.

A wilder, more barbaric scene was probably seldom witnessed in America than this gathering of Seris on the shores of the Gulf of California, dancing the *venado*. The camp fire threw a flickering light over dark fierce faces with low foreheads and frowsy unkempt hair.
[302] One man, Luis Torres, the head "ship carpenter" with a moustache and chin beard, his hair low-down framing his dark face, looked like a savage from the wilds of New Guinea. Another, Santo Blanco, a secondary chief below Juan Tomas, has a straggling moustache curling over cruel projecting lips which rarely smile, while his fierce black eyes peering through his black thatch of hair, have a perpetual scowl. The monotonous sing-song chant accompanied by the soft roar of the surf added an indescribable eeriness and weirdness to the dark night.

123 We soon turned in as it was then eleven o'clock, and we all fell asleep lulled by the waves of the sea.

10: Davis E-5 (1922-ca.1939) 1965 NU31 Seri NU31

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Seri Indians at home

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Seri Indians preparing their meal

123 261 We were up long before the sun, the following day the eighth of March, but the baking of bread delayed our breakfast, so that while we ate, forty Indians were looking on at us. Little ones with streaming hair and fluttering shirt tails, paddled over the sand hills as fast as their brown legs could carry them in their fear of being late. Women in patched and ragged skirts hurried and plowed through the sand and over thorny mesquite brush to be in time---for what? To see the *gringos* eat their breakfast and to possibly pick up a few crumbs. Each grain of corn, each bean, even a piece of dough half the size of a dime is precious and carefully garnered and eaten.

To eat under the devouring eyes of these people who rarely have enough to eat and most of the time not half enough, to see the hungry dog-like look as I tried to swallow a piece of bread, to see the children half start up as if to run and seize it and watch the mothers jerk them back, to see them eye hungrily our sacks of provisions and not dart to touch them, is enough to make one choke.

Any bread left over we broke into little chunks and gave to the children. I then gave each child two lumps of cube sugar. A little later, as they would hide their sugar and try to repeat, I lined up fifteen or twenty eager, frowsy bare-legged boys and girls and gave each an orange.

123 439 Later, the mother would trade a basket or a hair brush for an orange, a knife for two oranges. They brought Pelican skin rugs made from six Pelican hides sewed together which used to form their kilts. For these I traded four yards of *manta*, or cotton goods, of which they made garments.

I soon had a thriving trade on hand, especially in necklaces. I had bought a few cheap glass bead necklaces at fifteen cents each. These set them wild. For native necklaces of seeds I traded the bead ones. I secured most of the necklaces, and when they ran out the children were sent by their mothers into the brush to gather more beans and seeds. These were hastily strung and hung around the neck and exposed to my admiring gaze, but it was useless as I would not trade any more beads. I had to save them for the Seris on the Island. I would have given everything away there.

Also, I had to consider the moral effect of them securing things without effort on their part. Only for service, must we pay in food or goods. For bringing food, water, to go hunting for us, or for trade---except giving things to the little children. It was heart-breaking, but they were lucky to have water. Like many others less primitive, they work, hunt, fish, only when hunger drives them.

231 With the people were a crowd of undersized, starved, bony dogs. A Seri cleans up everything and the dogs get the rest. Each day they are gnawing on some old fish head that is long past having any nourishment, and is tough and strong as rawhide, but hope springs eternal in an Indian dog's heart or stomach, and again and again, will they search out an old fish head or Pelican bone. Discouraged, never!

000 search out an old fish head or Pelican bone. Discouraged, never!

123 223 We had intended going to Alcatraz *(Pelican Island)* and have the Indians secure more skins for us at night, but the wind was strong and not favorable, so the trip was put off. The Indians hold up torches of dry *pitahalla*, while another Indian knocks the Pelicans over the head.

123 224 Stan and three Indians started out for the *picachos* with rifles in a hunt for mountain lions and a *tigre* our Indian said he saw. They returned in the afternoon tired and hungry and carrying no game. Stan had mounted the highest peak, an almost perpendicular one, and dangerous climb.

123 513 One member of the hunting party, Santo Blanco *(Holy White)* which belies his name---as he is neither white nor holy---evidently didn't find his dinner waiting for him, and proceeded to beat up his poor wife. Perhaps she didn't expect him so soon or perhaps the larder was empty. At any rate, another woman, Luis Torres' wife, flew to her assistance and grabbed the rifle or stick and he cut her hand cruelly with his knife. She was brought whimpering to our camp, her poor thin hand dripping blood. One or two sympathizing women, crying softly, followed her.

I immediately put some flour over the cut and tore up strips of cotton goods and wrapped them round and round her hand, then pressed the veins to check the hemorrhage, and held her hand up. After fifteen or twenty minutes it ceased to drip, and an Indian brought me some mentholatum from my grip. I bathed her hand in salt water while she whimpered softly, put on the salve and re-wrapped her hand in clean goods and she returned to her camp. Her child picked up the discarded bloody clothes and took them to her.

123 Roberto had gone back for the things he had left, and at noon had returned with the car to Santa Cruz, intending to return by mule in the evening. He returned long after dark after five hours in the saddle. He had been bucked off once and lost in a jungle of timber, both down and standing for two hours. He was fenced inside this tangle, he said, finding it almost impossible to escape.

The mule was later to be tied up, rolled into the boat and taken to the Island for my use, so I would not get worn out walking and carrying food and water.

Again, we were lulled to sleep by the murmur of the sea.

On account of unfavorable conditions, we did not start in the boat the next morning, but fully expected to start the following morning. After breakfast we decided to give the Indians a feast. One Seri secured a five-gallon can three-quarters filled with water, and one by one I poured four cups of flour in it. I hesitated a moment and the Indian said "too much water," and all the crowd waited with bated breath. When I poured in an extra cup-full a great sigh of

[text continues on p. 200]

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Santo Blanco and Edward B. Davis - this hombre gambled away his only shirt - Sonora - 1929

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Seri method of carrying infant

123 relief and contentment rose, and everybody smiled. This concoction I placed on the fire while the Indian stirred with a long stick. It took half an hour to cook into a thick sticky paste, gummy white.

[415] Meanwhile, the women vanished and returned with various vessels: greasy baskets, a black chamber pot, frying pans, ollas, stew pots, shells, any old thing---even a cuspidor. When ready, the Indians dipped the sticky mess out with a cup into the various vessels and the women and children licked it up. Some of the children covered the back of a large clam shell with the paste and then licked it off, repeating this until it was gone. Most of the people hooked their fingers into it and licked them off time and again. Any drip on the outside was carefully licked off that four gallons of goo. I do not think one single drop was lost.

126 123 As one little girl was carrying away a clam shell of paste I secured her photograph. It was a sight not soon to be forgotten, to watch these little ones dip in their fingers, mostly two, sometimes three fingers and contentedly lick them off.

Wishing to secure a photo of the Indians in Pelican skin kilts, Roberto induced Chico Romero to strip and wrap a kilt of Pelican skins around his waist. He did this and Roberto secured a good photograph. For this service, Chico demanded three oranges which he gave to his children.

By coaxing and wheedling and joking, Roberto finally persuaded a young woman to put on the Pelican kilt, and she gradually pulled off her shirt, or waist, or whatever name it goes by, and laughingly permitted it. As her brown shoulders and breasts were exposed she covered them with her arms and hands while I took the photo. I gave her some blue powder to decorate herself and a little round mirror.

372 Chico Romero made a fire drill out of a piece of dry driftwood from a cottonwood tree, and then made a fire by turning the stick between his hands. After three or four minutes the fine dust became punk and turned into a live coal. This he carefully put in some dry grass and by holding it up in the wind it was fanned into a flame. The price of this was a red bandanna.

372 773 825 The legend of Fire was told to me later by the campfire. The Seris' god sent down a fly to Seriland to show the Indians how to make fire. The fly was pointed out to me one day. It was a trifle larger than a house fly with a body of shining green and blue.

"Now," they said to me, "notice when it lands. Did you not see it take its two hands, rub them over its head and then rub them together a few times?". . ."Each time it settles it rubs its hands together, and our Indians noticed this and in this way we were taught by this little fly how to make fire by rubbing a stick between our two hands, back and forth. One fly came to earth and found something dead and he rubbed a stick between his hands and made a smoke signal

so all the other flies could see and also come to this dead thing.''

A few weeks ago, Antonio Herrera had a very vivid dream. He dreamed that he was hunting in the mountains for deer and came across a cave. (These volcanic mountains are pitted with caves.) He went into the cave and saw all kinds of things dear to the heart of a Seri---plenty of rifles, lots of cartridges, knives, *manta* (unbleached cotton), necklaces, red bandannas, blue overalls, *plata*, or silver, and many other things.

When he awoke he sought his father Manuel Encinas, who is a medicine man and interpreter of dreams, to explain his dream to him. The price demanded by Manuel was six *tiras*---or 30-30 cartridges, a very high price, according to Seri standard. The explanation was this:

It was true that the cave was there and all the things in it just as seen and described by Antonio, but in order to find it he would have to fast nine days and go without water that length of time also, in the heat of summer. Then the way would appear to reach the cave. So far, Antonio has not attempted the fast.

I witnessed the operation of making a certain kind of pitch or tar which the Seris use to make the seams in their canoes or boats tight. The women pound up the dried pulp next to the outside skin of a dead *pitahalla* cactus (organ cactus). This is very dry and brown in color and the pieces are pounded up to a dry powder with a wash or shore rock in a dried deer hide. This is placed in a *batello*, or flat basket, and manipulated so that the coarse pieces come to the top and are scraped off and thrown away. The fine powder is then put in a five gallon can and some porpoise or sea-lion oil or horse oil is poured on it and stirred into a thick gummy mass. When thoroughly mixed it is put over the fire, in an olla, to boil and continually stirred for an hour or two until it is the consistency and has the appearance of coal tar. While being worked it is kept heated and applied to seams inside and outside the boat. It hardens just like tar and answers the same purpose.

Since the corn, which had kept this band of Seris in food, disappeared two days before we came, and they had barely kept going on seeds and a few fish, and they all had decided to leave camp with us in the morning---the women walking and the men and some children in boats---it was necessary to supply them with some food to take them to the hunting grounds of the *cahuama*, or sea turtles, and land them on the Island. The *cahuama* would furnish them meat---their favorite and national food, and the shores would supply them with clams, oysters, crabs and other sea food.

So the whole band was called around our camp and each family was furnished with two cups of corn, two of beans, some green coffee and a cup of cube sugar. For the first time our camp was free of Indians, and we ate and went to bed in peace.

The amenities of civilization were laid aside and forgotten in

123 our rough camping, and we lived more or less like the natives, along the lines of least resistance. Shaving was unknown; washing the hands took place possibly every few days---the face never; teeth never; hair combed never; dressed, always in bed and out. We did not shed our shoes. Our revolvers were our constant bedfellows and lay in the blankets next to our right hands. But the Seris have never made a move to take the least thing that was not given to them, and made not a hostile move or look. I did see a child surreptitiously wet his fingers and wipe them across the open flour sack and lick them off, but even then his mother pulled him back.

123 484 By starlight the next morning we were up again, and ate our breakfast before sun-up. We loaded most of the groceries and things in our boat, including about eighteen gallons of water. Besides ourselves, we took Luis Torres and his wife as helper and boat-steerer. This gave us a very heavy load. Chico Romero planned to take twenty gallons of water and one sack of flour and half beans and corn, and follow in his boat.

The Seri camp was a busy place, women carrying things to the boats and preparing to leave. The camp was stripped. Much water was taken in the boats to supply the families, who for the most part walked along the shore and made short cuts through the hills, planning to meet the boats at appointed places. Two other boats started with us.

The wind was dead ahead, so our sail was useless and we unshipped the mast, and three of the men took the long oars with Luis Torres at the helm and in the bow. The boat leaked quite a great deal and it [502] kept Lupe busy bailing. Chico Romero's boat was manned at the oars by two small boys about seven or nine, and he steered with a paddle. In the other boat were three men at the paddles, three children, two dogs, cans of water and baskets and cooking things.

[501] The wind kicked up quite a heavy sea for the small Seri craft, but this narrow, heavily-laden craft met the swells and floated over them gracefully, although oftentimes the water missed coming over the gunwale by an inch or two. The children laughed gleefully, showing even rows of white teeth innocent of brush and tooth powder.

123 On rounding one rocky point three deer stood outlined against the sky, and we landed three men to try and get one, Stan among them. They returned empty-handed, except Stan, who kept ashore and followed over the hills to try for game.

At noon we landed on a beautiful sandy shore laced by the green waters of the Sea of Cortez, with Tiburon Island opposite a few miles distant. Here we unloaded and built a fire of driftwood and cooked our dinner. Stan found us---without his deer---and we ate very heartily. Beans, bread, coffee. We camped here for the night in this delightful little cove, calm and protected from the strong wind outside. Green sea, purple mountains, cloudless blue sky, a little freedom from hordes of staring Indians.

123 484 Then Chico Romero and his load of children and dogs arrived and he unloaded his impediments on the beach, and soon the women came walking along the beach and joined the party. The boats carrying the heavy things and children; the women, with their babies and a few light things on their heads, walk along the beach when possible and follow the boats, which hug the shore to avoid the strong currents and tide. The boats are propelled by paddles mostly, though some of the Indians use oars. The women are slightly built, slender and inclined to be gaunt, owing to the hard life and lack of food. Their cheek bones are quite prominent and their profiles present protruding lips.

422 [364] Having no permanent homes, moving hither and thither for their various food supply, household things are not accumulated and life is reduced to its very simplest elements and absolute necessities.

Crude baskets made from shoots of the torote tree, vessels in which to cook, and some patched rags in place of Pelican skins to serve as blankets to the fortunate few, constitute the family possessions. Strange to relate, many of the women have an over-supply of milk, and according to Roberto have puppies nurse what the babies cannot take. One woman was known to nurse a baby pig on one side and a puppy on the other.

[247] [884] Family dogs lick all cooking vessels which is unnecessary as they are thoroughly clean when the Seris are through with them, and also lick the infants clean after performing their natural functions, so they are quite indispensable. I saw a Seri girl place on the sand a small can of water for a dog and then saw her drink some of the remainder and pour the rest back in a five-gallon can. Dogs frequently swim across the Infernillo to join their masters.

732 Asked about cripples and incompetents, Roberto said they probably did not exist. The conditions of survival were too precarious to admit of anyone living who was unable, by physical disability, to hunt or fish. There are two or three men who are nearly blind or so. The wives of these men eke an uncertain living for them by the hardest struggle. The sea turtle is the staple; one man and one good boat can secure a living for five families. There are now nine boats, but one boat to a family would practically free them from continual want. With the exception of four bones in the flippers and the bones of the head, all the sea turtle is used---the meat, blood, entrails, shell which furnishes food and oil, skin of flippers which furnishes sandals, sinew for strings. Nothing is wasted except contents of the entrails.

123 Again, we laid our blankets on the clean white sand of the shore and were lulled to rest by the murmuring sea.

123 484 Daylight found us up the next morning, and we breakfasted, rolled up our blankets, pushed the boats into the sea and were off by the time the sun rose over the mountains and shone over a glassy sea. Two Seris towed their boat by a tump line, while a boy of twelve steered

123 it from shore by a paddle. A little child in the boat sat still as a
484 mouse. No matter how the boat rocked, it never whimpered or cried. All the children stayed perfectly quiet in the frail crafts, in the very positions in which they were placed.

123 Once the boat approached shore to secure a small octopus for fish
484 bait. One was finally located by Stanley, who could see its eyes
136 shining with a baleful purple light under a large boulder in about
[120] eighteen inches of water. The Seri got out and pinned it down with an oar, while Roberto pounded it time and time again with another oar. Even then it escaped in a cloud of sepia which it discharged. Its tentacles were easily a foot in length, and its color was the bottom of the sea. If it once gets a grip on a rock it is practically impossible to tear it loose.

Schools of porpoises played close to the boat each day, curving up to breathe and throw spray and then diving lazily below the surface, frequently gliding like a dark shadow below the waves. Sometimes, in the sheer joy of living, they would leap clear of the water and splash back in a spray of foam.

123 We soon reached the extreme point where it juts from the Sonora
484 shore, landed and set a signal smoke to notify other Seris on the
[108] Island. (A dry *pitahalla* cactus was selected for a black smoke.) No answering signal came. We crossed the narrow channel, the Infernillo, a little over a mile wide, the water like a mill pond, and landed on the sheltered side and unloaded on the stony beach. For miles the beach was covered by windrows of round wave-worn rocks and pebbles of all beautiful colors and sizes mingled with strange shells and seaweed. Here we made camp and stayed overnight.

The Indian canoe landed its cargo of women, children and dogs a little later, and established a camp adjoining. Three little boys were commissioned to secure us some clams and they returned in a while with a pail of clams, one crab and some oysters. These were boiled in salt water, the meat extracted and Pancho Oliverria cooked them in rice for supper. The crab was my especial delicacy.

123 Roberto and Stanley walked off after dinner to hunt in the mountains a few miles back from the coast, and they returned long after dark very weary from carrying, for seven miles, a young burro deer which they had shot. The Indians soon gathered around it chattering volubly, as both they and ourselves had eaten no meat for several days. We gave them nearly three-fourths of it, reserving a hind quarter and some ribs for ourselves. Rafael Feliz and Chico, with skill born of long practice, skinned and unjointed the animal in a very short time, and devoured a good part of their share in a cooking pot a little later, although they had eaten only a little while before. The boys cracked the bones and scraped the marrow, eating it like candy.

[484] At six thirty the next morning, we were crowded in the boats again

123 and on our way, headed south, rounding the point with the tide in our
484 favor. It was a rowing proposition. During mornings the sea is calm and the swells glassy. Usually at noon the wind comes up, mostly ahead and against us. Last night we could see the light of a camp fire on the point opposite us, and soon we spied a boat headed for the Island. We had left the women and older children to walk and they met us where we landed. At noon we camped for dinner in a lovely cove, and soon three other boats joined us with their cargoes of women, children and dogs. We ate quickly and got under way again as soon as possible, and even then we were the last boat. The trip was bad, as all the people were loaded in the boats which made them low in the water.

123 It was a pretty sight to see the Seris in their *pangas*, boats
484 shaped like dories, graceful, narrow and swift, kneel in the bottom
501 and dip their broad paddles into the waves and shoot into the open sea like dark-skinned Vikings, wild hair flying.

As soon as we emerged from the cove the wind and tide struck us dead ahead, and progress was slow although the swells were behind us. After rounding a point the wind blew on the forward quarter and all the boats, now increased to five, hoisted their sails. We also stepped our mast, sheeted our flour-sack sail, and bowled through the sea, carrying a bone in our mouth.

Chico's boat ahead had no sail and when we neared it, steered with superb skill by the wild-looking Seri, Luis Torres, he had a tow line aboard and thereafter we held him in tow until finally the wind shifted dead ahead and all the boats lowered their sails, unstepped their masts and began paddling. One *pangah* had a sail with part of it loose and flapping at the top like a flag. Roberto said the Seris did not want to cut off this useless piece for fear of spoiling the sail, so there it flapped whenever the sail was sheeted home.

123 About three thirty in the afternoon we rounded a bold rocky point
484 and entered a beautiful curving bay of quiet water, and here we landed for the night camp. Soon all the boats were unloaded. Men and children hunted driftwood for camp fires, two boats at our insistence set off fishing, and Stan and three Seris took their rifles and went hunting. All parties later returned without fish or game, so, as our meat had disappeared like a beautiful dream, we had to dig into our corn and flour to feed thirty or forty hungry Indians. The children stood about like a bunch of hungry cormorants and we promised them *pinole*, or flour paste.

123 Looking at these half naked children with their swarthy little
177 bosoms bare and most of them bare from the waist down, I dug out some safety pins and began with the little girl Luz, who was vigorously stirring the paste mass and pinned her waist over her bare breast and tummy with two bright safety pins. She never ceased stirring. Each bare breast I pinned the shirt over as the night was chilly. The children quick to catch on and keen with desire born of privation, each pulled his or her shirt open even when it had a button, or had

177 been fastened with a string---each child eager for a safety pin. A
123 little child two and a half years old was shoved forward for a pin, its round black eyes dancing with anticipation, but its dress had no opening in front, so I laughed and shook my head and everyone appreciated the joke. But, not to be defeated, a little girl untied the child's waist from behind and spread it open, exposing its little brown body from head to feet, and called my earnest attention to it. I then pinned up the dress. Then the older ones crowded around me, but I had used up a whole paper of pins, so I shook my head. I gave the empty paper to an eager child, although a dozen hands were outstretched for it. By making the children happy I pleased the parents.

123 By this time the flour soup was thick and ready, and Roberto baled it out with a cup into the various vessels eagerly outstretched to receive it. As the cup would drip, little hands caught the priceless drops before they reached the sand. As each got his proportion he began sticking his fingers into the mess and licking them off. Many took their *pinole* to camp and the others secured a taste also. A small piece of bread dropped into the sand was snatched up, by a child, from under the nose of a dog. She rubbed off the sand and devoured it.

When all had vanished to their various camps I opened the box of candies---small round drops of green, red and yellow. I filled our coffee pot and went to each camp and gave each man, woman and child about ten candies.

439 Since I wanted shell necklaces, the women had combed the beaches
123 and gathered plenty of shells, and strung them while resting. This evening they were draped about their necks, and they wished to trade, so I traded for about a dozen---one small round mirror for one, five needles for another, five safety pins for another, blue face paint for another. Mirrors were most in favor.

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206 *Seri outside beauty parlor*

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Maria Jesusa - Great grand-daughter of Lola Casanova and Coyote Iguana. She is self-conscious and embarrassed to face the white man's magic box for the first time. Her face is decorated in blue, in a typical Seri design. Her features are more regular and attractive than the pure Seri and her clothing shows more taste and pride than her half sisters. Taken at La Cruz, island of Tiburon---E.H.D.

10: Davis E-5 (1922-ca. 1939) 1965 NU31 Seri NU31

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Seri beauties

10: Davis E-5 (1922-ca.1939) 1965 NU31 Seri NU31

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Sunrise - Tiburon Island - 1936

10: Davis E-5 (1922-ca. 1939) 1965 NU31 Seri NU31

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Juan Tomas - Chief of Seris, 1922

10:Davis E-5 (1922-ca.1939) 1965 NU31 Seri NU31

War Chief of the Seris

622 765 There is sorrow and mourning on that little known island in the Gulf of California, Tiburon.

[164] During the last few years, many of the Seri tribesmen have succumbed to influenza and pneumonia, and many a night has the weird and melancholy wailing for the dead mingled with the soft lapping of the waters of the Gulf on the shores of that lovely desert isle.

But now a universal grief has overtaken the remnants of a once powerful and warlike tribe---Juan Tomas (*Pik-ta-aohe*, "Very Brave" in his own language)---the old War Chief of the Seris, is no more. He has fought a last and losing battle. For a month, maybe for several months, the women will wail and lament, and around the tribal camp fires, for many a night, the Seris will tell of his exploits and miraculous escapes, as they told Roberto Thomson, their friend and advisor.

[164] The old Chief died on the shores of Kino Bay opposite Alcatraz Island, probably of pneumonia.

There was no soft mattress to lie upon, no pillow to rest his head, and no roof to shelter him from sun or storm. His bed was the sand of the sea shore; his canopy, the blue heavens above, and his [163] requiem, the solemn beating of the surf on the shore. His last words were to his grand-nephews to inherit the *Sierra de las Tinajas*, and he asked the Indians and his *Yori* (Mexican) friends to protect his nephews and the mountains.

622 764 His body was wrapped in an old *serape*, fastened around by rope of native fibre. His grave was dug with paddles from the canoes, four and one-half feet deep in the sand hills near the sea. He was placed in the grave with his head to the north, face up, with the carapace of a sea turtle covering his head. Amid much lamentation and mourning, the grave was partially filled, and then a heavy layer of *cholla* cactus spread over. The grave was then filled and mounded up and covered with *chollas*, *mesquite*, shells, and thorny growths, and also a five-gallon can. The cactus spines were to discourage coyotes.

622 Thus passed a very striking character among the primitive races of Sonora, Mexico. He was brave and fearless in battle; crafty, cautious, and cunning in attack; cruel and merciless to his enemies. He was rarely caught off his guard, and always managed to extricate himself and his men from difficult situations. He was quick to think and act, and was wise with the wisdom learned at first hand on desert and sea from a rugged nature, reluctant to give up her secrets. He was a master hand at *balsa* building, a good hunter, fisherman, harpooner of *cahuana* (sea turtle), a good surfman, a good gambler, and an expert [575] tracker. It was not unusual to possess two or three wives, but the old Chief, while married three times, had only one wife at a time. He was quite fond of the writer, and used to greet him with the true Mexican *abrazo*.

[123] It was in 1922 that I first met the grim old warrior on the shores of Tiburon, whither I had gone on a quest for the Museum of the American Indian, Heye Foundation, New York.

[142] He was very dark, of medium height, thick set, with a broad, deep chest, very muscular, with shaggy brows and deep set eyes which, even at that age, ninety years, burned like coals of fire, and were sus- [302] picious and wary. He wore a braided pigtail down his back which con- 290 tained a few gray hairs. For clothing, he wore a ragged shirt and an [411] old pair of overalls, with a short kilt hanging from a belt, through which stuck a long naked knife of hoop iron, ground on abrasive rocks and keen as a razor.

[291] From infancy to the grave, the freedom of his feet was never [484] hampered by shoes. Even at that advanced age, and until his last illness, he was perfectly able to care for himself, and follow his nomadic tribe on its devious trails along the coast and far in the interior. A walk of a hundred miles was not unusual. For ten rifle cartridges a Seri Indian once walked forty or fifty miles to deliver my message to Juan Tomas. From the time we first met, our friendship was never broken.

The Pelican Skin Robe

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Toshne or Pelican Island - Kino Bay - 1936

It was the dark of the moon and a very black night, ideal for surprising the Pelicans asleep, roosting on the steep slope above the waters of the Sea of Cortez. The Pelican is a very wary bird and cannot be approached in the light of the moon. 123 223

At sundown we had climbed several hundred feet to the saddle between two peaks on the Island of Alcatraz in Kino Bay off the coast of Sonora. We rolled up in our blankets and hugged the great volcanic rocks at the crest, to be as inconspicuous as possible to the great birds circling the peaks to seek a roosting place on the west slope of the Island.

Santo Blanco had provided himself with a torch made from the slender rods of a dead *pitahella* (organ) cactus which he had tied together in a long bundle. The four young Seris who joined him also had a torch and in addition, each had provided himself with a club. We took no fire arms. Senor Roberto Thomson, my companion, had arranged this trip with Santo Blanco, for my benefit. [416] [824]

[text continues on p. 215]

10: Davis E-5 (1922-ca. 1939) 1965 NU31 Seri NU31

Chico Romero - Seri dressed in Pelican skins - 1926

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Seri Concha in Pelican skin robe or shirt - 1926

123 It was March and the night wind was cold, but we did not dare light
223 a fire, so we hugged our blankets close to us for warmth until Santo Blanco judged the Pelicans were sound asleep. We could hear the waters of the Gulf roaring softly as they broke against the cliffs far below us.

At midnight Santo Blanco lighted his torch and the other Indians
[21] did likewise. They all wore rawhide sandals to keep their feet from being cut on the sharp rocks. Santo Blanco was agile as a cat, as he jumped from rock to rock on the steep slope holding his torch over head. Part way down the party split, leaving Santo Blanco, Roberto and myself. I had a flashlight which threw a feeble ray on nearby
[134] rocks and then shot off into blackness. The rocks were slippery from droppings of thousands of cormorants, gulls, Pelicans and other sea birds and climbing down rocks on the steep slope and that on a dark night, was risky if not dangerous, for if we slipped or missed our footing, we might roll, bump a few times and drop from a high cliff into the sea.

Santo Blanco was far below us and at last we could hear him clubbing Pelicans over the head and by the time we reached him he had several dead Pelicans spread on the rocks and he was bringing in the last of them near where we had stopped.

There lay five of these great silver gray birds, each boasting a wing spread of ten feet, as against seven feet of the golden eagle. The flashlight picked them out, one by one, with their long necks, long bills, and with pouches on the nether mandibles for temporary storage of their catch. They are very awkward and ungainly as they stand in groups on rocks at the edge of the tide, but when their great pinions are spread in flight over the sea, they are the epitome of grace.

That was a heavy load, over one hundred pounds, for one man to pack up those steep slippery rocks. I suggested that we help Santo Blanco to the top, but Roberto said the Pelicans were covered with lice and it was not advisable, but with Santo a few more or less made no difference. So he tied the birds together and swung them over his shoulders leaving his hands free for climbing. His torch had burned out and our only light was my flashlight to pick out hand and foot holds. At times we would reach down and give him a lift where the rocks were steepest, but for the most part he struggled alone. Sometimes he would find a few steps like a stairway and then he would look for an easy way, using both hands to pull himself up, but there was no easy way. It was a herculean task to climb those slippery rocks and one time the load almost pulled him over backward, but he recovered his balance and finally the crest of the hill was reached and the rest was down hill on an easy trail.

The boys already had a camp fire going near the beach and as soon as Santo deposited his load, they all fell to and began skinning the

[text continues on p. 217]

10: Davis E-5 (1922-ca. 1939) 1965 NU31 Seri NU31

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Edward H. Davis and Pelican skin robe made for him by Seri Indians - 1934

123 223 [262] birds. As soon as the skin was off the breast was laid on top of the coals and roasted. The meat was red as raw beef, but it was free of fishy flavor and tasted excellent. The Indians ate pelican flesh till daylight.

252 [123] We gave them a generous helping of flour in a pail and this with water from a canteen, Santo stirred vigorously with a stick and then kneaded the dough with his hands until it was of the right consistency. He rolled hunks of this into little balls of dough about the size of golf balls, which he laid on his blanket. The boys picked these up, patted them flat like pancakes, scraped away ashes and sand from the edge of the fire, placed their pancakes in the hollow, covered them with hot ashes and hot sand, and in about three minutes pulled them out all baked brown. They shook the ashes and sand from them, leaving them clean and ready to eat. I am telling this in detail to show how simple cooking can be done without a dutch-oven, frying pan, or cooking grease, far from civilization.

281 [123] We were soon paddled across to their village on the shores of Kino Bay and the skins turned over to Mrs. Santo. The skins had been split down the back, leaving the breast unmarred. The wings and legs had already been removed, and she sewed the skins together with sinew recovered from the birds. The boys had secured an extra pelican making six, three to a side, then placed together and sewed lengthwise, making a robe three and a half feet wide by seven feet long.

[342] [291] [301]

Pegging out and drying a Pelican skin robe by a Seri Indian woman - 1936

281 The Indians made a mound of sand full length of the robe and amply wide rounding off the top. On this the robe was spread, flesh side up, and pinned to the mound by slender slivers of *carrizo* and left exposed to the sun. The skins were singularly free from oil or fat and in a few hours, the robe was cured. The pins removed, the sand shaken from the plumage, and it was ready to use as a blanket covering at night or in old times, as clothing wrapped around the body.

The robes of silvery gray are from male Pelicans and are larger and more attractive than robes from the female birds, which have white breasts, edged with gray.

291 177 Before the garments and costumes of civilization encroached on the Seris, Pelican robes and deer skins were the only clothing worn by the natives, but now they have adopted civilized ways to a great extent, Pelican robes as clothing became obsolete.

10:Davis E-5 (1922-ca.1939) 1965 NU31 Seri NU31

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batea--winnowing basket
batello--flat basket
cahuama--sea turtles, used as food by the Seri
guaraches--rawhide sandals
palanca--shoulder poles, used in carrying water
pangas--Seri boats shaped like dories
piojo--body lice

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THE KIVA

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SERI BANDS

EDWARD MOSER

114

Mr. Moser, of the Summer Institute of Linguistics, holds a Master's degree in Linguistics from the University of Pennsylvania. He has been doing research on the Seri language during trips to Sonora since 1952.

ABSTRACT

105 In previous publications on the Seri, frequent reference to distinct
621 Seri groups points to historical tribal divisions at some level.
642 Recent research among the Seri has determined the former exist-
614 ence of six bands which included three dialect groups. Three of
the bands were subdivided into clans. These six bands, whose
[178] formation may have been caused largely by internal struggles,
were eventually crushed and reduced to a single group by the
devastation brought about by external conflict.

INTRODUCTION

101 The Seri tribe is located in Mexico along the coast of Sonora
131 between Bahia Kino and Puerto Libertad, and on Tiburon Island
[161] (Fig. 1). Today it consists of approximately two hundred and
178 eighty persons who call themselves *kongkaak*[1] "the people." Al-
621 though at one time it was comprised of six distinct bands (Fig. 2),
642 the tribe has now lost its band organization. However, much of
the late history of these now-defunct tribal units remains vivid
121 in the minds of the Seri. The purpose of this paper is to present
621 some of the salient features of these former bands, to discuss
642 certain interrelations between them, and to recount the Seri ver-
sion of the disintegration of the band system.[2]

114 Three published studies on the Seri should be mentioned.[3]
Of these, the reports by Kroeber and by Griffen are the more
reliable. All three investigators mention tribal divisions which
Griffen rightly designates as bands.

BANDS

642 BAND I *xika ʔai kkoii* "they who live toward the true wind"
101
131 This group is commonly referred to in the literature as the
Tepoca or Salinero. As shown on Fig. 1, they inhabited an area
which extended from a point slightly north of Puerto Lobos to
Punta Tepopa on the south. The territory extended inland, encom-
passing the general area delimited by the San Ignacio River.

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FIG. 1. Area of Present Seri Occupation

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One descendant of this band states that long ago his ancestors wandered north from the region of Guaymas. Eventually, they established land rights to the coastal area extending from Campo Ona on the south to Puerto Lobos on the north. Before long, however, they relinquished claim to the area between Campo Ona and Punta Tepopa. [173] [167] [425]

It is to be understood, of course, that groups from this band, as well as groups from other bands, at times ranged far afield from their respective territories. Band I, for instance, had campsites as far north as the mouth of the Colorado River. [484]

642 BAND II *xika xnai kkoii* "they who live toward the south wind"
101 This group is commonly referred to as the Tastioteño. These
131 people roamed the coastal area from Guaymas to Bahía Kino.

BAND III *ta?eowkw kongkaak* "the people of Tiburon Island"

This band is referred to in the literature as the Seri or Tiburones. At one time their territory included only the northern and eastern coasts of Tiburon Island. Later it was extended to include the whole coastal strip of the mainland directly opposite the island.

BAND IV *?eno kongkaak* "the people of the desert"

The area this band occupied in the center of Tiburon Island is shown in Fig. 2.

642 BAND V *xnaamotat* "they who came from the direction of the
131 south wind"
173 The Seri believe that this band came originally from a region
628 south of Guaymas. It may have been the Upanguayma group
[101] mentioned in the literature. Its members came in contact with the members of Band II with whom they resided, apparently for a period of years. Whether the *xnaamotat* were Seri or non-Seri,
[197] I have been unable to ascertain. Since no informant suggests that this group spoke another language besides Seri, it seems reasonable to believe that it was simply a distinct dialect group.

642 The *xnaamotat* were a belligerent people and, after fighting
628 broke out between them and the members of Band II, they
721 traveled northward. Eventually they established themselves on
[131] the relatively small coastal strip located east of Punta Tepopa as shown in Fig. 2.

642 BAND VI *xika ?ast ano koii* "they who live in the mountains"

[101] This group, which has been recognized previously only by
[131] Griffen, inhabited San Esteban Island. It laid claim also to the greater part of the coast on the southern end of Tiburon Island. One informant stated that in earlier times this band had ranged over all of Tiburon Island except for the northern two-thirds of the eastern coast, but that they were slowly pushed southward by the movements of other groups.

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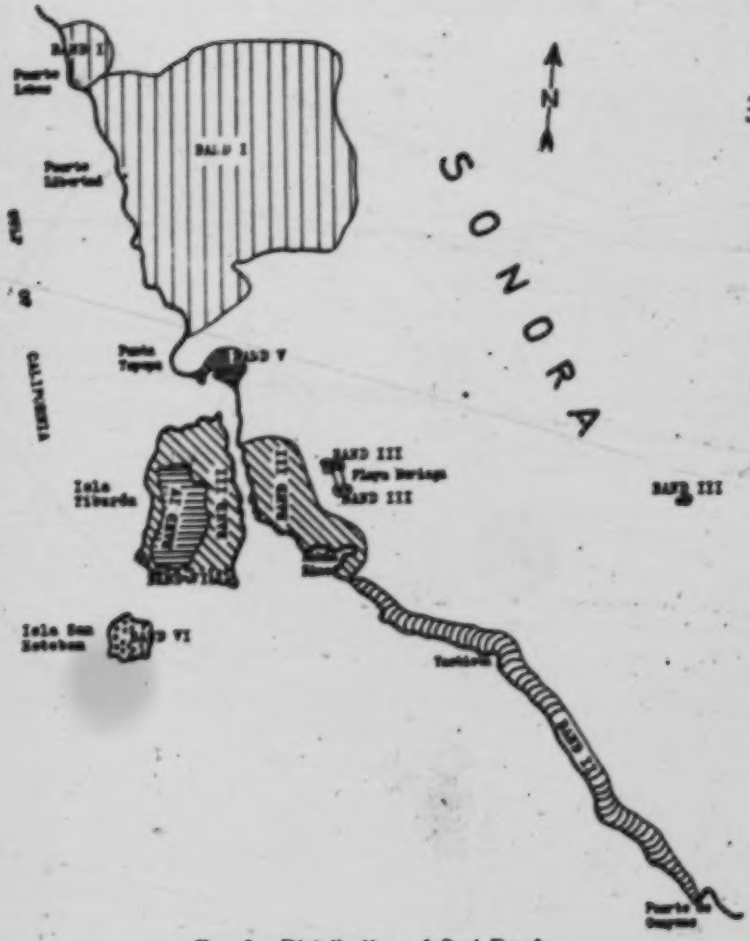

FIG. 2. Distribution of Seri Bands

DIALECTS

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The existence in former times of three distinct but mutually intelligible dialects seems evident.

Dialect 1 was spoken by Bands I, II, III, and IV. Any diversity of speech among these four bands seems to have been confined to word formation. The Seri language of today is derived largely from this dialect. [192]

Dialect 2 was spoken by Band V. This dialect is extinct and only scanty data on it can be gathered. From a number of expressions gathered, it appears that the dialect was characterized by extreme intonational contours. [194]

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Dialect 3 was spoken by Band VI. This dialect, which is also extinct, is described by the informants as musical and is referred to as "singing talk." Expressions which are recalled are characterized by sharp pitch contours and heavy stress. Several grammatical constructions from this dialect have been found to contain morphemes unknown to present-day speakers.

The elicitable utterances and expressions of dialects 2 and 3 appear to employ the same segmental phonemes as present-day Seri.

BAND SUBDIVISIONS

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Three of the six bands were subdivided. The territorial subdivisions of those three, Bands I, III, and VI are shown on Figs. 3-5.

Band I

Band I became divided into six groups, each group occupying a subdivision of the band territory. Each such subdivision was called an *i?iziitng*. The name of the most prominent camp in each *i?iziitng* was generally used also as the name of that subdivision. The names of these subdivisions are;[4]

zaah ?akaila	"(arrows) shot at the cliff"
paiik ?aokwt	"driftwood huts"
xpano ?ax	"fresh water in the sea"
?aasixp	"white mesquite"
?axwii?om	"place of clams"
xapoya?	"sea lion . . ."

Band III

This band became subdivided into fifteen groups, named as follows;

?ah?ax	"whichever water"
kiazin	"long and narrow"
sakpatix	"_____"
?aank	"clam (species of)"
?atkisa	"rotten testicle"
taih it	"willow trunk"
inoo?kw kiiax	"rattling stone bay"
xniizk	"facing the wind"
takata	"_____"
?eeme	"camp"
?ast ?ax	"stone point (of arrow)"
soenitaa	"in front of Alcatraz Island"
xoxaokl	"the large ones"
kaii iti ktawkwo	"men of the dry lake bed"
?ax ipak	"the other side of the water"

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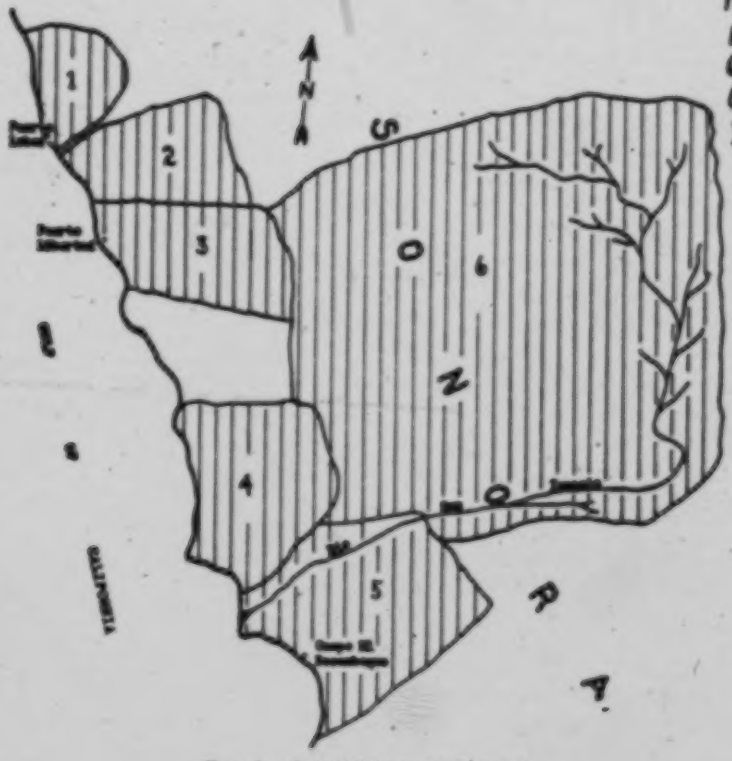

FIG. 3. Subdivisions of Band I

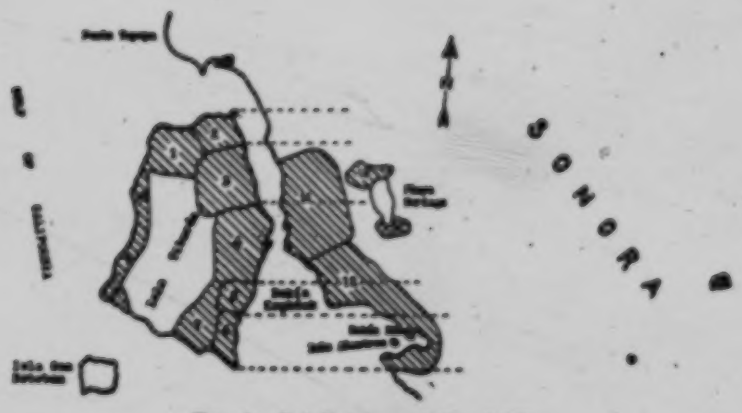

FIG. 4. Subdivisions of Band III

642
621 Little information could be elicited about subdivisions 7, 8, 9, and 10. The reason for this might be that Band VI was slow in [169] abandoning those coastal areas (if it actually did inhabit them) [688] as it was being displaced by Bands III and IV.

621 The Seri say that long ago several men, called *?ant i?akimhoh* 642 "they who explain the land," came to Tiburon Island and told the 173 people along the eastern shore that they owned also a corre- 425 sponding strip of land on the mainland. Thus the inhabitants of 167 subdivisions 2, 3, 4, 5, and 6 laid claim to the coastal areas directly across the channel from them as shown by the dotted lines on Fig. 4. They assumed that their new territories extended inland [822] to include as much terrain as they chose to claim. At first the people went to their mainland areas primarily to gather cactus fruit. Eventually some of them remained on the mainland and established subdivisions 11 and 12. This establishment superseded the claims of the five Tiburon Island subdivisions to their main- [101] land territories. Although the mainland subdivisions 11 and 12 formed, in some respects, a separate band in their own right, they retained their name, *ta?eowkw kongkaak* "the people of Tiburon Island." Eventually this group returned to Tiburon.

621 Of subdivisions 13 and 14 which are shown on Fig. 4, very 642 little is known. The people of subdivision 13 inhabited an area 131, encompassing the northern end of the dry lake, La Playa Noriega [829] (San Bartolo). Some of the Seri believe that these people were giants. Although in this area I have found clay figurines and other [192] artifacts common to abandoned camps elsewhere, the Seri do not [193] know the names of the camps of this subdivision. Subdivision 14 occupied the area surrounding the southern end of the same dry lake.

Subdivision 15 occupied the general area which is now Villa de Seris, a settlement on the southern edge of Hermosillo. As [167] Hermosillo grew, it became increasingly difficult for these Seri to maintain their customary way of life, and they eventually returned to Tiburon Island.

642 BAND VI
621 Band VI became divided into four subdivisions, the names of 101 which are:

xnitom	"_____"
pahti	"flint"
kofte oki ifa	"large iguana peninsula"
kotih	"tubular"

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FIG. 5. Subdivisions of Band VI

BAND SOCIAL STRUCTURE

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The social structure of the bands can be properly understood only in relation to the social structure of their smaller units, the *i?iziitang*. The kin group which resided in and dominated each such subdivision constituted a clan.[5] This group conforms to Murdock's three major specifications for clan designation.[6]

Murdock's first specification states that a kin group, to constitute a clan, must be based explicitly on a unilinear rule of descent. The kin group of each Seri band subdivision was based on patrilineal descent. An individual was closely associated with the group of kinsmen of his subdivision, all of whom were related to him through males only. The father was the head of his household. For example, he assumed leadership in marriage negotiations. Upon his death, the eldest son took his place.

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The second specification states that such a kin group must have residential unity. Seri marriages were exogamous with respect to the subdivision,[7] and the rule of residence was patrilocal. The domicile was set up near the home of the groom's parents.

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642 621 618 714 [186] [476]

The third specification states that a kin group, to constitute a clan, must exhibit actual social integration. Murdock stresses the necessity of observing a positive group sentiment, such as would be manifested by organized collective activities or group functions, before the group can be characterized as a clan. An essential feature of this group sentiment is the inclusion of the wife as an integral member of her husband's kin group.

621 618 [628] [622] [701] [583] [476]

This sort of social integration was indeed exhibited by the Seri kin group of each subdivision. It was, in fact, fostered by the isolation brought about by the inhabitants' reservation of hunting and fishing rights for themselves. Tension existed between certain subdivisions and, since there was no chief, the oldest capable male organized and led the fighting force of the clan. In times of need, the members of the group united to give mutual assistance. The groom-to-be could expect material aid from his fellow clan members in the payment of the bride price. Mutual assistance was given in the fulfillment of puberty ceremony and burial obligations. The men cooperated in their hunting and fishing expeditions. The women of the clan, including the in-married spouses, cooperated in the gathering and sharing of food. Everyone could attend the various fiestas. It is said that in the performance of these collective activities, close harmony generally prevailed.

BAND INTERNAL AND EXTERNAL RELATIONS

642 619 578 [648]

The division of the Seri tribe into bands was likely brought about through internal strife. During the period of band history known to the present-day Seri,[8] however, serious skirmishes seem to have been fought predominantly with non-Seri groups.[9]

Band I

642 621 628 578 [721] [648]

Band I internal relations appear to have been relatively peaceful. The inhabitants of subdivisions 1, 2, 3, 4, and 5 were fishermen as well as hunters and gatherers, whereas the people of subdivision 6 preferred to subsist on gathered food and wild game. Also, the members of Band I robbed cattle and horses, which pursuit brought reprisals from the Mexican ranchers. There was apparently considerable social intercourse among the six subdivisions, even to the extent that hunting rights of one were sometimes granted to inhabitants of a neighboring section.

Trouble developed when some members of Band I speared fish within the domain of Band V. Here also bitter fighting broke out, and any semblance of peaceful co-existence between the two groups was destroyed.

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Except for the occurrence of several battles, relations between Bands I and III were peaceful.

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Relations with non-Seri groups were not always peaceful. For many years the members of Band I were on friendly terms with the Papago; they often camped together and even intermarried. Due to a misunderstanding,[10] fighting erupted between the two groups and many people were killed in the years which followed.

Band II

[262]
[721]

The external relations of Band II were decidedly turbulent. Although their primary base of operations was a coastal area, the people did not use the ocean as a source of food. They preferred beef and horse meat which was easily acquired by stealing animals from ranches. Here again the wrath of the ranchers and the government was incurred.

[582]

A small group of Yaqui eventually joined Band II and intermarried with them. The Seri claim that the Yaqui induced the warriors of this band to assault travelers on the road between Hermosillo and Guaymas. Coyote Iguana, who according to Seri tradition captured Lola Casanova, was of this band. This activity soon brought retribution from the government. Later, dissension arose between these Seri and the Yaqui.

The enmity and strife that occurred between Bands II and V were mentioned above.

Band III

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The history of the internal relations of this band on Tiburon Island seems to have been marked by periods of violence. Battles between subdivisions sometimes occurred; however, they were usually short-lived and soon forgotten. A major struggle once occurred when a shaman named *?apetla* "the invincible one" and warriors from subdivision 4 made repeated raids upon the neighboring subdivisions and killed many. Eventually, his enemies overcame their fear and destroyed the killer.

[721]

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721

Although the inhabitants of Band III were hunters, gatherers, and fishermen, they began to rob cattle once they became established on the mainland. They too incurred the wrath of ranchers and the government.

Band IV

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Since the members of this band were, by choice, inhabiting an inland area of Tiburon Island, they lived in relative isolation as hunters and gatherers. Their primary contacts were with members of Band III with whom they intermarried.

[361]
[582]

BAND V

642 These people were apparently hunters, gatherers, and fishermen. It is said that they speared fish from the shore since they did not use *balsas*. They too apparently raided the ranches. Their warring nature has already been discussed; it resulted in the acquisition of few friends. However, several marriages between members of this band and members of subdivision 2 of Band III are said to have occurred.

BAND VI

The members of Band VI lived on San Esteban Island and were the most primitive of the tribe. They lived in huts made of driftwood and in caves and made extensive use of the balsa. Although they did not have the bow and arrow, they did become expert in the use of the spear. The people depended mainly on a seafood, iguana, and maguey diet.

621 Perhaps it was due to the confined living space on the small island with the accompanying lack of fresh water that relations between the four subdivisions were precarious and fights broke out frequently. The Seri today stress the fact that the members of this band were impetuous and unpredictable.

642 Their relations with the other bands were generally good however. Seri from Band III were free to visit San Esteban where they were well treated.

The San Esteban people seldom traveled to the mainland, and, since they spoke no Spanish, it is probable that they made no peaceful contact with non-Seri groups.

642 COLLAPSE OF THE BAND SYSTEM

628 Internal strife in the Seri tribe was probably a major factor 578 in the establishment of the band system. External strife was a 648 major factor in its downfall.

Reference has been made to the plundering, killings and rustling of cattle to which certain of the bands were dedicated. The concern of the Sonora government was aroused, and steps were taken to crush the rebellious groups. According to the present-day Seri, military action by army units and rancher outfits against the various bands resulted in the near-destruction of the whole tribe.[11]

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BAND V

It was stated above that this band fought with Band II and 628
then with Band I. Since Band V was likely killing cattle, they 648
also may have been harassed by soldiers. Eventually Band V [425]
abandoned its territory near Punta Tepopa and headed south [131]
along the coast to a camp near present-day Bahia Kino. From
this camp the entire group disappeared and was never seen again
by members of the other bands. The Seri of today believe that [173]
Band V either traveled inland or was destroyed by a non-Seri
force.

BAND II

642
These people were rustlers and marauders. Government inter- 648
vention in the situation was inevitable. The Seri recount the 726
following final encounter between this group and the government
forces.

The entire remaining membership of Band II was hiding out in a nearly inaccessible swamp thicket at Bahia Kino. Knowing that an armed force of soldiers and ranchers was searching for them, the people left their camp to seek safety elsewhere. Almost immediately they were attacked by the superior armed force which proceeded to wipe out the whole group. A youth who had avoided capture is said to have reported the affair to the Seri on Tiburon Island. This event may have occurred during the Encinas [105]
Wars fought from 1855 to 1865.

BAND VI

642
The members of this band on San Esteban Island were little 648
interested in the mainland and did not participate in the raids on 727
man and livestock there. Nevertheless, they were to share in the [721]
severe punishment meted out to the bands guilty of multitudi-
nous depredations.

Sometime after the massacre of Band II, a ship arrived at San Esteban, and many of the people were induced to go aboard. The rest of the inhabitants followed the ship to a camp on the eastern side of Tiburon Island where they were to receive gifts. As the people congregated, they were herded into a stone corral. Apparently, some of the San Esteban men were killed at this time. The rest of them, along with the women and children, were taken to Santa Rosa point on the mainland. Here, the Seri say, more of the men were killed. The remaining men were strung together by wire and led away, never to return.

The San Esteban women and children, along with some Tiburon Island women and children (of Band III), were taken in

642 648 727 the vessel to Guaymas. With the aid of a group of Yaqui, some of these women were said to have been permitted to go to Hermosillo and eventually to return to their home on Tiburon. Others of their group are said to have remained near Guaymas. The women who returned to Tiburon reported that the San Esteban women and children were put aboard another ship which sailed southward.

BANDS I, III, AND IV

642 648 72 As opposition from the Papago and government forces increased, the members of Band I were forced to seek refuge on Tiburon Island. The mainland members of Band III (subdivisions 11 and 12) were also forced, especially during the Encinas Wars, to flee to Tiburon. There the combined forces of Bands I, III, and IV sought to cope with the military expeditions sent out through the years to exterminate them. Tiburon Island is an adverse battlefield for the uninitiated; some expeditions were turned back due to lack of potable water or because of failure to make contact with the enemy in the mountainous terrain. Some expeditions did encounter the Seri, however, and many natives were either killed or captured.

642 648 178 [161] [618] Through the years, then, these military encounters, along with smallpox and measles epidemics, were responsible for reducing the Seri tribe to a small remnant. The band and clan systems lost their functional relevance as the people continued to live together for mutual protection. Shortly after the turn of the century, the expeditions and raids had practically ceased.

642 178 611 591 SIGNIFICANCE OF BANDS TODAY

With the dissolution of the band system, the rule of descent shifted from patrilineal to bilateral, and the rule of residence shifted from patrilocal to neolocal.

621 642 178 423 [428] [583] Although the substance of the band system is no longer a reality, the concept of land ownership still remains. A young Seri of today may choose to be associated with either the *i?iziiting* of his father or that of his mother. He is said to inherit part ownership of the area. It is recalled by one informant that in former times ownership of a mountain was especially important. Sometimes ownership of a mountain was included as part payment for a bride. Thus a person might 'own' a mountain in a subdivision other than his own.

231 552 178 A custom exists even today whereby a person names his dog after a mountain or other geographical point located in his subdivision. Although the person may re-use the name, each dog so named must be of the same sex as the first.

so named must be of the same sex as the first. The significance of land ownership needs further investigation.

Many of the Seri still prefer, when possible, to live in their chosen band area. Sometimes a person, when he is approaching death, will ask to be taken to his own i?iziiting, where he can die and be buried in the area of his choice.

NOTES

1. Due to printing limitations, stress on Seri words has been omitted, and several orthographic symbol changes have been made for this paper. The phonetic values of the symbols used are the following: p is voiceless labial stop; t is vl. dental stop; k is vl. velar stop; ? is glottal stop; f is vl. labial flat spirant; ɯ is vl. labial grooved-rounded spirant; s is vl. alveolar spirant; x is vl. alveo-palatal spirant; l is vl. lateral spirant; h is vl. velar spirant; x is vl. back velar spirant; m is labial nasal; n is dental nasal; ŋ is velar nasal; y is palatal semivowel; i is a high close front vowel; e is a low close front vowel; a is a low open central vowel; o is a mid close back vowel.

2. These data were compiled during field trips to the Seri camps during the years 1956-61, the studies being carried out under the auspices of the Summer Institute of Linguistics. The principal informant was R. Herrera T. whose information was checked with and supplemented by nine of the older members of the tribe. I am indebted to my colleague, David Thomas, who read an earlier draft of this paper and made helpful suggestions.

3. 1) W. J. McGee, "The Seri Indians," *Bureau of American Ethnology, Annual Report*, No. 17, Part 1. Washington, 1898. 2) A. L. Kroeber, "The Seri," *Southwest Museum Papers*, No. 6. Los Angeles, 1931. 3) W. B. Griffen, "Notes on Seri Indian Culture, Sonora, Mexico," *Latin American Monograph Series*, No. 10. Gainesville, 1959.

4. It will be noted that between subdivision 3 and 4 on Fig. 3 there is an unnumbered area, the status of which is uncertain.

5. Kroeber states that McGee's concept of Seri maternal lineages crystallized into totemic clans with matron rule seem a fantasy. In Kroeber's opinion, "The Seri may never have had sibs or clans; but the fact that they appear to lack them now is no positive evidence that they were without them three centuries ago. Shifts of residence, contraction of territory, shrinkage of numbers, amalgamation of distinct bands, may well have obliterated much of such social fabric as they once possessed."

Griffen discusses the nature of the former Seri bands and states, "they may have been patrilineal and exogamous. The criteria . . . that Julian Steward has exposited for the formation of exogamous, patrilineal bands . . . are and presumably would have been met formerly in the Seri habitat." Griffen lists other aspects of this type of band which are also verified to some extent by his data. From reading his material, it is obvious that he suspects the existence of clans at some earlier period. He emphasizes the need for further investigation.

6. G. P. Murdock, *Social Structure*, Macmillan Co., New York, 1949.

7. Marriages were usually contracted within the band.

8. As Kroeber points out, their memory likely covers only the latter part of the period of Spanish contacts.

9. The Seri recall nothing of Seri-Pima contacts and little of Seri-Apache relations.

10. The story is related that one day some Seri entered a cave where they found several Papago jugs filled with seeds. Being hungry, the people ate the seeds and left some arrows as token payment. The Seri say that the Papago apparently believed the arrows were intended as an insult. Fighting broke out soon afterward.

11. The Seri concept of the band annihilations is seen to be in contradiction to McGee's statement (p. 132): "Concordantly with their primary characteristic, the Seri have avoided ethnic and demotic union beyond the narrow limits of their own kindred; and even of these they seem to have cast out parts, annihilating the Guayma and Upanguayma, displacing and nearly destroying the Tepoka, and outlawing individuals and (apparently) small groups."

11: Moser, Edward.

rather than 614; this in contrast to other sources in this file where given less specific information similar data have been placed in the 614 category.

Footnotes appearing in the text will be found at the end of the source in category 116, p. 27.]

Field date: 1956-1961
Analyst: Gilbert Winer

Evaluation: Linguist-5
Processed in 1967

11: Moser

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619

/For information on the organization of the Seri into bands, see category 642./

12: Moser L-5 (no date) 1964
(ca. 1960) NU31 Seri NU31

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[Title Page]

12: Moser L-5 (no date) 1964
(ca. 1960) NU31 Seri NU31

SERI BLUE

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ABSTRACT

The blue which the Seri Indians of Sonora, Mexico, use in face painting is not the mineral dumortierite, as previously believed, but is a prepared pigment. This paper is a description of the process in which three elements are combined to produce this pigment.

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McGee and Kroeber reported the mineral dumortierite as the source of the blue pigment used in Seri face painting (McGee 1898: 165-6; Kroeber 1931: 27). Coolidge described two blues, one a mixture of gypsum and a boiled root, the other a blue stone found on Tiburon Island (Coolidge 1939: 200). Xavier mentioned dumortierite and commercial bluing. She also referred to a third blue obtained from a plant on Tiburon (Xavier 1946). Present investigation has shown that as far as the Seri know, the only blues they have ever used are *ika?óil* "to cause to be blue" (commercial bluing) and the highly prized *?antezj kóil* "blue clay" of their own manufacture.[1]

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The components and the method of manufacture of *?antezj kóil* are said to have been taught to the women long ago by *?ant i?akímxoj* "they who tell the things about the earth." The actual color transformation is veiled in mystery to the Seri who say that if the process of making the clay is observed by any girl who has not passed the menarche, the blue will not appear. Its appearance is not attributed to shaman power, however.

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?antezj kóil has been in less demand during the last few decades since commercial bluing has been readily available. Nevertheless, *?antezj kóil* is the blue preferred by those women who continue to adorn their faces in the traditional manner.

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The three ingredients used in making the blue clay are the root bark of *xkoktz (Franseria dumosa)*, *iki kóizj* "to grind with" (a mixed clay in which montmorillonitic layers predominate), and *mokni óoxW* "excrement (sap) of *mókni (Guaiacum coulteri)*." The Seri say that the *iki kóizj* and the *mókni* are found only on Tiburon Island. The root bark of *tinkl (Franseria ambrosioides* Cav.) or of *xneejan siiktoj (Stegnospermum halimifoliam)* can be used instead of *xkoktz*. *tinkl* gives a distinct aroma to the clay. The plants mentioned are fairly common along the Sonoran coast.*

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*EDITOR'S NOTE: It is interesting to note that none of the ingredients is blue in its unaltered state.

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Recently I observed the manufacture of *?antezj kóil* in Desemboque, Sonora. Although the woman involved normally makes the clay in complete privacy, she agreed to let me watch. Seven young men and two young women were near a fire outside her hut as she seated herself on the ground behind a water drum. As she began to work she cautioned them not to watch.[3]

She commenced by scraping several roots of *xkoktz* to remove any dirt and then moistened them with water. Using a mano and metate, she split the bark and removed it. The rest of the root was discarded. She then pounded the bark into a pulp, moistening it at the same time with more water (Fig. 1). This pulp was put in a cup and set to one side.[4]

Next she ground several small chunks of *iki kóizj* into a fine powder. Then she placed a piece of hard *mokni óoxW*, the size of a marble, on the white powder. At this point she told her daughter, one of the two young women, to bring her a clean white rag and a blanket. After again warning the young people to stay away, she covered herself and her metate with the blanket, leaving only a small opening by her shoulder through which I could observe. The warning was heeded by all of the youths except the daughter who came over once to take a peek. The group remained interested, and several times someone asked, "Is it blue yet?"

Beneath the blanket, the woman ground the *mokni óoxW* into the *iki kóizj*, mixing the powders thoroughly. After scraping the mixture to one side of the metate, she wrapped the bark pulp in the white cloth and squeezed approximately ½ teaspoonful of liquid onto the center of the stone. Then she combined some of the powder with the liquid and ground the resultant paste for about ten minutes. As necessary, she added more powder or liquid to the mixture. Finally she daubed a streak of the clay onto the back of her hand, withdrew her hand into the sunlight, and remarked that it was beginning to turn blue. At that time it was a grayish-blue. She continued to work for several more minutes and then tested the color again. This time she seemed satisfied that it was the right shade. It was now a bright, or as she put it, a strong blue. This was the *?antezj kóil*, the prized blue pigment (Fig. 2).

The making of the *?antezj kóil* is followed immediately by the making of a second portion of clay, called *?a?óoskl*, which is a lighter shade of blue. Thus its name, the root meaning of which is "drab or grayish." *?a?óoskl* is considered to be inferior to the *?antezj kóil*. After the woman had scraped the finished *?antezj kóil* from the metate and mano and transferred it to a saucer, she added more ground *iki kóizj* to the small amount of remaining

FIG. 1. Crushing the root bark of zkoktz (*Fraxserria dumosa*), to a pulp. Note the pieces of root in the left foreground, the little pieces of mákni óoxW sap (*Guaiacum coulteri*) in the center foreground, and the chunks of mineral in the right foreground.

FIG. 2. The first or brighter batch of blue pigment, ?oxterj hóll.

powder mixture and combined this with the blue clay remains on the metate. She then squeezed a few more drops of liquid from the cloth-covered bark pulp onto the powder and resumed the grinding and mixing. After working several minutes she scraped up the second batch of clay and placed it opposite the *?antezj kóil* on the saucer. Only then did she drop the blanket and display the results of her work. The pastes were soft and sticky, and the difference in the shades of blue was noticeable. She said that on the following day she would form the clay into the proper shapes.

The next day she kneaded and molded each of the two masses, which by that time had dried enough to be workable. She molded the *?antezj kóil* into two capsule-shaped pieces, each about an inch long and tapered at both ends. The *?a?óoskl* she molded into a disk about one-fourth inch thick and almost an inch in diameter (Fig. 3). The different shape permits it to be distinguished from the *?antezj kóil*. Although both blues are made at a single sitting, the process is spoken of only as "making *?antezj kóil*."[4]

FIG. 3. The two capsule shaped pellets are *?antezj kóil*. The disk-shaped pellet is *?a?óoskl*.

To use the clay as paint, a bit of water is placed on a stone and the clay is rubbed into it to make a paste. It is then applied to the face (Fig. 4). It spreads smoothly and adheres firmly to the skin. The blue was formerly used for decorating pottery, clay figurines, headdresses, fetishes, arrows, wrist guards, and cane gaming sticks, as well as for face painting. In curing the sick, the shaman sometimes used the blue for painting crosses on the patient's chest. Also, women made necklaces using beads formed from the blue clay.

386 [302] [531] [765] [301]

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FIG. 4. Painting the face with ...e finished pigment.

12: Moser L-5 (no date) 1964
(ca. 1960) / NU31 Seri NU31

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ACKNOWLEDGMENTS

I am indebted to Richard Felger, Department of Zoology, University of Arizona, for information concerning plants referred to in this article. H. Wesley Peirce of the Arizona Bureau of Mines identified the mineral material used in the pigment.

NOTES

104 386 114 1. The phonetic values of the symbols used are the following: t is voiceless dental stop; k is vl. velar stop; ? is glottal stop; W is vl. labial grooved-rounded spirant; s is vl. alveolar spirant; z is vl. alveo-palatal spirant; l is vl. lateral spirant; j is vl. velar spirant; x is vl. back velar spirant; m is labial nasal; n is dental nasal; i is a high close front vowel; e is a low close front vowel; a is a low open central vowel; o is a mid close back vowel.

386 784 881 2. The restriction as stated to me by various women pertains only to young girls below the age of menarche. Actually, however, none of the above-mentioned young men and women, most of them in their twenties, was allowed to observe.

126 3. Plant specimens are deposited in the Herbarium of The University of Arizona.

386 114 4. The blue "pencil" which McGee describes (McGee 1898: 166) and pictures (McGee 1898: Plate XXVII facing p. 170) is apparently the ʔantezj kóil.

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[For the use of various plants and minerals in the preparation of ?antex) kóil or blue clay used in Seri facial ornamentation, see category 386.]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

105 sepulture. There is a weird, formal mourning for dead matrons, and suggestions of fear of or veneration for the manes.

172 Seriland is surrounded with prehistoric works, telling of a numerous population who successfully controlled the scant waters for irrigation, built villages and temples and fortresses, cultivated crops, kept domestic animals, and manufactured superior fictile and textile wares; but (save possibly in one spot) these records of aboriginal culture cease at the borders of Seriland. In their stead a few slightly worn pebbles and bits of pottery are found here and there, deeply embedded in the soil and weathered as by the suns of ages. There are also a few cairns of cobbles marking the burial places, and at least one cobble mound of striking dimensions but of unknown meaning; and there are a few shell-mounds, one so broad and high as to form a cape in the slowly transgressing shoreline (Punta Antigualla), and in which the protolithic implements and other relics are alike from the house-dotted surface to the tide level, 90 feet below.

The absence of relics of a superior culture, and the presence of Seri relics throughout deposits of high antiquity, suggest that the tribe is indigenous to Seriland; and this indication harmonizes with the peculiar isolation of the territory, the lowly culture and warlike habits of the people, the essentially distinct language, the singular marriage custom, and the local character of the beast-gods. And all these features combine to mark the Seri as children of the soil, or autochthones.

Recent Explorations and Surveys

114 Present knowledge of Seriland and its inhabitants is based primarily
121 on the work of two expeditions by the Bureau of American Ethnology,
[122] conducted in 1894 and 1895, respectively; and, secondarily, on researches into the cartography and literature (descriptive, historical, and scientific) of the region. Both of the expeditions were projected largely for the purpose of making collections among little-known native tribes in the interests of the National Museum, and the general ethnologic inquiries were ancillary to this purpose.

The 1894 expedition was directed chiefly toward work among the Papago Indians in the vaguely defined territory known as Papagueria, lying south of Gila river and west of the Sierra Madre in southwestern Arizona and western Sonora (Mexico). Outfitting at Tucson early
[122] in October, the party moved southward, visiting the known Papago rancherias and seeking others, and thus defining the eastern limits of the Papago country. On the approach to the southern limits of the tribal range toward Rio Sonora, the evil repute of the Seri Indians sounded larger and larger, suggesting the desirability of scientific study of the tribe; and it was decided to attempt investigation. Accordingly the party was reorganized at Hermosillo, and, with the
114 sanction of the Secretary of State and Acting Governor, Señor Don Ramón Corral, proceeded to Rancho San Francisco de Costa Rica,

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

where a temporary Seri rancheria was found occupied by about sixty of the tribe, including subchief Mashém, who speaks Spanish. In this part of the work the expedition was accompanied by Señor Pascual Encinas, the owner of the rancho visited, and doubtless the best informed white man concerning the habits, customs, personnel, and habitat of the tribe. About a week was spent in intercourse with the occupants of the rancheria, when the studies were brought to an end through the illness of Señor Encinas, and the consequent necessity for return to Hermosillo. The expedition then proceeded northwestward and northward along a route so laid as to define the western limits of Papagueria proper, and reached Tucson near the end of the year. In addition to the leader, the party comprised Mr William Dinwiddie, photographer; José Lewis, Papago interpreter, and E. P. Cunningham, teamster. The outfit was furnished chiefly by Mr J. M. Berger, of San Xavier (near Tucson). On the visit to the Seri frontier the party was accompanied by Señor Encinas, Don Arturo Alvemar-Leon (who acted as Spanish interpreter), and two or three attachés of Molino del Encinas.[1]

The second expedition was directed primarily toward investigation of the Seri, and only incidentally to continuation of the researches among the Papago. Outfitting at Tucson in October (again with the aid of Mr Berger), the expedition proceeded southward by a route different from those previously traversed, and carried forward a plane-table route survey covering a considerable zone from the international boundary at Sasabe to Rio Sonóra. Descending the previously unmapped course of Rio Bacuache, the expedition reached the Rancho de San Francisco de Costa Rica on December 1, 1895, and, although conditions were found unfavorable in that the Seri were on the warpath, immediately prepared for the extension of the work into Seriland.

A preliminary trip was made into the mainland portion of the Seri habitat, terminating at the crest of Johnson peak, the highest point in Sierra Seri. The triangulation and topographic surveys were carried over the territory traversed, and several points were fixed on Isla Tiburon; but the natives, agitated by a skirmish with vaqueros on the frontier a day or two earlier, had withdrawn to remoter parts of the territory, and were not encountered. The party returned to Costa Rica, a rude boat was completed, transported across the desert via Pozo Escalante to Embarcadero Andrade, and launched in Bahia Kunkaak. The surveys were extended to the southern portion of Sierra Seri and Isla Tasajo, and, after various difficulties and delays due to dearth of fresh water, to gales, and to other causes, the party (enlarged for the purpose) finally landed on Tiburon. Many Seri rancherias were found on

[1] The more noteworthy details of the organization and work of the two expeditions are set forth in the administrative reports of the Bureau for the fiscal years 1894-95 and 1895-96. Certain members of this party are shown in the accompanying half tone, forming plate II: Señor Encinas seated at the end of the table; his son, Don Manuel (bareheaded), and Don Ygnacio Lozania at his right, a grandson behind him, and Señor Alvemar-Leon seated at his left, with Mashém kneeling over the table in the foreground.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

teeth (such as that of Jesus Omada) passed from mouth to mouth until—incredible as it may seem—the more timid Sonorenses stood in greater dread of these natural weapons of the Seri than of their brutal clubs and swift-thrown missiles, or even of their poisoned arrows; while traditions of cannibalism came up and received such general credence that the current items of Seri outrages, both in local gossip and in the Mexican and American press, customarily recounted savage butcheries ending with gruesome feastings on the raw or slightly cooked flesh of the victims. The shuddering antipathy felt for the perpetrators of these inhumanities even a thousand miles away increased toward their frontier, as light toward its source; the dread was deepened by the failure of punitive expeditions sent out again and again only to be balked by waterless sand-wastes or wrecking tiderips; and in 1894 and 1895, at least, the horror of the Seri was a daily and nightly incubus on half the citizens of Hermosillo and the tributary pueblos and ranchos, and a thorn in the flesh of the state officials.

The external history of the Seri since the spring of 1894 is fairly known, both through the direct researches and through press reports, and would seem to be typical. This era may be assumed to open with the arrival on Tiburon's shores of the sloop *Examiner*, carrying two San Francisco newspaper writers, Robinson and Logan, with two assistants, Clark and Cowell. The to-have-been-expected happened duly, save that two of the party escaped, and on reaching Guaymas advertised the disaster through correspondence and the press. Several of the accounts indicated that the two victims were not only slain but eaten, and various plans were laid in California, Arizona, and Sonora for the recovery of the bones[1]—as if, forsooth, the omniverous and strong-toothed Seri spared anything save scattered teeth and split sections of the longer shafts of skeletons the size of those of *Homo sapiens*. While in Guaymas the two survivors set up claims for indemnity, which initiated international correspondence and inquiry into the details of the affair. These details are indicated, in sufficient fulness for present purposes, in a formal communication incorporated in the international correspondence, viz:

SMITHSONIAN INSTITUTION,
BUREAU OF AMERICAN ETHNOLOGY,
Washington, December 14, 1894.

SIR: Early in November I visited the Seri tribe of Indians, inhabiting Tiburon Island in the Gulf of California and an area of several thousand square miles of the adjacent mainland in Sonora, Mexico. The visit was for the purpose of making collections under your authority as Secretary of the Smithsonian Institution; but I availed myself of the opportunity for obtaining additional information relating to the customs, habits, and history of the tribe. In addition to my own party I was accompanied by Señor Pascual Encinas, a prominent citizen of Hermosillo, and

[1] A number of Californians and Arizonians, especially M. M. Rice, of Phenix, intimated a strong desire to join the 1895 expedition of the Bureau of American Ethnology for the express purpose of personally ascertaining the fate and seeking the remains of Robinson, who was extensively known in southern California and southwestern Arizona.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

614 earlier paragraphs (pp. 164–169); these symbols evidently represent an
[302] exclusively maternal organization into clans consecrated to solo tutelaries. The tutelaries, or totems, together with the clan names and all personal designations connected with the totems, are highly esoteric, and were not ascertained save in the few cases mentioned above.[1]

593 It should be observed that the identification of kindred by the alien observer is difficult and somewhat uncertain, since the relationships recognized in Seri society are not equivalent to those customary among Caucasians. It was found especially difficult to identify the husband
[582] of the jacal, partly because he is commonly incongruously younger (and hence relatively smaller) than the mistress, and partly because of the undignified position of outer guard into which he is forced by the tribal etiquette. Moreover, his connection with the house is veiled by the absence of authority over both children and domestic affairs, though he exercises such authority freely (within the customary limits) in the
[842] jacales of his female relatives. There is, indeed, some question as to the clear recognition of paternity; certainly the females have no term
601 for "my father", i. e., the term is the same as that for "my mother", *em*, though the males distinguish the maternal ancestor by a suffixed syllable (*e-m*="my father"; *e-ta* or *ĕ-tak*="my mother"), which seems to be a magnificative or an intensificative element. It is noteworthy that the kinship terminology is strikingly meager; also that while the records suggest various significant points, the material is hardly rich enough to warrant complete synthesis of the consanguineal system.

421 While the burden of the more permanent property pertains to the women, there is a decided differentiation of labor with a concomitant vesting of certain property in the warriors—the distinctively masculine chattels comprising arrows, quivers, bows, turtle-harpoons, etc. There are indications that the balsas, too, are regarded as masculine property. The impermanent possessions—water, food, etc—seem to be the common property of men, women, and children, except in so far as the
[264] right is regulated by regimentation; for the privileges of eating and drinking are enjoyed in the order of seniority. In the reckoning of
554 seniority, the chief (who is comonly such in virtue of his position as
602 nominal elder brother of a prolific dame) ranks first, and is followed by other warriors in an order affected in an undetermined way by conjugal relations as well as by their prowess or sagacity (the equivalents of age in primitive philosophy) down to an undetermined point—apparently fixed by puberty; then comes the clanmother, followed by her daughters in the order of nominal age, which is affected by the status of spouses and the number of living offspring; finally come the children, practically in the order of their strength (which also is deemed an equivalent of age), though the girls—especially those

[121] [1] The chief object of the 1895 expedition was to pursue the inquiries concerning social organization, totems, etc; but, as mentioned elsewhere, this object was defeated by the troublous history of the tribe during the earlier part of 1895, and the consequent revival and intensification of their animosity toward aliens.

2: Kroeber E-5 (1930) 1931 NU31 Seri NU31

[p.3]

THE SERI

By A. L. Kroeber, *University of California*

Introduction

The present paper is the first product of field studies made between January and March, 1930, in Arizona, Sonora, and Sinaloa, under a joint expedition of the Southwest Museum, Los Angeles, and the University of California. The financial contribution of the University was the gift of Mrs. Ethel W. Crocker. While the purpose of the trip was to define rather than solve problems, the following pages contain part of the positive observations obtained.

The Seri, who live on Tiburon Island, Sonora, in the Gulf of California, are often considered the wildest and most primitive tribe surviving in North America. They owe this repute partly to McGee's monograph about them, in the Seventeenth Annual Report of the Bureau of American Ethnology. It is easy to read between the lines of this description that McGee leaned toward a romantic and imaginative interpretation of the Seri. Also, his actual contacts with the people themselves were brief, and hampered by imperfect communication. Moreover, the Seri have been for three hundred years in contact with Spaniards and Mexicans, part of the time even under direct mission control. It therefore seems doubtful whether their backwardness could be the result wholly of preserved primitiveness, and may not rather be attributable to a recalcitrant degeneration. In order to answer this question, and to place Seri culture at least tentatively among the other tribal cultures of the Southwest instead of leaving it as an unexplained and lurid abnormality, a brief visit to them was undertaken.

The success of this visit was due wholly to Sr. Roberto Thomson of Hermosillo and Rancho San Rafael, who is now the Mexican Government's *Jefe de Vigilancia* for the Seris, and in effect what in the United States would be known as Indian Agent for the tribe. He has protected and befriended them, kept them in turn in bounds, and secured some governmental assistance for them, under which they are making a beginning of adaptation to the modern world. At any rate, the mutual raidings and killings have stopped, and the Seri, though still very suspicious of most of the neighboring settlers and of strangers, look upon Sr. Thomson as their protector and friend. Without his introduction and experience, many less data could have been collected in a longer stay.

The Seri now live wholly on Tiburon Island. I was with them six days, half of them on the island. This is about as long a time as McGee spent with them—all of it at the cattle ranch of Costa Rica. McGee also explored the island and its camps at some length, but without encountering any Seri, who eluded his party.

Inasmuch as Mr. Edward H. Davis of Mesa Grande, California, has three times visited Tiburon to form an ethnological collection for the Museum of the American Indian, Heye Foundation, I attempted no examination of Seri material or economic culture, which Mr.

2: Kroeber E-5 (1930)1931 NU31 Seri NU31

Davis has had fuller opportunity to investigate, but confined my attention to the social and religious sides of their life. There was the more reason for this since it is in dealing with these latter aspects, where verbal communications are as important as observation, that McGee's monograph is most tenuous and dubious. I also secured linguistic notes for the preliminary placing of the curious tonal speech of the Seri.

Seri culture in its present form is a fragmentary thing such as could hardly have existed under purely native conditions. Religion especially has suffered, no doubt under Christian influence, without many elements of Christianity having been taken over in exchange. Of mythology, only tatters seem to remain; of ritual, little more; only shamanism seems to be fairly well preserved. Nor, beyond the Spanish names for God and the cross, do the Seri give evidence of being or having been Catholics. The result is that they seem remarkably religionless. I do not know of a native people that appears so free from superstition and so unspiritual in its attitudes. Possibly I conferred with the wrong informants; but those I talked with seemed unsecretive. Social culture is better preserved, as is evident from a set of kinship terms that are numerous, precise, and untouched by Spanish concepts. On the other hand, there is little formal social organization. Whether this is also the result of a loss, is hard to say. The Seri may never have had sibs or clans; but the fact that they appear to lack them now is no positive evidence that they were without them three centuries ago. Shifts of residence, contraction of territory, shrinkage of numbers, amalgamation of distinct bands, may well have obliterated much of such social fabric as they once possessed. Games and the calendar are wholly native and intact, but taboos connected with sex, age, food, and the like seem fewer than among the backward tribes of the southwestern United States. It seems reasonable to construe this condition as the result of varyingly hostile, parasitic, and missionizing Spanish-Mexican contacts; especially when one realizes how overwhelmingly, though also spottily, this influence has affected the other tribes of Sonora—the Yaqui, Mayo, Pima, and Opata.

Historically the Seri are not a tribe but the consolidated remnant of a series of dialectically distinct tribes that once held the barren coast of Sonora from Guaymas to Puerto Libertad. Tiburon Island is the stronghold in which the mixed survivors, probably now numbering less than 200, have taken refuge, and, owing to its inaccessibility, drought, and poverty, have succeeded in maintaining themselves and their blended and reduced culture. Toward the interior, it is doubtful if they ranged beyond the present line of the Southern Pacific railroad, if that far. Orozco y Berra indeed assigns them territory up the Sonora River to Ures, on his famous map, which is still basic to all other ethnic maps of Mexico. But from Hermosillo

2: Kroeber E-5 (1930)1931 NU31 Seri NU31

are inconclusive. Some of the outstanding speech similarities and differences are given in a section of the present paper; a fuller presentation will be made in a subsequent classification of the Yuman languages.

The Yuman tribes of the United States are better known, and there are published or collected accounts of the Diegueño, Kamia, Cocopa, Yuma, Mohave, Maricopa-Halchidhoma, Yavapai, Walapai, and Havasupai. These fall into two groups, culturally: the farming tribes of the Colorado (and Gila) bottomlands, and the gathering tribes of the desert and semi-desert of Arizona and southern California, the latter again affiliating with those of northern Baja California, such as the Kiliwa and Akwa'ala-Paipai. As might be expected, it is the desert Yumans of Arizona who show the greater number of resemblances to the Seri and fewest differences.

The Pima as the immediate neighbors of the Seri, and the Opata and Cahita tribes beyond, ought to show many similarities with the Seri, plus differences due to their agriculture and activities like weaving which are normally encouraged by sedentary habits.

Such are some of the indications as to the history of the Seri and their culture, as discussed more in detail below so far as the preliminary data available allow. Further and intensive investigation is obviously needed. On the side of material life, Mr. Davis' studies ought largely to fill the need. For social and spiritual culture, the work will be difficult. It is not that the Seri are unwilling, but that they are inaccessible and hard to communicate with. The obvious procedure would be a study of their speech until it served as a medium. In that way both their language and their culture could be recorded hand in hand. But the obstacles are numerous. The island is thirty miles long by twenty wide. There is not a roof on it. The six summer months are extremely hot, and, along the coast, said to be almost insufferable from gnats and mosquitoes. Most of the few water holes are inland; the Seri live, except during the cactus and mesquite harvest, scattered in small settlements along the shore, often several miles from water. There is no communication across the strait, except by open boat, subject to weather conditions; and then it is twenty miles to the nearest house and a hundred to a town. Life on the island would be both harsh and monotonous to an unusual degree. Nor can the Seri as yet be studied by taking one or two of them to civilization for a prolonged stay. They soon become restless and homesick. Added to all this is the fact that their Spanish, though reasonably fluent in some cases, is ungrammatical, and would hardly serve for securing paradigms or accurate translations of texts; and while able to endure hardships, the people are not accustomed to steady work or mental concentration. The difficulties would not be insuperable, when the destined linguist-ethnologist undertakes the task; but he should not under-rate them.

2; Kroeber E-5 (1930)1931 NU31 Seri NU31

197 174 On the other hand, if the hypothesis were true that the Seri reached their historic habitat from across the Gulf, they would have come from territory which in recent times was Cochimí, and their presumably closest relationship would be with these former neighbors, and only indirectly with the other Yumans. Thus the line of affinity would be Seri-Cochimí-main Yuman.

192 197 It is to test these two alternative hypotheses of Seri origins that the accompanying comparative vocabularies of Seri, Cochimí, Yuma, and Cocopa have been selected. They are limited because the only material pertinent to the problem at issue is stems represented in all three linguistic groups; and both the Seri and Cochimí data are scant. A number of words of the same meaning differ completely in the three groups—in their surface appearance at any rate—and have therefore been omitted as irrelevant. The residue consists of 33 Seri words which show more or less resemblance to the corresponding Cochimí or Yuman words or to both.

[121]

The Seri, Yuma, and Cocopa vocabularies were recorded by myself. Yuma and Cocopa represent distinct branches of Yuman. Cochimí 1 and 2 were recorded or copied respectively by W. M. Gabb in 1867 and by J. R. Bartlett about 1852, and are transcribed from photostat copies of the originals filed in the Bureau of American Ethnology and furnished through the courtesy of its Chief, Mr. Matthew Stirling. Both are entered on Smithsonian printed blanks. The Bartlett vocabulary is designated "from M. Robinia at Guaymas." It may represent a vocabulary taken down by Robinia from a Cochimí and given to Bartlett, or a record made by Bartlett from Sr. Robinia's memory of Cochimí. The words for two and three are identical, even in spelling, with those given by Clavigero. Those for one and man (tejeeg and tama in Clavigero) are different. The Bartlett vocabulary may thus not go back to a single native source.

The relations of the Cochimí dialects are not clear. To judge from the three Lord's prayers given by Clavigero, languages rather than dialects may have been involved. These prayers begin respectively pennayú nakaenamlá, ua-lappá anma-bang miamú, cahai apá amleing miá, and are attributed to latitudes 25°30'-26°, 28°, and 29°-31° in the peninsula. Gabb's entry for "my father" is ka-ai and for "sky" em-bai, which clearly correspond to Clavigero's northern Cochimí cahai (h silent in Spanish, usually a glottal stop) and ambei-ng ("in heaven"). Bartlett's dialect is not so easily identified. His word for father is calemlag, and his sky remains a blank entry. There are a few other identities with Clavigero, besides the numerals mentioned, but they are to words scattered in Clavigero's

2: Kroeber E-5 (1930)1931 NU31 Seri NU31

SUMMARY AND CONCLUSIONS

121 114 Knowledge of the Seri is still in its infancy. McGee's actual observations are excellent but slender in range. He has interwoven them with conjectures, some of which are erroneous and others unproved and doubtful. Intensive study of the Seri will be difficult, chiefly for physical and practical reasons, but, to judge from such explicit data as are in hand, should prove them to be a tribe unusually interesting indeed, yet fundamentally similar to others in the same region. So many of their known traits are shared with one or another of these tribes, that it is practically precluded that complete investigation will leave the Seri as a unique people or even as one set widely apart, except in their historical fortunes.

13 182 The most distinctive thing about the Seri is their environment. This is extremely arid and lacking in water supply, but not desert in the ordinary, untechnical sense. Botanists describe it as a succulent vegetation desert. It is fairly well stocked with food inland and rich in food along shore. This territory is able to support a fair sized population, but scatters it and keeps it from settling down. The land is also inhospitable and difficult to strangers who are not ready to adopt the Seri mode of life. This fact has helped preserve Seri ethnic integrity and culture to an unusual degree. A considerable fraction of original Serian territory is wholly unoccupied by civilization today, a full three centuries after its frontier was settled. The Indian neighbors of the Seri, all being farmers in fertile valleys, had no more incentive or ability than Caucasians to penetrate Seri territory sustainedly.

171 174 Across the Gulf, the peninsula of California presents a very similar environment, and was inhabited by tribes of very similar subsistence and residential habits, culture level, and temperament. But the Baja Californians differed from the Seri in being so situated, with reference to the rest of the world, that the length of the peninsula cut them off, except in the northern portion, from nearly all outside relations. Each group in the peninsula thus had contacts and stimuli only from others of similar culture. The Seri, on the contrary, having long been surrounded on the landward side by peoples of higher cultural level, were able to exploit this difference, in part by adopting cultural traits from their neighbors; and perhaps still more largely by preying upon them economically; while their habitat afforded them a refuge from destructive reprisals. Such may have been the condition in pre-Columbian days. At any rate it has been such since the coming of the Spaniards, and has made the "history" of the Seri different from that of the Baja Californians.

174 Three islands, Tiburon, San Estefan, and San Lorenzo, form stepping stones from Seri mainland to the peninsula. The water gaps between them are navigable to native craft and have been navigated

2: Kroeber E-5 (1930) 1931 NU31 Seri NU31

farm, but because they have secondarily specialized their culture away from the old Seri-Walapai substratum. 171

The Baja Californians must be reckoned as having participated in the same basal, low-level, desert culture, though of course, like every other people, with certain variants and developments of their own. That we can name fewer Seri traits in their culture than in that of the preceding groups, is probably due to the less store of our knowledge of them. More significant of relationship is the smallness of the number of Seri traits which they are known to lack. It is entirely possible that if there existed adequate information for both sides of the Gulf, Seri and Cochimi similarity would prove to be the closest of all. But at present this possibility cannot be either conclusively proved or disproved.

Seri similarities with southern and even central California are fairly numerous, and can be attributed partly to the common non-agricultural subsistence, which would tend to induce the adoption or retention of similar cultural traits. On the other hand, the basic farming life of the Opata, Mayo, and north Sinaloan peoples must have operated at many points in the opposite direction in spite of their geographical nearness. Pueblo culture is so highly specialized that its mass would expectably show little kinship to Seri, and such is the trend of the available comparative data.

The Seri thus relate culturally to other peoples much as might be anticipated from their geographical position and subsistence opportunities. The Seri problem consequently has to be removed from the category of those which hold out a hope or illusion of being particularly significant for the solution of basic questions or broad hypotheses. It is essentially a problem of specific local ethnography, with wider significances revealable only by impartial comparative studies; but of special interest because of the relatively well-preserved status of parts of old Seri culture and the human appeal of three centuries of outlaw history. The thorough study of this culture will involve much grinding physical hardship and possibly some danger. It is to be hoped that when the work is undertaken, it will not be in a spirit of personal adventure, with emphasis on the external difficulties to be overcome, but with a serious desire and competence to secure facts and understanding. 121

ABBREVIATIONS USED

AA—American Anthropologist. 113
AMNH-AP—American Museum of Natural History, Anthropological Papers. 128
BAE-B—Bureau of American Ethnology, Bulletin.
BAE-R—Bureau of American Ethnology, Reports.
JAFL—Journal of American Folk-Lore.
UC-PAAE—University of California, Publications in American Archaeology and Ethnology.

4:Malkin E-5 (1953-1955) 1956 NU31 Seri NU31

SERI ETHNOECOLOGY: A PRELIMINARY REPORT[1]

Beryx Malkin

121

In this paper I shall attempt to summarize briefly some of the possibilities inherent in ethnoecological studies. Ethnoecologies, published so far, have either stressed only the economic or medicinal uses of animals or have just included them as part and parcel of mythology and religion. The emphasis here, on the other hand, is primarily on the aboriginal knowledge of natural history and naturalistic concepts about animals. A comparison with the actual situation in nature will be frequently made in order to test the acuteness of the native observation.

This account is part of a wider comparative study in ethnoecology of several aboriginal groups. Additional field work has recently been completed among two other tribes, the Cora in Nayarit, Mexico, and the Sumu in northern Nicaragua.

Ethnoecological studies of such scope require much more extensive background in natural history than anthropologists or even zoologists today are likely to have. One has to deal with very diverse groups of animals and I have found my own knowledge of the subject repeatedly inadequate on many occasions. It is hoped that a study of this sort will attract individuals who will cover more satisfactorily the entire range of the animal kingdom.

Economic Uses

825 262 439

Almost all major classes of animals, with the exception of the insects, are used for food. Only a very limited number of species serve other purposes such as trade with the Mexicans. Among these are various species of large fishes, sea-turtles and a number of shells. None are used for the basic non-dietary products such as utensils, clothing, and other items of the material culture, for these are purchased ready-made in the local Mexican "tiendas" (small general store).

825 [439]

As a major source of income for their livelihood the Seris depend mainly upon a few commercially significant species of large fish and sea-turtles. Yet they do exploit a wide range of the animal environment as a source of additional food. Of the total number of species of animals[2] upon which information has been available, 45% were reported as economically exploited. The table below gives the breakdown of the major groups.

[p.73]

5:Dawson N-5 (1940) 1944 NU31 Seri NU31

DESERT
PLANT LIFE

SIXTEENTH YEAR NUMBER 9

LT. E. YALE DAWSON, A.A.F.
Scripps Institution
La Jolla, California

SOME ETHNOBOTANICAL NOTES ON THE SERI INDIANS

105 121 If the natural resources of a region may be said to reflect the degree of cultural and social development of its aboriginal people, we may easily understand why the Seris of Sonora, now approaching extinction and with much modified habits and culture, are considered the most primitive and savage of American Indians. Certainly the arid coast of Sonora, destitute [133] of water but for a few widely separated, stagnant holes, with a dry, rocky soil habitable only by the most frugal and thorny of desert vegetation, presents little in the way of resources to a native people. It was, indeed, [262] only along the ocean shore that the Seris found animal food sufficient to sustain them, principally, the sea turtle and the pelican. This food source proved adequate to support a tribe of some 2000 in pre-Columbian times, but the limited habitat of the pelican and turtle brought about extreme isolation of the people. Thirty-mile-long Tiburon Island became their principal home, separated from the mainland by the narrow but tempestuous channel, El Infiernillo, across which they frequently voyaged in their buoyant balsas to search out vegetal supplements to their monotonous sea food diet. It is this use of vegetable materials, not only as food but in other phases of the domestic economy of these people in earlier times, with which these notes are particularly concerned.

225 Primary occupation of the Seris aside from their continual movement to and from the water holes was, necessarily, their search for food, for they cultivated nothing and conserved little. Fish were exceedingly abundant in the waters around their island, but their very limited tool sense, pro- [227] viding them with almost no fishing devices, excluded much of this food from their diet. Clams and other shellfish were to be had, but it was the abundant green sea turtle, feeding upon luxuriant growths of marine grass, *Ruppia maritima*, in the shallow, sandy lagoons along El Infiernillo, that provided their meat staple. The turtles could be captured with ease during egg laying season as they crawled over the beach, but at other times they had to be 396 speared from a watercraft. No sizable timber grows in Seriland and before the advent of flotsam boards and hoop-iron it would have strained the

[89]

Seri Social Structure (1)

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1. The material presented here was collected on a three-week visit to the Seri zone, the costs of which were defrayed by the I.N.A.H. [Instituto Nacional de Antropología e Historia], for the purpose of planning later investigations. It took place in January, 1952, in the company of Mr. Paul Finninger of M.C.M. [Mexico City College].

121 The permanent system of interacting influences that is presented among the Seri is of great scientific interest for its extreme characteristics of geographic isolation, environmental hostility, poverty, and the small size of the community.

131 The Seri occupy coastal territory in Sonora on the Gulf of California; formerly they covered a territory that toward the end of the 18th century, along the coast extended from Guaymas Bay, including it, to Punta Peñasco and, on the mainland, included the area in the vicinity of the present city of Hermosillo. They have been reduced little by little, now occupying only some isolated points on Cape Tepoca, Desemboque, and Tiburón Island, places from which, in spite of their inclemency, they are also being displaced.

648 Until some 30 years ago, most of the contacts of the Seri with Western culture had been warlike, ferociously defending their skins from the attacks of the yori (Mexican) invaders. Their contacts with the natives have been with the Yaqui, Papago, and those of Santa Rosalía (crossing the gulf). It was not until about 20 years ago, when the establishment of fishing camps was initiated with mestizo capital, that a new orientation in the treatment of the Seri came into being. Existing side by side with them at present are various Mexicans who exploit the products of Seri fishing, and some scientific investigators, principally from the United States.

13 They form enclaves in the heart of Aridamerica, with its cactus, shrubs and grasses, without flowing water, and with abundant flying and, especially, marine fauna:

8: Ascher E-5 (1960) 1962 NU31 Seri NU31

Ethnography for Archeology: A Case from the Seri Indians[1]

Robert Ascher
Cornell University

● 121 Any case for close association among the branches of anthropology would surely include weighty arguments developed from comments on the relationship of ethnology and archeology. In one of his last collections of papers A. L. Kroeber (1957: 193) depicts interdependence of the two in terms of ultimate goals:

> It has become clear that in this matter of a reconstruction of the larger and long-range movements or developments in global human culture, the ethnographer or ethnologist needs the help of the archaeologist. The ultimate purposes of the two are the same: to discover the history or evolution of culture; but their instruments and methods are quite different. . . . The two approaches supplement each other so gratifyingly because they approach a common purpose with quite distinct methods.

In certain obvious areas archeology draws on general ethnographic information. The most elementary notions about behavior in ongoing nonindustrial communities form the implicit basis for all thinking about behavior founded on archeological evidence. From the vista of the urban mid-twentieth century, for instance, it would be difficult to imagine what existence was like in communities with but a single occupational specialty if it were not for ethnographies on food-gathering populations. Yet archeologists have expressed doubt concerning the utility of ethnography for archeology. What is the basis for this doubt?

By definition, archeological data consist of the results of human behavior. The initial objective of archeology is to reconstruct behavior from its results. In accomplishing this objective, the archeologist turns to descriptions of behavior and its products, where the products are similar to those which he excavates. Thus, by moving from the results of actions to actions which are known to yield similar results, it becomes possible to make statements about behavior in the absence of direct observation. To operate with this logic in such a way that the behavioral statements based on archeological data are reasonable, the correspondence between the results of observed behavior and archeological data must be high. The principal source for relevant descriptions is thought to be ethnography. Yet it is argued (Kleindienst and Watson 1956: 76) that ethnography is inadequate for archeological purposes because the literature describes either "ideal types without description of range of variation" or detailed material items without behavioral correlates, or because it describes no material items, i.e., no results of behavior.

8: Ascher E-5 (1960) 1962 NU31 Seri NU31

Elsewhere (Ascher 1961) I have disputed this portrayal of the potential of existing ethnography, citing examples where qualitative and quantitative models have been constructed from ethnography and suggesting that one task for archeology is to codify the literature in a manner useful to itself. Regardless of doubts about existing ethnographies for archeological purposes, the worth of future ethnography for archeology will depend on the acquisition of the relevant kinds of information. Although discussion on the subject has been recorded (Tax *et al.* 1953: 229-232), no specific guides have been produced. This paper provides and discusses an example, which can be used as a paradigm, model, or guide of the kind of information to be collected from ongoing communities which would be of general value for archeology. The subject culture is that of the Seri Indians of Sonora, Mexico; the example describes a persistent trait complex associated with fishing for the Pacific green turtle, with particular emphasis on one trait in the complex, the harpoon foreshaft.

Example from the Seri Indians

The Seri, who numbered approximately 200 individuals in 1960, occupy a band of coastal desert about four miles wide and seventy miles long in the state of Sonora in western Mexico. The band extends along the Gulf of California from Kino Bay in the south to Desemboque in the north, opposite the largest island in the Gulf, Tiburon. Although the region is desert, with an estimated average rainfall of less than eight inches per year, falling mostly in July and August, it is comparatively rich in succulents and small land mammals. The Gulf forms a natural trap for large fish and marine mammals and is a breeding ground for the Pacific green turtle. The scantiness of fresh water has constituted, in the past and present alike, the single crucial limiting factor to agriculture and human occupancy.

In the past the Seri may have comprised from four to six tribal groups, and they were certainly numerically larger, with a maximum estimated population of 2,000 (Kroeber 1931: 53, 30). Until very recently they also occupied Tiburon Island, and at some more remote period they extended south, north, and east over a territory whose bounds are uncertain (Kroeber 1931: 5). On the basis of linguistic change, Kroeber (1931: 54) calculated that the Seri could have inhabited this general region for 1,000 years. It is uncertain whether the original occupation stemmed from Baja California via the Gulf of California or from the north and west via an overland route or routes (Kroeber 1931: 39-51). The first contact with Europeans occurred as early as 1540 (McGee 1898: 51).

In culture content the Seri are most closely affiliated with the Pima (Kroeber 1931: 51), but they do not share the practice of agriculture with them or with their western neighbors. The Seri are primarily fishermen; secondarily they gather the fruits of succulents; and to a still lesser extent they hunt game. McGee (1898: 214)

8: Ascher E-5 (1960) 1962 NU31 Seri NU31

TABLE 1
Foreshaft Specifications

411
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Manufacturer	Plate Reference	Approx. Age of Artifact	Length of Hafting (Centimeters)	Length of Point (Centimeters)
Ernesto Dias	Ia	2	6.5	5.3
José Estorga	Ib	6	6.5	5.6
Francisco Garcia	Ic	4	6.5	5.8
Alberto Mendez	Id	5	5.8	5.7
Ignacio Molina	Ie	3	8.7	11.5
Louis Moreno	If	3	7.8	4.8
Ramon Perrales	Ig	3	7.0	4.4
Francisco Barnett	IIa	1	6.8	5.2
	IIb	2	6.4	5.3
	IIc	2	6.8	5.9
	IId	2	7.3	6.1
	IIe	–	7.7	5.8
Miguel Barnett		3	7.8	5.0
		3	6.0	4.9
		5	6.1	4.5
Ernesto Corrales		1	3.1	2.8
(8-year old boy)		1	3.0	4.2
Juan Moreno		7	6.5	5.0
		7	6.7	4.9
		8	6.7	5.2
		7	6.1	5.1

cause he did not believe it would help retard death. This man, interestingly enough, is the nephew of Alberto Molina, whom the Seri believe responsible for having introduced the gasket. The foreshaft produced by Ignacio (Plate Ie) is the most divergent one in the entire collection. It is, for example, the only one in which the point has two barbs and, except for those made by the eight-year-old boy, the only one in which the length of the point above the hafting exceeds that of the hafting. The finished products also show some variation in the source of the rubber used for the gasket and in the kind of wood used for the hafting. Six of the eight gaskets are shaped from an automobile tire, two from scraps of rubber of which the men did not recall the source. Three haftings (Plate Ia, d, g) are made of ironwood, all the others of mesquite, which is easier to obtain than suitable ironwood or nonindigenous woods.

[196]

Discussion

The foregoing example is designed as a paradigm to illustrate how observations on ongoing cultures might be adapted to the problems of archeological reconstruction. It is, of course, imperative to focus on behavior where matter is changed in some way, because it is only in altered matter that behavior is protracted through time. The example is deliberately selected to capitalize on an important area

121 ●

8: Ascher E-5 (1960) 1962 NU31 Seri NU31

[2] of partial overlap between the observational fields of ethnology and archeology. Unlike endeavors which exclusively emphasize those aspects of culture which archeologists cannot learn about (e.g., Thompson 1939), it directs attention toward the archeologically possible.

The analytic unit in the example is the trait complex, with emphasis on persistence and change within it, rather than independent traits and changes in them, which are the kinds of data with which the archeologist often works. Recognition of the relevance of one trait to the other traits in a single complex, or of nonsymmetrical changes in the complex, poses a problem and a challenge for meaningful cultural reconstruction. Though it deals with a common observational field, the example extends that field by providing a series of behavioral linkages, which may conceivably prove useful in the formulation of hypotheses of less restricted scope.

The specific information on fishing and the context in which it occurs can serve as a basis for testing localized hypotheses by analogy. Conceptions about specific phenomena are usually tested by seeking descriptions of cultures which utilize and manipulate their environments in a comparable manner. The fishing complex and its ecological setting are particularly relevant to the archeological interpretation of the New World Archaic and, to a lesser extent, of the Old World Mesolithic.

The quantitative data on similarity and variation among foreshafts, both in the entire collection and in the work of particular individuals as compared with other individuals and with the group as a whole, are of some theoretical value. It is an archeological tenet of major importance that matter altered in accordance with a particular scheme exhibits similarities which allow its grouping into a class. Ideally, such a class should approximate a normal distribution since individual differences, e.g., in manual dexterity, represent variations from a norm or mean. In addition to supporting and amplifying these general notions, the data also confirm the proposition that behavior can be inferred from the quantitative analysis of its results. Thus the four men who independently described the procedure for making a foreshaft agreed that the length of the point determines the length of the hafting, and the finished foreshafts themselves exhibit a constant relationship between the length of the point (as measured from the hafting) and the hafting. More important, such quantitative data, if coupled with similar data from other cultural settings, are capable of being used to develop general statistical models of artifact typology which would facilitate making classifactory decisions based on behavioral realities.

The example provides a feasible guide for the kind of information to be collected from ongoing communities. Feasibility may be measured in two ways: by the amount of time needed to collect the data and by the generality of the guide in terms of the phenomena to which it can be applied. The time required to collect the kind of information indicated is brief in relation to the total time spent by the

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ethnologist in the field, and, used as a guide, the example can be applied to any behavior in which matter is changed. More investigations similar to that offered here are needed as the archeologist turns to interpretation, conceptualization, and synthesis, or to what Kroeber (1957: 193) has called "the larger and long-range movements or developments in global human culture."

NOTE

1. I hope it is not too presumptuous to dedicate this paper to the memory of A. L. Kroeber.

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Editorial Comment

● 121 This paper was originally written by Borys Malkin as a thesis in partial fulfillment of the requirements of the degree for Master of Arts in Anthropology at the University of Minnesota, 1960. It has since been 128 edited to verify scientific names and to drop some of the original introductory portions of the manuscript. Unfortunately, because of technical problems involved in reproducing them, the Seri names also had to be dropped.

At the time the manuscript went to press, the author was in South America conducting field work. It was not feasible to send various stages of proof to him for his personal attention, and the editors were not always certain of the appropriate decision.

000 *Seri Ethnozoology* represents an extension of the Idaho State College Museum's previous publishing policy in anthropology. However, its content and its quality are important and fall within our intent to publish items of wide as well as of regional scholarly interest.

E.H.S., B.R.B.

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I

INTRODUCTION

The territory discussed in this paper is somewhat larger than the historical area occupied by the Seris. While Seri settlements are limited today to a quite narrow range, the Tiburon Island and the coast of Sonora immediately adjacent to it, they are familiar with a far larger region, owing to their periodic trips, either on their own after fish, turtle and game or, occasionally, in the temporary employ of the Mexican fish-traders and even farmers. The further away from Tiburon perimeter, the lesser their familiarity with a locality.

The area is limited by Hermosillo in the east, Punta Penasco and Porto Libertad in the north, and Nogales in the south, and finally it includes also the coast of Baja California which the Seris sometimes visit. It also includes all of the islands within that area, Tiburon, Patos, Rasa, Angel de la Guarda, San Lorenzo and San Esteban.

With very minor variations this entire region belongs properly to the Sonoran desert. *Palo Verde, Palo Fierro, Pithaya, Mesquite, Cholla, Sahuaro,* prickly pear, elephant tree and creosote bush are the basic plants. Among the vertebrates, such forms as the Sonoran bighorn, deer, cougar, jumping rat, badger, coyote, skunk, rattlesnake, sidewinder and Gila Monster are most conspicuous and diagnostic. Among the birds are the roadrunner, the raven, as well as many pelagic or littoral birds, the pelican and cormorant among them.

The region is one of very low rainfall, limited to the hot summer months, in some places occuring only a few times in a year. Winters are chilly and dry with persistent winds and dust, with the temperature falling down, on rare occasion, to just above the freezing point. Summers are intensely hot, with daily temperatures usually over 100 and the water temperature of the sea along the shore not infrequently as much as 85 degrees. There are great differences between diurnal and nocturnal temperatures, very much influencing the desert life.

Within this region there are several different ecological zones or perhaps sub-zones, varying from the alkaline flats like Playa Noriega, and the alkali-and salt-permeated soils of Desemboque to the more bountiful slopes of the mountains and the irrigated mud-flats around Hermosillo.

For the sake of distinction, I have selected several of the typical localities or zones as a point of reference either because of their ecological distinctions or because of their signficance as a landmark, readily delineating a peculiar habitat. Personally I am familiar only with some of the

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I

INTRODUCTION

●121 localities, but I think it is advisable to include others, whose nature is not so different from the main places of Seris' habitations.

361 13 I have selected then 25 localities and I shall give their main characteristics below:

1. **Punta Peñasco** — a village along the upper shores of the Gulf of California, close to the U.S., [491] connected by a paved highway from Gila Bend. Typical Sonoran zone with extensive sand flats. Very rarely visited by the Indians.

2. **Porto Libertad** — rocky shores, located some 30 miles north of Desemboque. A Mexican village frequently visited by the Seris.

3. **Desemboque** — Seris' main settlement after 1940, just north of and around Punto Tepopa, only a few miles from Tiburon. A narrow strip of poor land, thoroughly permeated with alkali and salt. Vegetation is very sparse. The mesquite, elephant bush, creosote bush, *Cholla* and *Sahuaro* are the main trees. No *Palo Verde* or *Palo Fierro. Ocotillios, Sahuaros* and mesquite are stunted and scarce, only toward the mountains increasing in frequency and size. Along the shores, sand dunes [172] with kitchen middens, partly covered by vegetation. An arroyo nearby is empty except on a few occasions during the year when flash flood after rains rushes through. Rainfall very scarce. During the summer of 1953 I spent there, it rained very little—only twice and that was short and feeble. [312] Water is obtained from a well, near which there is a Mexican ranch where, owing to irrigation, some vegetables are grown and weeds are present such as *Datura*. The coast is largely rocky. Narrow beaches lack wide sand bars. Hence the fauna here is poor.

4. **Estero Sargente** — alkali flats and mud flats some 25 km. south of Desemboque along the coast. Vegetation very scarce. *Sahuaros* and *Ocotillios* and other desert trees grow some distance from the shore. Short grasses in some places clump the coastal dunes. Breeding and feeding place of many shore birds, especially of willets and egrets. On the alkali flats near the shore are many peculiar insects, not found in Desemboque, particularly tiger beetles and Oedemerids.

5. **Campo Vivora** — little more than half way down toward Desemboque from Estero Sargente, [103] also along the coast. So named after supposedly numerous rattlesnakes. Clumpy grasses. Favorite encampment of the Seris and others while fishing and hunting turtle. The only loggerhead turtle I have seen was right here.

[491] 6. **Porto Kino** — fishing village directly due east of Hermosillo, nowdays connected with Sonora's

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13 17. **San Lorenzo Island** — a narrow long island along the coast of Baja, California, and opposite to Tiburon. Altitude up to 1200 feet. Fauna limited, owing to the distance from the mainland. Vegetation much as elsewhere but impoverished. Visited incidentally as is San Esteban.

18. **Angel de la Guarda** — large island along the coast of the peninsula, longer but narrower than [312] Tiburon, slightly lower at its highest point, pretty much waterless. Vegetation as elsewhere, fauna limited. Visited by the Seris very rarely.

19. **Desemboque (Mountains)** — high mountains immediately back of Desemboque, 5 miles away, rising perhaps to 1200 feet. Vegetation much richer than in Desemboque, with giant *Sahuaro* growing to considerable size. More moisture than immediately near the sea-shore. Full Sonoran fauna with cougar and bighorn. Frequently visited during hunts.

20. **Tepopa (Mountains)** — in distinction from Punto Tepopa as a whole, this refers only to the rugged head. The mountain reaching to over 1800 feet. Thus by Punto Tepopa are meant only the shores and the littoral.

21. **Buena Vista** — a ranch inland on the way to [312] Hermosillo, newly deserted. Water present in the large well and periodically in the dry river. Willows, large mesquite, Palo Verde, etc. Now only [361] incidentally visited by the Seris but formerly of some importance as a camp site.

22. **San Francisco de Costa Rica**—a ranch inland halfway between Kino and Hermosillo near the [361] main road, presently a large Mexican ranch. Formerly a frequent Seri campsite. The distinctive feature of this locality is extensive sandy areas with very peculiar fauna.

23. **Hermosillo**—capital of Sonora of some 40,000 people. Extensive agriculture, irrigation, river and water-dammed reservoir and cattle and cotton ranges. Once the Seris ranged almost as far as this [484] town but presently they come here only on special business, to the hospital or for a ride to town, with the Mexican truckers. Their observations in Hermosillo are only incidental.

[484] 24. **Nogales**—U.S.-Mexican frontier town. Seris come here very rarely and only certain individuals. Observations less than incidental.

25. **Campo Utah** — large track of irrigated flat lands given up to cotton, operated by the Utah Construction Company between San Francisco and Hermosillo. Somewhat off the main road. Selected as a distinct region owing to the irrigation and [484] cotton fields with their ecological peculiarities. Seris visit this only in transit or on most unusual [464] occasions when they work a few days for the Mexicans.

The Problem

● 121 The basic problem concerns the state of Seris' zoological knowledge, that is the general knowledge of the natural history of animals in its main outlines; of their ecology, habits, reproduc-

[P.2B]

121 tive behaviour, migrations, predation, distribution and the like. Existing ethnographic sources on the Seri barely touched on these matters and 114 such information as is available concerns only 121 a few economically important species and even then concern only the economy and fragments of myths in which animals are involved. This is not surprising. To my knowledge, there is not a single publication in existence dealing with the aboriginal knowledge of natural history as such, certainly not in the North American literature. Much less, yet such an approach had been followed in the standard ethnographies under the heading of "ethnozoology." It has been left to the ethnobotanists (Whiting on the Hopi, Chamberlin on the Gosiute, Robbins *et al.* on the Tewa are the best examples) to attempt something along these lines, but even this is on a limited scale.

121 Since the material for the present study has been obtained with this in mind, it inevitably suffers from the limitations imposed by the outline of the problem. The Seri material has been gathered as one of the series of studies undertaken among the selected Indian tribes (Sumu, Cora and Karajá are others) in order to have comparative material from cultures different in their basic economy and occupying different ecological niches. Thus, an analysis of the Seri material alone further limits the application of it and the conclusion one may draw from it.

The main intent then is to form an orderly and analytical presentation of the material which later may serve for comparison with the analogous material gathered among other tribes.

What then can be done with this type of material and what is the purpose of such work? For this, several different answers can be offered. To begin with, the factual data on the aboriginal knowledge of natural history of animals is sadly neglected. What there is, is fragmentary. Ethnobotanies outnumber ethnozoologies in the North American literature by better than six to one. Thus the present work and also other work I have done along these lines will fill in a gap in our knowledge.

Secondly and more importantly, this work, I believe, suggests a very novel approach toward ethnozoology, the sort of approach so far untried. This sort of systematization of the zoological knowledge among the primitives, makes a comparative approach possible, much as we have comparative studies, for example, of the social organization or of the political systems. In other ways such systematization also makes easier the internal analysis of the material.

Another important angle in this work is an attempt to relate aboriginal natural history knowledge to the general economy and to the natural environment. This is phrased as a question: how does the general economy of the people influence their knowledge of the natural history of animals? Specifically: what is the extent of their knowledge of various animal groups and how does this knowledge increase or decrease relative to their general economic preoccupations? Also: how does the general natural environment, climate espec-

[P. 3A]

•121 ially, limit the possible uses made of different species; how does it limit the knowledge of animals' natural history? How important are animals in their economy?

Such efforts to connect various phases of culture with the environment had long been practiced by archaeologists, but these lessons were largely lost on cultural anthropology, which, at present time, insists on concentrating on the social factors in splendid isolation, either from the natural environment or from the fact that man is a biological organism first and last. However, considerable revival of at least the ecology—stressing studies is quietly taking place in culture anthropology, viz: Kirschoff, Steward, Leonard Mason, to mention only a few of the contemporary students, and, of course, Kroeber and Sauer who stressed this approach long ago. But as Julian Steward (1938:260) points out, cultural and environmental relationships cannot be answered in a blanket, ready-made statement. Each of the ecological determinants must be examined separately as an empirical fact, and this is what I attempted to do. The Seri material alone indicates where the ecology is a limiting factor and to what extent, and where it is not. In the end, such study as I have undertaken should contribute to our understanding of man's relationship to his natural environment and his adaptions to it as well as his ability to escape from it.

Finally, this type of work indirectly suggests another line of questioning. How does human scientific knowledge evolve, and how is it formed? A set of comparative studies of this kind inevitably suggests some patterns in the evolution of men's biological knowledge. In this it may be of much interest to the zoologists or to the historians of biology. For in the knowledge of these simpler people we find our own predecessors historically, sometimes not so far behind us. Some of the Seri concepts are no less developed than those of the earlier Western naturalists, quite on par with the work of the 16th century men like Gesnor or Aldrovandi. In some ways even as superb as naturalist as John Ray who really laid the foundation for systematized natural history was not much ahead of them. As to the question of how such knowledge is formed, the problem is one for a psychologist and here, at best, only the barest suggestion can be found.

These are than some of the problems and questions which this study seeks to answer.

On the other hand there is a great deal that this study cannot do owing to self-imposed limitations, and there is a great deal which it can only hint at or answer in a most fragmentary manner. For example, there is no use to attempt functional analyses of the naturalistic concepts in the Seri culture. To do this, considerable extra field work would have to be done, with just this point in mind. The existing literature, owing to its diverse origins and approach and owing to its fragmentariness, is of little use. Nor can this study answer in a general way how the Seri knowledge of natural history developed. To anwser this adequately one would have to have first, the

121 documentary data and second, also the archaeological data. The subject matter unfortunately [172] is absent from the first. As for the archaeological [114] data, there is none as yet to date for the area except Giffor's unpublished manuscript. Nor have we the kind of ethnography that would be of help—not until ethnographers will pay greater attention to the naturalistic knowledge of the people. Nor can the matter of the Seris' cultural connections be undertaken with the present material with any degree of reliability, simply because no such material exists for the neighboring group.

However, few suggestions outside the limitations and the main object of the present analysis can be made. From the fragmentary data available I shall try to show the change in utilization of animals by the Seris. I think I can also indicate a few points in support or denial of this or that idea of the Seris' cultural connections. I can also suggest the direction of the attitudes toward animals in the Seri culture, in a sphere which normally we assign variously within the domain of religion or world view. I can also indicate some of the major changes in the Seris' exploitation of general environment. All these can be suggested only fragmentarily, as only small bricks toward a generalized structure of our knowledge of the Seri culture. To this extent the present analysis should be helpful to the future student of the Seri culture and to our general understanding of it.

Procedure

114 The field work on which this material is based has been done during the summer of 1953, June-September and again for one week in May, 1955. [164] The second visit took place at a most inopportune [166] time, amidst bad measles, dysentery and a flu epidemic which completely disorganized the tribe and persuaded most of them to flee Desemboque into the coastal desert.

The work was accomplished mostly in Desemboque, the Seris' largest and most permanent settlement after 1940 where most of them lived. Occasional side trips were undertaken later to Hermosillo, Estero Sargente, Campo Vivora, Tiburon and some of the other places mostly with the view of evaluating their ecological nature and for the observation and acquisition of the zoological materials not available in Desemboque. These trips had been undertaken in the company of the Seris who then also doubled up as informants.

124 During the first two weeks of my stay in Des- [126] emboque, I did no interviewing but concentrated on the collections of zoological material, occasionally and informally asking for the name of this or that animal. After two weeks regular interviewing work was commenced, first with an aid of Mr. Leo Sandoval, Mexican, U.S.—educated school teacher, but later on entirely without an interpreter. There are sound reasons for this practice. Direct questioning allows the interrogator to evaluate the replies in their less obvious nuances, the reactions of the informant to the question, his hesitations, uncertainties and the like.

In the event of well-known animals with those colloquial Spanish name everybody, Mexican and

121 Another Point in the Procedure is of Par-
amount importance in this type of research. Fair
[129] general knowledge of practical field natural history can have no substitute. The investigator must have this basic knowledge, to realize the range of possibilities in the answers and identify any answers not commensurate with the actual events. This way, even without interest in the mythology, one may get on the track of a myth. Although, in
825 general, anthropologists seem to think that na-
121 tural history knowledge of the primitive folks must be ridden with the mythology and must be different than ours, my rather extensive field work persuaded me that this is not so at all. Mythology there is, if one looks for it. But the bulk of their knowledge is based on sound obervation as anyone acquainted with the natural history will readily discover. One must be able to disentangle the two qualities. That this is so is well indicated in a large number of animals where the informants simply replied to queries on this or that subject in the usual *quien sabe*. And indeed, the more obscure the subject, the more likely one got that sort of an answer.

128 In the analysis of the actual material a certain schematic programme has been followed. For the sake of convenience, material has been grouped according to the major divisions of the animal kingdom. Some may object to this saying that this is just our way of classifying animals but that aboriginal classification does not follow these lines. For certain purposes, this may be true, but for my own purpose I find my procedure more convenient. Regardless of the hypothetical native mode of classification, one may form a question.
128 How do the Seri distinguish different mammals?
825 I may say also that our own groupings are not different from those of the Seri or any other tribes. Their recognition of differences among animals may be at times hazy or from our point of view erroneous. But by and large, birds to them are birds and snakes are snakes and even within the insects, without actually naming differences, they tended to group together insects according to their order. Exceptional cases, bat, whale and the like, remain exceptions just as they were to the early Western naturalists, the 16th century Gesner or Alrovandi, for example, to whom their place in the scheme of nature was based on the analogies. But this didn't prevent these men from grouping other animals much the same as we do. In the same way, the South African Bushmen may regard Mantis as a supreme diety, but this does not prevent them to say that it is also like an insect.

128 The scheme I followed turned out useful. In the end I have obtained generalized ideas on the salient features of natural history of different animal groupings which I could compare with each other. The internal evidence is most interesting, more so that in some details it differs qualitatively and quantitatively from the materials I have gathered among other tribes.

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11: Moser L-5 (1956-1961) 1963
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SERI BANDS

EDWARD MOSER

Mr. Moser, of the Summer Institute of Linguistics, holds a Master's degree in Linguistics from the University of Pennsylvania. He has been doing research on the Seri language during trips to Sonora since 1952.

ABSTRACT

In previous publications on the Seri, frequent reference to distinct Seri groups points to historical tribal divisions at some level. Recent research among the Seri has determined the former existence of six bands which included three dialect groups. Three of the bands were subdivided into clans. These six bands, whose formation may have been caused largely by internal struggles, were eventually crushed and reduced to a single group by the devastation brought about by external conflict.

INTRODUCTION

The Seri tribe is located in Mexico along the coast of Sonora between Bahia Kino and Puerto Libertad, and on Tiburon Island (Fig. 1). Today it consists of approximately two hundred and eighty persons who call themselves *kongkaak*[1] "the people." Although at one time it was comprised of six distinct bands (Fig. 2), the tribe has now lost its band organization. However, much of the late history of these now-defunct tribal units remains vivid in the minds of the Seri. The purpose of this paper is to present some of the salient features of these former bands, to discuss certain interrelations between them, and to recount the Seri version of the disintegration of the band system.[2]

Three published studies on the Seri should be mentioned.[3] Of these, the reports by Kroeber and by Griffen are the more reliable. All three investigators mention tribal divisions which Griffen rightly designates as bands.

BANDS

BAND I *xika ʔai kkoii* "they who live toward the true wind"

This group is commonly referred to in the literature as the Tepoca or Salinero. As shown on Fig. 1, they inhabited an area which extended from a point slightly north of Puerto Lobos to Punta Tepopa on the south. The territory extended inland, encompassing the general area delimited by the San Ignacio River.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

105 sepulture. There is a weird, formal mourning for dead matrons, and suggestions of fear of or veneration for the manes.

172 Seriland is surrounded with prehistoric works, telling of a numerous population who successfully controlled the scant waters for irrigation, built villages and temples and fortresses, cultivated crops, kept domestic animals, and manufactured superior fictile and textile wares; but (save possibly in one spot) these records of aboriginal culture cease at the borders of Seriland. In their stead a few slightly worn pebbles and bits of pottery are found here and there, deeply embedded in the soil and weathered as by the suns of ages. There are also a few cairns of cobbles marking the burial places, and at least one cobble mound of striking dimensions but of unknown meaning; and there are a few shell-mounds, one so broad and high as to form a cape in the slowly transgressing shoreline (Punta Antigualla), and in which the protolithic implements and other relics are alike from the house-dotted surface to the tide level, 90 feet below.

The absence of relics of a superior culture, and the presence of Seri relics throughout deposits of high antiquity, suggest that the tribe is indigenous to Seriland; and this indication harmonizes with the peculiar isolation of the territory, the lowly culture and warlike habits of the people, the essentially distinct language, the singular marriage custom, and the local character of the beast-gods. And all these features combine to mark the Seri as children of the soil, or autochthones.

Recent Explorations and Surveys

114 Present knowledge of Seriland and its inhabitants is based primarily
121 on the work of two expeditions by the Bureau of American Ethnology,
[122] conducted in 1894 and 1895, respectively; and, secondarily, on researches into the cartography and literature (descriptive, historical, and scientific) of the region. Both of the expeditions were projected largely for the purpose of making collections among little-known native tribes in the interests of the National Museum, and the general ethnologic inquiries were ancillary to this purpose.

The 1894 expedition was directed chiefly toward work among the Papago Indians in the vaguely defined territory known as Papagueria, lying south of Gila river and west of the Sierra Madre in southwestern Arizona and western Sonora (Mexico). Outfitting at Tucson early
[122] in October, the party moved southward, visiting the known Papago rancherias and seeking others, and thus defining the eastern limits of the Papago country. On the approach to the southern limits of the tribal range toward Rio Sonora, the evil repute of the Seri Indians sounded larger and larger, suggesting the desirability of scientific study of the tribe; and it was decided to attempt investigation. Accordingly the party was reorganized at Hermosillo, and, with the
114 sanction of the Secretary of State and Acting Governor, Señor Don Ramón Corral, proceeded to Rancho San Francisco de Costa Rica,

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

where a temporary Seri rancheria was found occupied by about sixty of the tribe, including subchief Mashém, who speaks Spanish. In this part of the work the expedition was accompanied by Señor Pascual Encinas, the owner of the rancho visited, and doubtless the best informed white man concerning the habits, customs, personnel, and habitat of the tribe. About a week was spent in intercourse with the occupants of the rancheria, when the studies were brought to an end through the illness of Señor Encinas, and the consequent necessity for return to Hermosillo. The expedition then proceeded northwestward and northward along a route so laid as to define the western limits of Papagueria proper, and reached Tucson near the end of the year. In addition to the leader, the party comprised Mr William Dinwiddie, photographer; José Lewis, Papago interpreter, and E. P. Cunningham, teamster. The outfit was furnished chiefly by Mr J. M. Berger, of San Xavier (near Tucson). On the visit to the Seri frontier the party was accompanied by Señor Encinas, Don Arturo Alvemar-Leon (who acted as Spanish interpreter), and two or three attachés of Molino del Encinas.[1]

The second expedition was directed primarily toward investigation of the Seri, and only incidentally to continuation of the researches among the Papago. Outfitting at Tucson in October (again with the aid of Mr Berger), the expedition proceeded southward by a route different from those previously traversed, and carried forward a plane-table route survey covering a considerable zone from the international boundary at Sasabe to Rio Sonóra. Descending the previously unmapped course of Rio Bacuache, the expedition reached the Rancho de San Francisco de Costa Rica on December 1, 1895, and, although conditions were found unfavorable in that the Seri were on the warpath, immediately prepared for the extension of the work into Seriland.

A preliminary trip was made into the mainland portion of the Seri habitat, terminating at the crest of Johnson peak, the highest point in Sierra Seri. The triangulation and topographic surveys were carried over the territory traversed, and several points were fixed on Isla Tiburon; but the natives, agitated by a skirmish with vaqueros on the frontier a day or two earlier, had withdrawn to remoter parts of the territory, and were not encountered. The party returned to Costa Rica, a rude boat was completed, transported across the desert via Pozo Escalante to Embarcadero Andrade, and launched in Bahia Kunkaak. The surveys were extended to the southern portion of Sierra Seri and Isla Tasnne, and, after various difficulties and delays due to dearth of fresh water, to gales, and to other causes, the party (enlarged for the purpose) finally landed on Tiburon. Many Seri rancherias were found on

[1] The more noteworthy details of the organization and work of the two expeditions are set forth in the administrative reports of the Bureau for the fiscal years 1894-95 and 1895-96. Certain members of this party are shown in the accompanying half-tone, forming plate II: Señor Encinas seated at the end of the table; his son, Don Manuel (bareheaded), and Don Ygnacio Lozania at his right; a grandson behind him, and Señor Alvemar-Leon seated at his left, with Mashém kneeling over the table in the foreground.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

the wealth of place-names and the strongly accentuated configuration which the nomenclature expresses, Seriland is one of the most hopeless deserts of the American hemisphere.

ACKNOWLEDGMENTS

Since most of the field work of the two expeditions lay in the neighboring Republic of Mexico, it became necessary to ask official sanction for the operations from the Mexican government; and it is a pleasure to say that every possible privilege and courtesy were extended by both federal and state officials. Especial acknowledgments are due to the Mexican minister (and afterward ambassador) to the United States, his Excellency Don Mateo Romero (now deceased); to the Ministro de Fomento of the Mexican Republic, Excelencia Don Fernando Leal; and to the governor of the State of Sonora, Señor Don Ramón Corral. Equal acknowledgments are due to various United States officials, notably Honorable W. Woodville Rockhill, First Assistant Secretary of State when the expeditions were planned; and it is a pleasure to advert to the active interest taken in both expeditions by Honorable S. P. Langley, Secretary of the Smithsonian Institution, and to the careful attention given the 1894 expedition by the late Dr G. Brown Goode, Assistant Secretary of the Institution.

Mr Willard D. Johnson did invaluable service in connection with the second expedition, particularly in the execution of surveys and the construction of maps in inimitable style. Mr William Dinwiddie is to be credited with the excellent photographs made during the 1894 expedition, with the representation of the devices used in Seri face-painting, and with various other aids to the investigation; while Mr J. W. Mitchell is to be credited with the photographs made on Isla Tiburon, and with other contributions to the success of the 1895 expedition. Acknowledgments are due also to all of the participants in both expeditions, whose names appear in other paragraphs. Their contributions were not primarily intellectual, yet were of a kind and amount to be forever remembered among men who have worked and hungered and thirsted and stood guard together. The deepest debt connected with the field work is to the now venerable but ever vigorous pioneer, Señor Pascual Encinas; and no small part of this debt goes over to his estimable spouse, Señora Anita Encinas, who twice traversed the long road from Hermosillo to Costa Rica in the interest of the 1895 expedition.

The scientific results of the researches have been enriched by invaluable contributions from Director Powell's store of ethnologic knowledge, and by suggestions from Messrs Frank Hamilton Cushing, F. W. Hodge, James Mooney, and other collaborators in the Bureau of American Ethnology. The qualities of the colored illustrations are due largely to the artistic skill of Mr Wells M. Sawyer, by whom they were designed, and of Mr DeLancey Gill, by whom the proofs were revised. The Spanish translations are due chiefly to Colonel F. F.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

into the saguesa forests of the eastern base of Sierra Seri; on the east it is miles in breadth, passing gradually into the normal Sonoran plain; on the south it widens still farther, stretching all the way to Arenales de Gil and Pozo Escalante, and merging into the playa-like mud-flats bordering Laguna la Cruz, into which the gulf waters are sometimes forced by southwesterly gales at high spring tides. Throughout this portion of the desert, marine shells are scattered over the playa-like flats or lodged in the adjacent banks, sometimes in great beds; the vegetation is scantier than usual and largely of salt-loving habit; the mud-flats are usually coated with saline and alkaline crusts, while the dunes are soft and fluffy, and expand into broad belts perforated with the tunnels of the surprisingly abundant rodents. Across this plain of bitter sand-dust lie the two hard land routes to Seriland—the supposed Escalante route of 1700, down the fan of Rio Bacuache and thence by Barranca Salina; and the Encinas route, down the northern border of the Rio Sonora fan and thence by Pozo Escalante to the shores of Bahia Kino.[1]

Desierto Encinas is an impossible human habitat in any proper sense; it is merely a broad and hardly passable boundary between habitats. The hardy stock of the frontier ranchos, pasturing partly on the thorny fruit of the cholla, push far out on the plains, and are sometimes watered for short periods, under strong guards of heavily armed vaqueros, at Barranca Salina; yet the greater part of the expanse is trodden only by the Seri. Two or three ruined frames of Seri jacales and a few graves crown the low knoll near Pozo Escalante, and there are one or two house remnants near Barranca Salina; these are notable not only as the easternmost remaining outposts of Seri occupancy, but because they represent the only known instances in all Seriland of the erection of even temporary houses adjacent to water. Distinct paths, trodden deep by bare Seri feet, radiate from both waters toward the Seriland interior, but no traceable trails extend eastward.

The southern limit of Desierto Encinas is marked either by the broad mud-flats opening into Laguna la Cruz or by the coast of the gulf, the coast cutting the lower portions of the plain being accentuated by a sand-bank 30 or 40 feet high, against which the surf thunders in nearly continuous roar audible halfway or all the way to Pozo Escalante. A Seri trail skirts the crest of this bank, sending occasional branches into

[1] Both the routes were traversed by the expedition of 1895, the former from the headwaters of Rio Bacuache to the upper portion of its alluvial fan, and thence from the abandoned Rancho Libertad on the lower portion of the fan across Desierto Encinas by way of Barranca Salina. In the northern crossing a light vehicle (the first to traverse this portion of the desert), drawn by four horses and aided by several horsemen, was taken from Rancho Libertad across the northern portion of Playa Noriega and thence up Arroyo Mitchell to a point midway between Barranca Salina and Johnson peak, and was brought back over the same route. The Encinas trail from Rancho San Francisco de Costa Rica was traversed four times each way by the same outfit, and once each way by the running gear of a heavy wagon carrying the rude craft (about 1,000 pounds in weight) in which the Seri waters were navigated, this vehicle being drawn by 8 to 12 horses, frequently changed. Typical aspects of both routes are shown in plate 12, the upper figure representing the Encinas trail and the lower a distant view of Sierra Seri, taken from Playa Noriega, in the depths of Desierto Encinas.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

132 The broad valley between Sierras Seri and Kunkaak, bottomed by El Infiernillo, is especially beset by fierce and capricious gales; the general atmospheric drift is disturbed by the leading and lesser sierras, as well as by temperature convection from the gulf, and eddies are developed in such wise as to send air-currents directly or obliquely up or down the valley. These local or sublocal winds are characteristic. Judging from observations covering several weeks, the valley is wind-swept longitudinally for an average of eighteen or twenty hours daily, the winds ranging from strong breezes to gales so stiff as to load the air with sand ashore and spray asea; and even the calms may be broken

●[122]

FIG. 5.—Embarking on Bahia Kunkaak in la lancha *Anita*.

any minute by sudden gusts and williwaws, passing rapidly as they arrive. Not only waves but wind itself combines with tides to shape the [134] structural features of the valley; nowhere within it do flour-fine sands like those of Desierto Encinas occur, save as a hardly perceptible constituent of the dunes and banks of coarser sand—they have been blown into the sea or beyond the limits of the valley. Throughout the strait 132 so expressively named by its explorers, the capriciousness of the sea 133 culminates, despite the shoalness and the protection from easterly and westerly winds; the storm currents and tide-currents are half the time opposed, raising breakers even when the air is nearly still; eddies and whirls and cross-currents arise constantly, and even at the stillest

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

extensive rancherias near Punta Narraganzett measure 10 miles by trail from the same aguaje; the half dozen jacales about Campo Navidad are separated by some 15 miles of stony and hilly pathway from the alternative watering places of Tinaja Anita and Arroyo Carrizal;[1] and the huts crowning the great shell-heap of Punta Antigualla—one of the most striking records of immemorial occupancy in America—are nearly or quite 10 miles by trail from Pozo Escalante, and still further from Aguaje Parilla, the nearest sources of potable water. These are but typical instances; and while there are ruined huts (evidently regarded as temporales) near the dead waters of Barranca Salina and Pozo Escalante, they tell the tribal policy of locating habitations in places surprisingly remote from running water. Like other desert folk, the Seri have learned to economize in water-carrying by swigging incredible quantities on their occasional visits to the aguajes; it is probable, too, that their systems are inured, somewhat as are those of the desert animals that survive deprivation of water for days or months, to prolonged abstinence from liquid food; yet it seems safe to assume that at least half of the water required in their vital economy (say 2 or 3 pounds apiece daily, on an average) is consumed after transportation over distances ordinarily ranging from 4 to 12 miles. Under these conditions the Seri have naturally produced a highly developed water industry; they are essentially and primarily water-carriers, and all their other industries are subordinated to this function.

Concordantly with their customs, the Seri have a highly differentiated aquarian device in the form of a distinctive type of olla, which is remarkable for the thinness and fragility of the ware, i. e., for largeness of capacity in proportion to weight. Representative specimens are illustrated in plates XXXII and XXXIII (the former painted, as already described). The dimensions of the two vessels are as follows: painted olla, height 34 cm. (13⅜ inches), mean diameter 32.5 cm. (12⅞ inches); plain olla, height 32 cm. (12⅝ inches), mean diameter 32 cm. In both specimens the walls are slightly thickened at the brim, those of the painted vessel measuring about 4 mm. and those of the plain vessel about 4.5 to 5 mm. in thickness. Below the brim the walls are thinned to about 3 mm., as is shown in the fractured neck of the painted specimen. The capacity of these Seri vessels in proportion to their weight, compared with that of typical examples of ware produced by other desert peoples, is shown in the accompanying table.

Comparison of the mean ratios indicates that the Seri ware is almost exactly twice as economical as that of the Pueblos—i. e., that its capacity is twice as great in proportion to the weight of the vessel; and that

[1] The preciousness of water in this hard province was impressed in the 1895 expedition, during which the cost of the commodity, reckoned on the basis of time and labor involved in obtaining it, was estimated at $10 or $12 per gallon, or about the wholesale price of the finest champagnes.

2: Kroeber E-5 (1930)1931 NU31 Seri NU31

197 are inconclusive. Some of the outstanding speech similarities and
171 differences are given in a section of the present paper; a fuller presentation will be made in a subsequent classification of the Yuman languages.

The Yuman tribes of the United States are better known, and
171 there are published or collected accounts of the Diegueño, Kamia, Cocopa, Yuma, Mohave, Maricopa-Halchidhoma, Yavapai, Walapai, and Havasupai. These fall into two groups, culturally: the farming tribes of the Colorado (and Gila) bottomlands, and the gathering tribes of the desert and semi-desert of Arizona and southern California, the latter again affiliating with those of northern Baja California, such as the Kiliwa and Akwa'ala-Paipai. As might be expected, it is the desert Yumans of Arizona who show the greater number of resemblances to the Seri and fewest differences.

The Pima as the immediate neighbors of the Seri, and the Opata and Cahita tribes beyond, ought to show many similarities with the Seri, plus differences due to their agriculture and activities like weaving which are normally encouraged by sedentary habits.

Such are some of the indications as to the history of the Seri
114 and their culture, as discussed more in detail below so far as the preliminary data available allow. Further and intensive investigation
121 is obviously needed. On the side of material life, Mr. Davis' studies
122 ought largely to fill the need. For social and spiritual culture, the work will be difficult. It is not that the Seri are unwilling, but that they are inaccessible and hard to communicate with. The obvious procedure would be a study of their speech until it served as a medium. In that way both their language and their culture could be recorded hand in hand. But the obstacles are numerous. The island is thirty miles long by twenty wide. There is not a roof on it. The six summer months are extremely hot, and, along the coast, said to be almost insufferable from gnats and mosquitoes. Most of the few water holes are inland; the Seri live, except during the cactus and mesquite harvest, scattered in small settlements along the shore, often several miles from water. There is no communication across the strait, except by open boat, subject to weather conditions; and then it is twenty miles to the nearest house and a hundred to a town. Life on the island would be both harsh and monotonous to an unusual degree. Nor can the Seri as yet be studied by taking one or two of them to civilization for a prolonged stay. They soon become restless and homesick. Added to all this is the fact that their Spanish, though reasonably fluent in some cases, is ungrammatical, and would hardly serve for securing paradigms or accurate translations of texts; and while able to endure hardships, the people are not accustomed to steady work or mental concentration. The difficulties would not be insuperable, when the destined linguist-ethnologist undertakes the task; but he should not under-rate them.

171 the latter are largely unconcerned with by far the greater majority of them.
825 If there is any magical importance attached to any of the species, it has not been discovered in the course of this field work and this fact has been corroborated by other recent observers.3

Summary

182 Extensive field work of this sort has many ramifications. One of the main
825 items investigated has been the acuteness of the native observation of animals. In the case of the Seris, this knowledge progressively increases both in volume and in accuracy with the increasing economic importance of the group. The mammals and large fish are the best known followed in order by birds, reptiles, smaller fish, insects and marine invertebrates. It is also obvious that local ecology, habits and anatomy of the various species of animals set definite limitations upon observation. Lack of understanding of the hibernation of reptiles through the winter is a case in point. Another example is in the Seris' inability to distinguish between the sexes of birds. Purely cultural factors are also potent as can be seen in the standardized responses to the questions about the age of animals and the development of birds. Seri knowledge of animals is remarkably free from mythology, although a number of animals are known to have had mythological significance in the past.

825 There is little fear of animals except of those which are actually dangerous.

An interesting fact emerges from the comparison of the particular aspects of the knowledge of natural history. Namely, that this knowledge is not always symmetrical in that some facets of natural history are far better known by the Seris than others. An excellent illustration is provided here in the complicated ways of sexing animals, in their extensive knowledge of the food habits of some of the animals and their ecological environment, and by their very limited ability to guess correctly the age of animals.

Not all of these differences can be accounted for in natural terms and it is suggested that the answer to this asymmetry lies, perhaps, in the cultural factors unaccounted for in this study. In spite of their dependence upon a relatively few economically important species of animals, the Seris do make use of much of their animal environment in their diet, as would be expected of a marginal people who still live today in a fishing and gathering economy.

FOOTNOTES

1. This field work was made possible by research grants from the Department of Anthropology, University of Washington. Most of the work was done in Desemboque, Sonora, during the summer of 1953 with some additional work there in May 1955.

For much help in carrying out this field work I am indebted to my friend, Leo Sandoval, a school teacher in Desemboque.

[89]

Seri Social Structure (1)

114
121
122

1. The material presented here was collected on a three-week visit to the Seri zone, the costs of which were defrayed by the I.N.A.H. [Instituto Nacional de Antropología e Historia], for the purpose of planning later investigations. It took place in January, 1952, in the company of Mr. Paul Finninger of M.C.M. [Mexico City College].

121 The permanent system of interacting influences that is presented among the Seri is of great scientific interest for its extreme characteristics of geographic isolation, environmental hostility, poverty, and the small size of the community.

13 The Seri occupy coastal territory in Sonora on the Gulf of California; formerly they covered a territory that toward the end of the 18th century, along the coast extended from Guaymas Bay, including it, to Punta Peñasco and, on the mainland, included the area in the vicinity of the present city of Hermosillo. They have been reduced little by little, now occupying only some isolated points on Cape Tepoca, Desemboque, and Tiburón Island, places from which, in spite of their inclemency, they are also being displaced.

648 Until some 30 years ago, most of the contacts of the Seri with Western culture had been warlike, ferociously defending their skins from the attacks of the yori (Mexican) invaders. Their contacts with the natives have been with the Yaqui, Papago, and those of Santa Rosalía (crossing the gulf). It was not until about 20 years ago, when the establishment of fishing camps was initiated with mestizo capital, that a new orientation in the treatment of the Seri came into being. Existing side by side with them at present are various Mexicans who exploit the products of Seri fishing, and some scientific investigators, principally from the United States.

13 They form enclaves in the heart of Aridamerica, with its cactus, shrubs and grasses, without flowing water, and with abundant flying and, especially, marine fauna.

121 Another point in the procedure is of par-
amount importance in this type of research. Fair
●[120] general knowledge of practical field natural history can have no substitute. The investigator must have this basic knowledge, to realize the range of possibilities in the answers and identify any answers not commensurate with the actual events. This way, even without interest in the mythology, one may get on the track of a myth. Although, in
825 general, anthropologists seem to think that na-
121 tural history knowledge of the primitive folks must be ridden with the mythology and must be different than ours, my rather extensive field work persuaded me that this is not so at all. Mythology there is, if one looks for it. But the bulk of their knowledge is based on sound obervation as anyone acquainted with the natural history will readily discover. One must be able to disentangle the two qualities. That this is so is well indicated in a large number of animals where the informants simply replied to queries on this or that subject in the usual *quien sabe*. And indeed, the more obscure the subject, the more likely one got that sort of an answer.

128 In the analysis of the actual material a certain schematic programme has been followed. For the sake of convenience, material has been grouped according to the major divisions of the animal kingdom. Some may object to this saying that this is just our way of classifying animals but that aboriginal classification does not follow these lines. For certain purposes, this may be true, but for my own purpose I find my procedure more convenient. Regardless of the hypothetical native mode of classification, one may form a question.
128 How do the Seri distinguish different mammals?
825 I may say also that our own groupings are not different from those of the Seri or any other tribes. Their recognition of differences among animals may be at times hazy or from our point of view erroneous. But by and large, birds to them are birds and snakes are snakes and even within the insects, without actually naming differences, they tended to group together insects according to their order. Exceptional cases, bat, whale and the like, remain exceptions just as they were to the early Western naturalists, the 16th century Gesner or Alrovandi, for example, to whom their place in the scheme of nature was based on the analogies. But this didn't prevent these men from grouping other animals much the same as we do. In the same way, the South African Bushmen may regard Mantis as a supreme diety, but this does not prevent them to say that it is also like an insect.

128 The scheme I followed turned out useful. In the end I have obtained generalized ideas on the salient features of natural history of different animal groupings which I could compare with each other. The internal evidence is most interesting, more so that in some details it differs qualitatively and quantitatively from the materials I have gathered among other tribes.

[P. 5 B]

[23 before him, has been a friend of the Seris for years. It was his father
15] who brought McGee to Tiburon in 1895, and in many ways they have shown kindness to the Seris.

[22] I hired an auto-truck for fifty dollars to take the necessary people and supplies. These supplies consisted of some fine-tooth combs, needles, thread, one bolt of white muslin, 150-pounds of flour, panoche, saws, nails, harmonicas, little round mirrors, fish twine, hooks, 2-bits and other things.

We left at 6:30 a.m. With us was the driver Ricardo, his friend Rafael Ysabel, son of an ex-governor of Sonora. When we reached Bob's ranch, *El Providencia*, five or more miles out, we added a one-eyed Mexican and Bob's brother.

After a simple dinner at the ranch house we drove across the mouth of the Sonora river, a broad, flat alluvial plain probably four or five miles across. We circled about and turned north, stopping at the edge of a broad shallow bay. The tide was down and the shore was slimy mud and filled at places with sharp-edged clam and oyster shells. There were oyster flats at the edge of the mud, so Roberto and the Mexican waded out and secured enough of them for supper.

[13] During the day we ran close to a Gila monster, a horrid looking black and orange mottled fat lizard who waddled along. Rafael held his head with a rifle, reached down and caught him in back of the head, and held him up. He hissed like a snake and bears a bad reputation.

[33] The country was flat and the road pretty good. Detached mountains we passed during the day and one range called *Siete Cerros*, Seven Mountains, with peaks all in one row, reached for fifteen or twenty miles. We passed a few ranches where the people were pumping water from wells or hauling in the old turn-table way with a mule and rawhide buckets. Then we made camp, got everything ready for an early start the next day and turned in.

At dawn three men took the boat with all our traps and groceries and fifteen gallons of fresh water, and Rafael and I walked up to the point to meet it. Louis and the driver and truck returned to the ranch. The weeds and ground were very wet and we came to some sloughs filled with soft ooze. These were impossible to cross, so we went around them and then decided to strike for the ocean side and go along a sand bank. This we did, and when we reached the end we saw the boat waiting for us half a mile or more across a great flat.

[13] The ocean view was grand. A great rock, *Alcatraz Island*, protruded from the sea a short distance out, on which countless cormorants roost and raise their young. Bob often gathers their eggs.

We reached the boat and climbed in and pushed off into deep water. There was no wind and the tide was part way against us, but we rowed, three of us, for many many miles. We landed in a small cove, drew up

[text continues on p. 15]

11: Moser L-5 (1956-1961) 1963.
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so named must be of the same sex as the first. The significance of land ownership needs further investigation.

Many of the Seri still prefer, when possible, to live in their chosen band area. Sometimes a person, when he is approaching death, will ask to be taken to his own i?iziiting, where he can die and be buried in the area of his choice.

NOTES

1. Due to printing limitations, stress on Seri words has been omitted, and several orthographic symbol changes have been made for this paper. The phonetic values of the symbols used are the following: p is voiceless labial stop; t is vl. dental stop; k is vl. velar stop; ? is glottal stop; ƒ is vl. labial flat spirant; w is vl. labial grooved-rounded spirant; s is vl. alveolar spirant; z is vl. alveo-palatal spirant; l is vl. lateral spirant; h is vl. velar spirant; x is vl. back velar spirant; m is labial nasal; n is dental nasal; ng is velar nasal; y is palatal semivowel; i is a high close front vowel; e is a low close front vowel; a is a low open central vowel; o is a mid close back vowel.

2. These data were compiled during field trips to the Seri camps during the years 1956-61, the studies being carried out under the auspices of the Summer Institute of Linguistics. The principal informant was R. Herrera T. whose information was checked with and supplemented by nine of the older members of the tribe. I am indebted to my colleague, David Thomas, who read an earlier draft of this paper and made helpful suggestions.

3. 1) W. J. McGee, "The Seri Indians," *Bureau of American Ethnology, Annual Report*, No. 17, Part 1. Washington, 1898. 2) A. L. Kroeber, "The Seri," *Southwest Museum Papers*, No. 6. Los Angeles, 1931. 3) W. B. Griffen, "Notes on Seri Indian Culture, Sonora, Mexico," *Latin American Monograph Series*, No. 10, Gainesville, 1959.

4. It will be noted that between subdivision 3 and 4 on Fig. 3 there is an unnumbered area, the status of which is uncertain.

5. Kroeber states that McGee's concept of Seri maternal lineages crystallized into totemic clans with matron rule seem a fantasy. In Kroeber's opinion, "The Seri may never have had sibs or clans; but the fact that they appear to lack them now is no positive evidence that they were without them three centuries ago. Shifts of residence, contraction of territory, shrinkage of numbers, amalgamation of distinct bands, may well have obliterated much of such social fabric as they once possessed."

Griffen discusses the nature of the former Seri bands and states, "they may have been patrilineal and exogamous. The criteria . . . that Julian Steward has exposited for the formation of exogamous, patrilineal bands . . . are and presumably would have been met formerly in the Seri habitat." Griffen lists other aspects of this type of band which are also verified to some extent by his data. From reading his material, it is obvious that he suspects the existence of clans at some earlier period. He emphasizes the need for further investigation.

6. G. P. Murdock, *Social Structure*, Macmillan Co., New York, 1949.

7. Marriages were usually contracted within the band.

8. As Kroeber points out, their memory likely covers only the latter part of the period of Spanish contacts.

9. The Seri recall nothing of Seri-Pima contacts and little of Seri-Apache relations.

10. The story is related that one day some Seri entered a cave where they found several Papago jugs filled with seeds. Being hungry, the people ate the seeds and left some arrows as token payment. The Seri say that the Papago apparently believed the arrows were intended as an insult. Fighting broke out soon afterward.

11. The Seri concept of the band annihilations is seen to be in contradiction to McGee's statement (p. 132): "Concordantly with their primary characteristic, the Seri have avoided ethnic and demotic union beyond the narrow limits of their own kindred; and even of these they seem to have cast out parts, annihilating the Guaymа and Upanguaymа, displacing and nearly destroying the Tepoka, and outlawing individuals and (apparently) small groups."

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

both sides of Bahia Kunkaak and El Infiernillo. Some of these had been occupied almost to the hour of the visit, but the occupants had taken flight, leaving most of their unattached possessions behind, and were not seen, though it was evident that, like wary birds and game animals, they kept the invaders in sight from points of vantage and hidden lairs. The eastern scarps and foot-slopes of Sierra Kunkaak were traversed extensively and repeatedly; its crest was crossed by Mr Johnson with a small party at a point west of Punta Narragansett, and the triangulation and topographic sketching were connected with the work on the mainland and carried over practically the entire surface of the island, being tied to the work of the Hydrographic Office about the coasts. Then, despairing of finding the wary natives, and having exhausted food supplies, the party returned to the mainland and thence to Costa Rica, arriving in the evening of December 31.

The original party comprised, in addition to the leader, Mr Willard D. Johnson, topographer; Mr J. W. Mitchell, photographer; Hugh Norris, Papago interpreter, and José Contrares, teamster. The party engaged in the expedition to Sierra Seri comprised the leader, Messrs Johnson and Mitchell, Mr L. K. Thompson of Hermosillo, Don Andrés Noriega of Costa Rica, José Contrares, and two Papago Indian guards, Miguel and Anton, of Costa Rica. The Tiburon party was made up of the leader, Messrs Johnson and Mitchell, S. C. Millard of Los Angeles, and Señores Andrés Noriega and Ygnacio Lozania, together with Ruperto Alvarez, a Yaqui Indian guard, and Miguel, Anton, Mariana, Anton Ortiz, and Anton Castillo, Papago guards; while Hugh Norris and José Contrares, with half a dozen Papago guards and other attachés of the rancho at Costa Rica, maintained an intermittent supply station at Embarcadero Andrade. Señor Encinas cooperated in the work of the expedition, part of the time at Costa Rica and part at Molino del Encinas, his principal hacienda in the outskirts of Hermosillo; while Mr Thompson and Dr W. J. Lyons aided in the work, the former at both Hermosillo and Costa Rica and the latter at Hermosillo.

The return trip from Costa Rica lay via Hermosillo, and permitted the extension of the plane-table surveys to this longitude. While at the city advantage was taken of the opportunity to obtain linguistic and other data from "El General" Koluaio, a full-blood Seri retained at the capital by the State for occasional duty as a Seri interpreter, who was obligingly assigned to the service of the party by Señor Don Ramón Corral, then governor of Sonora. At Hermosillo the leader of the expedition left the main party, which then proceeded northwestward and northward along the route followed by the 1894 expedition on the return journey, the party comprising Mr Johnson, in charge, with Messrs Mitchell and Millard, Hugh Norris, and José Contrares; and the plane-table surveys were continued and combined with the route surveys made on the outward journey.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

owner of several ranches adjacent to, and one within, the territory claimed by the Seri Indians; also by Señor A. Alvemar-Leon of Hermosillo, a young Mexican gentleman educated in the United States. For Señor Encinas the Seri Indians have the highest regard, and his kindly motive in accompanying the party was to facilitate friendly intercourse with the Indians; Señor Alvemar-Leon acted as Spanish-English interpreter, and one of the tribe who speaks Spanish [Mashóm] acted as the Seri interpreter.

One of the subjects of inquiry of the Indians related to the alleged killing of two Americans by the Seri Indians on Tiburon island during last spring at a date not definitely known either to the Indians or to myself. At first the Indians were indisposed to convey information on the subject, but after receiving presents from Señor Encinas and myself, and friendly assurances from the former, the interpreter for the tribe confessed the crime and detailed the circumstances, denying, however, that any of the Indians present at the place of conference (Rancho de San Francisco de Costa Rica, 17 leagues west-southwest of Hermosillo and near the coast) participated.

According to the first account given through the Indian interpreter, the Indians on the island saw a small vessel approach the shores of the island, and saw four men land therefrom in a small boat. The spokesman among the strangers made inquiry, chiefly by signs, as to whether game was abundant in the interior of the island, and was by signs answered in the affirmative by the chief of the tribe, who displayed a letter of authority from the state officials at Hermosillo. Then the strangers divided, two remaining on the shore by the small boat, while the spokesman and another, accompanied by several Indians, started toward the interior of the island. When they were some distance away—the account continues—some of the Indians remaining on shore indicated by signs a desire to borrow the rifle of one of the two men on the beach, and after some parley the rifle was turned over to them; then the Indians desired also to borrow the small boat in which the party of white men had landed, and after one of the two men remaining on the shore was put aboard the vessel, this, too, was placed in the hands of the Indians. Thereupon several of the Indians entered the small boat, carrying the white man's rifle, and rowed around a headland a short distance away. Passing this point they landed and a part of them ran quickly into the interior in such direction as to intercept the course of the white men. There they lay in wait until the strangers appeared, when they shot the spokesman, killing him almost instantly. On this the second white man cried out for help, whereupon he too was shot and wounded, and then (according to the first account) ran away and concealed himself in the bushes and was seen no more. The Indians who had borrowed the boat then went back to the shore, and reentered the boat with the intention of returning and capturing the fine vessel of the strangers; but as they approached the vessel, being at the time quite near the shore, the man on board arose suddenly with a gun pointed toward them and shouted, whereupon they dropped the borrowed gun and, leaping from the boat, ran away among the mesquite bushes, all escaping unhurt. The white man on the beach then, as the account ran, leaped into the boat, and, recovering his gun, rowed to the vessel and got aboard, when the two men at once made sail and escaped down the bay.

The foregoing account was given to Señor Encinas alone by the Indians through their interpreter, and was afterward conveyed to me through Señor Alvemar-Leon. Both of us recognized the incongruity with the character of the Seri Indians of that part of the narrative relating to the wounding and escape of the second man, and Señors Encinas and Leon and myself sought to impress the improbability of the account on the interpreter. Subsequently the Indians, through their interpreter, conveyed to Señor Encinas a modification of the account (after adhering to the first version for twenty-four hours), which agreed in all essential respects with the first, excepting the supplementary statement that some of the Indians (but neither the party who accompanied the white men nor those who followed in the boat) ran after the wounded man, caught him, shot him again—whereupon he again cried out—and

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

point at which he had stopped; the other was a German naturalist-prospector with two mozos (servant-companions), purporting to hail from Chihuahua, who started across the delta-plain of Rio Bacuache and Desierto Encinas with saddle animals, and never reappeared. 648

Then came the second expedition of the Bureau of American Ethnology, to which several Papago domiciled at Costa Rica were attached as guards. While the party were at the rancho the day before the first entrada into Seriland via Barranca Salina, a party of vaqueros from Rancho Santa Ana tended a herd of stock to the barranca for water; one of the animals strayed behind a dune, and the vaqueros, following its trail, came on a small band of Seri already devouring the entrails, and attacked them so vigorously that they escaped only by outrunning the horses, leaving behind all their unattached possessions, including a bow and quiver of arrows and an ancient and nonusable army rifle. This incident, albeit typical, was untimely, and doubtless aided in rendering the Indians too wild to permit communication with the aliens during the ensuing weeks spent in their territory. 123 ● 648

After the withdrawal of this expedition the Seri resumed their range over the borderland plain, with the evident intention of avenging the insult of the invasion. There were a number of skirmishes, in which some of the Papago guards of the 1895 expedition were wounded and had horses killed under them, though they did customary execution on the worse-armed Seri; and extensively published press items indicate that, toward the end of January, 1896, a party of five gold prospectors landed on Tiburon, whence one escaped. 648 721

A well-attested episode ensued toward the end of 1896: Captain George Porter and Sailor John Johnson spent the later part of the summer in cruising the coasts of the Gulf, collecting shells, feathers, and other curios in the small sloop *World*. About the end of October they apparently anchored in Bada Ballena; and a day or two later Captain Martin Mendez, of Guaymas, in charge of the schooner *Otila*, being driven up the gulf and into Bahia Kunkaak by storms, came on a horde of Seri hooting Porter's vessel. The episode received publicity on Mendez's return to Guaymas; United States Consular Agent Crocker instituted inquiries, and Governor Corral sent a force to Costa Rica, where, after some delay, a parley was held with a strong band of Seri under the chiefship of "a seven-foot warrior named El Mudo (The Mute), . . . so called for his reticence of speech."[1] The testimony obtained at the parley and from Captain Mendez indicates that Porter and Johnson landed, or at least approached the shore, probably in a small boat; that they were met by a shower of arrows, under which Johnson immediately fell, while Porter defended himself with a shot- 648

[1] San Francisco Chronicle, October 18, 1896, p. 3. The details of the episode, including the correspondence of Consular Agent Crocker, were printed in the newspapers of San Diego (the place of residence of Porter and Johnson), as well as in those of San Francisco and other cities; and there was considerable correspondence concerning the matter with the State Department at Washington. Some reports present that the bodies of Porter and Johnson were rent to fragments and devoured, but these details naturally lack confirmation. El Mudo's portrait appears in plate 112. [113]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

from actual invasion of the territory of the hereditary enemy. Like representatives of the faith-dominated culture-grades generally, they spoke weightily of inherent rights descended from the ancient time, even back unto the creation; they repeatedly declared the right of the Seri to protect their territory because it was *theirs;* yet their converse but served to show the depth and persistence of their abhorrence of the Seri and of everything pertaining to them. And when gales arose to delay the work, when the frail craft of the party was storm buffeted and lost for days, when they were seized with the strange sickness of the sea, when the salt and sugar mysteriously disappeared (having been secretly sacrificed to diminish suffering from thirst), when all of the earth-powers and air-powers seemed to be arrayed against the expedition, they stoically held it to be but just punishment for a sacrilegious infraction of the ancient law—and their steady adherence to duty, despite tradition and physical difficulty and constant danger, revealed a real heroism. The strain was no slight one; it may have been felt more by the stay-at-homes than by the men in action; certainly a sister of one of the party (Anton Castillo) and spouse of a supporter at the supply station broke under the strain, and died of her terrors—and the return of the party was, to the Papago women and oldsters at least, as the rising of the dead. The dread inspired by the personal presence of the alien is stronger still; when the Seri rancheria at Costa Rica was visited in 1894 it was found needful to keep the Papago interpreter and others of the tribe at a distance, since the mere sight of the inimical tribesmen threw even the women and children into watchful irritation, like that of range-bred horses at scent of bear or timber-wolf, or that of oft-harried cats and swine at sight of passing dog—they instinctively huddled into circles facing outward, and ceased to think connectedly under the stress of nervous tension. The irritation was so far mutual that it was days before the usually placid interpreter, José Lewis, recovered his normal spirits; while the 1895 interpreter, Hugh Norris, was actually rendered ill by the mere entrance into Seriland at Pozo Escalante. And the antipathy between Seri and Yaqui is nearly as great as that between the common-boundary neighbors.

The instinctive antagonism, or race antipathy, between the Seri and the widely distinct Caucasian is less trenchant and intense than the local antipathy; yet even between Seri and Caucasian there would seem to be hardly a germ of sympathy. In the days of his prime, the Tiburon islanders flocked around Don Pascual, first as a provider of easy provender and later as a superpotent shaman whose wrath bore destruction; yet their allegiance was never more than that of the cowed and beaten brute to a hated trainer, and his coming never brought a smile to their stolid features—indeed, his passage among their jacales was met with the same stolid yet sinister indifference accorded the solitary visitor to a menagerie of caged carnivores. And no sooner did his vision become

648

[123]

[115]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

impaired than their fear-born veneration evaporated, and their native antipathy reappeared in original virulence. The 1894 party was fortunate in successfully treating a sick wife of sub-chief Mashém, and subsequently spent days in the rancherïa, distributing gifts to old and young in a manner unprecedented in their experience and making liberal exchanges for such small possessions as they wished to spare; yet, with a single possible exception, they succeeded in bringing no more human expression to any Seri face or eye than curiosity, avidity for food, studied indifference, and shrouded or snarling disgust. Among themselves they were fairly cheerful, and the families were unobtrusively affectionate; yet the cheerfulness was always chilled and often banished by the approach of an alien. The Sonorenses generally hold the Seri in indescribably deep dread as uncanny and savage monsters lying beyond the human pale; while the reciprocal feeling on the part of the Seri toward Caucasians, and still more toward Indian aliens, seems akin to that of the average man toward the rattlesnake, which he flees or slays without pause for thought—it seems nothing less than intuitive and involuntary loathing. The Seri antipathy is at once deepened into an obsession and crystallized into a cult; the highest virtue in their calendar is the shedding of alien blood; and their normal impulse on meeting an alien is to kill unless deterred by fear, to flee if the way is clear, and to fawn treacherously for better opportunity if neither natural course lies open.

Concordantly with their primary characteristic, the Seri have avoided ethnic and demotic union beyond the narrow limits of their own kindred; and even of these they seem to have cast out parts, annihilating the Guayma and Upangnayma, displacing and nearly destroying the Tepoka, and outlawing individuals and (apparently) small groups. The earlier chronicles indicate that the Jesuit missionaries, and after them the Franciscan friars and the secular officials, sought to scatter the tribe by both cajolery and coercion, and endeavored to divide families by restraint of women and children and by banishment of wives; there are loose traditions, too, of the capture and enslavement of Indian and Caucasian women in Seriland; yet the great fact remains that not a single mixed-blood Seri is known to exist, and that no more than two of the blood (Kolusio and perhaps one other) now live voluntarily beyond the territorial and consanguineal confines of the tribe. The romantic story of a white slave and ancestress of a Seri clan, sometimes diffused through pernicious reportorial activity, is without shadow of proof or probability; the tradition of the captivity of a Papago belle was corroborated, albeit indefinitely, by Mashém's naïve admission that an alien women was once kept as a slave to a childless death due to her inaptitude for long wanderings; and there is not a single known fact indicating even so much as miscibility of the Seri blood with that of other varieties of the genus *Homo*. Naturally the presumption of miscibility holds in the absence of direct evidence; yet the presumption

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

000 those so fully described by Hough,[1] and serves to explain the otherwise obscure genesis of the fire-sense, which must have accompanied and shaped that most significant of all steps in human progress, the conquest of fire.

411 The modern coordinate of the Seri arrow is the bow, made preferably from a straight and slender branch of the palo blanco. A typical specimen is illustrated in plate XXX; it is 4 feet 9½ inches long, with the outer face convex and the inner face flat; greatest width 1⅝ inches, narrowed to 1¼ inches at the hand-hold; thickness at the hand-hold 1 inch, thinning to five-eighths inch at 8 inches from this point; tapering gradually in both dimensions toward the extremities, which are rudely notched to receive the cord (of mesquite-root fiber). The specimen [284] illustrated has been cracked and repaired in two places; in one place the repair was effected by a rough wrapping of sinew, and in the other by slipping over the wood a natural sheath of rawhide from the leg of a deer. The specimen is of added interest in that it combines bow [372] and nether fire-stick ("Strong-Kind-Mother"), one of the friction holes being worn out to the notched margin, and the other remaining in usable condition, as shown in the enlarged marginal drawing.[2]

Compared with the delicately finished and graceful arrow, the typical bow is a rude and clumsy device; it displays little skill in the selection and shaping of material, and evidently involves little labor in manufacture—indeed, the indications are that more actual labor is spent in the construction of a single arrow than in the making of a bow, while the arrow-making is expert work, betokening craft of a high order, and the bow-making little more than simple handiwork of the lowest order. The comparison affords some indication of the genesis [174] of Seri archery, and at the same time corroborates the independent suggestion that the arrow is of so much greater antiquity than the bow as to represent a distinct stage in cultural development—though the precise cultural significance of the bow is not easily ascertained.

Efforts were made to have different Seri warriors at Costa Rica in 1894 114 assume the normal archery attitude, with but moderate success, the ● 123 best pose obtained (illustrated in plate XXVIII) being manifestly unnat- 126 ural and a mere reflection of the attitude in the mind of the Caucasian poser; while the results of inquiries served only to indicate that the normal archery attitude was purposely avoided for reasons not ascertained. Fortunately another observer was more successful: in the course of the United States hydographic surveys in 1873, Commander (now Admiral) Dewey received several visits from Seri warriors on board the *Narragansett*; and on the occasion of one of these visits, Mr 114 Hector von Hayer, of the hydrographic party, caught a photograph of 126 an archer in the act of drawing his bow. The negative was accident-

[1] Fire-making apparatus in the U. S. National Museum; Smithsonian Report for 1888, pt II, 1890, pp. 521-547, and elsewhere.

[2] Ordinarily the nether fire-stick is of soft and porous wood, fetuna palo verde and water-logged pine being preferred.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

relation may be considered to begin in the animal realm with organisms adapted to environment through physiologic processes, and to end in that realm of enlightened humanity in which mind molds environment through complete nature-conquest. In the serial scale so defined the various primitive tribes and more advanced peoples may be arranged in the order of mental power or culture-status; when the same arrangement will express in inverse order the relative closeness with which the several tribal minds reflect their environments. It follows that the lowly minds and craft of the Seri reflect their distinctive environment with exceeding, perhaps unparalleled, closeness, because of their very lowliness; it follows, too, that any other equally lowly folk imported into the region and perfectly wonted to it by generations of experience would equally reflect the physical features of the region in their craft and in their thinking; it follows, also, that if the Seri were transported into any other district of equally distinctive physical features, they would gradually adapt themselves to the new environment—though with some added intelligence, and hence with diminished closeness, as is the way of demotic development—in such manner that their craft and thinking would reflect its features. In a more general way it follows that those similarities in culture, or activital coincidences, which have impressed the ethnologic students of the world (notably Powell and Brinton), are normal and inevitable in primitive culture and of diminishing prominence with cultural advancement.

Social Organization

Among the Seri, as among many other aboriginal tribes, the social relations are largely esoteric; moreover, in this, as in other savage groups, the social laws are not codified, nor even definitely formulated, but exist mainly as mere habits of action arising in instinct and sanctioned by usage; so that the tribesmen could not define the law even if they would. Accordingly the Seri socialry[1] is to be ascertained only by patient observation of conduct under varying circumstances. Unfortunately, the opportunities for such observation have been too meager to warrant extended description, or anything more, indeed, than brief notice of salient points.

Clans and Totems

The most noticeable social fact revealed about the Seri rancherias is the prominence of the females, especially the elderwomen, in the management of everyday affairs. The matrons erect the jacales without help from men or boys; they carry the meager belongings of the family and dispose them about the habitation in conformity with general custom and immediate convenience; and after the household is prepared, the men approach and range themselves about, apparently in a definite

[1] A convenient term proposed by Patten.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

As an illustration of the ordination in some 129
what unusual circumstances, it may be noted that when the "Seri 562
belle" (Candelaria) refused to pose for a photograph she was supported 626
by the clanmother (Juana Maria) until the latter was placated by presents; and that when the belle refused to obey the mother's command—to the vociferous scandal of the entire group—Juana Maria appealed to Señor Encinas, as the conqueror of the tribe and hence as the virtual head of both rancho and rancheria. And when a younger Seri maiden (plate XXV) similarly refused to pose, and in like manner disobeyed her mother (again to the general disgust), the latter appealed to Mashém; when he, after first exacting additional presents for both girl and mother and a double amount for himself, put hands on the recalcitrant demoiselle and forced her into the pose required, despite the shrinking and tremulous terror perceptible even in the picture

Commonly the regimentation of family, clan, and larger group appears 592
to be indicated approximately by the placement assumed spontaneously in the idle lounging of peace and plenty. A typical placement of a small group is illustrated in plate XIV. Here the family are assembled outside the jacal, but in the relative positions which would be assumed within. The matron (a Red Pelican woman) squats in easy reach of her few and squalid possessions; on her left, i. e., in the group-background and place of honor, sits the elderwoman of the rancheria (a Turtle); then comes the daughter of the family, followed by two girl-child guests of the group, the three occupying positions pertaining to chiefs or elder brothers or, in their absence, to daughters; opposite the matron sits a younger brother,[1] whose wife is a Turtle woman (daughter of the dame in the place of honor) and matron of another jacal. A few feet behind this brother (just outside the limits of the photograph reproduced, though shown on the duplicate negative) squats the husband, with his side to the group and face toward the direction of natural approach; while the place belonging to the sons of the family on the matron's right is temporarily occupied by a White Pelican girl, together with a dog, notable in the local pack for largely imported blood and correspondingly docile disposition. The place for the babe, were there one in the family, would be on the heap of odds and ends behind the matron. As in this group so in most others, the place of the sons is vacant; for the boys are at once the most restless and the most lawless members of the tribe—indeed, the striplings seem often to ignore [858] [882] the maternal injunctions and even to evade the rarely uttered avuncular orders, so that their movements are practically free, except in so far as they are themselves regimented or graded by strength and fleetness and success in hunting.

The raison d'être of the proprietorship and regimentation reflected in 302
the everyday customs is satisfactorily indicated by that totemic feature 614
of the social organization revealed in the face-painting described in

[1] This man was one of those involved in the Robinson butchery on Tiburon island a few months before the picture was taken; and he was one of those executed or transported for the affair during the interval between the 1894 and 1895 expeditions.

2: Kroeber E-5 (1930) 1931 NU31 Seri NU31

[p.3]

THE SERI

By A. L. KROEBER, *University of California*

INTRODUCTION

The present paper is the first product of field studies made between January and March, 1930, in Arizona, Sonora, and Sinaloa, under a joint expedition of the Southwest Museum, Los Angeles, and the University of California. The financial contribution of the University was the gift of Mrs. Ethel W. Crocker. While the purpose of the trip was to define rather than solve problems, the following pages contain part of the positive observations obtained.

The Seri, who live on Tiburon Island, Sonora, in the Gulf of California, are often considered the wildest and most primitive tribe surviving in North America. They owe this repute partly to McGee's monograph about them, in the Seventeenth Annual Report of the Bureau of American Ethnology. It is easy to read between the lines of this description that McGee leaned toward a romantic and imaginative interpretation of the Seri. Also, his actual contacts with the people themselves were brief, and hampered by imperfect communication. Moreover, the Seri have been for three hundred years in contact with Spaniards and Mexicans, part of the time even under direct mission control. It therefore seems doubtful whether their backwardness could be the result wholly of preserved primitiveness, and may not rather be attributable to a recalcitrant degeneration. In order to answer this question, and to place Seri culture at least tentatively among the other tribal cultures of the Southwest instead of leaving it as an unexplained and lurid abnormality, a brief visit to them was undertaken.

The success of this visit was due wholly to Sr. Roberto Thomson of Hermosillo and Rancho San Rafael, who is now the Mexican Government's *Jefe de Vigilancia* for the Seris, and in effect what in the United States would be known as Indian Agent for the tribe. He has protected and befriended them, kept them in turn in bounds, and secured some governmental assistance for them, under which they are making a beginning of adaptation to the modern world. At any rate, the mutual raidings and killings have stopped, and the Seri, though still very suspicious of most of the neighboring settlers and of strangers, look upon Sr. Thomson as their protector and friend. Without his introduction and experience, many less data could have been collected in a longer stay.

The Seri now live wholly on Tiburon Island. I was with them six days, half of them on the island. This is about as long a time as McGee spent with them—all of it at the cattle ranch of Costa Rica. McGee also explored the island and its camps at some length, but without encountering any Seri, who eluded his party.

Inasmuch as Mr. Edward H. Davis of Mesa Grande, California, has three times visited Tiburon to form an ethnological collection for the Museum of the American Indian, Heye Foundation, I attempted no examination of Seri material or economic culture, which Mr.

2: Kroeber E-5 (1930)1931 NU31 Seri NU31

PHYSICAL TYPE

123 I had a calipers and rule with me on Tiburon Island, but no
141 stature rod. The Seri proved not to object to being measured, but in order to avoid the possibility of arousing prejudice, I had left the matter to the last; but for this, my series would have been longer. The results are given in the adjoining table. The somewhat unconventional finger and foot measurements were taken because of the seeming length (more probably only unusual slenderness) of these members, but may give an approximate indication of the bodily height.

114 McGee is undoubtedly in error (p. 136) in estimating the average
141 height of Seri men at 1825 mm., of women between 1727 and 1750. I would deduct 100 mm. from these figures.[17] The Seri impressed me as less tall than the Mohave and Maricopa, who run about 1720 to 1740.[18] Hrdlička[19] found the following for the region: 53 American Pima, 1718; 50 Papago, 1709; 50 Yaqui, 1696; 30 Opata, 1670; 53 Mayo, 1673; 1 Seri, 1707. The Seri look taller than they are on account of their slenderness. This in turn might be due to preponderant animal diet, general malnutrition, or congenital type. Certainly their calves, arms, and wrists are notably thin. The forearm bones in particular look long and exceptionally thin. The muscles are generally firm.

[142]

Head form, and nose index for adults, run close to those of other Sonoran tribes. Thus:

Cephalic index, 13 Seri men, women, and children, 80.4; Hrdlička,[20] 1 Seri, 81.3; 50 Mayo, 80.2; 31 Opata, 79.3; 49 Yaqui, 78.5. The Pima in the United States are longer headed, 78.1. Eleven Yaqui skulls averaged 75.7, equivalent to 77+ in the head by the usual estimate.

Nasal index, Seri, 4 men of 28 and up, 79.3, 4 women of 20 and up, 74.7, mean of total 8 adults, 77; Hrdlička, 1 Seri, 71.9; 53 Mayo, 80.2; 31 Opata, 81.1; 52 Yaqui, 78.9; 50 Papago, 79.8; 53 American Pima, 78.1; ten Kato, 38 Mohave, 82.

The Seri are slightly broader headed and narrower nosed than the others, but the difference does not seem significant, especially in view of the smallness of the Seri series.

141 Physiognomically the Seri are quite different both from the
142 Yaqui and Mayo and the American Pima and Papago; in fact con-

[Text continues on page 38]

[17] Hrdlička, in McGee, 142-147, gives the following on the skeleton of a Seri woman of age 20-24: Stature (computed by Manouvrier method), about 1620 mm.; indicated musculature, ample; cranial index (occipital deformation, probably unintentional), 88.3; nasal index, 49; skull capacity (Broca) 1545, (Pearson) 1490 cc.

[18] Mohave, 1716; Yuma, 1722; Maricopa, 1749 (Hrdlička, in Putnam Anniversary Volume, 405-424, 1909); Maricopa, 1722 (ten Kate, Journ. Am. Ethnol. and Archaeol., 3:117-144, 1892).

[19] Putnam volume, as just cited; the Seri, in AA, 6:88, 1904.

[20] AA, 6:86-88, 1904. The nasal index means are given by Hrdlička. Neither means nor individual measurements are given for cephalic index, but the percentage distribution in index ranges of one point allows the calculation of an approximate mean.

3:Davis & Dawson E-5 (1922-1940) 1945
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114 648 [123]

their tasks and to live among them without undue fear of losing his life. Through the kindness of Señor Thomson the senior author succeeded in making himself a friend of the Seri and, enlarging upon this friendship through long periods of living and traveling among them, has acquired an intimate knowledge of these strange people.

105 178 [161]

In 1922 the fishing industry of the Gulf of California was not yet well developed, and it was to be ten years before the village of Kino should appear on the maps of the Sonora coast. The Seris were still isolated in their desert domain and their numbers, then about 250, were maintaining themselves out of reach of the infectious diseases of the white man. The clan life had disappeared, and the people lived as a single tribe with their old chief, Juan Tomas, 90 years old at that time

[291] [481] [482] [415]

FIG. 15. MOVING DAY AMONG THE SERIS
THESE BURDENS, BORNE FOR MANY MILES OVER ROCKS, THROUGH CACTUS AND DEEP SAND, CONTAIN UTENSILS FOR HOUSEKEEPING WHEREVER THE SERIS MAY STOP.

[p. 263(B)]

10:Davis E-5 (1922-ca. 1939) 1965 NU31 Seri NU31

Section V

The Seri Indian

Unfinished Book Manuscript

War Chief of the Seris

The Pelican Skin Robe

175 131 *Three centuries ago they were a friendly people living along the banks of the Sonora River from Hermosillo to where the flow of water sinks into the marshy banks along the coast of the Gulf of California.*

175 717 *The great Padre of the Pimas, Eusebio Francisco Kino, first visited the Seris in 1685, and found them "a very gentle people." After a short preachment to them he noted that "With very great insistency they begged me to remain with them and baptize them saying they would give me horses, fish and many products of the country, and that they would build me a house and a church. On three different days I said Mass in their country."*

The Padre could not remain but two years later (1687), he sent Father Adam Lily to them. Lily established a mission---Santa Maria del Populo---on the banks of the River near what is now Hermosillo. The Seris remained faithful to the Padres when the whole country rose in revolt some years later.

175 [131] *The withering hand of time worked against them, however. They were pushed farther and farther down onto the barren lands along the gulf coast until, finally, in a fierce and desperate retreat out into the sea and onto the desert Island of Tiburon. The swift and deadly channel between the Island and the Sonoran mainland gave them protection. They retrogressed through the centuries into a fierce and, perhaps, cannibalistic tribe.*

114 [125] *As late as 1922, when Edward Davis first visited Tiburon Island, a man was putting his life on the line when he stepped on the Island. But perhaps the quality of the man had something to do with it. As did Father Kino, Edward Davis was able to make friends of them.*

The following manuscript is an incompleted book on the Seris which was found among his papers.

[pp. 6-138 not processed]

Unfinished Book Manuscript

114 At the Museum of the American Indian, Heye Foundation in New York City where I was staying temporarily _____, I was asked by Mr. Heye where I would like to go on my next collecting trip for the Museum. I had already covered the whole of southern half of Arizona and had made thorough collections from Pima, Papago, Maricopa, Apache, Hualapai and other tribes, and had also covered Southern California and its deserts.

For many years I had read every scrap of information about the treacherous Seri Indians of the Island of Tiburon---off Mexico, and was greatly intrigued with these wild primitive natives. My theory has always been that the farther away from civilization a tribe is located, the better chance to secure original or aboriginal material, so I asked Mr. Heye if he had anything from the Seri Indians of Tiburon Island, and he said: "Not a thing, nor any other museum."

"Well, I think I'll go to Tiburon in March," I said.

He said, "I wouldn't advise it. You know their reputation. No white man landing on that mysterious Island has ever returned. They are the most treacherous Indians in North America, and Tiburon Island is a good place to stay away from."

114 Nevertheless, I went to Hermosillo, capital of the State of Sonora, Mexico, and there I met and engaged Roberto Thomson, whose father had • 123 treated with kindness some of the Seris who had reached his ranch, [115] and he, Roberto, thought we could land on the Island and, by considerate treatment, make friends with these wild *Tiburones*. It seemed as if we were flying into the face of certain death from their reputation, but we met these people, and by gifts and fair treatment, we became good friends, and from that time in 1922 to the present, that friendship has endured unbroken.

I have the absolute freedom of the Island, and have visited there at least six times. I have been through the Island on all its coasts and am familiar with its wild inhabitants.

123 As a concrete result of that first trip to Tiburon, I secured a
115 *balsa* (boat) made of *carrizo* canes lashed together with native fibre,
501 which *balsa* Mr. Heye said it was the finest one in North America.

[226] This *balsa* was given to me without hesitation, although it furnished one or two families with sea food.

115 I wish to pay tribute to Senor Roberto Thomson who has been my constant companion, friend, guide and interpreter during the past twenty years, on all my trips to Tiburon and various parts of Mexico. I found him absolutely dependable, using excellent judgment in critical situations. He was honest, fair, intelligent, looking out constantly for my safety and comfort always, enduring hardships cheerfully. A better all-round out-door man I have never seen equaled. In short, he is a real *hombre*, and muy *simpatico*.

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18 Tiburon, or *Shark Island*, long noted for its evil reputation as
133 the home of the most savage and treacherous Indians of North America, lies in latitude 29°north and 112°30' west longitude, in the Gulf of California. It is shaped like a parallelogram about thirty-five miles long and eighteen to twenty miles wide, and lies parallel to the coast of Sonora, Mexico, of which, no doubt, at some remote period, it once formed a part.

[137] It is separated from the mainland, for the most part, by a strait called *El Infernillo*, or The Little Hell, through which the rising tides pour a resistless flood. It is a desert island and supports a desert arboreal vegetation which includes several varieties of the cactus family and the *mesquite, palo verde, palo fierro, torote, palo blanco, ocotillo* and others. The giant *saguaro, sarbueso* and *pitahalla (pit-a-haya)* cactus are found here also.

Two desert ranges run lengthwise of the Island, which, on its westward or windward side, terminate in sea-worn cliffs against whose ramparts dash the heavy breakers of the Gulf, and on its eastern side, by long alluvial aprons from the foot of the mountains, sloping gently down to the lovely shell-strewn beaches. From this side the foot of the mountains lies from two to five miles distant. On this, the leeward side of Tiburon, the sea is much calmer, and often, in the early morning, it is as smooth and placid as a lake, reflecting each rosy, lavender and purple tint of the rugged Sierra Seri along the Sonoran coast, as in a mirror. The exquisite loveliness of marvelous sunrises over the pure limpid waters of the *Estrecho Infernillo* is mystical.

134 The soil is loose and sandy, unsuitable for cultivation, and im-
24 possible for producing domestic crops of any
142 kind.

175 if they were as hungry then as they are today, they would not stop to
648 spike a man up preparatory to serving him. Their only tools then were
266 rocks to use as hammers and hoop iron for knives, and these are in
114 universal use today.

[412] There is no doubt that the men were killed, but I think these mining men purposely exaggerated their findings, if any.

648 There is no doubt that the Seris were brave fighters, treacherous
721 murderers, sparing neither men, women or children on their raids,
727 killing ruthlessly. But there is one charge which cannot be brought against them, which cannot be said of many tribes north of the border. So far as I could find out, they never tortured nor scalped.

648 The Seris never took prisoners and they never inter-married with
721 other tribes, so their strain is pure.

727 There was one exception. Sixty or seventy years ago, the Seri
563 Chief Coyote Iguana and his band of warriors held up the stage between Hermosillo and Guaymas, and killed all except a handsome Spanish girl of the better class. This girl, Coyote Iguana made his wife and by her raised a family. One granddaughter still survived in 1924, and while more attractive than the general run of Seri, her complexion was fully as dark.

800 The Seris, Ishmaelites among the native tribes of Mexico---the most fascinating Indians in North America!

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123 *Reception Committee, Tiburon Island - 1935*
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On the twenty-fifth of April, nineteen twenty-two, I engaged the services of Roberto Thompson, who with his father and grandfather

[text continues on p. 149]

[23] [15] before him, has been a friend of the Seris for years. It was his father who brought McGee to Tiburon in 1895, and in many ways they have shown kindness to the Seris.

[22] I hired an auto-truck for fifty dollars to take the necessary people and supplies. These supplies consisted of some fine-tooth combs, needles, thread, one bolt of white muslin, 150-pounds of flour, panoche, saws, nails, harmonicas, little round mirrors, fish twine, hooks, 2-bits and other things.

We left at 6:30 a.m. With us was the driver Ricardo, his friend Rafael Ysabel, son of an ex-governor of Sonora. When we reached Bob's ranch, *El Providencia*, five or more miles out, we added a one-eyed Mexican and Bob's brother.

After a simple dinner at the ranch house we drove across the mouth of the Sonora river, a broad, flat alluvial plain probably four or five miles across. We circled about and turned north, stopping at the edge of a broad shallow bay. The tide was down and the shore was slimy mud and filled at places with sharp-edged clam and oyster shells. There were oyster flats at the edge of the mud, so Roberto and the Mexican waded out and secured enough of them for supper.

[3] During the day we ran close to a Gila monster, a horrid looking black and orange mottled fat lizard who waddled along. Rafael held his head with a rifle, reached down and caught him in back of the head, and held him up. He hissed like a snake and bears a bad reputation.

[33] The country was flat and the road pretty good. Detached mountains we passed during the day and one range called *Siete Carros*, Seven Mountains, with peaks all in one row, reached for fifteen or twenty miles. We passed a few ranches where the people were pumping water from wells or hauling in the old turn-table way with a mule and rawhide buckets. Then we made camp, got everything ready for an early start the next day and turned in.

At dawn three men took the boat with all our traps and groceries and fifteen gallons of fresh water, and Rafael and I walked up to the point to meet it. Louis and the driver and truck returned to the ranch. The weeds and ground were very wet and we came to some sloughs filled with soft ooze. These were impossible to cross, so we went around them and then decided to strike for the ocean side and go along a sand bank. This we did, and when we reached the end we saw the boat waiting for us half a mile or more across a great flat.

[33] The ocean view was grand. A great rock, *Alcatraz Island*, protruded from the sea a short distance out, on which countless cormorants roost and raise their young. Bob often gathers their eggs.

We reached the boat and climbed in and pushed off into deep water. There was no wind and the tide was part way against us, but we rowed, three of us, for many many miles. We landed in a small cove, drew up

[text continues on p. 151]

Robert Thomson waving white bandera as signal of peace. In the Gulf - Sonora. April 26, 1922

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Pulling the boat up the beach above high tide - Kino Bay and Alcatraz Island - 1936

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123 the boat and took dinner. Afterward, we pulled out into the Gulf and skirted the coast, rowing for miles. We passed great red mountains with the sea beating against their rugged breasts, hollowing out deep caverns; then sandy bluffs with mountains receding, but the horizon was always notched with rugged, pinnacled desert ranges.

We landed for the night on a sandy point and made camp. After our supper two fires were built, Roberto's signal that he was on hand. [202] Also a white scarf was tied to a long pole as a signal of friendship. No answering signal appeared. Probably the people were on the opposite side of the Island.

At sunset the sea became calm as a pond and the mountains on Tiburon in the distance turned purple and lavender. The sea reflected all the sky and mountain colors like a mirror.

The next morning we got an early start and it required our united strength to push the boat down to the water as it was low tide. The beach was strewn with various shells and a lot of colored pumice stone which had drifted in from seventy-five miles north, where there are some pumice hills near the sea.

The nearest point of Tiburon was only one and a half miles distant, a short row across. The water was pure green, indicating a shallow sea. [361] We rounded the point and rowed into a bay and then to the head of the bay where there were a few huts called *Rancheria Tinajanita*, or Little Tanks. The water was so shallow in places we had to get out and push the boat a long way out and walk up a long muddy beach over shells and a sort of coral that bruised and cut our bare feet, so that we went as if walking on eggs.

342 The rancheria was built on the shore with no shade; each hut facing
361 the water. The huts were very crude---the frames of *carrizo* reed and ocotillo, covered with coarse brush and blankets of dried seaweed. [351] Around the bottoms, or sides, of each hut were piled sea turtle shells three and a half feet high and two and a half feet wide. Over these were piled seaweed and brush, not fastened. Round about were turtle bones and shells, and sea shells, bones and anything that contained meat.

This was just a temporary camp of about eight huts.

123 We left this camp, raised the sail, which consisted of several
202 flour sacks sewed together, and lay in the bottom of the dug-out, while the one-eyed Mexican steered with a paddle. Before leaving, Ricardo left his sign---a sign agreed between him and the Seris. Since he and his family had been so kind to them, they would never harm him or kill his horses and cattle. He erected a stick with a rag to call attention, made a circle with his heel, and inside the circle made the tracks of his right bare foot and right hand.

123 At the bow we carried the white banner always to signify peace.
361 We crossed the bay to a sandy point and came upon another small

[text continues on p. 153]

123 361 rancheria of about ten or fifteen huts, half tumbled down, all facing the sea and surrounded by turtle shells and deer bones, and sea shells. Things were dropped wherever they ate. This rancheria was deserted also.

We set sail again and landed on a sandy beach near another deserted rancheria called *Palo Fierro*. We hauled the boat way up and took out all our things and carried them up to the huts. In this place there were twenty-one huts---sometimes three built together. Many of them were in a good state of preservation. They were all in a long row with bleaching bones and turtle shells on all sides. From the inside of one hut I counted thirteen tortle shells around the base. There must have been about a hundred turtle shells here, and a few land tortoises.

123 [611] There were two or three fragments of painted parts of a boat---probably remains of a boat belonging to seven fishermen who got drunk and landed here, and were all killed by the Seris two years ago. Six months ago a single Seri was captured by some Mexican fishermen and killed in reprisal.

As the wind increased it kicked up an ugly sea and we decided to camp over night. As we were reduced to about six gallons of water, Roberto suggested we take two empty five-gallon cans and go for water. I had offered to stay with the boat but was told the Seris would kill me if they found me alone.

[712] A Seri had told Roberto to follow a certain trail from the rancheria and go between the mountains and he would find a *pozo*, or well, not far away. Ricardo left his private sign and the five of us marched away, following a well-worn trail. For the full distance broken shards of ollas lined the trail at short distances, so we knew we were on 137 the right trail. Brush began at the sea shore and we passed various 123 kinds of desert vegetation---several kinds of cactus, especially the *sarbueso*. This starts with a single great trunk two or three feet in diameter, and then branches out like a vase, running up fifteen to twenty or more great columns like the *saguaro*. They were thirty or forty feet high. In some of these were piled a great accumulation of sticks and trash ten feet high or more, and on the top where the sea eagle makes its nest. There were a number of these.

Then we came to the *pitahalla*, *cholla*, *ocotillo*, and others, and the strange *terote* tree. This tree is the *Bursura Microphylla*, and has an odor like turpentine. It is a fat, dropsical tree like stuffed sausage, with crooked ungainly branches coming out at all angles. There are three varieties---the *terote colorado*, *blanco*, and *negro*, according to the color of the cut bark. Another strange tree was the *palo blanco*. Then there was the *palo verde*, *palo fierro* and *mesquite*. The *mesquite* was rare.

123 [212] A number of signs were marked in the sand. We could not translate them. We walked single file, rifles in hand, and revolvers handy.

[text continues on p. 155]

123 Mile after mile. We got very dry and had almost given up finding the [133] water. We had gone up a sandy wash for miles, barren arid mountains terminating in regular saw tooth pinnacles on all sides, some of beautiful red rock---red as blood; some gray and some lavender.

312 At last we came to the water hole which had also been frequented
123 by coyotes, skunks and other animals, and their flavor was easy to taste. But we had ceased to be critical long ago. The hole was really a crooked shaft and led down crude steps worn into the rock for ten or twelve feet. It had been dug by clam shells and bones and sticks, and may have dated back many years. Part of it was through rock and it was a work of great patience to dig with such primitive tools.

123 At the foot, a seepage came through the sand and formed a shallow pool from which, in the semi-darkness, we dipped water and filled our cans. After a rest, all partook of a generous drink. It took us two and a quarter hours---six miles to go there, and we were probably the only white men who had ever been there. I am glad I went for the experience, but we were all completely exhausted on reaching camp. Ricardo and the Mexican carried the cans of water six miles on a stick balanced over the shoulder. Roberto left his sign along the trail. We slept in the Seri huts, all tired out. My feet were tender from walking on the sharp shells and my shoes had shrunk from being wet in salt water, and that pained my feet greatly by cramping them too much.

We heard many interesting tales about the Seris: their wonderful endurance, their susceptibility to disease, their marvelous feats of tracking and swimming, their habit of getting food only when necessary and laying up none ahead, and other queer customs.

The breaking of dawn brought a marvelously beautiful sunrise. It was very low tide and the boat was stranded nearly two hundred feet from water. The sky and sea were crimson and the mountains purple on the Sonora side. The sea was calm, without a ripple, and mirrored every peak and color and made a picture of indescribable beauty.

We ate a hasty breakfast and strained ourselves to the utmost to move the boat. It slowly slid over the grass and shells to the water's edge, and then we had to push it out seventy-five feet in the water to get it deep enough to float. A slight breeze was blowing, so we raised the sail and rounded the point and headed across for another point, across a stretch of water five or six miles.

[202] At last we saw a few huts and as we neared shore we saw two men with rifles. We waved the white banner, laid our rifles handy, fixed our revolvers, and ran the boat ashore. The men had darted back into the brush as experience had told them to beware of strangers. Roberto and his brother Nene leaped out, leaving their rifles, seized the white flag, ran after the men and called to them and said they were friends who had come to see them. They recognized Roberto, returned to the brush shelters, left their rifles and came to the boat bare-

[text continues on p. 157]

Blind Seri Indian, 1939
Best paddler we had

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Candelario completes his decoration
one of our paddlers - 1936

123 handed to show their friendliness.

142 One was a young man with rather pleasant features, his braided
291 hair hanging below his shoulders. His name was Antonio Herrera. The
123 other was a wild-looking specimen called Ramon Blanco. His hair was a
[302] tangled mat with a short braid behind, suspicious black piercing eyes,
long sparse moustache and chin-beard hiding a broad cruel mouth. He
[311] wore the remnants of an old sweater, a short dirty kilt, or skirt,
nearly to his knees, a belt full of cartridges, mostly empty, and a
long knife in a rawhide scabbard.

123 The young man had been baptized and given a name by Roberto, who
[795] had acted as godfather or *patrona*, many years ago. He wore a hat,
[291] jacket, and pants of blue denim, and *guaraches*, or sandals of rawhide.

We shook hands all around and then they called and halloed in the
brush and soon three women and a lot of children, wild and half-
[415] clothed, filed into camp. The women were tall, gaunt, unkempt, ragged
[482] and barefooted, paying us not the slightest notice. They were bearing
[422] on their heads large baskets filled with all their earthly posses-
[850] sions---cooking ollas, scraps of cloth, pieces of turtle meat, bone
[231] brads, hair brushes, and odds and ends. They carried, also, an infant
or two wrapped in odd bits of rags. Several gaunt dogs followed in
their wake.

342 In all, three families came trailing in, removed their household
equipment from their heads and resumed their interrupted and primitive
[592] housekeeping. Each family occupied its apartment in the row of brush
shelters, separated from each other only by brush partitions with a
total lack of privacy. These shelters, always open to the sea, serve
as shade from the fierce rays of the sun, and also as windbreaks, but
[361] are no protection from infrequent rains. They are occupied only for a
brief period and then their nomadic tenants move on to fresh *cahuamas*,
or sea turtle range.

123 Soon, a third man arrived while we were near the huts, Manuel
[142] Encina. He was a man of sixty-five, gray hair and mustache, seamed
features, and not evil looking. He was out of breath. He had gone for
water to the same water hole where we had been yesterday, struck our
tracks, had left his water cans and hurried back to warn his people.
He was greatly relieved to find friends.

Since he had gone for water, inquiry revealed there had been no
water in camp for two days, and six adults and one girl of thirteen
and six children were thirsty. We gladly gave them one of our five-
[225] gallon cans of water and they were very grateful. They had caught a
[262] sea turtle the day before and gave us some turtle steaks which looked
like beef or mutton.

312 As the camp was without water and we were running short, the young
482 man and Encina offered to get some. Each took a *palanca*, or short
123 shoulder pole with knotched ends, fitted empty five-gallon cans in

123 312 [492] nets of twisted fiber, hooked the nets in the ends of the notched stick and started off nine or ten miles to the water hole in the heart of the mountains.

Water carried so far over loose, sandy soil, dodging cactus, threading a devious way among the *talus* thrown off the cliffs and slopes of canyon walls, with the water-bearer barefoot, acquires a value absolutely unknown to the man who draws an unlimited supply from a faucet.

The two men were gone six hours and when they returned they were almost staggering under the heavy loads of water, each man carrying at least one hundred and ten pounds of water, as the cans were full. In addition, one man had a canteen full.

The thirsty people drank sparingly, and a little Seri maid poured some of the precious liquid into a cooking olla for a thirsty dog. After the dog had lapped sufficient to allay his thirst, she carefully poured the residue back into the can, never losing a drop. One drop of water could not be spared after that arduous trip.

484 147 648 Bob says a man goes to Hermosillo occasionally and returns to the coast, ninety miles, with two to five cans of *mescal*. It takes probably four days to do it, but it is a wonderful feat of endurance. He said about thirty years ago a woman walked the ninety miles during one night, afoot, and reported to the Government House when it was opened at nine in the morning that about fifty of her people had been shot by Roberto's uncle at various times. This uncle was a very hard rough man and the Seris were fond of his mares and steers for meat, and used to steal, so he began shooting a goodly number. Fearing a man messenger would be shot, as men were frequently shot while going along the road, they sent a woman.

Ysabel was Governor at the time. Judgment was rendered against the uncle, and it is probable that a hanging squad would have been sent out to execute him. The Governor, a great friend of the family, sent for him, and he rode ninety miles at night on horseback and was saved with the Governor's help.

Roberto saw twelve Seris pack meat from two mares, two steers and two yearling heifers, for four or five miles to their boats. Their endurance and strength is phenomenal. The question naturally arises, "Why are not burros used by the Seris on the Island to ride and pack, [492] as they are by their Mexican neighbors on the mainland?" It has been tried, but things were reversed; the Seris packed the burros around in their stomachs.

261 262 Roberto said: "These people, living on the verge of starvation, never having a continuous food supply, would kill and eat every burro, and it is a common thing on the mainland, if a cow or horse dies, and Seris are in the neighborhood, they will try to beat the buzzards to it. They will gorge in times of plenty, and when food is scarce they

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261 will exist on very small rations, bear burdens, and walk long dis-
262 tances. Their food is anything that walks, flies, crawls or swims,
[252] and they eat it raw with the same relish that we eat it cooked. There is but one thing they will not eat; they draw the line on the Gila monster. They are the most perfect type of human being adapted to desert conditions that exists today. Convey them blindfolded many miles into the heart of the desert, empty-handed, remove their blinders, and they will find both food and water where others would perish. The Papagos and Yaquis do almost as well."

302 We gave the women a small bag of flour and three or four cubes of
[123] sugar around, and the men three packets of tobacco each and two boxes of matches. Matches with them are very precious and are rarely used. Rather than use a match a woman came over to our fire and borrowed some coals to rebuild her fire. From this point the nearest matches are a good deal over one hundred and twenty miles distant, so they have to economize in every thing.

432 Each rag is valuable, and flour, sugar, coffee and rifle shells
[436] are absolutely priceless. While they know money, it has no value here.
[437] Only commodities go here. The most highly prized things are boards to
[389] make boats and rifle shells to get game and protect themselves. All empty shells are saved, the primer punched out, straightened, a match head put in, a little pinch of powder on top, the shell filled up, a long bullet inserted, the shell pinched tight, and a fresh set of ammunition is made.

142 The women and children certainly did look wild. Their hair was
291 frowsy and unkempt, their skirts and waists a patchwork of dirty rags
302 coming just below the knees; their features seamed and hard and cruel. Their complexion was very dark. They had no under garments. The children wore only a dirty shirt coming a little below their thighs, and even that is ragged. One or two of the women had a dirty bandanna over their heads. How I wished I could have seen them in their ancient, picturesque pelican-skin kilts!

302 I happened to witness the operation of a Seri beauty parlor. A
[029] mother brushed the hair of her thirteen-year-old daughter with a brush
[293] made from the fibrous roots of a certain grass tied together with
[515] sinew. During the operation if she came across a *piojo*, and she found several, she plucked him away from his feeding ground and dropped him in the fire.

The hair neatly brushed, the mother then mixed paint in a small vessel and with a tiny stick painted a bright blue design under the eyes and across the cheeks and nose, and then she added narrow white stripes, which, contrasting with the blue and the dark skin, produced a very striking effect. This paint is easily removed and the women often paint and remove three different face designs in one day.

304 I did not see tattoo work on either men or women, nor did they
301 wear ceremonial feathers as did our western Indians.

000 wear ceremonial feathers as did our western Indians. I saw no skin or
164 cutaneous disease, or evidence of tuberculosis or of trachoma---the curse of our Indians.

142 One boy-child of five years was a handsome child---fat, round,
302 sturdy, with roving great black eyes, large thick lips, a picture of
[29] perfect health. He was almost naked. His hair was done in a pigtail
[85] with a red string braided into it. His face like all the others was dirty, but he waded into the shallow water with a short spear and I saw him catch two crabs with his little harpoon. The water did not bother his face.

415 They had no plates or eating tools, except large deep clam shells,
412 cast up by the sea, which served as cups and dippers. Their long, keen
264 belt knives were used for cutting, carving or skinning, and always the
[23] fingers for eating. They gathered in a circle around an olla of seeds of long grass growing on the sea bottom prepared by winnowing, parching and grinding, and then cooked with turtle oil. Each one dipped his or her fingers into the olla and conveyed them to the mouth without losing a drop, and licked them off with great relish.

231 The dogs eat with the family. There were six or seven half-starved
264 ones. If someone picked up a piece of turtle flipper the dog often took the first lick at it, bit off a piece or licked it before it reached the owner's mouth. The dogs were not punished. They were just slapped to keep them out of the pots.

123 We had a great time that evening in Seriland. The young man played
534 his violin. This consisted of a hollow box cut out of a *palo verde*
[82] tree, and a piece of pine about sixteen inches long; terminating in a
[28] hollow where a single peg was fitted. The one string was twisted deer
[23] sinew, and the bridge was a small round clam shell at the far end. The
[53] bow was a small bent stick and some black horsehair. On the handle was a wad of rosin fastened underneath. By fingering this string a few weak squeaky notes were made, and this was the classical music of the Seris.

Manuel Encina seized his gourd rattle and began chanting. Herrera tapped a tin can and I beat on an inverted basket and the orchestra
535 was in full swing. A young girl, Rosa, dragged out a turtle shell and
123 standing on it began to dance. This dance consisted of stepping up and down quickly with each foot alternately, and this stamping, barefooted, emitted a hollow sound. Every once in a while I let out an
[12] Indian yell which pleased the Seris very much. For two hours they had a real swell time. We took one flashlight of the proceeding.

[34] Each family was in their hut, which afforded very slight shelter
[36] as they were only partially roofed over and the sides were broken
[35] down in places. The huts were all adjoining and each had a little
[36] campfire, which did not give much illumination, so the dancing was in semi-darkness.

(text continues on p. 163)

535 semi-darkness.

123 Soon two little boys joined the dance, stepping up and down in the sand. Lighted only by the flickering flames of the driftwood fires on the shores of this mysterious and dreaded isle, the soft murmur of the sea as a refrain to the wild chanting, the weird circling of glittering eyes, and wild dark faces, presented a scene of uncanny and savage fascination witnessed by white men probably for the first time.

[533] After each stanza there was a short rest. The singing was similar to most other tribal chanting.

582 836 622 Bob made the remark that the girl was old enough to be broken in by the old Chief. I said, "How?"

583 [839] He said, when a girl thirteen or fourteen has her menses, the Chief takes her and goes through the family act. This is called 'breaking her in'. She is then eligible for marriage. A young man desiring marriage has to purchase the girl by giving the father a boat or rifle, both being necessary to the Seri's existence and protection. At the wedding they have sort of a fiesta and much mescal is drunk, which properly solemnizes a wedding.

585 844 845 When a girl has a baby it usually comes very naturally and easily, but I remember one girl's first baby was three days in coming, and she suffered a great deal. This was on a subsequent trip. She was staying with many of her people on the mainland and someone asked them if they didn't want a doctor or other help. They said: No, they had one. It was a Medicine Man who chanted over the girl and dug hollows in the sand to fit her heels into. He said that the legs had to be kept apart. This was all he did. But ordinarily there is no trouble, and if a baby is born at noon the mother is up and doing, and cooks supper [543] for her lord and master. The men treat their wives with kindness and each shares with the other any delicacy.

462 [303] [482] In Seriland domestic duties are reversed from the usual Indian methods. The men get the water and the women get the wood. This consists mostly of driftwood gathered along the shore, and it is a picturesque sight to see a string of women and girls bringing in loads of wood in baskets on their heads at sunset.

622 595 There are no plural marriages, but sometimes when a Chief is old, or rather when his wife is old and can have no more babies, he can take a younger woman as his wife. The present Chief is getting old now, almost too old to break in the girls, so they may get a younger man. This might be called the perquisites of office. He takes the cream.

832 825 They hunt lice in the head and eat them. This is said to increase the amorous desires. The penis of the male turtle is cut out and dried. This is pounded and pulverized and placed in the food of the women. This is said to create a desire for a man and the family act.

157 The women are virtuous and faithful and perform all the duties of
152 wife and mother and bear their share of hardships. The hard life,
[145] exposure and struggle for existence soon causes hard features, wrinkles
and ugliness. Many babies die young and the tribe probably numbers
[165] only about two hundred.
[167]

The dancing by the driftwood fires continued as we turned in to
123 rest, our eyes constantly drawn to the flame and the glittering eyes in the wild dark faces, while the waves of the sea accompanied the chanting in that mysterious isle of Seriland.

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Seris - off to the fishing grounds - December 1934. Alcatraz Island in distance.

222 In Seriland most of the food comes from the sea. During April and May, at the time of my first visit, a green grass growing on the sea bottom was detached and washed ashore. The women dragged it up on the bank near camp and spread it out to dry. Some of the stalks contained about seven fine green seeds the size of a pin head. When dry, the women threshed them out with sticks on a piece of canvas. These are
[285] cleaned by the deft use of the *batea*, or winnowing basket, of which these people are pastmasters.

252 A pint of these fine seeds were parched in an olla over coals of driftwood and constantly stirred to prevent burning. It was then ground
262 on a flat rock like a *metate*---any flat rock---into a green meal which was very nourishing. This was cooked in an olla with turtle oil, making a porridge like thick green paint. It was then drunk or eaten with the fingers. If there is plenty, two fingers are used; if not, only one finger.

262 The Seris also eat the fruit of the *cholla* cactus, *pitahalla* and *sag-*
222 *uaro*, and probably many other plants in season, but they are wild to get flour. But the principal diet is *cahuasa*, or sea turtle.

225 After a day or so with the Seris, their food supply became exhaust-
• 123 ed and they made arrangements to take our boat (all they had was a
[177] *balsa*) and get a sea turtle. So at four o'clock in the morning, with Roberto and Nene, his brother, and myself, they shoved off for the fishing ground. It took two hours of hard rowing to reach the Sonora
[133] side, as the tide was racing up the *Infernillo*. Most of the waters are shallow, with patches of dark and light sandy bottom, with seaweed or grass. On this green grass the turtle feeds; it is their alfalfa field, and it takes a keen-practised eye to see a turtle at the bottom and harpoon him before he escapes.

225 Once on the hunting ground, water, one of the Seris stood in the
[411] bow with a harpoon twenty feet long, a detachable barb on the end of it, and a heavy line attached. The Seri in the bow motioned with his hand this way or that, slow or fast, and watched the bottom. At last he plunged his spear and withdrew the pole. The turtle swam awhile
[411] until exhausted, and then he was drawn alongside, his head pounded with an ironwood club, and then he was turned on his back and drawn on board. This called for great skill in balancing the cranky, smooth-bottomed boat to keep it from shipping a wave.

225 When a Seri goes in his native *balsa*, which only holds one man, he
501 straddles the middle part on his knees, resting them on seaweed. The craft is light and is a good sea craft, but it is low in the water and the man is wet all the time. He uses a double-bladed paddle, and his harpoon rests against pegs set in the *carrisos*. A rock which serves to quiet the turtle, two pointed stakes and a heavy fish line complete the equipment. He has to paddle across to the other side in that cramped position, say eight or ten miles, very early in the morning, then watch his chance to harpoon. If successful he brings up the turtle, knocks him on the head with the rock, pulls him on the end of the craft by skillful manipulation, cut slots in the front flippers, put stakes through and into the *carriso*, pinning him firmly in place, then paddle back.

225 The wind came up strong when we started to return from our turtle
123 hunt and with wind and tide against us we rowed across the Island. Bob and his brother disembarked and took it afoot for camp, a distance of ten miles, reaching there at two p.m. The Seris made a tump line and towed the boat, one towing and two warping off-shore until we arrived at camp about four p.m.

When the bow was run up on the shore everybody came down, the women and children talking a steady stream in their strange jargon.
123 They soon jerked the heavy turtle out, dragged him up the beach on
262 his back, and began immediately to cut him up. Bob spoke for the breast, which is a white plate on the underside of the turtle with

[text continues on p. 168]

123 the flesh attached. This we roasted, or broiled, by standing it on
262 edge against two stakes in front of the fire. The breast was white and tender, somewhat like roast pig, but much more delicious.

262 The Seris cut off the great flippers, dug out the entrails, and
252 whenever there was a crack in the crowd of men, women and children, there was a dog lapping the blood and chewing a shred of meat before being driven off. Men, women and children tore off pieces of the tender
[251] meat and ate it raw. The blood which gathered in the hollow of the shell was baled out and saved in an olla.

A woman took out the coils of entrails, ripped them open with her finger, squeezed out the half-digested sea grass, which resembled closely-packed boiled greens, and rinsed them in the sea. The head
[250] was skillfully disjointed, and with flippers, entrails and liver, put up on the brush roof away from the sand and dogs.

Then began the feast; half the turtle being devoured immediately.
[244] To see Blanco, which name fits neither his complexion or character, gnaw the bone and tear away the raw flesh of a turtle flipper with his strong white teeth and cruel mouth, would not require much imagination to substitute the shin bone of a human being.

All parts of the sea turtle are utilized except the bones and portions of the head. The white, flexible under-shell is roasted and eaten, but how they can masticate and digest it is a mystery. I tried it and gave it up, as did all our party. It might have been a Goodyear tire, for all the impression we made on it, but even the Seri children
237 eat it. The carapace is broken into small pieces and dried out in an olla, and this yields a green oil. The shell is nearly one-half inch thick and filled with minute cells which carry oil. This oil is evidently a provision of nature to prevent barnacles and marine growths from attaching to the shell. This oil is poured into a previously cleaned section of intestine, fastened at one end, and then is bottled, ready for transportation or use.

The skin of the flippers is used for sandals. The broken pieces of carapace are also used for firing ollas. The shells are used for windbreaks, for receptacles for transporting household things on women's heads, and possibly for other needs. The stomachs are stretched, probably with sand, and when dried are used for transporting water, the same as we use a canteen.

185 The Seris are always improvident. They raise no cattle. They plant
261 nothing and the only crops they raise are children and dogs. They
[241] store no food away, eat when there is plenty, go hungry when there is
[234] nothing to eat. When they will eat raw turtle meat like animals, their
[262] taste is not refined. This is evidenced when they will eat a horse or burro dead, several days---scrape off the maggots to get a chance at it.

242 Burro meat comes first in their estimation, then mares, then steers, but they take what they can get and no questions asked. Burro deer or black tail is a great article of diet, and these deer are on the Island. Wolves and coyotes are on the Island also. I do not think they eat them.

266 As I have said, the Seris are reputed to be cannibals, or to have been. Since those who furnished the meals cannot speak, it is a matter not entirely proven.

648 177 There is a war on between Mexican fishermen and the Seris. The Seris are wild for boats and will do almost anything to get one, so two years ago a chance occurred and they killed seven drunken Mexican fishermen and seized their boat. Last summer, some fishermen surprised the Seris, killed one, and recovered the boat. They mourn this boat a lot more than they do the dead man.

648 Twenty or thirty years ago, Governor Ysabel came here with some troops to capture some Yaquis who had joined the Seris. The Governor told the Chief he would have to give up the Yaquis, as they were outlaws. The next day the Seris brought in six right hands. They said they had killed the Yaquis. Asked how and why, they said they had killed them while they slept and they wanted their guns. They cut off the right hand of each as proof.

With all their apparent friendship, we never go without arms. When we sleep our rifles are alongside of us, and we wear our revolvers with us. Sometimes we roll in with our clothes on. But they have never, by sign or act, shown anything but friendship.

851 123 177 A baby boy about four months old was in camp, so Rafael Ysabel baptized him and gave his name Rafael, and presented him with a little gold cross of which his mother was very proud. She held the baby while he poured a little precious fresh water over its head and repeated:

"In the name of the Father, Son and Holy Ghost, I name thee Rafael. . ."

123 Curious black eyes follow us always. When we eat, the Seris often squat around us and watch every mouthful. If there is any bread, gravy, grease, beans or meat left over, we pass it on and they certainly clean up.

While we eat, the waves are always lapping on the shore upon which many pretty shells are thrown by the tide, besides water-worn pumice stone in all sizes down to a small marble.

Our meals are very simple. We bake biscuit in the dutch oven for every meal, cook turtle meat, if we have it, or beans or rice or spuds.

[text continues on p. 171]

123 We have given the Seris so much we are now short ourselves. Variety is very restricted. We haven't enough tin dishes or tools to go around, but that does not trouble us at all. All the cleaning is done in salt water and sand. Fresh water is only used to drink. Nothing else. We can't even take a shave. Not a drop of water. We are very lax in our personal toilets and appearance. We are barefooted always in the boat, as we have to wade to get the boat in deep water, and often the waves slosh on board.

This boat is made of a hollowed log twenty feet long and three feet, three inches wide, and she is very cranky. She almost upset with us several times. When everybody is placed in it, it is difficult to even change a posture without endangering everybody. She has no keel and leaks some, so we have to bail out often. But she is a good sea boat and rides the waves well if they are not too rough.

123 439 [203] [404] One evening we decided to get a message through to Juan Tomas, the Chief, some twenty or thirty miles distant. Herrera promised to go if we gave him twenty thirty-thirty cartridges. He would go one day and return the next, a round trip of about fifty miles. We gave him the message to tell those people we had a lot of things to trade for the things they use in every day life. Pelican skin kilts, bows and arrows, ollas, baby cradles, hair brushes and other interesting things. I had already made a trade with Blanco for his *balsa*, promising him sufficient lumber, nails and tools, to make a boat large enough to carry five men. This promise I fulfilled to the letter, and later on another expedition to Seriland I had the pleasure of sailing in this boat, which was well built and seaworthy. The unusual part of this bargain was that Blanco permitted me to deprive him of his only means (apparently) of making a living in hunting *cahuama* for himself and his family, freely and without hesitation, simply on my promise of lumber in the future. I was deeply touched by the trust reposed in me by this old sea rover.

322 [50] These people are splendid mechanics with the crudest of tools--- rocks, fire, bones, knives. For instance, the pole of the harpoon was composed of five pieces of driftwood and a seagoing boat which I saw in Guaymas, captured by Mexican fishermen after killing the Seri crew, was composed of fully one hundred pieces of driftwood fastened with nails made of wire, and tied with fiber, and all the seams were filled with a black composition of native origin resembling pitch. Previous [325] to the use of old iron, harpoon points were made of ironwood, but now iron is universally used.

283 [123] I asked old Blanco for some of his native rope. He gave me some of it. He said they get the slender roots of the mesquite and peel the bark, and then the girls and women chew the fibrous wood. This is shredded and twisted into small two-stranded ropes. It is this rope, tied around and around, that holds the *carriso balsa* together.

285 [824] I watched a woman make a basket. She used young branches from the terote tree, I think *terote blanco*. The bark was peeled and shredded into two parts, the heart taken out and kept separate. The coils of the round part were put in a pot of hot water to soften, and the edge of the basket was soaked a little in hot water. The center of the coils or woof consisted of six or eight strips of heart while the outer sap wood was woven around in regular coil-weave fashion.

[237] [412] A brad of deer shin-bone sharpened on pumice to a needle point was used as a brad. With this brad she split the fiber, held one piece in her mouth, and stripped the back down. Then she punched a hole in the bone brad, inserted the sharp end of the fiber and pulled it almost through. She then repeated the operation, adding a strip of heart once in a while. These baskets are coarse and unattractive, but they are hard and tough and stand heavy use.

323 Cooking vessels consist of two or three cooking ollas that nest together to facilitate transportation. These are made of coarse clay, solely for utility without regard for beauty of shape, color or design. In burning these ollas they use the shell of the sea turtle. [237] [372] The cells of the shell are filled with a fine oil and this burns the ollas. On most of the other places on the mainland, the Indians use cow chips, or dried droppings to fire the clay.

283 484 123 [277] We proposed to shift camp to Tinajanita, our first landing place, where Herrera was to meet us in two days with the Chief and some of his men. Since it was blowing, he said the men couldn't fish and they would be on land probably hunting, so he would be able to see them. At this time they gathered *aescal* on an island off the west coast to make the liquor they used at fiestas, weddings and other celebrations.

Herrera left at five o'clock in the morning, with a swinging gait, for the opposite side of the Island. The distance around by boat would be fifty miles, and across, only about twenty or twenty-five---a full day's trip and hard, as mountains would have to be crossed and the rocks were sharp and the way difficult.

123 We had breakfast on rice and bread. Our rations are running low and we expect to move this morning. We made arrangements about the native boat and saw Blanco trot off with two five-gallon cans for water, a distance of ten miles. We went to the camp to get a few things---an old basket, a Pelican hide and other things, and then we asked the help of everybody to get the boat down to water---the tide was very low. The one man, the women and five of us were required to drag and push the boat to water.

We waved goodbye, loaded her up and then rowed against the tide and wind for miles, and finally landed in a lovely sheltered lagoon, built our fire and had lunch. A few crabs were speared, and late in the afternoon the wind shifted. We loaded the boat again and pushed off for Tinajanita, our first landing place. After rowing, we raised

[text continues on p.174]

123 the sail, a very delicate operation in so cranky a boat, and between rowing and sailing, we reached our destination about eight o'clock, all worn out. Before landing, we called and halloed to notify possible strange Seris that we were friends. After a bite we turned in.

In the morning we started for the *carrisal*, as the water hole was called because *carriso* grows there, as we were almost out of water. The nearest *carrisal* was five miles away. We each had a rifle, revolver and extra cartridges, besides two five-gallon cans and a canteen with some water in it. Nene, Bob's brother, had been there and knew the trail, so we all followed him. The most traveled trail from any camp always led to water.

After going a couple of miles we entered the mountains, and from there on the trail was stony and later rocky as we entered the canyon.
[134] On the way Rafael caught a light gray diamond-back rattler. He held the head with a stick, reached down and grasped it tightly just in back of the mouth. It rattled viciously and twisted itself about his arm, but to no purpose. I took his photo with it coiled about his neck, and the rattle buzzing on his breast. Later he took my photo, I holding the rattler while his tail was coiled around my neck. Later, we killed it and drew the skin off like a kid glove. When we reached camp I filled the skin with sand to cure it, so I could take it home.

[135] There seemed to be several zones of vegetation as we advanced. First came brush, then *pitahalla*, ironwood and various cacti, then *torote*. In the mountains, *mesquite, palo blanco, "wild fig"* and several varieties of brush. The roots of a certain variety of brush furnished us with tea, as our coffee had disappeared. This washed and boiled, made a very good drink.

At the latter end of our arduous trip we had to climb over boulders, and then we arrived at a few pools of water in the rocks and a bunch of *carrisos* in their midst. Beneath the *carrisos* the creek bed was as dry as a bone. We climbed up higher, looking for tanks in the rocky bed. We found one tank but it was filled with green algea. In some places there were great caves in the cliffs and everywhere the scenery was rugged and fascinating. The main mountain above us seemed to rise five hundred feet, with very sparse vegetation. We climbed up some very steep places, almost perpendicular, but as we found no more water we returned and filled our cans.

I had brought shaving tools with me, except soap. However, one of the men knew of a certain root that would produce a lather. This was handy and I macerated the root. Bob put it in my bandanna and by manipulation produced a good suds. With this I reduced a week's growth of whiskers.

On the way we passed several places where burro deer horns had been stuck in the trees and well bleached out.

Bob and the one-eyed Mexican, Oliverria, carried the water, two

five-gallon cans full. They were fastened one each end of a *palanca*, or shoulder pole, and thus brought to camp. If anyone thinks this is easy they should try it over rocky, uneven, sandy, stony ground, dodging thorny vegetation at every step. 123

The colors of the mountains were mostly red of volcanic character, with great streaks of yellow and pink, deeply cut with side canyons and sharp ridges, all similar to other desert ranges. [133]

The men caught a few crabs and gathered clams in the afternoon, which helped out our larder. One of them told about his wife being shot. He said they had a big fiesta and during the drunk, a Seri shot at his head. He happened to be stooping alongside his wife and the bullet buried itself in his wife's thigh. We could feel it through her clothes.

A good many years ago when stages ran between Nogales and Guaymas, the Seris held up the stage, killed the men and captured one Mexican girl. She was brought here and made the wife of one of the chiefs, Coyote Iguana, and she bore children. Some years later her brothers came here to induce her to return, but she refused, saying that she was ashamed to go back and she had children here. About fifteen years ago in a battle with the Papagos, two of her sons were killed. 648 727 563

The Papagos have taken toll of many Seris, these hunted Indians who are such fascinating and ingenious companions, whether they are harpooning turtle or packing water through the thorny wastes. 648

372 516 291

Seris making fire (with fire drill) - Island of Tiburon

123 [202] It was a beautiful morning in early May, and the water was still as a pond, reflecting all the sunrise tints like a mirror. After a breakfast of clams and broth, bread and sand and bronco tea, we made a big smoke and were answered by a similar smoke two miles off, so we knew our friends were on the way.

123 482 [415] In one hour they began trailing in, the women each with a load on her head, walking graceful and erect. On one head was an inverted turtle shell containing nearly all the family belongings done up in rags. On the top was the most precious belonging of all---the rifle. The man carried two or three ollas and other things on a shoulder stick. Everything necessary for their home was carried on their heads.

123 Soon the Indian Blanco was seen paddling in his *balsa;* he also had a load and had paddled all the way from Ironwood camp against wind and sometimes tide. As they were all very thirsty we gave them water around. They immediately went to the shore as it was low tide, and began gathering small oysters from the rocks. Soon each woman returned with a half bushel of them on her head.

About three o'clock and for an hour or so thereafter, Antonio Herrera, the Chief's son Chico, the old Chief Juan Tomas, two other men and one woman, came drifting into camp with their dogs. Each one was loaded with things. They were a pretty wild looking bunch. There was very little food and little water for so many.

648 731 The Chief said that a day or two before, some of his men had a fight with some sailors (Mexicans) on the Island of San Estevan four or five miles off the south west corner of Tiburon. Nobody was killed, but the two boats, the wealth of the Island, had drifted away and were lost, leaving eight men marooned on the Island. They had gone there to gather *sescal* to make drink to celebrate a wedding to come off soon. Three men were five days without water. They sent up frantic smoke signals every day. At last they were seen, and help went for them in the only remaining boat on the Island. They were rescued.

648 484 123 The Chief and his men and women, with us, are going to Hermosillo ninety miles afoot with all their belongings to ask the Government for food and help.

142 [622] The Chief looks to be seventy years old, a grim dark-skinned individual with a thin fringe of hair on his upper lip, broad nose, wide nostrils, small black eyes. He is well-built and erect. None of these that I have seen so far have any fat. They are lean and sinewy. [302] [291] The young men are of large build, high cheek bones, some with hair on their lips, their long black hair braided; sometimes with a strand of red worsted. All were either barefooted or wore sandals. I saw one pair of sandals made out of turtle hide; another of burro hide.

648 123 When the Chief arrived, the sail of a vessel was seen over the beach. Bob recognized it as belonging to a launch of a Yaqui Indian

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648 friend of his from Guaymas, although only the upper part of the sail
• 123 was visible. This greatly frightened the women who began packing to escape to the interior. They thought they were friends of ours and it was a plan to have them land. Bob proposed to go out and meet them, and if possible get provisions. With the Chief and two other Seris, Bob and his brother, leaving the firearms behind, hoisted the sail and headed for the mouth of the bay.

When they reached the Infernillo the sloop veered away, its crew being afraid of being killed by the Seri. There were six men and boys and they mustered all the rifles and stood ready to fight. They had just had trouble three days before at San Estevan. At last the wind veered and they had to stop and Bob waved his cap. Finally they got close enough to talk, and then came on board and secured some provisions---a little coffee, sugar, fresh onions, tomatoes and rice, and a little flour for the Chief. They had a fair wind back and returned about dusk.

123 At night everybody was happy. I had gathered two pails of oysters that are exposed on the rocks at low tide and I had built a fire over them so they would open readily, and then had cut them out. We made a sort of stew then, enough to go around the crowd.

123 After supper the Indians gave a dance, a very weird affair. I
534 have seen nearly all the musical instruments used by the Indians of
[535] the Southwest and Mexico in their ceremonial dances, but the Seris were the first tribe I had ever seen use the bow and arrow as a musical instrument. A six-foot bow with a tightly stretched bowstring of twisted sinew was held, back down, on two inverted bowl baskets by one of three men, all of whom struck the string with arrows. This
[533] emitted a musical baritone note like the vibration of a piano wire, in perfect rhythm to the weird chanting of the three musicians, singing a wild plaintive air.

535 The dancer, Manuel Encina, a grim old boy, facing the orchestra,
123 mounted the back of a turtle shell resting over a hollow in the sand, as a resonator, with a long staff held in his right hand to steady him, and gave one of the prettiest exhibitions of the double shuffle on the rounded top of an oily old turtle shell that I have ever seen. At the end of each *canto* there was a rest, and then they went at it again. This lasted two hours, and was lighted by a feeble camp fire and moon and was danced on the shore.

123 Before daybreak the following morning we arose, loaded the boat, and then the Indians brought a lot of things, besides three or four rifles. Then two young Indians jumped in. We were so crowded that we could not move. The two Indians and two of our men used paddles as we were too crowded to row. There were seven men besides all the junk, and the boat was so loaded and so cranky there was imminent danger of capsizing. At the least movement she would dip to the edge of her

[123] gunwales, and then in trying to balance, she would dip the other way.

As we got to the point, the swells were larger and the danger so imminent we stopped the boat in lee of the point nearest Sonora, and Bob and I landed.

Old Blanco had paddled his *balsa* with some of the freight to the Sonora side. The boat put off again, and rode the sea better and it landed all right on Sonora side. In the meantime, several of the women and children, with their loads, had reached the Seri point ready to be ferried across. The boat returned with two Seris paddling. We loaded a lot of Indian junk, Bob and I and several children, the Chief and a woman. Nine in all. We reached the Sonora side, all right.

By this time breakfast had been cooked and we sat down to drink black coffee and eat rice and onions. The wild-looking Seris sat around us watching each mouthful, hungrily. When we finished we gave them all that was left and they cleaned it up.

[23] As we left the Seri point, and as their masters left, the dogs trotted to the water's edge and howled. Bob said that when all had crossed, the dogs would plunge in and swim across the swift current.

[24] The water was infested with sharks, so it was possible that some of them would not reach shore. At last everybody got across, dogs and all.

[25] The Indians carried their packs; the men with the shoulder sticks and the women balancing their loads with marvelous dexterity on their heads. Two men packed twenty gallons of water in five-gallon cans.

When we had all our things in the boat, Juan Tomas jumped in with his pack. We were well loaded before, but this made us a little too deeply laden. Nevertheless, we pushed off and raised the sail to take advantage of the wind. We sailed parallel to the shore for a few miles until the waves got too overpowering and the boat had a lot of water in her. The mast was unstepped---a very delicate operation---and we made for the shore after shipping some of the waves.

My heart was in my mouth most of the time as each time the boat rolled, one side almost dipped up a wave. It was a matter of personal safety as well as safety of what few things I had already collected. One olla I had bought was smashed. The waves looked like clear green paint.

We finally landed without mishap and pulled the boat up, but it was so rocky we had great difficulty in walking in our bare feet. Our legs and feet were bare when we were in the boat and mine were badly scalded by the sun.

The Seris had made camp one quarter of a mile down the beach from us, and the old Chief shouldered his pack and strode down to them. We were very thankful.

[225] Soon some of the men came back to borrow the boat to hunt for

123 225 *cahuamas*, or sea turtle. After two or three hours' use of the boat they had harpooned two and brought them to shore. Then the whole bunch went to the shore and dragged them out and began cutting them up as they were all hungry and had had nothing to eat hardly. They gave us one breast, the most delicate part of the turtle. It is tender juicy white meat.

123 We soon had the boat loaded again, paddled to the Indian camp, and took the *carriso* boat in tow. We raised the sail and a good wind sprung up and we made a fast run before the breeze. This also whipped up a nasty sea, and the great green rollers would come and slop against the freeboard to an inch of coming on board. At a critical time our slight tow-line parted and we stood a good chance of being swamped in order to hold the *balsa* until we could bend a heavy fish line with great fishhooks which we jabbed into it.

The boat, all the time, was ripping through the water, the boom was slopping in the waves, and each green roller threatened to come on board. We dared not spit overboard for fear of dipping up a wave. The wind and waves got so nasty we decided to make a landing. To add to our anxiety, the *balsa* had broken loose again, but we held it with our hands despite the waves. We unstepped the mast after dropping the sail, and just in time, as the seas got bigger and the wind stronger. We were so cramped we could not row, so the paddles were used, and eventually we reached a sandy beach, all safe and sound, and pulled the boats up out of the water.

I had sent a note ahead, in English and Spanish, to the car to meet us at a designated place on the coast to the south about fifteen or twenty miles. He had stopped to eat *cahuamas* to give him strength. He was a big raw-boned man, Chico Romero, son of the Chief.

123 133 On the two points nearest Tiburon and Sonora, the most beautiful rocks had been washed up by the sea, that I ever saw. All colors of the rainbow were represented, but lavender and violet prevailed. The sands were a delicate lavender while the shore at Tinajanita, up the bay, was a deep lavender. Many beautiful shells were left by the tide as well as various colored pumice.

Our present camp was at the foot of the granite hills, and the sand was almost white. It was made much whiter by tiny shell fragments only as large as grains of sand.

690 Ten or twelve years ago Bob's uncle and cousin were captured by the Yaquis. They suffered the most inhuman tortures. The soles of their feet were sliced off and they were made to walk over sharp rocks. Their eyes were gouged out and they were scalped.

Another captive was used like a piece of beef. He was staked out and one Yaqui would ask the other:

"What cut would you like?"

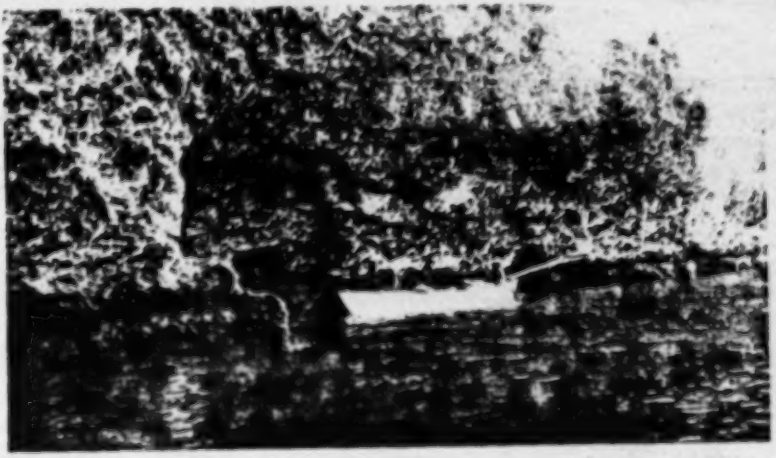
"I'll take a piece of leg," the other would answer.

A chunk of living flesh would be cut out and piece by piece the captive was hacked to pieces.

Only two or three years ago Bob and two friends had trouble. Bob escaped by a very narrow margin, but they tracked him like hounds for twelve miles. His friends were captured and stripped of clothes and everything, and expected every moment to be shot. They caught a hog, hung it up alive and cut a long strip off the back and left it hanging. They got frightened away suddenly and left the two friends unharmed. His uncle was captured on his way to Royon, on the San Miguel River twenty miles south of Opodepe.

648 The Yaquis and the Seri Indians have been enemies for untold years. What grim scenes the eyes of the desert have witnessed in the past!

133



Entering cave - Tiburon - 1936

• 123 One night when the sea was quiet Bob and his brother went sea turtle hunting but didn't catch any. We made a bright fire of drift to guide them back. The sea murmured gently, accompanying the crackle of the fire.

We turned in on-shore in the clean white sand. We roasted the turtle breast that the Seris gave us, by standing it on edge in front of the fire. It was tender and elegant. For bread we made pancakes, mixed with sea water. We were out of baking powder. The green coffee secured from the Yaqui fishermen was wasted in a frying pan until it

123 was black. He then ground it in the frying pan by rolling it with a tin can. When made, the coffee was black and bitter, but they were used to it that way.

At three thirty in the morning we were up from our sand beds and drank coffee. At four we pushed off, towing our balsa on which we lashed our turtle shells, antlers and other things. Our boat rode the waves like a duck.

As we glided by the foot of some mountains we could hear the surf break sullenly. We had the sail up but soon had to resort to the oars as the slight wind died out. Day soon began to grow light. The sea was glassy, reflecting the rosy morning tinge. There was a swell on but the waves were smooth.

136 The cormorants, in threes and fives, began flying to their feeding grounds, with swift wings and necks outstretched. Then a few Pelicans drifted idly by on lazy wings. A school of sardines fretted the water near us, chased by a hungry fish from its depths. A few porpoises rose and dived, rose and dived, rose and dived, time after time. At one time eight of them came within twenty feet of us and one dived right under our bow, bouncing the boat up and down.

133 Soon we were passing some red volcanic hills, with caves and blow
123 holes in the cliff and sea caves below, in which the sea roared. Giant cactus secured a precarious footing in the crannies of the cliffs. Then a long beach, then *Cerro Prieto*, another red cliff descending to the sea, penetrated with numerous caves and roosting places for cormorants.

123 As we neared Alcatraz *(Pelican)* Island, we saw a fishing boat in the distance. The wind had freshened and was ahead and the waves seemed almost to come in board, but the hollowed tree arose and rarely shipped any water. A boat put off from the fishing boat and was rowed to shore, and as we came up we hailed the crew and grounded our own boat. They had seen us from Alcatraz Hill, and seeing the balsa thought the Seri Indians had stolen a fishing boat and were towing their own boat. Each man had a belt of cartridges and if the Seris had been there instead of us they were going to kill them. Bob knew them from Guaymas.

We pushed off from shore again, and after rowing a half or three quarters of a mile further we beached our boats, cooked dinner and waited for our auto truck. Our provisions were almost gone. We had only enough for one meal left. No meat at all. Water was almost gone. None other for miles.

415 One of the cherished vessels used by the Seris is an agate chamber
244 pot. It is black from much use. When I saw it, it contained a green
262 slimy mess made from meal of seaweed seeds and the green fat or oil of the turtle. The Seris stick their fingers into the pot and then lick them off. If any is left the dog licks out the pot. No vessel is ever washed; it is licked clean.

000 ever washed; it is licked clean.

415 147 One time a bunch of Seris camped near a ranch and spied a white porcelain chamber pot sunning itself. They immediately secured it and began cooking in it, without washing it first. The rancher saw them and told them that it was dirty and told them not to cook in it. They said they would clean it up after they got through and leave it as it was before they finished with it. When they come to Hermosillo they get pots from heaps of city refuse and carry them back as prizes to the Island.

• 123 501 We made smokes to attract attention, but all to no purpose, until about three o'clock the car appeared. It could not come close to the beach as the sand was too soft, so we had to pack everything two hundred yards in soft sand. The *balsa* was very heavy and some distance away. It also had some things tied on it, so Bob pulled off his pants and we pushed it into the surf. Bob first stood up, but it rocked so he got on his knees and pushed out with a pole and got it headed to the rollers, after which it rode easier. He then lost his pole, and in struggling to recover it the *balsa* rolled over with him and dumped him in the surf, but he grabbed the side and rolled it right again. He could then touch bottom, so he came in through the surf with it and we dragged it up and unloaded three turtle shells and a few other things. There were four of us and we put oars under it and gradually lifted and carried it to the truck.

It must have weighed six hundred or seven hundred pounds, a good part of which was water. I must say I was glad to see it started on its long land-journey.

123 The Indian messenger had arrived with my note which brought the truck. Bob, Luis and the Mexican took the boat and tried to go into the place where they hid it, but it was low tide and the boat could not enter, so they beached it and walked to Agua Sarco where we had preceded them by two or three hours. We had, over the last of our grub, a little rice and beans. As many doves were flying about the water, I shot fifteen or twenty. One of my shots brought down seven doves.

439 123 Before night all the Seris were camped near us, and when Bob came, Louis had brought all our trade stuff, so I began bartering right away.

As all were hungry we gave each man and woman three cups of flour, and three pieces of *panoche*, cakes of coarse brown sugar. They were wild for this, so when they had finished they were well disposed.

On the Island I had been called a cheerful liar for promising things, but now it was different. Three new butcher knives, all bright and shiny, I traded for three rusty homemade affairs. Two were made of barrel hoops and one from the piece of a shovel. This was a way-up knife. For the violin I traded a harmonica, and for three carved

[text continues on p. 187]

439 little gods I traded some muslin, a harmonica and some *panoche*. For
123 native hair brushes, I traded three fine-tooth combs for catching *piojos*, or lice, easier. I gave each woman a little round mirror and they were greatly pleased.

To the old Chief I presented a good pocket knife and a mirror. For the bow I traded a spark lighter. By striking the edge of a small wheel with milled edge it strikes a spark from a small flint and lights a wick.

123 We asked for a dance, and the Seris, using the bow and striking
535 sticks for music, the slender girl jumped up and down on a flat piece
[534] of tin which served, instead, of a turtle shell and also served for
[352] baking flour cakes upon also. A while before, Louis had seen a woman
[415] wash her head and that of a child in the chamber pot, empty the water and then cook in it.

After the girl had danced a while on the tin, old Manual Encina pushed her away and hopped on himself and did the double-shuffle for half an hour, after which we left for our camp.

197 The language of the Seris is the most difficult and peculiar I
194 have ever heard. It is spoken deep in the throat with the mouth open and sounds like no other language I have ever heard except that there are some sounds like Papago.

439 Even before breakfast of the next day we were still trading with
123 the Indians, and in an hour or so I possessed nearly everything they had except their rags. They seemed happy and contented and postponed their trip to Hermosillo. I left some stuff with Louis Thomson to be traded later for bows and arrows, Pelican skin dresses and baby cradles.

We then arranged our loads, said *Adios* to the Seris, and left for Hermosillo, where we arrived without accident about six-thirty p.m. The sun was very hot and the road heavy and the sun glaring, and we were all very tired when we reached town. I stored my stuff with Mr. Marks at Hotel Cohen, and will crate it before leaving for Yaqui River.

123 Before leaving the Seri Chief I told him that whenever he saw
202 this sign---Circle Bar D and left hand below it, it was me---their friend, and not to shoot at me. He said he would tell all the Seris, and I left him my card with the same sign on it. When will I see him again!

123 In February, nineteen-twenty-four, my son Stanley and I were on our way to Tiburon Island. At Nogales we went to see Mr. Holler, Custom House Broker. We asked about the entrance of firearms and revolvers, and he said a permit could only be secured through Secretary Hughes at Washington and President Obregon at Mexico City. However, I had read assurances from a high official that the first could be arranged. I would have to take chances with the second.

When I stated where I was going he said he would not care to go to Tiburon Island, among the savage cannibals, but that he would certainly carry a gun somehow, and his square jaw snapped while his eyes flashed. He had been a United States marshal in New Mexico, where there were a lot of bad *hombres*.

That settled the matter. The next morning we arose early, returned to the Montezuma Hotel where we had been staying, and I fastened my gun and cartridge belt about me in such a way that it did not show and its location would not be suspected. Where? That's a secret. Stan did likewise, in another part of his anatomy, and his could not be detected either. Not a bunch or a lump.

We passed inspection at U. S. Custom House and no questions asked, and then crossed the line to the Mexican Custom House. Here we opened our grips and unrolled our blankets and they were punched and jabbed and passed, rolled up and checked. Then we boarded our train which pulled out after a long delay for Hermosillo and Guaymas.

For a distance of one hundred and seventy-five miles, there were clusters of adobe and stick mud houses around each station, thronged with Mexican women and children standing in their doorways gazing at the train, which was always a source of wonder and speculation. Some of the places such as Santa Ana, Magdalena, and Carbo, are quite large adobe towns with streets and straggling houses, but the people and towns looked poverty-stricken enough.

The women and girls wore faded blue *rebozos*, or scarves, draped gratefully over head and shoulders, and many of their faces and forms were remarkably beautiful.

A crowd of people gathered about the cars at Santa Ana, and I noted a saddled horse standing facing the cars, riderless, reins over the horn, but standing as if tied. He never altered his position, he was so well trained.

Dr. Kessler who attended me at the hospital last year in Hermosillo was on the train, and directly behind us was a Mexican officer, large and dignified, trimmed in brass and silver braid, with an automatic swinging from his belt and shoulder, and several clip pockets.

Whenever I bent over, my cartridge belt was outlined across my shoulders and was plainly visible, if he looked. I expected to be tapped on the shoulder any moment and told to turn over my firearms,

123 but nothing happened.

123 622 [116] We reached Hermosillo at three in the afternoon, and as we landed Roberto and Sara met us, and Roberto embraced me. Then the Seri Indian Chief rushed up and fairly hugged me in his joy at seeing me again. A timid wild-looking Seri boy, of fifteen years of age, shyly shook hands with the *Americano*, while all the Mexican men and women, fully one hundred in number, looked on, open-mouthed and wide-eyed, to see the Chief of the wildest and lowest of savage Indians in North America, rush up and embrace a white man.

We all climbed into Roberto's auto-truck, and my things were brought to Hotel Cohen, and then we all went to Roberto's home and stayed all the afternoon. He had just returned from the coast the day before, and Juan Tomas was determined to come also and greet me, and the boy---a nephew---hung on to the Chief, and finally Roberto said he would have to return on foot if he brought him. Juan Tomas said that made no difference. He would walk to the coast eighty or ninety miles, if only he could come.

[291] [302] He was probably seventy-five years old. He wore a hat, but his hair was straggly and he had a slight moustache. He wore shirt and trousers and a dirty kilt---remanent of the Pelican-skin-kilt---around his waist, and he was barefooted. The boy had a not unpleasant face, long wild hair, shirt, pants, and a cotton kilt reached to his knees. He, too, was barefooted.

I gave the Chief a knife, and the boy a red crayon and fifty cents. With the crayon he made a V on his kilt. He was very shy and always kept in a shadow, or in the background, and he spoke no Spanish although he knew the Spanish alphabet.

Sara showed some photographs and postcards in a baloptican in a dark room, and among them were pictures of some Seris and myself. These created much excitement with the Chief and the boy, and they jabbered together in the Seri language with animation. They recognized some of the subjects, their own people.

584 622 648 123 Juan Tomas is to be married soon to an elderly Seri dame, and we have been invited to attend the fiesta. He has been laying in the trousseau for the bride, and several gallons of mescal. A steer or burro will have to be provided, and all the fixin's and nothing will be left undone to make a very festive occasion. When asked to show us his gifts he reluctantly brought forth a package which he carefully unwrapped and disclosed eighteen yards of *manta*, two red pieces and one pink piece of Calico, some red handkerchiefs, and one box for painting the face. He carefully wrapped these up again and put them in the room set apart for him and the boy.

[608] [589] The woman he is to marry has no male relatives from whom she can be bought, so the Chief appointed a man and created him Uncle *pro-tempore*, and to him the Chief is going to give a rifle and a blanket as the purchase price. Pretty high!

464 Last year the Seris and their families worked on the ranches
431 gathering corn and beans and made three thousand *pesos*, and then they
484 came to town to spend it. They go back and forth much more than they used to.

• 123 We ate supper with Mrs. Thomson and then we went to the Plaza to watch the carnival. Much confetti and *cascaroni* was thrown on boys and girls, and the square was thronged by a mass of weaving people, while the military band played seductive Mexican pieces.

The next morning after breakfast we started shopping and kept at it all day, purchasing things to trade with the Indians and groceries for them and ourselves.

While at one of the stores six or eight Yaqui Indians, from their town about one hundred and thirty miles distant, came to buy things for the Easter period. This is the one big fiesta of the year for them. The women were bare-footed and the men wore rawhide sandals. One Yaqui soldier came with them, and he wore three belts of ammunition. They were very dark, with short hair. Rather gaunt, fierce, striking faces.

We walked into a cigarette factory and saw them manufacture cigarettes by machinery. Four machines were running, turning out one hundred and sixty each per minute. Altogether, twenty-three thousand packets of fourteen each every eight hours. These packets are usually tied together in the shape of a solid wheel, one hundred packets each called a *ruedo*, or wheel.

After dinner we went to Roberto's house and they told us there that the Indian boy Pascual had gone out alone and was lost. The Captain left to hunt for him and later brought him in, and then he went out to hunt for us. We finally saw him on a side street and sent him home to his dinner.

Last night, Roberto said they slept up till midnight, then waked up, opened the bride's bundle, and gloated over the bright colors. Later on they opened it twice again. Then they sang and talked for a while before going to sleep again.

On the following day it was nearly three in the afternoon before we got the car repaired and all supplies on board, including our blankets and grips and lumber for a Seri *balsa*, or boat. This was a heavy load for the Ford truck besides five men, which included the two Indians. Every item had to be considered---food for ourselves and the Indians, all the trade things, lumber for a boat and tools to make it, gas, oil, cans for water and many other things.

We soon left the city behind and rattled through the outskirts of poor adobe or stick mud houses, many half in ruins but still sheltering some family.

After about fifteen or twenty miles we arrived at one of Rafael Ysabel's ranches, *Europa*, where Senor Feliz is the foreman or *Mayor*

123 *Dono*. It has fallen into sad decay---many buildings in ruins, ditches gone, mill and machinery idle; no water, very few people and a general appearance of slow, peaceful and painless disintegration.

The one redeeming feature is the daughters of the *senor*. Two of them were remaining at home, and in all Sonora I do not believe there are two more charming, modest, industrious as well as lovely maidens than are Laura and Clara Feliz. In addition, they are perfectly artless and very unassuming and retiring. I had with me some slight gifts for Laura and her father whom I had met before, but nothing for Clara, a tall handsome girl of sixteen. Laura thanked me with grace and charm.

After a visit of half an hour we continued on our journey, and after we had travelled about twenty miles more, passing the end mountain of *Siete Cerros*, or Seven Mountains, we reached San Carlos Rancho, another of Ysabel's ranches, containing four and a half square leagues or about forty square miles.

Another very sweet daughter of Feliz's---Lupe, or Guadalupe, lived here. She teaches school with twenty-six Mexican children and a night school for older boys. The school building is a low one-story structure of *carriso* reeds and earth roof. Both wind and sun can come through the cracks. The tables are built of rough boards and the benches had no backs. Everything was as neat and clean as conditions would permit.

At a little Mexican house, whose owner was a friend of Roberto, the wife cooked our meat and coffee and dished up the ever-ready beans. We ate outside the house by the light of a camp fire while a crowd of men and children stood gaping at us and drinking in the news that Roberto brought from the great metropolis. The conversation was a rapid-fire Mexican and sounded like machine guns going off, and this kept up long after Stan and I retired. We slept under a shed. Roberto insisted that I sleep on a bed, instead, with rawhide springs.

The Indians curled up around the camp fire, blankets on top, earth below.

In the morning we ate breakfast in the living room of the stick-mud house, which was poor---so poor, but hospitable. Tortillas of flour and corn, beans and meat were our fare.

We bought a sack of beans and one of corn, twenty pounds each, and then we took a photograph of the school. There were a few extra little girls whose fond mothers had decked out for the occasion. The children had swept the grounds clean and pulled outside the tenderly nursed vines in a jar inside the window, so that they also could be taken.

[131] [132] The dry parched desert is unkind to domestic plants and flowers and these are always blooming in jars or ollas or tin cans under ramadas or in other shade. They secure their share of precious water

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123 [132] [137] the same as do children and dogs, even though it may be hauled for six or eight miles on mule-back.

With gifts and hand-shaking all around, we bade goodbye to Lupe and the children and started on our way.

After leaving San Carlos we travelled through a cholla and giant cactus country until we reached Roberto's ranch at Santa Cruz. We had picked up Pancho Oliverria at San Carlos.

Just before leaving the ranch several men lifted a poor woe-begone mare to her feet. She was so poor and weak she could not get up by herself, but once up she managed to stand and finally staggered out into the *sesquital*, the place of mesquite. One eye was missing and watery matter was oozing out and running down her cheek. A night or two before, a lion caught and destroyed her colt, and probably in an effort to protect it the mare came too near the scene and the lion tore out her eye with one sweep of its paw.

Midway to Santa Cruz we stopped a moment at Blevens ranch *Costa Rica*. Blevens is a large, florid white-haired American who has lived in this country for fifteen or twenty years and hasn't much use for the Seris as they have killed so much of his stock.

[24] At one time he noticed a dead cow which was all swelled up and badly spoiled. No white man could stand the smell. He told some Seris about it, and they flocked around it, and when they had finished all that was left were the hoofs and horns.

Nene's wife cooked dinner for us at their house which was composed of *carrizos* and mud roofed with earth, all supported by mesquite logs. Surrounding it was a hog tight mesquite fence, and in this corral was a fifty-foot deep well which furnished the water supply. Half a bull's hide laced on to an iron hoop and holding about fifteen or twenty gallons, was the water bucket. This was hauled up by a long rawhide rope passing through an over-head block drawn by a mule.

After leaving Santa Cruz with none added to our crew, we wended our way through a maze of mesquite, cottonwood and other timber, gradually working out of the timber to more open country where traveling was not so strenuous. The steering gear was worn so that the old truck would often head for a saguaro or mesquite and stop just short of being smashed.

At last we reached a region of flat baked lake-beds, covered in flood times. Sometimes we could travel fast at fifteen miles and then again we would go in the low where it was soft. About three miles from our destination we took off half our load and piled it to one side and jogged along through a wild desert country with no roads or trails, through chollas, desert brush and terote trees.

123 312 361 When we neared a hill of dark volcanic rock a number of Seri Indians darted out, and with their help we reached a camp near the coast where Roberto had recently located a small well of sweet water.

123 [361] [342] Clustered near this well were brush windbreaks joined together, divided by brush partitions all open on one side. Here were gathered several Seri families. There was no such thing as privacy or seclusion.

As soon as we stopped and unloaded we were immediately surrounded by a curious, half-starved mob of forty men, women and children, about fifteen to twenty children. All dirty, all ragged, all hungry. Some of them I recognized: others were new to me.

While preparing and eating our supper this motley crowd formed a circle about us and hungrily watched every mouthful. We gave them a little food and an orange all around, and they finally left. By that time we had also finished our bread and coffee and followed to the brush shelters.

535 123 [583] A dance was immediately started. A place was hollowed in the sand, a few short planks placed over it, and the dance was on. Music was furnished by men tapping on an inverted basket and chanting. Only one man danced at a time. Sand was thrown over the planks and the Indian danced a shuffle, scraping his bare feet on the boards. He held a staff in his right hand and danced to a song called in Spanish *El Toro*. Later on other dancers performed, then gave us the *venado* (deer) dance, taught them by the Yaquis. [371]

This dancer represents a timid deer, hopping up and down to the time of a rattle held in the right hand, and the chanting of the singers. The *venado* dancers stooped over frequently, turning first to one side and then the other to look behind. Manuel Encina was the *venado* and Chico Romero, a very large young Seri, acted the part of a coyote, crawling and jumping on all fours and barking and every once in a while biting the calf or thigh of the *venado*, then jumping back and barking. It was acted with great realism, and the onlookers, especially the children, enjoyed it immensely.

A wilder, more barbaric scene was probably seldom witnessed in America than this gathering of Seris on the shores of the Gulf of California, dancing the *venado*. The camp fire threw a flickering light over dark fierce faces with low foreheads and frowsy unkempt hair. [302] One man, Luis Torres, the head "ship carpenter" with a moustache and chin beard, his hair low-down framing his dark face, looked like a savage from the wilds of New Guinea. Another, Santo Blanco, a secondary chief below Juan Tomas, has a straggling moustache curling over cruel projecting lips which rarely smile, while his fierce black eyes peering through his black thatch of hair, have a perpetual scowl. The monotonous sing-song chant accompanied by the soft roar of the surf added an indescribable eeriness and weirdness to the dark night.

123 We soon turned in as it was then eleven o'clock, and we all fell asleep lulled by the waves of the sea.

123 261 We were up long before the sun, the following day the eighth of March, but the baking of bread delayed our breakfast, so that while we ate, forty Indians were looking on at us. Little ones with streaming hair and fluttering shirt tails, paddled over the sand hills as fast as their brown legs could carry them in their fear of being late. Women in patched and ragged skirts hurried and plowed through the sand and over thorny mesquite brush to be in time---for what? To see the *gringos* eat their breakfast and to possibly pick up a few crumbs. Each grain of corn, each bean, even a piece of dough half the size of a dime is precious and carefully garnered and eaten.

To eat under the devouring eyes of these people who rarely have enough to eat and most of the time not half enough, to see the hungry dog-like look as I tried to swallow a piece of bread, to see the children half start up as if to run and seize it and watch the mothers jerk them back, to see them eye hungrily our sacks of provisions and not dart to touch them, is enough to make one choke.

Any bread left over we broke into little chunks and gave to the children. I then gave each child two lumps of cube sugar. A little later, as they would hide their sugar and try to repeat, I lined up fifteen or twenty eager, frowsy bare-legged boys and girls and gave each an orange.

123 439 Later, the mother would trade a basket or a hair brush for an orange, a knife for two oranges. They brought Pelican skin rugs made from six Pelican hides sewed together which used to form their kilts. For these I traded four yards of *manta*, or cotton goods, of which they made garments.

I soon had a thriving trade on hand, especially in necklaces. I had bought a few cheap glass bead necklaces at fifteen cents each. These set them wild. For native necklaces of seeds I traded the bead ones. I secured most of the necklaces, and when they ran out the children were sent by their mothers into the brush to gather more beans and seeds. These were hastily strung and hung around the neck and exposed to my admiring gaze, but it was useless as I would not trade any more beads. I had to save them for the Seris on the Island. I would have given everything away there.

Also, I had to consider the moral effect of them securing things without effort on their part. Only for service, must we pay in food or goods. For bringing food, water, to go hunting for us, or for trade---except giving things to the little children. It was heart-breaking, but they were lucky to have water. Like many others less primitive, they work, hunt, fish, only when hunger drives them.

231 With the people were a crowd of undersized, starved, bony dogs. A Seri cleans up everything and the dogs get the rest. Each day they are gnawing on some old fish head that is long past having any nourishment, and is tough and strong as rawhide, but hope springs eternal in an Indian dog's heart or stomach, and again and again, will they search out an old fish head or Pelican bone. Discouraged, never!

000 search out an old fish head or Pelican bone. Discouraged, never!

123 223 We had intended going to Alcatraz *(Pelican Island)* and have the Indians secure more skins for us at night, but the wind was strong and not favorable, so the trip was put off. The Indians hold up torches of dry *pitahalla*, while another Indian knocks the Pelicans over the head.

123 224 Stan and three Indians started out for the *pieachos* with rifles in a hunt for mountain lions and a *tigre* our Indian said he saw. They returned in the afternoon tired and hungry and carrying no game. Stan had mounted the highest peak, an almost perpendicular one, and dangerous climb.

123 593 One member of the hunting party, Santo Blanco *(Holy White)* which belies his name---as he is neither white nor holy---evidently didn't find his dinner waiting for him, and proceeded to beat up his poor wife. Perhaps she didn't expect him so soon or perhaps the larder was empty. At any rate, another woman, Luis Torres' wife, flew to her assistance and grabbed the rifle or stick and he cut her hand cruelly with his knife. She was brought whimpering to our camp, her poor thin hand dripping blood. One or two sympathizing women, crying softly, followed her.

I immediately put some flour over the cut and tore up strips of cotton goods and wrapped them round and round her hand, then pressed the veins to check the hemorrhage, and held her hand up. After fifteen or twenty minutes it ceased to drip, and an Indian brought me some mentholatum from my grip. I bathed her hand in salt water while she whimpered softly, put on the salve and re-wrapped her hand in clean goods and she returned to her camp. Her child picked up the discarded bloody clothes and took them to her.

123 Roberto had gone back for the things he had left, and at noon had returned with the car to Santa Cruz, intending to return by mule in the evening. He returned long after dark after five hours in the saddle. He had been bucked off once and lost in a jungle of timber, both down and standing for two hours. He was fenced inside this tangle, he said, finding it almost impossible to escape.

The mule was later to be tied up, rolled into the boat and taken to the Island for my use, so I would not get worn out walking and carrying food and water.

Again, we were lulled to sleep by the murmur of the sea.

On account of unfavorable conditions, we did not start in the boat the next morning, but fully expected to start the following morning. After breakfast we decided to give the Indians a feast. One Seri secured a five-gallon can three-quarters filled with water, and one by one I poured four cups of flour in it. I hesitated a moment and the Indian said "too much water," and all the crowd waited with bated breath. When I poured in an extra cup-full a great sigh of

[text continues on p. 200]

123 relief and contentment rose, and everybody smiled. This concoction I placed on the fire while the Indian stirred with a long stick. It took half an hour to cook into a thick sticky paste, gummy white.

[415] Meanwhile, the women vanished and returned with various vessels: greasy baskets, a black chamber pot, frying pans, ollas, stew pots, shells, any old thing---even a cuspidor. When ready, the Indians dipped the sticky mess out with a cup into the various vessels and the women and children licked it up. Some of the children covered the back of a large clam shell with the paste and then licked it off, repeating this until it was gone. Most of the people hooked their fingers into it and licked them off time and again. Any drip on the outside was carefully licked off that four gallons of goo. I do not think one single drop was lost.

126 123 As one little girl was carrying away a clam shell of paste I secured her photograph. It was a sight not soon to be forgotten, to watch these little ones dip in their fingers, mostly two, sometimes three fingers and contentedly lick them off.

Wishing to secure a photo of the Indians in Pelican skin kilts, Roberto induced Chico Romero to strip and wrap a kilt of Pelican skins around his waist. He did this and Roberto secured a good photograph. For this service, Chico demanded three oranges which he gave to his children.

By coaxing and wheedling and joking, Roberto finally persuaded a young woman to put on the Pelican kilt, and she gradually pulled off her shirt, or waist, or whatever name it goes by, and laughingly permitted it. As her brown shoulders and breasts were exposed she covered them with her arms and hands while I took the photo. I gave her some blue powder to decorate herself and a little round mirror.

372 Chico Romero made a fire drill out of a piece of dry driftwood from a cottonwood tree, and then made a fire by turning the stick between his hands. After three or four minutes the fine dust became punk and turned into a live coal. This he carefully put in some dry grass and by holding it up in the wind it was fanned into a flame. The price of this was a red bandanna.

372 773 825 The legend of Fire was told to me later by the campfire. The Seris' god sent down a fly to Seriland to show the Indians how to make fire. The fly was pointed out to me one day. It was a trifle larger than a house fly with a body of shining green and blue.

"Now," they said to me, "notice when it lands. Did you not see it take its two hands, rub them over its head and then rub them together a few times?". . ."Each time it settles it rubs its hands together, and our Indians noticed this and in this way we were taught by this little fly how to make fire by rubbing a stick between our two hands, back and forth. One fly came to earth and found something dead and he rubbed a stick between his hands and made a smoke signal

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826 so all the other flies could see and also come to this dead thing."

787 A few weeks ago, Antonio Herrera had a very vivid dream. He dreamed
[149] that he was hunting in the mountains for deer and came across a cave. (These volcanic mountains are pitted with caves.) He went into the cave and saw all kinds of things dear to the heart of a Seri---plenty of rifles, lots of cartridges, knives, *manta* (unbleached cotton), necklaces, red bandannas, blue overalls, *plata*, or silver, and many other things.

[158] When he awoke he sought his father Manuel Encinas, who is a medicine man and interpreter of dreams, to explain his dream to him. The price demanded by Manuel was six *tiras*---or 30-30 cartridges, a very high price, according to Seri standard. The explanation was this:

It was true that the cave was there and all the things in it just as seen and described by Antonio, but in order to find it he would have to fast nine days and go without water that length of time also, in the heat of summer. Then the way would appear to reach the cave. So far, Antonio has not attempted the fast.

381 I witnessed the operation of making a certain kind of pitch or
396 tar which the Seris use to make the seams in their canoes or boats tight. The women pound up the dried pulp next to the outside skin of a dead *pitahalla* cactus (organ cactus). This is very dry and brown in color and the pieces are pounded up to a dry powder with a wash or shore rock in a dried deer hide. This is placed in a *batello*, or flat basket, and manipulated so that the coarse pieces come to the top and are scraped off and thrown away. The fine powder is then put in a five gallon can and some porpoise or sea-lion oil or horse oil is poured on it and stirred into a thick gummy mass. When thoroughly mixed it is put over the fire, in an olla, to boil and continually stirred for an hour or two until it is the consistency and has the appearance of coal tar. While being worked it is kept heated and applied to seams inside and outside the boat. It hardens just like tar and answers the same purpose.

• 123 Since the corn, which had kept this band of Seris in food, disap-
226 peared two days before we came, and they had barely kept going on
[189] seeds and a few fish, and they all had decided to leave camp with us in the morning---the women walking and the men and some children in boats---it was necessary to supply them with some food to take them to the hunting grounds of the *cahuasa*, or sea turtles, and land them
[262] on the Island. The *cahuasa* would furnish them meat---their favorite and national food, and the shores would supply them with clams, oysters, crabs and other sea food.

123 So the whole band was called around our camp and each family was furnished with two cups of corn, two of beans, some green coffee and a cup of cube sugar. For the first time our camp was free of Indians, and we ate and went to bed in peace.

The amenities of civilization were laid aside and forgotten in

123 our rough camping, and we lived more or less like the natives, along the lines of least resistance. Shaving was unknown; washing the hands took place possibly every few days---the face never; teeth never; hair combed never; dressed, always in bed and out. We did not shed our shoes. Our revolvers were our constant bedfellows and lay in the blankets next to our right hands. But the Seris have never made a move to take the least thing that was not given to them, and made not a hostile move or look. I did see a child surreptitiously wet his fingers and wipe them across the open flour sack and lick them off, but even then his mother pulled him back.

123 484 By starlight the next morning we were up again, and ate our breakfast before sun-up. We loaded most of the groceries and things in our boat, including about eighteen gallons of water. Besides ourselves, we took Luis Torres and his wife as helper and boat-steerer. This gave us a very heavy load. Chico Romero planned to take twenty gallons of water and one sack of flour and half beans and corn, and follow in his boat.

The Seri camp was a busy place, women carrying things to the boats and preparing to leave. The camp was stripped. Much water was taken in the boats to supply the families, who for the most part walked along the shore and made short cuts through the hills, planning to meet the boats at appointed places. Two other boats started with us.

The wind was dead ahead, so our sail was useless and we unshipped the mast, and three of the men took the long oars with Luis Torres at the helm and in the bow. The boat leaked quite a great deal and it [502] kept Lupe busy bailing. Chico Romero's boat was manned at the oars by two small boys about seven or nine, and he steered with a paddle. In the other boat were three men at the paddles, three children, two dogs, cans of water and baskets and cooking things.

[501] The wind kicked up quite a heavy sea for the small Seri craft, but this narrow, heavily-laden craft met the swells and floated over them gracefully, although oftentimes the water missed coming over the gunwale by an inch or two. The children laughed gleefully, showing even rows of white teeth innocent of brush and tooth powder.

123 On rounding one rocky point three deer stood outlined against the sky, and we landed three men to try and get one, Stan among them. They returned empty-handed, except Stan, who kept ashore and followed over the hills to try for game.

At noon we landed on a beautiful sandy shore laced by the green waters of the Sea of Cortez, with Tiburon Island opposite a few miles distant. Here we unloaded and built a fire of driftwood and cooked our dinner. Stan found us---without his deer---and we ate very heartily. Beans, bread, coffee. We camped here for the night in this delightful little cove, calm and protected from the strong wind outside. Green sea, purple mountains, cloudless blue sky, a little freedom from hordes of staring Indians.

123 484 Then Chico Romero and his load of children and dogs arrived and he unloaded his impediments on the beach, and soon the women came walking along the beach and joined the party. The boats carrying the heavy things and children; the women, with their babies and a few light things on their heads, walk along the beach when possible and follow the boats, which hug the shore to avoid the strong currents and tide. The boats are propelled by paddles mostly, though some of the Indians use oars. The women are slightly built, slender and inclined to be gaunt, owing to the hard life and lack of food. Their cheek bones are quite prominent and their profiles present protruding lips.

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422 [364] Having no permanent homes, moving hither and thither for their various food supply, household things are not accumulated and life is reduced to its very simplest elements and absolute necessities.

Crude baskets made from shoots of the torote tree, vessels in which to cook, and some patched rags in place of Pelican skins to serve as blankets to the fortunate few, constitute the family possessions. Strange to relate, many of the women have an over-supply of milk, and according to Roberto have puppies nurse what the babies cannot take. One woman was known to nurse a baby pig on one side and a puppy on the other.

231 [858]

[264] [854] Family dogs lick all cooking vessels which is unnecessary as they are thoroughly clean when the Seris are through with them, and also lick the infants clean after performing their natural functions, so they are quite indispensable. I saw a Seri girl place on the sand a small can of water for a dog and then saw her drink some of the remainder and pour the rest back in a five-gallon can. Dogs frequently swim across the Infernillo to join their masters.

732 Asked about cripples and incompetents, Roberto said they probably did not exist. The conditions of survival were too precarious to admit of anyone living who was unable, by physical disability, to hunt or fish. There are two or three men who are nearly blind or so. The wives of these men eke an uncertain living for them by the hardest struggle. The sea turtle is the staple; one man and one good boat can secure a living for five families. There are now nine boats, but one boat to a family would practically free them from continual want. With the exception of four bones in the flippers and the bones of the head, all the sea turtle is used---the meat, blood, entrails, shell which furnishes food and oil, skin of flippers which furnishes sandals, sinew for strings. Nothing is wasted except contents of the entrails.

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123 Again, we laid our blankets on the clean white sand of the shore and were lulled to rest by the murmuring sea.

123 484 Daylight found us up the next morning, and we breakfasted, rolled up our blankets, pushed the boats into the sea and were off by the time the sun rose over the mountains and shone over a glassy sea. Two Seris towed their boat by a tump line, while a boy of twelve steered

123 484 it from shore by a paddle. A little child in the boat sat still as a mouse. No matter how the boat rocked, it never whimpered or cried. All the children stayed perfectly quiet in the frail crafts, in the very positions in which they were placed.

123 484 136 [220] Once the boat approached shore to secure a small octopus for fish bait. One was finally located by Stanley, who could see its eyes shining with a baleful purple light under a large boulder in about eighteen inches of water. The Seri got out and pinned it down with an oar, while Roberto pounded it time and time again with another oar. Even then it escaped in a cloud of sepia which it discharged. Its tentacles were easily a foot in length, and its color was the bottom of the sea. If it once gets a grip on a rock it is practically impossible to tear it loose.

Schools of porpoises played close to the boat each day, curving up to breathe and throw spray and then diving lazily below the surface, frequently gliding like a dark shadow below the waves. Sometimes, in the sheer joy of living, they would leap clear of the water and splash back in a spray of foam.

123 484 [208] We soon reached the extreme point where it juts from the Sonora shore, landed and set a signal smoke to notify other Seris on the island. (A dry *pitahalla* cactus was selected for a black smoke.) No answering signal came. We crossed the narrow channel, the Infernillo, a little over a mile wide, the water like a mill pond, and landed on the sheltered side and unloaded on the stony beach. For miles the beach was covered by windrows of round wave-worn rocks and pebbles of all beautiful colors and sizes mingled with strange shells and seaweed. Here we made camp and stayed overnight.

The Indian canoe landed its cargo of women, children and dogs a little later, and established a camp adjoining. Three little boys were commissioned to secure us some clams and they returned in a while with a pail of clams, one crab and some oysters. These were boiled in salt water, the meat extracted and Pancho Oliverria cooked them in rice for supper. The crab was my especial delicacy.

123 Roberto and Stanley walked off after dinner to hunt in the mountains a few miles back from the coast, and they returned long after dark very weary from carrying, for seven miles, a young burro deer which they had shot. The Indians soon gathered around it chattering volubly, as both they and ourselves had eaten no meat for several days. We gave them nearly three-fourths of it, reserving a hind quarter and some ribs for ourselves. Rafael Feliz and Chico, with skill born of long practice, skinned and unjointed the animal in a very short time, and devoured a good part of their share in a cooking pot a little later, although they had eaten only a little while before. The boys cracked the bones and scraped the marrow, eating it like candy.

[484] At six thirty the next morning, we were crowded in the boats again

123 484 and on our way, headed south, rounding the point with the tide in our favor. It was a rowing proposition. During mornings the sea is calm and the swells glassy. Usually at noon the wind comes up, mostly ahead and against us. Last night we could see the light of a camp fire on the point opposite us, and soon we spied a boat headed for the Island. We had left the women and older children to walk and they met us where we landed. At noon we camped for dinner in a lovely cove, and soon three other boats joined us with their cargoes of women, children and dogs. We ate quickly and got under way again as soon as possible, and even then we were the last boat. The trip was bad, as all the people were loaded in the boats which made them low in the water.

123 484 561 It was a pretty sight to see the Seris in their *pangas*, boats shaped like dories, graceful, narrow and swift, kneel in the bottom and dip their broad paddles into the waves and shoot into the open sea like dark-skinned Vikings, wild hair flying.

As soon as we emerged from the cove the wind and tide struck us dead ahead, and progress was slow although the swells were behind us. After rounding a point the wind blew on the forward quarter and all the boats, now increased to five, hoisted their sails. We also stepped our mast, sheeted our flour-sack sail, and bowled through the sea, carrying a bone in our mouth.

Chico's boat ahead had no sail and when we neared it, steered with superb skill by the wild-looking Seri, Luis Torres, he had a tow line aboard and thereafter we held him in tow until finally the wind shifted dead ahead and all the boats lowered their sails, unstepped their masts and began paddling. One *pangah* had a sail with part of it loose and flapping at the top like a flag. Roberto said the Seris did not want to cut off this useless piece for fear of spoiling the sail, so there it flapped whenever the sail was sheeted home.

123 484 About three thirty in the afternoon we rounded a bold rocky point and entered a beautiful curving bay of quiet water, and here we landed for the night camp. Soon all the boats were unloaded. Men and children hunted driftwood for camp fires, two boats at our insistence set off fishing, and Stan and three Seris took their rifles and went hunting. All parties later returned without fish or game, so, as our meat had disappeared like a beautiful dream, we had to dig into our corn and flour to feed thirty or forty hungry Indians. The children stood about like a bunch of hungry cormorants and we promised them *pinole*, or flour paste.

123 177 Looking at these half naked children with their swarthy little bosoms bare and most of them bare from the waist down, I dug out some safety pins and began with the little girl Luz, who was vigorously stirring the paste mass and pinned her waist over her bare breast and tummy with two bright safety pins. She never ceased stirring. Each bare breast I pinned the shirt over as the night was chilly. The children quick to catch on and keen with desire born of privation, each pulled his or her shirt open even when it had a button, or had

177 been fastened with a string---each child eager for a safety pin. A
• 123 little child two and a half years old was shoved forward for a pin, its round black eyes dancing with anticipation, but its dress had no opening in front, so I laughed and shook my head and everyone appreciated the joke. But, not to be defeated, a little girl untied the child's waist from behind and spread it open, exposing its little brown body from head to feet, and called my earnest attention to it. I then pinned up the dress. Then the older ones crowded around me, but I had used up a whole paper of pins, so I shook my head. I gave the empty paper to an eager child, although a dozen hands were outstretched for it. By making the children happy I pleased the parents.

123 By this time the flour soup was thick and ready, and Roberto baled it out with a cup into the various vessels eagerly outstretched to receive it. As the cup would drip, little hands caught the priceless drops before they reached the sand. As each got his proportion he began sticking his fingers into the mess and licking them off. Many took their *pinole* to camp and the others secured a taste also. A small piece of bread dropped into the sand was snatched up, by a child, from under the nose of a dog. She rubbed off the sand and devoured it.

When all had vanished to their various camps I opened the box of candies---small round drops of green, red and yellow. I filled our coffee pot and went to each camp and gave each man, woman and child about ten candies.

439 Since I wanted shell necklaces, the women had combed the beaches
123 and gathered plenty of shells, and strung them while resting. This evening they were draped about their necks, and they wished to trade, so I traded for about a dozen---one small round mirror for one, five needles for another, five safety pins for another, blue face paint for another. Mirrors were most in favor.

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206 *Seri outside beauty parlor*

622 Thus passed a very striking character among the primitive races of Sonora, Mexico. He was brave and fearless in battle; crafty, cautious, and cunning in attack; cruel and merciless to his enemies. He was rarely caught off his guard, and always managed to extricate himself and his men from difficult situations. He was quick to think and act, and was wise with the wisdom learned at first hand on desert and sea from a rugged nature, reluctant to give up her secrets. He was a master hand at *balsa* building, a good hunter, fisherman, harpooner of *cahuama* (sea turtle), a good surfman, a good gambler, and an expert [575] tracker. It was not unusual to possess two or three wives, but the old Chief, while married three times, had only one wife at a time. He was quite fond of the writer, and used to greet him with the true Mexican *abrazo*.

[123] It was in 1922 that I first met the grim old warrior on the shores of Tiburon, whither I had gone on a quest for the Museum of the American Indian, Heye Foundation, New York.

[142] He was very dark, of medium height, thick set, with a broad, deep chest, very muscular, with shaggy brows and deep set eyes which, even at that age, ninety years, burned like coals of fire, and were suspicious and wary. He wore a braided pigtail down his back which con- [302] [319] [411] tained a few gray hairs. For clothing, he wore a ragged shirt and an old pair of overalls, with a short kilt hanging from a belt, through which stuck a long naked knife of hoop iron, ground on abrasive rocks and keen as a razor.

[291] From infancy to the grave, the freedom of his feet was never [484] hampered by shoes. Even at that advanced age, and until his last illness, he was perfectly able to care for himself, and follow his nomadic tribe on its devious trails along the coast and far in the interior. A walk of a hundred miles was not unusual. For ten rifle cartridges a Seri Indian once walked forty or fifty miles to deliver my message to Juan Tomas. From the time we first met, our friendship was never broken.

The Pelican Skin Robe

133

Tashne or Pelican Island - Kino Bay - 1936

It was the dark of the moon and a very black night, ideal for surprising the Pelicans asleep, roosting on the steep slope above the waters of the Sea of Cortez. The Pelican is a very wary bird and cannot be approached in the light of the moon. 123 • 223

At sundown we had climbed several hundred feet to the saddle between two peaks on the Island of Alcatraz in Kino Bay off the coast of Sonora. We rolled up in our blankets and hugged the great volcanic rocks at the crest, to be as inconspicuous as possible to the great birds circling the peaks to seek a roosting place on the west slope of the Island.

Santo Blanco had provided himself with a torch made from the slender rods of a dead *pitahalla* (organ) cactus which he had tied together in a long bundle. The four young Seris who joined him also had a torch and in addition, each had provided himself with a club. We took no fire arms. Senor Roberto Thomson, my companion, had arranged this trip with Santo Blanco, for my benefit. [416] [124]

[text continues on p. 215]

123 It was March and the night wind was cold, but we did not dare light
123 a fire, so we hugged our blankets close to us for warmth until Santo Blanco judged the Pelicans were sound asleep. We could hear the waters of the Gulf roaring softly as they broke against the cliffs far below us.

At midnight Santo Blanco lighted his torch and the other Indians
[24] did likewise. They all wore rawhide sandals to keep their feet from being cut on the sharp rocks. Santo Blanco was agile as a cat, as he jumped from rock to rock on the steep slope holding his torch over head. Part way down the party split, leaving Santo Blanco, Roberto and myself. I had a flashlight which threw a feeble ray on nearby
[134] rocks and then shot off into blackness. The rocks were slippery from droppings of thousands of cormorants, gulls, Pelicans and other sea birds and climbing down rocks on the steep slope and that on a dark night, was risky if not dangerous, for if we slipped or missed our footing, we might roll, bump a few times and drop from a high cliff into the sea.

Santo Blanco was far below us and at last we could hear him clubbing Pelicans over the head and by the time we reached him he had several dead Pelicans spread on the rocks and he was bringing in the last of them near where we had stopped.

There lay five of these great silver gray birds, each boasting a wing spread of ten feet, as against seven feet of the golden eagle. The flashlight picked them out, one by one, with their long necks, long bills, and with pouches on the nether mandibles for temporary storage of their catch. They are very awkward and ungainly as they stand in groups on rocks at the edge of the tide, but when their great pinions are spread in flight over the sea, they are the epitome of grace.

That was a heavy load, over one hundred pounds, for one man to pack up those steep slippery rocks. I suggested that we help Santo Blanco to the top, but Roberto said the Pelicans were covered with lice and it was not advisable, but with Santo a few more or less made no difference. So he tied the birds together and swung them over his shoulders leaving his hands free for climbing. His torch had burned out and our only light was my flashlight to pick out hand and foot holds. At times we would reach down and give him a lift where the rocks were steepest, but for the most part he struggled alone. Sometimes he would find a few steps like a stairway and then he would look for an easy way, using both hands to pull himself up, but there was no easy way. It was a herculean task to climb those slippery rocks and one time the load almost pulled him over backward, but he recovered his balance and finally the crest of the hill was reached and the rest was down hill on an easy trail.

The boys already had a camp fire going near the beach and as soon as Santo deposited his load, they all fell to and began skinning the

[text continues on p. 217]

123 223 [262] birds. As soon as the skin was off the breast was laid on top of the coals and roasted. The meat was red as raw beef, but it was free of fishy flavor and tasted excellent. The Indians ate pelican flesh till daylight.

252 [123] We gave them a generous helping of flour in a pail and this with water from a canteen, Santo stirred vigorously with a stick and then kneaded the dough with his hands until it was of the right consistency. He rolled hunks of this into little balls of dough about the size of golf balls, which he laid on his blanket. The boys picked these up, patted them flat like pancakes, scraped away ashes and sand from the edge of the fire, placed their pancakes in the hollow, covered them with hot ashes and hot sand, and in about three minutes pulled them out all baked brown. They shook the ashes and sand from them, leaving them clean and ready to eat. I am telling this in detail to show how simple cooking can be done without a dutch-oven, frying pan, or cooking grease, far from civilization.

281 [123] We were soon paddled across to their village on the shores of Kino Bay and the skins turned over to Mrs. Santo. The skins had been split down the back, leaving the breast unmarred. The wings and legs had already been removed, and she sewed the skins together with sinew recovered from the birds. The boys had secured an extra pelican making six, three to a side, then placed together and sewed lengthwise, making a robe three and a half feet wide by seven feet long.

[342] [291] [301]

Pegging out and drying a Pelican skin robe by a Seri Indian woman - 1936

386

Recently I observed the manufacture of *?antezj kóil* in Desemboque, Sonora. Although the woman involved normally makes the clay in complete privacy, she agreed to let me watch. Seven young men and two young women were near a fire outside her hut as she seated herself on the ground behind a water drum. As she began to work she cautioned them not to watch.[3]

She commenced by scraping several roots of *xkoktz* to remove any dirt and then moistened them with water. Using a mano and metate, she split the bark and removed it. The rest of the root was discarded. She then pounded the bark into a pulp, moistening it at the same time with more water (Fig. 1). This pulp was put in a cup and set to one side.[3]

Next she ground several small chunks of *iki kóizj* into a fine powder. Then she placed a piece of hard *mokni óoxW*, the size of a marble, on the white powder. At this point she told her daughter, one of the two young women, to bring her a clean white rag and a blanket. After again warning the young people to stay away, she covered herself and her metate with the blanket, leaving only a small opening by her shoulder through which I could observe. The warning was heeded by all of the youths except the daughter who came over once to take a peek. The group remained interested, and several times someone asked, "Is it blue yet?"

Beneath the blanket, the woman ground the *mokni óoxW* into the *iki kóizj*, mixing the powders thoroughly. After scraping the mixture to one side of the metate, she wrapped the bark pulp in the white cloth and squeezed approximately ½ teaspoonful of liquid onto the center of the stone. Then she combined some of the powder with the liquid and ground the resultant paste for about ten minutes. As necessary, she added more powder or liquid to the mixture. Finally she daubed a streak of the clay onto the back of her hand, withdrew her hand into the sunlight, and remarked that it was beginning to turn blue. At that time it was a grayish-blue. She continued to work for several more minutes and then tested the color again. This time she seemed satisfied that it was the right shade. It was now a bright, or as she put it, a strong blue. This was the *?antezj kóil*, the prized blue pigment (Fig. 2).

The making of the *?antezj kóil* is followed immediately by the making of a second portion of clay, called *?a?óoskl*, which is a lighter shade of blue. Thus its name, the root meaning of which is "drab or grayish." *?a?óoskl* is considered to be inferior to the *?antezj kóil*. After the woman had scraped the finished *?antezj kóil* from the metate and mano and transferred it to a saucer, she added more ground *iki kóizj* to the small amount of remaining

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

ascertained by extended inquiry). Kolusio also remembered "giving his language" (a bold if not sacrilegious act, according to his view) to two or three other persons, (one "not a Mexicano" though speaking Spanish, none "Americano"[1]); but the first-mentioned instance was the one most deeply impressed on his mind. At this time (1800) he retained a working knowledge of the Seri tongue, and was able to serve satisfactorily as a Spanish-Seri interpreter; yet careful test showed that he had forgotten numerous native terms, and sometimes inadvertently substituted other Indian (Yaqui, Papago, and probably Opata) and Spanish words; while he knew so little of the tribal customs and beliefs that inquiries pertaining to them were too nearly fruitless to be long pursued. Undoubtedly his knowledge of the Seri tongue was fresher and fuller in 1832; but since he was practically isolated from his tribe in early childhood, he probably never possessed much information concerning the esoteric characters of his people.

The next noteworthy scientific student of the Seri was Johann Carl Eduard Buschmann, who visited various Mexican tribes, but whose knowledge of the Seri was wholly secondhand. Quoting Villa-Señor and Arrecivita and other early writers, noting unfortunate passages from Bartlett, and magnifying Mühlenpfordt's misapprehensions into positive error, he reduced knowledge of this and neighboring tribes to chaos. The "Guaymas" were separated from the "Seris (oder Seres)", and these (at least by implication) from the "Tiburones", while the "Piatos" were combined with the Seri, the traditional alliance with the Apache was greatly overdrawn, and the "Heri oder Ileris" and the "Tepocas" were treated as distinct.[2] No new facts were adduced, no use was made of local sources of information, and no notice was taken of other than literary data.

In 1857 the gigantic surveying enterprise of Jecker & Co. was undertaken, under a concession from the Government of Mexico, and the scientific surveys were intrusted to a commission headed by El Capitan Carlos Stone (General Charles Pomeroy Stone, U.S.A.). The commission headquartered at Guaymas, purchased vessels for the survey of the coast, and began operations also in the interior; Bahia Pinacati and George island (named by Hardy in 1826) were surveyed, as well as the entire Sonoran coast south of Guaymas, and "one hundred miles of coast near Tiburon", besides many hundred square miles of valuable lands. At this stage friction developed between the progressive commission and the conservative Sonorenses, which ended in the expulsion of the scientific commission by the State government.[3] By reason of the

[1] At the time of inquiry the importance of the other vocabularies was not suspected, and the interpreter was not pushed far enough to permit identification of the persons to whom they were given.

[2] Die Spuren der aztekischen Sprache im nördlichen Mexico und höheren amerikanischen Norden. Zugleich eine Musterung der Völker und Sprachen des nördlichen Mexico und der Westseite Nordamerika von Guadalajara an bis zum Hassee. Von Joh. Carl Ed. Buschmann (in Abhandlungen der Königlichen Akademie der Wissenschaften zu Berlin, aus dem Jahre 1854, zweiter Supplement-Band); Berlin, 1856, pp. 216–221 and elsewhere.

[3] Arizona and Sonora, etc., by Sylvester Mowry; New York, 1864 pp. 98–102.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

648 owner of several ranches adjacent to, and one within, the territory claimed by the
[115] Seri Indians; also by Señor A. Alvomar-Leon of Hermosillo, a young Mexican gentleman educated in the United States. For Señor Encinas the Seri Indians have the highest regard, and his kindly motive in accompanying the party was to facilitate friendly intercourse with the Indians; Señor Alvomar-Leon acted as Spanish-English interpreter, and one of the tribe who speaks Spanish [Mash'm] acted as the Seri interpreter.

One of the subjects of inquiry of the Indians related to the alleged killing of two Americans by the Seri Indians on Tiburon island during last spring at a date not definitely known either to the Indians or to myself. At first the Indians were indisposed to convey information on the subject, but after receiving presents from
[123] Señor Encinas and myself, and friendly assurances from the former, the interpreter for the tribe confessed the crime and detailed the circumstances, denying, however, that any of the Indians present at the place of conference (Rancho de San Francisco de Costa Rica, 17 leagues west-southwest of Hermosillo and near the coast) participated.

According to the first account given through the Indian interpreter, the Indians on the island saw a small vessel approach the shores of the island, and saw four men land therefrom in a small boat. The spokesman among the strangers made inquiry, chiefly by signs, as to whether game was abundant in the interior of the island, and was by signs answered in the affirmative by the chief of the tribe, who displayed a letter of authority from the state officials at Hermosillo. Then the strangers divided, two remaining on the shore by the small boat, while the spokesman and another, accompanied by several Indians, started toward the interior of the island. When they were some distance away—the account continues—some of the Indians remaining on shore indicated by signs a desire to borrow the rifle of one of the two men on the beach, and after some parley the rifle was turned over to them; then the Indians desired also to borrow the small boat in which the party of white men had landed, and after one of the two men remaining on the shore was put aboard the vessel, this, too, was placed in the hands of the Indians. Thereupon several of the Indians entered the small boat, carrying the white man's rifle, and rowed around a headland a short distance away. Passing this point they landed and a part of them ran quickly into the interior in such direction as to intercept the course of the white men. There they lay in wait until the strangers appeared, when they shot the spokesman, killing him almost instantly. On this the second white man cried out for help, whereupon he too was shot and wounded, and then (according to the first account) ran away and concealed himself in the bushes and was seen no more. The Indians who had borrowed the boat then went back to the shore, and reentered the boat with the intention of returning and capturing the fine vessel of the strangers; but as they approached the vessel, being at the time quite near the shore, the man on board arose suddenly with a gun pointed toward them and shouted, whereupon they dropped the borrowed gun and, leaping from the boat, ran away among the mesquite bushes, all escaping unhurt. The white man on the beach then, as the account ran, leaped into the boat, and, recovering his gun, rowed to the vessel and got aboard, when the two men at once made sail and escaped down the bay.

The foregoing account was given to Señor Encinas alone by the Indians through
124 their interpreter, and was afterward conveyed to me through Señor Alvomar-Leon.
648 Both of us recognized the incongruity with the character of the Seri Indians of that part of the narrative relating to the wounding and escape of the second man, and Señors Encinas and Leon and myself sought to impress the improbability of the account on the interpreter. Subsequently the Indians, through their interpreter, conveyed to Señor Encinas a modification of the account (after adhering to the first version for twenty-four hours), which agreed in all essential respects with the first, excepting the supplementary statement that some of the Indians (but neither the party who accompanied the white men nor those who followed in the boat) ran after the wounded man, caught him, shot him again—whereupon he again cried out—and

h McGee E-5 (1894-1895)1898 NU31 Seri NU31

them killed him with stones. This modified account, also, Señor Encinas duly conveyed to me. 124

Still later, in collecting linguistic material through the Seri interpreter with the assistance of Señor Alvarez-Lara, I reverted to the subject incidentally (or at least ostensibly so) on two or three occasions, partly with the view of verifying or disproving the current report that the men were eaten by the Indians; and since the first distrust on the part of the interpreter and the companions (by whom he was commonly surrounded) had worn off, the questions were answered freely and with apparent truth. In brief, the information gained in this way was a repetition in general terms of the statement of the killing of both men; but the responses individual (1) that the Indians are not cannibals, (2) that they do not eat any portion or portions of the body of an enemy slain in war, (3) that they do not eat human flesh in a sacrificial way, and (4), specifically, that they did not eat the flesh of the two white men killed last spring. I am disposed to give credence to all of these statements. 648 [266]

Señor Encinas informed me that for a long time after the reputed killing of the two Americans on the island the Seri were exceptionally shy and were seldom seen on the mainland; that the first representatives of the tribe to appear were one or two old women who came to his rancho with much trepidation; that these representatives being not ill-treated, a man appeared, who was also well treated, and that still later other members of the tribe appeared, though it was only a few days before our visit that any considerable body of the Seri Indians showed themselves at their favorite mainland haunt on his rancho. It was his first communication with the Indians since the killing, and, both he and they agreed, the first confession of the crime outside of their own tribe. 648

While in Sonora various conflicting accounts of the affair were given me. One, to which I was disposed to attach credence by reason of the character of my informant and his explanation of the circumstances under which the information was gained, was given me (just before the visit referred to above) by ex-Consul Forbes, of Guaymas. This account corresponds in all essential details with that conveyed to my party by the Indians, except that, according to Mr Forbes' account, the survivors were altogether unarmed after the borrowing of the rifle by the Indians, and that when the man in the boat arose suddenly and shouted he pointed at the Indians not a gun but a stick, in the hope of deceiving them thereby, as he was fortunate enough to do. 115 124 648

It may be added that the Seri Indians are at the same time the most primitive and the most bloodthirsty and treacherous of the Indians of North America, so far as my knowledge extends; also that their character is well known throughout Sonora, and indeed generally throughout Mexico, Arizona, and the southern part of California. I was assured by the acting governor of Sonora and by the prefect of Hermosillo that it would be little short of suicide for even a Mexican official to visit these Indians or land on their island without an armed guard. Through conference with the Indians, also, I learned that any white man, Mexican, or Indian of another tribe coming in contact with them is killed without the slightest compunction, unless they are restrained by fear. Accordingly I am satisfied that the character of the Seri Indians is quite as bad as the unsavory reputation they have acquired throughout the Southwest. 181 648

It should be observed that while the Indians were unable to give the names of the men killed, their description of men and vessel agreed exactly with those of the newspaper correspondent Robinson and his companion, and with the sloop *Examiner*; and Mr Forbes' information was obtained direct from the survivors of the expedition of which Mr Robinson had charge. There can thus be no doubt that it was Mr Robinson and his companion who were killed by these Indians, and whose killing was confessed by them, as set forth above. 124 648

With great respect, your obedient servant,

W J McGee,
Ethnologist in charge.

Honorable S. P. Langley,
Secretary of the Smithsonian Institution.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

On first learning of the incident, months before the diplomatic correspondence began, the state and federal authorities promptly adopted vigorous punitive measures. A vessel carrying a force of federal troops was dispatched from Guaymas and a body of state troops were sent from Hermosillo with instructions to meet on the coast and capture the criminals at any cost, even to the extermination of the tribe if resistance was offered. But like so many others, the expedition failed; the horses of the land party were stalled in the sands and burrow-riddled plains, the vessel was harassed by storms and tidal currents, and the landing boats were swamped by the surf, while the Indians merely fled at sight of the invaders toward inaccessible lairs or remote parts of their territory; and when the water was gone and men and animals were at point of famishing, the forces retired without so much as seeing a single Seri.

During the ensuing autumn the tribe, having quenched their blood-feud in alien blood, turned toward peace, and sent a matron of the Turtle clan, known as Juana Maria, to Costa Rica—i. e., Rancho de San Francisco de Costa Rica—where she was gradually followed by younger matrons and children, then by youths, and finally by warriors (after the fashion of Seri diplomacy) to the aggregate number of about sixty. Here they were found by the first expedition of the Bureau of American Ethnology, in November, 1894; and here, under the still strong influence of the venerable Don Pascual, supplemented by small gifts and persistent pressure, they gradually "gave their language", submitted to extensive photographing, confessed specifically to the Robinson killing, and yielded up nearly the whole of their portable possessions in the way of domestic implements and utensils, face-painting material, pelican-skin robes, snake-skin necklaces, etc.

With the return of the Bureau party to Hermosillo the Indians became restive and soon withdrew beyond the desert. In the course of the ensuing winter a group returned to the neighborhood of Costa Rica, where, by aid of strategy, seven warriors (including some of those seen at the rancho in the preceding November) with the families of four, were arrested, taken to Hermosillo, tried, and, according to oral accounts, banished. Irritated by this action, and connecting with it the visit of Don Pascual and the strangers desiring their language and sacred things, the clans resumed the warpath, displaying special animosity toward the residents of Costa Rica. There were a few minor skirmishes; then, at the instance of the state officials, a number of Papago Indians, who are feared by the Seri beyond all other enemies, were domiciled at the rancho, where their mere presence proved a sufficient protection. Meantime, according to apparently trustworthy press accounts, two small exploring parties entered Seriland; the first consisted of seven prospectors, who kept well together until about to leave the territory, when one of their number fell behind—and his companions saw him no more, though they carefully retraced their trail beyond the

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

lowed it, yelling and swinging his light lasso, until, after much doubling and dodging and many unsuccessful casts, he caught and dragged the howling beast back to the open; and it was only after half a dozen repetitions that enough dogs had escaped to spoil the sport. As the boys lounged chattering back toward the rancheria their course lay between two clumps of the usual desert shrubbery, so placed that when the first was obliquely left and 40 or 50 feet distant from them, the other was obliquely right and 100 feet away. At this point a bevy of small birds (perhaps blackbirds—at any rate corresponding to blackbirds in size and flight) fluttered suddenly out of the nearer clump toward the more distant one, when, too instantaneously for the untrained eye to catch exchange of signal or beginning of movement, the boys lunged forward in a common effort to seize the birds; and though none were entirely successful, one exultantly displayed a tuft of feathers clutched by his fingers as the bird darted into and through the thorny harbor. When the distances were paced it was found that, although the birds had the advantage of the start, the boys covered at least 90 per cent of their distance in the same time; while the spontaneity of the impulse demonstrated habitual chase of flying game under fit conditions.

While obtaining the Seri vocabulary with Mashém's aid, advantage was taken of every opportunity to secure collateral information concerning the actual use of the terms, and thereby of gaining insight into the tribal habits. Through his naive explanations, usually repeated and corroborated by the elderwoman of the Turtle clan (Juana María) and others of the tribe, it was learned that half-grown Seri boys are fond of hunting hares (jack-rabbits); that they usually go out for this purpose in threes or fours; that when a hare is started they scatter, one following it slowly while the others set off obliquely in such manner as to head it off and keep it in a zigzag or doubling course until it tires; and that they then close in and take the animal in their hands, frequently bringing it in alive to show that it was fairly caught—for it is deemed discreditable, if not actually wrong, to take game animals without giving them opportunity for escape or defense by exercise of their natural powers. Similarly, Mashém described the chase of the bura and other deer as ordinarily conducted by five persons (of whom one or two may be youths), who scatter at sight of the quarry, gradually surround it, bewilder it by confronting it at all points, and finally close in either to seize it with their hands, or perhaps to brain it with a stone or short club; the former being held the proper way and the latter a partial failure. This hunting custom, described as a commonplace by Mashém, is established by the vaqueros who had frequently witnessed it from a distance; and the same extra-tribal observers described still more striking feats of individual Seri hunters: Don Manuel, son of Señor Encinas, and Don Ygnacio Lozania were endeavoring to train to work a robust Seri (one of a band sojourning temporarily at Costa

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

bolic weapon, the counterfeit cartridge, the imitation machete, or other charm against alien power; it is usually he who wears the white man's hat or random garment in lieu of the deer or lion mask of earlier days; and during recent years his most-prized fetish, and one which practically insures the support of his fellows, is a written certificate of his chiefship from Señor Encinas, or, still better, from El Gobernador at Hermosillo. Yet he is a throneless and even homeless potentate, sojourning, like the rest of his fellows, in such jacales as his two or three or four wives may erect, wandering with season and sisterly whim, chased often by rumors of invasion or by fearsome dreams, and restrained by convention even from chiding his own children in his wives' jacales save through the intercession of female relatives.

In 1894 the head chief was reported to be on Tiburon; the putative chief of the rancheria at Costa Rica was the taciturn giant known as El Mudo (plate XIX); while Mashem (or Juan Esturga) was the head of one of the Pelican clans.

ADOPTION

One of the more important factors in demotic development among primitive peoples (probably second only to interclan marriage in extending sympathy and unifying law) is adoption; and special efforts were made to obtain data relating to the subject. Direct inquiries were futile, the responses indicating that the entire subject is foreign to the thought of the tribe; but three sporadic and measurably incongruous examples of quasi adoption are worthy of record.

The most specific case is that of Lieutenant Hardy, who visited Isla Tiburon in 1826, and was fortunate in gaining the confidence of the tribe through successful medical treatment of the wife of the chief. On his second landing he was greeted with many expressions of gratitude, which were especially exuberant on the part of the daughter of the family (always a personage in Seri custom), who insisted on painting his face. He specifies:

> Not wishing to deny her the indulgence of this innocent frolic, I quietly suffered her to proceed. She mixed up part of a cake of blue color, which resembles ultramarine (and of which I have a specimen), in a small shell; in another, a white color, obtained by ground talc, and in a third was mixed a color obtained from the red flint-stone of the class which I before stated was to be found on Seal Island, and resembled cinnabar. With the assistance of a pointed stick the tender artist formed perpendicular narrow stripes down my cheeks and nose, at such distances apart as to admit of an equally narrow white line between them. With equal delicacy and skill the tops and bottoms of the white lines were finished off with a white spot. If the cartilage of my nose at the nostrils had been perforated so as to admit a small, round, white bone, five inches in length, tapering off at both ends and rigged something like a cross-jack yard, I might have been mistaken for a native of the island. As soon as the operation was finished, the whole party set up a roar of merry laughter, and called me "Hermano, Capitan Tiburon," being the very limited extent of their knowledge of Spanish.[1]

[1] Travels, p. 288.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

597 While the lieutenant attached no significance to the painting, the
648 procedure would seem to have been a ceremonial adoption, such as might, for example, be used in connection with a confederate clan. The description of the painting is sufficiently explicit to identify the totem with that of the Turtle clan, represented by the clanmother and the daughter of the clan at Costa Rica in 1894 (plates XVIII and XXIV); but it is noteworthy that the salutation with which the ceremony terminated, and which may be rendered "Captain-Brother of the Sharks", would seem to identify the totem with the shark rather than the turtle.[1]

The second case of adoption (if so it may be styled) was that of Señor Encinas, after his bloodiest battle, in which nearly all of the Seri warriors were left on the field. In this case there was no ceremony, or at least none remembered by the beneficiary; he was merely informed by a delegation of aged dames that thenceforth he would be regarded as a stronger and more invulnerable chief (shaman) than any member of the tribe, and hence as the tribal leader.

The third instance is still less definite, though it seems to be trust-
173 worthy. There is a widespread tradition throughout Sonora that in
563 the course of a brush between a band of Papago hunters and a marauding bunch of Seri warriors in the mountains southeast of Cieneguilla
727 twenty-five or thirty years ago, a Papago maiden was captured and carried off to Tiburon; and that for some years thereafter—i. e., until the Papago had taken ample blood-vengeance—the intertribal animosity was exceptionally bitter. No wholly satisfactory basis for the traditions could be found among the Papago, though some of the silences of the old men were suggestive; nor was the tradition fully credited by Señor Encinas, despite its deep lodgment in the minds of some of his yoemanry. When Mashém was interrogated on different occasions, he merely shook his head in stolid silence; but when the device was adopted of inquiring the number of Papago children brought into the tribe through this woman he responded promptly with a snort of scorn, and followed this with the explanation that she never had children, and could not because she was an alien slave. The explanation was corroborated by clanmother Juana María and other matrons, with sundry expressions of contemptuous disapproval of the inquiry and scorn of the very idea that aliens could fructify within the tribe. Later, the ice being broken, Mashém intimated that the woman had recently died of old age and its consequences—doubtless as an outcast. On the whole, the direct testimony would seem to substantiate the tradition, and to supplement it with the short and simple annals of a spouseless and childless life (incredible of other tribes, but consistent

[124] [773] [1] This identification may possibly be correct, the collocation of the totem with the turtle was shaped through unwilling and perhaps misleading responses made by Mashém to inquiries in 1894—these responses denoting a sea monster which in the beginning helped the Ancient of Pelikano to make the world by pushing from below, and which is now very good food—a description apparently fitting the turtle more closely than the other animal.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

the character of the man; in very fact, it at the same time both measures and makes the character of the woman. Among other privileges bestowed on the bride during the probationary period are those of receiving the most intimate attentions from the clanfellows of the groom; and these are noteworthy as suggestions of a vestigial polyandry or adelphogamy. At the close of the year the probation ends in a feast provided by the probationer, who thereupon enters the bride's jacal as a perpetual guest of unlimited personal privileges (subject to tribal custom); while the bride passes from a half-wanton heyday into the duller routine of matronly existence.

These details were elicited at Costa Rica in 1894 through methodical inquiries made in connection with the linguistic collection. This collection was made with the cooperation of Señor Alvemar Leon as Spanish-English interpreter, together with Mashém and (commonly) the clanmother known as Juana Maria. Usually quite a group of Seri matrons with two or three warriors were gathered about, and to these Mashém frequently appealed for advice and verification, while they constantly expressed approval or disapproval of questions and replies, as gathered through Mashém's words and mien, in such manner as to afford a fair index of their habitual thought—e. g., when the Seri vernacular for "twins" was obtained and the inquiry was extended (by normal association of ideas) to the term for "triplets", Mashém collapsed into moody silence while the rest of the group decamped incontinently with horror-stricken countenances—thereby suggesting cautious subsequent inquiry, and the discovery that triplets are deemed evil monsters and their production a capital crime. It was in one of the earlier conferences that the first intimations concerning the unusual marital customs were incidentally brought out; the Caucasian interpreter and bystanders were diverted by the naive reference to the moral test, but their expressions were hastily checked lest the native informants might be startled and rendered secretive; then, during two later conferences, when Mashém and several matrons were freely participating in the proceedings, the line of inquiry was so turned as to touch on various aspects of the marriage custom and bring out all essential features; so that much confidence is reposed in the accuracy of the details.[1] The confidence in the verity of the customs was such as not to be impaired seriously by the fact that no records of coincident moral tests were known in the voluminous literature of marriage and its concomitants; nor was it shaken by the still weightier fact that none of the experienced ethnologists to whom inquiries were addressed during ensuing months were acquainted with parallel customs—indeed the only shadow of corroboration thus obtained came in the form of references to the widespread requirement of continence in war and ceremonies,

[1] It may be observed that Kolonia, when visited in January, 1900, failed to corroborate the descriptions of Mashém and the matrons; but his failure occasioned little surprise for the reason that he has not lived with his tribe since early boyhood, and is equally uninformed (or uncommunicative) concerning the myths, ceremonies, and even the totems of the tribe.

2: Kroeber E-5 (1930) 1931 NU31 Seri NU31

NEW DATA

Informants' Attitude

Most of my information was obtained from Chico Romero, the present official chief, a man of about 38. Santo Blanco and one or two other men contributed occasionally. Sr. Thomson was present most of the time and aided materially, both in encouraging the Seri and in helping to formulate questions suitably to their experience and comprehension. For instance, he repeatedly cleared up points in the kinship system by applying his knowledge of the actual relationship of Seri individuals, or their acquaintance with his relatives, to frame concrete cases, real or hypothetical, for which a denomination was then readily given. Without this aid, the system could not have been obtained with either reasonable surety or correctness. So far as possible, direct questions were replaced by giving to the Seri accounts of customs attributed to the Cocopa, of whose existence they know, and suggesting comparisons, in which they proved interested. On the whole, their attitude was friendly, coöperative, and appeared unsecretive. Concealment may be so automatic a habit with them that they practice it without giving a sign; but I had the constant impression that they told little about their religion because they knew little, and not from any skilfully concealed reluctance. Still, all negative statements must be regarded as only tentative when secured in a brief time through an imperfect medium of communication from informants not accustomed to mental exertion.

Historical Tradition

There were formerly four tribes, according to the informant: to the East, the Seris, at Pueblo de los Seris (the ex-mission, across the river from Hermosillo); to the West, the Tiburones, on the island; to the North, at Tepoca, the Xeka'aikŏ'ye; to the South, at Tastiota, the Antepkĕ'ituX or Tastioteños. Too many died at Pueblo Seris, so they joined the Tiburones. They fought the northern and southern groups. Sixty (or 68) Seri-Tiburones once went to Tepoca to kill a man and his two sons. They made marks and stuck a knife in the trail to cause them to stop. Then they shot them. The women and children were captured, taken to the island and kept, the women first being abused by the whole party. The informant's son José Manuel (13) had a Tepoca maternal grandmother; that is, the informant, now about 38, married the daughter of a Tepoca woman. (This would put the incident hardly earlier than 1860 or later than 1890.) Similarly, there is Tastioteño blood among the present Seri. The dialects of the several tribes are said to have been distinct, though allied.

It is evident that these memories cover only the last part of the period of Spanish contacts.

8: Ascher E-5 (1960) 1962 NU31 Seri NU31

225 In fishing for turtle, one man stands at the bow of the boat, holding the mainshaft and extension cord in one hand. When he sights a turtle, he propels the mainshaft at the animal's carapace, retaining a firm grip on the mainshaft and the extension cord. If it is struck, the turtle lurches away, loosening the foreshaft and unplugging it from the mainshaft. Tired eventually by the tension [411] applied by the fisherman on the extension cord, the turtle is finally stunned by a wooden club and lifted into the boat.

225 There is evidence that the turtle-fishing complex has consider-175 able time depth and stability. The Seri were using similar apparatus and methods at least as early as 1825 (Hardy 1829: 296-297). At [501] this time they employed balsa boats rather than wooden boats with outboard motors and torches of cactus fibers instead of kerosene lamps. The complex continued, apparently with little change, through 1896 (McGee 1898: 187-193). Wooden boats and kerosene [177] lamps began to be adopted during the 1920s, and outboard motors were introduced in the 1940s.

411 During the entire period of 135 years (1825-1960), however, the harpoon tackle underwent only one important innovation. The 225 gasket on the foreshaft was introduced by a Seri Indian about the 176 year 1935. The addition of the gasket was related to, and coincided [439] in time with, the first attempts of the Seri to supply turtles to the commercial market. When they caught turtles solely for their own use, they did not need to keep the animals alive for very long, but when they began to sell them it became important to preserve them alive until they reached the market. The gasket acts like the hilt on a sword, preventing the entrance of the foreshaft hafting into the turtle's body. Through its contact with the carapace, it restricts the rotation of the point within the animal's body and provides a seal which inhibits the loss of blood, and thus prevents early death. After the turtle is stunned with a club and lifted into the boat, the foreshaft is removed and the hole which it made is stuffed with a piece of cloth.

● 124 Seri men were shown a harpoon foreshaft from a museum archive 411 and asked what it was for and whether they themselves made similar ones. If an informant acknowledged that he made them, he was asked, at the minimum, to detail the materials he used, the procedures he followed, and the approximate amount of time it would take him to produce one. Later he was requested to show the field worker examples of the foreshafts he had made. Of the approximately 40 adult Seri males, about 25 were available for questioning. Of these, approximately ten did not make foreshafts or had made them in the past but did so no longer; they were mainly older men and those [474] engaged in the administration of the Sociedad Cooperative de Pro-[887] duccion Pesquera Seri. Five men either would not or could not volunteer information. Data were obtained from the remaining ten adult men and from one eight-year-old boy; they include 21 foreshafts made by these eleven people.

411 The materials from which a foreshaft can be shaped and as-325 sembled vary within what is available in the Seri environment. Iron

9:Malkin F-5 (1953-1955)1962 NU31 Seri NU31

121 documentary data and second, also the archaeological data. The subject matter unfortunately [172] is absent from the first. As for the archaeological data, there is none as yet to date for the area [114] except Giffor's unpublished manuscript. Nor have we the kind of ethnography that would be of help—not until ethnographers will pay greater attention to the naturalistic knowledge of the people. Nor can the matter of the Seris' cultural connections be undertaken with the present material with any degree of reliability, simply because no such material exists for the neighboring group.

However, few suggestions outside the limitations and the main object of the present analysis can be made. From the fragmentary data available I shall try to show the change in utilization of animals by the Seris. I think I can also indicate a few points in support or denial of this or that idea of the Seris' cultural connections. I can also suggest the direction of the attitudes toward animals in the Seri culture, in a sphere which normally we assign variously within the domain of religion or world view. I can also indicate some of the major changes in the Seris' exploitation of general environment. All these can be suggested only fragmentarily, as only small bricks toward a generalized structure of our knowledge of the Seri culture. To this extent the present analysis should be helpful to the future student of the Seri culture and to our general understanding of it.

Procedure

114 The field work on which this material is based has been done during the summer of 1953, June-September and again for one week in May, 1955. [164] The second visit took place at a most inopportune [166] time, amidst bad measles, dysentery and a flu epidemic which completely disorganized the tribe and persuaded most of them to flee Desemboque into the coastal desert.

The work was accomplished mostly in Desemboque, the Seris' largest and most permanent settlement after 1940 where most of them lived. Occasional side trips were undertaken later to Hermosillo, Estero Sargente, Campo Vivora, Tiburon and some of the other places mostly with the view of evaluating their ecological nature and for the observation and acquisition of the zoological materials not available in Desemboque. These trips had been undertaken in the company of the Seris who then also doubled up as informants.

● 124 During the first two weeks of my stay in Des- [126] emboque, I did no interviewing but concentrated on the collections of zoological material, occasionally and informally asking for the name of this or that animal. After two weeks regular interviewing work was commenced, first with an aid of Mr. Leo Sandoval, Mexican, U.S.—educated school teacher, but later on entirely without an interpreter. There are sound reasons for this practice. Direct questioning allows the interrogator to evaluate the replies in their less obvious nuances, the reactions of the informant to the question, his hesitations, uncertainties and the like.

In the event of well-known animals with those colloquial Spanish name everybody, Mexican and

[P.4A]

Phtalkin F-5 (1963-1966)1982 NUSI Seri NUSI

● 124 Seri alike, is acquainted (Cougar, Jaguar, Whale, etc.) questioning had been done by referring to such and such beast without the use of pictures or actual specimens. This procedure had been followed for the majority of mammals, which are well enough known in the area. But otherwise, questioning had been done with actual specimens in hand, alive where possible. This was owing to [825] the fact that response may be different to the dead specimens than to the live ones and grew out of a conviction (entirely substantiated in the course of work) that many animals, of a small variety especially, are recognized more by their distinctive behaviour pattern, flight, selection of habitat, voice, running posture, etc., than by the shape and form alone. All invertebrates, all reptiles and all but the best known and largest fish had produced the data from actual specimens, dead or alive. Finally, where neither common colloquial name nor specimens were available, I resorted to pictures. That way I obtained data for a small number of animals and for a good many birds. This method has its weakness. The line drawings in the excellent guide to the *Birds of Mexico* by Blake I used are somewhat on the "dead" side and may be good aid in bird identification to someone who also will read the text, but they often fail to be of much use to someone who rarely has seen the drawings in any book, let alone a bird guide. From the replies it was obvious that a certain amount of misidentification took place in the naming of the birds or mammals from the sketches. I took account of this and eliminated from consideration all those forms where misidentification on the part of the informant was obvious. This in itself may be a worthwhile object of study but it was not my concern at the moment.

In working with the informants I studiously avoided giving them any suggestion that I already knew what the animal was or that I had a fair idea about the general features of its natural history. This is especially important in considering the Seris' knowledge of the animal distribution, ecology and other salient features. When available, I often brought along specimens of species I knew did not occur in Desemboque which had been captured elsewhere, in the absence of the Seris. This was in order to test better their recognition of animal forms.

115 Altogether 10 informants had been used. Of these the bulk were questioned in 1963, some again in 1955 and that year Chico Romero, now an old man of over 70, had been also added to the roster. Chico was Kroeber's star informant in 1930 and from him came the bulk of Kroeber's original information.

The two main informants were Miguel Barnett, then aged about 45 and one of the Seris' best hunters, and Jose Juan Moreno, a fellow about 25, recognized as their best fisherman. As expected, their preoccupations and interests slanted their replies. Accordingly, Jose Juan had the best knowledge of the marine animals and Miguel of the terrestrial animals. Jose Juan aided me again with some information in 1955.

[165] Other informants were as follows: Juan Torres, aged 40 or so; Ramon Montayo, one of the

[P. 48]

115 oldest Seris then alive of over 70; Ramon Cor-
[165] rales, claiming to be 37 and on the dim-witted side; Jesus Montanyo, a quiet, cooperative man of 21; Natcheo Molina, aged 35 or so, whose interest in the protestant hymnals was unfortunately far greater than in giving me the information I wanted; Jose Manuel Romero, about 37 years old on his own claim; and Jose Barnett, Miguel's son,
825 aged 14. Inclusion of young Barnett was a lucky strike because it indicated clearly differences in the natural history knowledge between the older men and the young men, later confirmed also in the incidental questioning of several young boys.
[868] Young men start out with general interest in animals of all sorts, including the small invertebrates, but as they grow up they end up with solid knowledge of economically important species and slim, forgotten knowledge of the insignficant invertebrates.

● 124 I made an endeavor to obtain the same sort of information from several informants in order to eliminate as far as possible aberrant answers or peculiarities. The most solid information is available for the mammals, which are, of course, well-known. Here in some cases the same kind of information had been obtained from five individuals. In other instances only two to three were available and sometimes only one. What was surprising about the information given were not the differences, which I often indicated in the text, but the amount if identical agreement on almost every single item of data between different individuals.

Since it was imposaible to obtain information on all animals from the same individuals, the questioning proceeded in "blocks." By this I mean, I would question for example two individuals about the entire order of mammals (every species of them) and another two on the birds. Two other individuals then would be questioned on half of the birds and half of the mammals, while the other two on half of the reptiles and half of the fishes; still another two on half of the insects and half of the marine invertebrates, while others would yet cover all of the insects or reptiles or fishes independently. This I believe is a useful procedure. It allows to test generalized concepts of natural history for several individuals for diverse groups. It is motivated by the question of no little importance. What does so-and-so know about mammals and what does he know about birds? What are his generalized ideas of each group? It
[825] had been soon discovered that when it concerns special points, the informants were apt to have standardized notions of what the animals did, regardless of the actual situation. The less actual observational knowledge they actually had, the more frequent were pat replies. Obvious demonstration of this helped a great deal to eliminate such pat answers or to recognize them for what they were and to account for them in the final analysis.

000 Another point in the procedure is of par-
[P 5A]

Malkin F-5 (1953-1955)1962 NU31 Seri NU31

III

MAMMALS

262 water for a week until it escaped. There was
[231] no intent to do away with it and serve it up for dinner later on.

The 3 species reported as eaten in the past are kangaroo rat, sea lion and the ringtail cat or cácomistle. Of these the little rodent had been
[252] supposedly "boiled in hot water with salt" which
[261] method of preparation may indicate that it happens quite recently yet. It is quite possible that in times of famine this animal is still used. The sea
[432] lion has been reported as "eaten once a long time ago. All of it. But not now. Its hide was once sold
[114] also but now it isn't used at all." This conflicts with McGee's statement (McGee, 189:202) that there was a taboo on eating sea lions among the Seris and there is no way to reconcile the information.

[114] McGee's report may be as truthful as are the uncertain and hazy comments of the present day Indians.

224 On the other hand, the cougar belongs to a very dubious category, unless we can rely on Miguel Barnett's memory. All 4 of the younger informants emphatically deny that the cougar has ever been hunted for meat. But Miguel Barnett claimed that this has been done in the past, although he could not tell how long ago. Kroeber says nothing about this animal and this makes it difficult to date the events. At the time of Kroeber's visit, Miguel was at least 25 years old and the cougar could have been hunted either
[262] then or earlier. But today the Seris do not eat the flesh of the big cat and their abhorrence of it has been confirmed by the Mexicans to whom I talked about the subject, and who relish cougars' meat. This apparent distaste for the *el tigre's* flesh may
[178] well be a recent development quite unconnected with the lack of weapons. McGee (1894: *loc. cit.*) casually mentions that the Seris hunt both cougars
[411] and the jaguars but cites no evidence for it. Yet
[177] in his time Seris' almost only weapons were the bow and arrow and a lance which today has been replaced by firearms. I am unable to explain this contradictory behaviour.

262 Finally, there is the Ringtail cat or cácomistle. Although this beast has been reported as part of the diet, the information isn't too reliable. I had
● [124] no way of checking whether this was the animal the Indians had in mind. Their description of it seemed to answer some other unspecified animal and their answers were confused. The fact is that the Ringtail cat does occur in the Seri territory and they are surely familiar with it.

Of the remaining 11 species none were ever mentioned by any of the informants as having been ever eaten. Their denial of eating the coyotes were most vehement. Coyote figures out probably

McAllister E-5 (1953-1955)1962 NU31 Seri NU31

231 which was kept around as a pet and it was interesting that the Indians who held it captive took considerable pains to look after it. This I noticed also with such few pet birds as they had. On the contrary, the large number of dogs which these Indians keep are left much to their own devices and are rarely fed. They are treated with lordly indifference and are treated as one Indian said to me "as you treat the dogs" which meant with a kick, stone and fist and forced to feed on the offal left on beaches. Yet, no Seri [273] would ever think of deliberately killing a dog, unless drunk. Although there is obviously little use for the dogs, each family keeps many of them. Sometimes as many as a dozen of these miserable curs live in the compound of one Serian family.

Taxonomy and Recognition

825 From the responses given, the Seri tend to split the mammals into two groups, the mammals proper and the group of animals which to them seem neither mammals nor fish. Evidently the possession of fur is of paramount importance here because it had been mentioned as a mammalian feature for several of the species. The Seri then put the *Cetacea* in a group of their own perhaps on these grounds. To be sure, the designation is somewhat hazy. The whale, the informants said, "is not fish nor mammal." The killer whale has also been referred to by them as a "whale-like animal." Finally, the dolphin one of the informants said was "like a shark. It lays eggs like a shark." But another informant thought it was "a mammal-like whale" although his response was obviously uncertain. That the presence of fur must be the main distinguishing feature is obvious in that they have no doubt about the mammalian position of the sea lion and that, while uncertain about the position of the bat, they are inclined to classify it with the mammals. As one informant put it "it can be of smilar kind to the coyote. It is not a bird because it has fur. Fur is not what the birds have."

Otherwise they are fairly good at the recognition of those individual species that are well known to them or that are frequently encountered in the area. The jaguar, called also *el tigre*, is known from hearsay only, owing to its extreme rarity in the immediate area of Desemboque. Porcupine is well recognized due to its peculiar features. But it must be rare and José Juan Moreno who saw it only once thought it was a "mammal." But he had no difficulty in recognizing a picture of it or associating the Spanish name *porcospino* with it. A somewhat moot point is the cácomistle. This animal evidently is not well known and, from the report, had been surely confused with some other creature. Finally, while the jaguarundi is surely found in the area it is also little known. Having to work with pictures I cannot in any way verify the Seri re- ●[124] sponses, especially since the picture used was not of the best kind for the identification purposes. A Mexican trader had a multilated skin of one, but he sold it to a visitor before I had time to query the informants about it.

[P. 11A]

McMakin F-5 (1959-1966)1982 MU31 Seri MU31

* 825 whale and the bat, both of which are said to be about more during the hot season. The killer whale, in fact, is supposed to be absent altogether during the cold season. On the other hand, the peccary and the bighorn are said to be more common during the cold season and the big sheep, the Indians say, "goes into the mountains of Eastern Sonora during the hot season."

For a few species, seasonal differences cannot be included in this type of analysis. The grey whale, the informants said, "comes here (to Desemboque) and Tiburon in May and disappears into the Gulf in late June." As for the porcupine, the sightings of these animals were few and the informants actually made a point of explaining that the beasts had been seen so few times that they couldn't tell in which season it is more common. José Juan Moreno summarized the situation best when he told me that "I have seen one two years ago near Kino in November. And before I saw it near Desemboque in March and before yet, a very long time ago near Tepopa in March."

So much for the gross seasonal occurances.

There are a few additional observations which indicate recognition of the seasonal differences in behaviour, although the observations here are sporadic and very few. Questioned about the time of the year when the mating of the mammals took [124] place, the overwhelming responses were "quien sabe?" In fact, only for two species, the sea lion and the deer, the Indians indicated this sort of information. Of the sea lion, the informants said "it gathers for mating in October. Everyone mates with everyone," but they gave no indication as to the time of birth of the young. More information they had about the deer where not only the mating season has been indicated but also a number of other phases of the life history of this ungulate, intimately connected with the season. Here they gave a whole sequence of events as follows: "Mating takes place in August. Young are born in May following this. In November the males fight. They (the males) drop horns in February or March, grow them in May."

The only other reference to the seasonality the informants gave was for the jackrabbit. Here, the young, they say, are born in May. Thus in the two only instances where the birth of the young has been indicated, this takes place during the summer. It is likely that if more information is available it'll tend in that direction.

It will be seen also that the two other species for which the Seri indicated a connection between the season and the life history were large species: the deer and the sea lion. It will also be seen that the animal about which they seem to know most is actually one that is perhaps of greatest economic importance and which is also common. Bighorn runs perhaps second in this respect, but it occurs only in certain limited areas and is far more elusive.

Finally, there is very little recognition of the seasonal changes in colorations in the mammals. In fact, not a single instance of such changes has been suggested to me. The replies varied from denials to the traditional "quien sabe?"

[P-14 B]

Bakalkin E-5 (1963-1965)1963 MU31 Seri MU31

#825 [177] the Mexican, since it includes such well known European beliefs as making deliberate efforts to get itself trapped in the hair and biting with the tongue. The younger ones discarded these ideas. But the residue of them or, at any rate, an afterfeeling remains. The bats are somehow regarded with disgust. It is this attitude which may well account for their denials that it lives in the human homes and it may represent a conscious or unconscious effort to cover up a disreputable fact (to them). There had been some other occasions where the informants denied, for example, eating certain animals or else the knowledge of certain matters which were both later exposed by the sequence of events.

● [124]

[P. 16 B]

9:Malkin E-5 (1953-1955)1962 NU31 Seri NU31

V

REPTILES AND AMPHIBIANS

136 fore it was impossible to check the Seris' ability
* [825] to distinguish between these.

As for the marine turtles, there are several possible species in the area. There is no mistake about the loggerhead. I have seen one carapace and bones taken at Campo Vivora, while with the Seris. The others could be any two of the several species common in the Gulf.

Economic Uses

* 825 In 1956 I published data concerning economic
114 exploitation of the reptiles by the Seris which need correction. Eleven species out of 25 had been reported as used economically. Additional work done in 1955 and after the completion of the MS. indicated a much higher percentage: 17 species out of 26 are used. Thus the percentage increases from 44% to 65%. The percentage of the species actually used will probably rise with additional
[262] field work because some of the informants are dis-
inclined to admit eating certain animals or will
● [124] simply say, "these had been eaten in the past but not now." However, close inspection and observation often contradict these statements.

262 The list of species reported as eaten is as follows:

Turtles and tortoises: all species
Snakes: both racers, patch nosed snake and both rattlesnakes
Lizards: both chuckawallas, Gila monster, race runner, northern crested lizard

This listing shows how much dependent are the Seris on the desert habitat for food. Even today, with all the available ready-made manufactured
[178] food or imported food from the *tienda*, they gather evidently most of the common reptiles to increase their menu.

Of the species in the list, only two, both smaller species of sea turtles, figure as really important items. McGee believed that here was by far the most important part of the Seri menu, with the marine birds running second.* Now, the importance of the sea turtles has declined, no doubt through a variety of outside influences. I doubt (on the basis of my observation) if altogether it comes to more than 10% of their total diet. The turtles had been replaced as number one food by
[177] the fish (with the introduction of hook and line fishing). But anther factor evidently is the depletion of the turtle population. The third species, the huge loggerhead, is so rare that during the entire
[225] summer of 1953, only one of them had been harpooned and that at Camp Vivora away from Desemboque. The two smaller species have also become very rare and hardly ever show up near the village. They can be taken on more distant expedi-

*Eggs of the turtles are considered a delicacy, especially of the smaller of the two. The Seris say that the loggerhead has been eaten once but now almost never, because it became so rare.

[P. 228]

231 *oporus* or a *Cnemidophorus*, but even so, the life of the captive is short. Sooner or later it'll be slaughtered like any other beast played with by the Indian boy.

Taxonomy

* 825 In general the Seri recognize the major groupings of this class. Thus we have the lizards, snakes, turtles, sea turtles and toads. All these do correspond to the natural groupings with the sole exception of the horned toad. For some reason it is not classed together with the lizards but is supposed to be an entirely different animal. Some of the informants tend to keep the "vivoras," that is the rattlers, separate from the snakes but others think they are just a different kind of snake.

In distinguishing between one species and another, the Seris showed remarkable acuity. Out of 26 species listed here, they confused only two, both relatively small and similar looking Utas.[11] On the other hand, they were able to associate correctly specimens of the different sizes and often also colors of the same species. I frequently mixed up

● 124 large number of specimens without telling them
* 825 anything about them and yet invariably the informants were able to sort them out correctly.

It is also interesting that, when I showed to Barnett and Moreno a specimen of a small toad I brought along pickled from Needles, California, they both identified it with the *B. alvarious*, the local toad.

* 825 Moreno also told me that there are two species of *Dipsosaurus* on San Esteban and the one I had was the smaller of the two. I am unable to check this information and it may be that what he had in mind was the larger chuckawalla. I have obtained information about the chuckawalla from other informants but not from him. There are no larger lizards in the area other than the chuckawalla and the Gila monster; therefore this suspicion is justified.

Sexing

All reptiles or amphibians, according to the Seri, do have the male and the female sex and in most cases highly specific traits in the two sexes of the same species were indicated. Actually sex differentiating data had been obtained for 23 out of 26 species. The three species for which no data on this are available were spotted race runner, western diamondback and the red racer. For the first two it may be an oversight on my part in the course of questioning. As for the red racer, the answer simply was "I don't know" or "I can't tell." It is possible that other individuals could have provided a more specific answer.

In general a multitude of criteria to differentiate the sex in the animals were employed; size, color pattern, presence or absence of specific structures all were used either individually or together. For 16 species the informants indicated either differences in size or similarity in size;

[11]Gecko and *Xanthusia* go under identical Seri name, but, they say, they are different forms. However, they do separate the two racers, black and red variety, even if taxonomists today lump them as color forms of the same species.

11: Moser L-5 (1956-1961) 1963
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so named must be of the same sex as the first. The significance of land ownership needs further investigation.

Many of the Seri still prefer, when possible, to live in their chosen band area. Sometimes a person, when he is approaching death, will ask to be taken to his own *i?iziiting*, where he can die and be buried in the area of his choice.

NOTES

1. Due to printing limitations, stress on Seri words has been omitted, and several orthographic symbol changes have been made for this paper. The phonetic values of the symbols used are the following: *p* is voiceless labial stop; *t* is vl. dental stop; *k* is vl. velar stop; *?* is glottal stop; *f* is vl. labial flat spirant; *w* is vl. labial grooved-rounded spirant; *s* is vl. alveolar spirant; *x* is vl. alveo-palatal spirant; *l* is vl. lateral spirant; *h* is vl. velar spirant; *x* is vl. back velar spirant; *m* is labial nasal; *n* is dental nasal; *ng* is velar nasal; *y* is palatal semivowel; *i* is a high close front vowel; *e* is a low close front vowel; *a* is a low open central vowel; *o* is a mid close back vowel.

2. These data were compiled during field trips to the Seri camps during the years 1956-61, the studies being carried out under the auspices of the Summer Institute of Linguistics. The principal informant was R. Herrera T. whose information was checked with and supplemented by nine of the older members of the tribe. I am indebted to my colleague, David Thomas, who read an earlier draft of this paper and made helpful suggestions.

3. 1) W. J. McGee, "The Seri Indians," *Bureau of American Ethnology, Annual Report*, No. 17, Part 1. Washington, 1898. 2) A. L. Kroeber, "The Seri," *Southwest Museum Papers*, No. 6. Los Angeles, 1931. 3) W. B. Griffen, "Notes on Seri Indian Culture, Sonora, Mexico," *Latin American Monograph Series*, No. 10, Gainesville, 1959.

4. It will be noted that between subdivision 3 and 4 on Fig. 3 there is an unnumbered area, the status of which is uncertain.

5. Kroeber states that McGee's concept of Seri maternal lineages crystallized into totemic clans with matron rule seem a fantasy. In Kroeber's opinion, "The Seri may never have had sibs or clans; but the fact that they appear to lack them now is no positive evidence that they were without them three centuries ago. Shifts of residence, contraction of territory, shrinkage of numbers, amalgamation of distinct bands, may well have obliterated much of such social fabric as they once possessed."

Griffen discusses the nature of the former Seri bands and states, "they may have been patrilineal and exogamous. The criteria . . . that Julian Steward has exposited for the formation of exogamous, patrilineal bands . . . are and presumably would have been met formerly in the Seri habitat." Griffen lists other aspects of this type of band which are also verified to some extent by his data. From reading his material, it is obvious that he suspects the existence of clans at some earlier period. He emphasizes the need for further investigation.

6. G. P. Murdock, *Social Structure*, Macmillan Co., New York, 1949.

7. Marriages were usually contracted within the band.

8. As Kroeber points out, their memory likely covers only the latter part of the period of Spanish contacts.

9. The Seri recall nothing of Seri-Pima contacts and little of Seri-Apache relations.

10. The story is related that one day some Seri entered a cave where they found several Papago jugs filled with seeds. Being hungry, the people ate the seeds and left some arrows as token payment. The Seri say that the Papago apparently believed the arrows were intended as an insult. Fighting broke out soon afterward.

11. The Seri concept of the band annihilations is seen to be in contradiction to McGee's statement (p. 132): "Concordantly with their primary characteristic, the Seri have avoided ethnic and demotic union beyond the narrow limits of their own kindred; and even of these they seem to have cast out parts, annihilating the Guayma and Upanguayma, displacing and nearly destroying the Tepoka, and outlawing individuals and (apparently) small groups."

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

where a temporary Seri rancheria was found occupied by about sixty of the tribe, including subchief Maahém, who speaks Spanish. In this part of the work the expedition was accompanied by Señor Pascual Encinas, the owner of the rancho visited, and doubtless the best informed white man concerning the habits, customs, personnel, and habitat of the tribe. About a week was spent in intercourse with the occupants of the rancheria, when the studies were brought to an end through the illness of Señor Encinas, and the consequent necessity for return to Hermosillo. The expedition then proceeded northwestward and northward along a route so laid as to define the western limits of Papagueria proper, and reached Tucson near the end of the year. In addition to the leader, the party comprised Mr William Dinwiddie, photographer; José Lewis, Papago interpreter, and E. P. Cunningham, teamster. The outfit was furnished chiefly by Mr J. M. Berger, of San Xavier (near Tucson). On the visit to the Seri frontier the party was accompanied by Señor Encinas, Don Arturo Alvemar-Leon (who acted as Spanish interpreter), and two or three attachés of Molino del Encinas.[1]

The second expedition was directed primarily toward investigation of the Seri, and only incidentally to continuation of the researches among the Papago. Outfitting at Tucson in October (again with the aid of Mr Berger), the expedition proceeded southward by a route different from those previously traversed, and carried forward a plane-table route survey covering a considerable zone from the international boundary at Sasabe to Rio Sonóra. Descending the previously unmapped course of Rio Bacuache, the expedition reached the Rancho de San Francisco de Costa Rica on December 1, 1895, and, although conditions were found unfavorable in that the Seri were on the warpath, immediately prepared for the extension of the work into Seriland.

A preliminary trip was made into the mainland portion of the Seri habitat, terminating at the crest of Johnson peak, the highest point in Sierra Seri. The triangulation and topographic surveys were carried over the territory traversed, and several points were fixed on Isla Tiburon; but the natives, agitated by a skirmish with vaqueros on the frontier a day or two earlier, had withdrawn to remoter parts of the territory, and were not encountered. The party returned to Costa Rica, a rude boat was completed, transported across the desert via Pozo Escalante to Embarcadero Andrade, and launched in Bahia Kunkaak. The surveys were extended to the southern portion of Sierra Seri and Isla Tasno, and, after various difficulties and delays due to dearth of fresh water, to gales, and to other causes, the party (enlarged for the purpose) finally landed on Tiburon. Many Seri rancherias were found on

[1] The more noteworthy details of the organization and work of the two expeditions are set forth in the administrative reports of the Bureau for the fiscal years 1894-95 and 1895-96. Certain members of this party are shown in the accompanying half-tone, forming plate II: Señor Encinas seated at the end of the table; his son, Don Manuel (bareheaded), and Don Ygnacio Lozania at his right; a grandson behind him, and Señor Alvemar-Leon seated at his left, with Maahém kneeling over the table in the foreground.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

both sides of Bahia Kunkaak and El Infernillo. Some of these had been occupied almost to the hour of the visit, but the occupants had taken flight, leaving most of their unattached possessions behind, and were not seen, though it was evident that, like wary birds and game animals, they kept the invaders in sight from points of vantage and hidden lairs. The eastern scarps and foot-slopes of Sierra Kunkaak were traversed extensively and repeatedly; its crest was crossed by Mr Johnson with a small party at a point west of Punta Narragansett, and the triangulation and topographic sketching were connected with the work on the mainland and carried over practically the entire surface of the island, being tied to the work of the Hydrographic Office about the coasts. Then, despairing of finding the wary natives, and having exhausted food supplies, the party returned to the mainland and thence to Costa Rica, arriving in the evening of December 31.

The original party comprised, in addition to the leader, Mr Willard D. Johnson, topographer; Mr J. W. Mitchell, photographer; Hugh Norris, Papago interpreter, and José Contrares, teamster. The party engaged in the expedition to Sierra Seri comprised the leader, Messrs Johnson and Mitchell, Mr L. K. Thompson of Hermosillo, Don Andrés Noriega of Costa Rica, José Contrares, and two Papago Indian guards, Miguel and Anton, of Costa Rica. The Tiburon party was made up of the leader, Messrs Johnson and Mitchell, S. C. Millard of Los Angeles, and Señores Andrés Noriega and Ygnacio Lozania, together with Ruperto Alvarez, a Yaqui Indian guard, and Miguel, Anton, Mariana, Anton Ortiz, and Anton Castillo, Papago guards; while Hugh Norris and José Contrares, with half a dozen Papago guards and other attachés of the rancho at Costa Rica, maintained an intermittent supply station at Embarcadero Andrade. Señor Encinas cooperated in the work of the expedition, part of the time at Costa Rica and part at Molino del Encinas, his principal hacienda in the outskirts of Hermosillo; while Mr Thompson and Dr W. J. Lyons aided in the work, the former at both Hermosillo and Costa Rica and the latter at Hermosillo.

The return trip from Costa Rica lay via Hermosillo, and permitted the extension of the plane-table surveys to this longitude. While at the city advantage was taken of the opportunity to obtain linguistic and other data from "El General" Kolusio, a full-blood Seri retained at the capital by the State for occasional duty as a Seri interpreter, who was obligingly assigned to the service of the party by Señor Don Ramón Corral, then governor of Sonora. At Hermosillo the leader of the expedition left the main party, which then proceeded northwestward and northward along the route followed by the 1894 expedition on the return journey, the party comprising Mr Johnson, in charge, with Messrs Mitchell and Millard, Hugh Norris, and José Contrares; and the plane-table surveys were continued and combined with the route surveys made on the outward journey.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

the wealth of place-names and the strongly accentuated configuration which the nomenclature expresses, Seriland is one of the most hopeless deserts of the American hemisphere.

ACKNOWLEDGMENTS

Since most of the field work of the two expeditions lay in the neighboring Republic of Mexico, it became necessary to ask official sanction for the operations from the Mexican government; and it is a pleasure to say that every possible privilege and courtesy were extended by both federal and state officials. Especial acknowledgments are due to the Mexican minister (and afterward ambassador) to the United States, his Excellency Don Mateo Romero (now deceased); to the Ministro de Fomento of the Mexican Republic, Excelencia Don Fernando Leal; and to the governor of the State of Sonora, Señor Don Ramón Corral. Equal acknowledgments are due to various United States officials, notably Honorable W. Woodville Rockhill, First Assistant Secretary of State when the expeditions were planned; and it is a pleasure to advert to the active interest taken in both expeditions by Honorable S. P. Langley, Secretary of the Smithsonian Institution, and to the careful attention given the 1894 expedition by the late Dr G. Brown Goode, Assistant Secretary of the Institution.

Mr Willard D. Johnson did invaluable service in connection with the second expedition, particularly in the execution of surveys and the construction of maps in inimitable style. Mr William Dinwiddie is to be credited with the excellent photographs made during the 1894 expedition, with the representation of the devices used in Seri face-painting, and with various other aids to the investigation; while Mr J. W. Mitchell is to be credited with the photographs made on Isla Tiburon, and with other contributions to the success of the 1895 expedition. Acknowledgments are due also to all of the participants in both expeditions, whose names appear in other paragraphs. Their contributions were not primarily intellectual, yet were of a kind and amount to be forever remembered among men who have worked and hungered and thirsted and stood guard together. The deepest debt connected with the field work is to the now venerable but ever vigorous pioneer, Señor Pascual Encinas; and no small part of this debt goes over to his estimable spouse, Señora Anita Encinas, who twice traversed the long road from Hermosillo to Costa Rica in the interest of the 1895 expedition.

The scientific results of the researches have been enriched by invaluable contributions from Director Powell's store of ethnologic knowledge, and by suggestions from Messrs Frank Hamilton Cushing, F. W. Hodge, James Mooney, and other collaborators in the Bureau of American Ethnology. The qualities of the colored illustrations are due largely to the artistic skill of Mr Wells M. Sawyer, by whom they were designed, and of Mr DeLancey Gill, by whom the proofs were revised. The Spanish translations are due chiefly to Colonel P. F.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

and more than ordinary littoral variety; for the waters of the gulf are warmed by radiation and conduction from its sun-parched basin, while the concentrated tides distribute and stimulate the species and keep the vital streams astir.

Local Features

Considered as a tribal habitat, Seriland comprises four subdivisions of measurably distinct character, viz, (1) the broad desert bounding the territory on the east; (2) the mountainous zone of Sierra Seri; (3) Tiburon island and the neighboring islets; and (4) the navigable straits and bays contiguous to island and mainland.

1. So far as its marginal portions are concerned, Desierto Encinas is a typical valley of the Sonoran province, sparsely dotted with vital colonies of the prevailing type and variegated by the exceptionally luxuriant mesquite forests of the Bacuacho and Sonora fans; but the interior of the valley is rendered distinct by the fact that it lies near, if not below, the level of the sea.[1] The central feature is Playa Noriega—a film of brackish water for a few days after each considerable semiannual freshet, a sheet of saline mud for a few weeks later, and for the greater part of the year a salt-crusted sheet 20 square miles in area, level as a floor and unimpressionable as a brick pavement. The playa is rimmed by dunes 10 to 40 feet in height, and about these and along the arroyos which occasionally break into it there is some aggregation of salt-enduring shrubs, evidently sustained in part by the semiannual freshet with its meager vapors and fogs. Outside this rim the surface is exceptionally broken; low dunes and irregularly wandering banks of soft and dust fine sand are interspersed with meandering salt flats much like the central playa, ranging from a few feet in width and a few yards in length up to mappable dimensions, as in the lesser playa lying east of the great one; and many of the dust-banks are honeycombed with squirrel burrows. This annulus of broken surface is narrow on the west, soon passing into okatilla scrub and then

[1] The expedition of 1895, during which Seriland was surveyed, was not provided with apparatus for accurate vertical measurement, and hence altitudes were only approximately determined. The determinations by Mr Johnson, who executed the topographic surveys, indicated that even the lowest part of the valley is somewhat above sea-level; but other facts indicate that it actually lies below the level of the waters of the gulf, and forms a miniature homologue of Colorado desert (in southern California): in the first place the central playa, which is undoubtedly flooded occasionally if not semiannually, does not embouch into, and has no channels extending toward, the sea; in the second place it is highly saline; again, the alluvial fans of Rio Bacuacho and (especially) of Rio Sonora are so pinched as to intercept and drain the trough occupied by Laguna la Cruz in its southern portion and Playa Noriega in its northern portion; concordantly, the detail configuration of the coast indicates marine transgression, apparently due to secular subsidence of the land—though the abundant marine shells of recent species toward the valley-bottom attest recent displacement of the sea. On the whole, the facts seem to indicate that, during recent geologic times, the lower portion of this valley was a shallow gulf extending northward (and probably also southward) from the eastern limit of Bahia Kino; that the importation and deposition of sediment, chiefly by Rio Sonora, outran the secular subsidence of the land so far as to displace the waters of the gulf in the central portion and to separate the northern arm from the sea; and that the waters of this northern arm were subsequently evaporated, disappearing finally in the central playa in which local inflow and evaporation are balanced by the usual mechanism of interior basins.

1: McGee E-5 (1894-1895)1898 NU31 Ser.i NU31

even during this halcyon term no Seri save Kolnslo and the Altar outlaw ever learned to live in a house; none but these and Mashém wore hats habitually; and, despite the fact that they often witnessed and sometimes playfully or perforce participated in the processes, no Seri ever really encompassed the idea of house-building or even of making adobe. Though surrounded by horses when near the rancho, they never learned to ride nor to use the animals otherwise than for immediate slaughter and consumption; though in frequent sight of skilful ropers, they never fully grasped the idea of the riata, preferring to seize their prey with hands and teeth; though familiar with the agricultural operations of the rancho, they never turned a sod nor planted a seed on their own account; though in frequent sight of cooking, they seldom began and never finished the process with their own food; though acquainted with firearms, they continued to regard them as thaumaturgic devices, and chose the bow and arrow for actual use; though submitting to apparel on the frontier, they commonly cast away the incumbrances on returning to their lairs; and no Mexican or other Caucasian ever saw within their esoteric life—their names remained unrevealed, their hair remained sacred, their mourning for the dead was unheard save at a distance, and no alien, even unto today, has ever seen the birth of their babes, the christening of their children, the burial of their dead, or the ceremonies of their shrines. The Seri and the whites were, indeed, mutually tolerant; but, so far as concerns mutual sympathy, the toleration was almost precisely on a par with that between the ranchero and the vulture-flock that scavengers his corrals—and when depredation began the toleration was of a piece with that between householders and their unwillingly domiciled rodents. It is not too much to say that the interracial mistrust and hatred of the Western Hemisphere culminates on the borders of Seriland; though the antipathy is commonly regarded by the alien tribesmen and the Mexicans as other than racial, since the Seri are felt to be hardly human—a feeling fully shared by the Seri, who undoubtedly deem themselves more closely akin to their deified bestial tutelaries than to the hated humans haunting their borders.

Even during the Encinas régime the Seri came in occasional contact with aliens on other parts of the frontier: on Hacienda Sersa, the somewhat remoter borderland outpost on the north, the relations between the landholders and the Seri were analogous to those on the Encinas plains, though less acute in the ratio of relative distance. Occasionally small parties of warriors journeyed to Guaymas[1] on balsas or on foot to barter pelican-skin robes for Caucasian commodities, chiefly aguardiente and manta; still more rarely similar pilgrimages were made to the outskirts of Hermosillo; a few marauding raids were made to the ranchos lying near Cieneguilla and Caborca; and a num-

[1] The accompanying plate XII is reproduced from a photograph of a small group of Seri traders taken near Guaymas, probably during the eighties. It was kindly furnished by F. A. Ober, who purchased it in Guaymas.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

SOMATIC CHARACTERS

142 Several physical characteristics of the Seri Indians are so conspicuous as to attract attention even at first sight. Perhaps the most striking is the noble stature and erect yet easy carriage; next in prominence is the dark skin-tint; a third is the breadth and depth of chest; another is the slenderness of limbs and disproportionately large size of extremities, especially the feet; still another is length and luxuriance of hair; and an impressive character is a peculiar movement in walking and running.

141/126/128 The mean stature of the adult Seri may be estimated at about 6 feet (1.825 meters) for the males, and 5 feet 8 inches (1.727 meters) or 5 feet 9 inches (1.73 meters) for the females, these estimates resting on visual comparisons between Caucasians of known stature and about forty adult Seri of both sexes at Costa Rica in 1894. In several of the accompanying photomechanical reproductions (e. g., plates XIII, XVI, XIX, XXIII, and XXVIII) a unit figure, introduced partly for the encouragement of the individuals and groups but chiefly to afford a basis for approximate measurement, gives opportunity for test of the estimate, the figure measuring 5 feet 11 inches (1.80 meters) to 5 feet 11½ inches (1.812 meters), and weighing about 215 pounds in the costume shown, including hat and boots.[1] These pictures and some thirty unpublished 141 photographs, like the observations on the ground, indicate that practically all of the fully adult males and several of the females overtop the Caucasian unit. The only definite measurement known is that of the youthful and apparently immature female skeleton examined by Dr Hrdlička, of which the dimensions indicate a stature (estimated by the method of Manouvrier) of about 5 feet 3⅞ inches (1.62 meters),[2] or 3½ inches above the female normal of 5 feet ¼ inch (1.53 meters) given by Topinard; but this considerable stature is, probably on account of the youth of the subject, much below the mean indicated by the ocular and photographic comparisons (it corresponds fairly with that of the Seri maiden represented in plate XXV, whose age was estimated at 18 years). Naturally this striking stature, especially that of the warriors, has been much exaggerated by casual observers; the typical warrior, El Mudo, depicted in plate XIX, is indeed commonly reckoned as a 7-footer, though his actual stature (diminished somewhat in the pictures by fearsome shrinking from the ordeal of photographing) can hardly exceed

[1] The average height and weight of the unit figure (that of the author) are about 5 feet 9½ inches and 200 pounds, respectively.

[2] Or about 1.6178 meters estimated by the method of Rollet; cf. The Races of Man, J. Deniker, London, 1900, p. 29).

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

142 color distinction alone sufficed to distinguish the Seri from any other people at a glance.

Foremost among the general somatic distinctions between the Caucasian and the American native is the peripheral development of the former, displayed in better-muscled limbs, more expressive features, etc—i. e., the Caucasian body expresses a readily perceptible but difficultly describable peripherization, in contradistinction from the centralization displayed by the aboriginal body. Save in a single particular (the large feet and hands), the Seri exemplify this distinction in remarkable degree: their chests are strikingly broad, deep, and long, recalling the thoroughbred racer or greyhound; their waists are shortened by the chest development, yet are rather slender; their hips are broad and deep, with a clean-cut yet massive gluteal development; and, in comparison with the robust yet compact bodies, the tapering arms and legs seem incongruously slender.[1] This physical characteristic, like that of color, is insusceptible of quantitative expression, at least without much more refined observations than have been made; but its value may be indicated roughly by the statement that the Seri differs from the average aboriginal American in degree of somatic concentration as much as the average aborigine differs from the average Caucasian—though it is noteworthy that the departure in this direction from the aboriginal mean is in some measure regional (i. e., the Seri differ less in this respect from the Papago and other swift-footed natives than from the average tribesmen of the continent). The Seri robustness of body and slenderness of limb are brought out by the absence (in appearance at least) of adipose; the skin is strikingly firm and hard and evidently thick, yet the play of muscle and tendon beneath indicate a dearth of connective tissue and convey that impression of physical vigor which their familiars so miss in the photographs; and in no case, save perhaps in the young babe, could the slightest trace of obesity be discerned. Thus the Seri, male and female, young and old, may be described as notably deep-chested and clean-limbed quick-steppers, or as human thoroughbreds.

The somatic symmetry of the average Seri, marred somewhat by the slenderness of limb, is still more marred by the large extremities. The hand is broad and long, the fingers are relatively long as those of the Caucasian, the nails are peculiarly thick and strong, and the skin is so thick and callousel as to give a clumsy look to the entire organ; the feet are still larger and thicker-skinned, appearing disproportionately long and broad for even the heroic stature of the tallest warriors. The integument covering the feet, ankles, and lower legs is incredibly firm and hard, more resembling that of horse or camel than the ordinary human type;

[126]

[1] The photo-mechanical reproductions do but meager justice to the splendid chest development of the Seri, young and old; for they were not only at ceremonialest rest during the better hours at which photography was most feasible, but invariably quailed before the mysterious apparatus and crouched shrinkingly in such wise as to contract their chests and lose their habitually erect and expansive carriage.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

000 those so fully described by Hough,[1] and serves to explain the otherwise obscure genesis of the fire-sense, which must have accompanied and shaped that most significant of all steps in human progress, the conquest of fire.

411 The modern coordinate of the Seri arrow is the bow, made preferably from a straight and slender branch of the palo blanco. A typical specimen is illustrated in plate XXX; it is 4 feet 9½ inches long, with the outer face convex and the inner face flat; greatest width 1⅝ inches, narrowed to 1¼ inches at the hand-hold; thickness at the hand-hold 1 inch, thinning to five-eighths inch at 8 inches from this point; tapering gradually in both dimensions toward the extremities, which are rudely notched to receive the cord (of mesquite-root fiber). The specimen [284] illustrated has been cracked and repaired in two places; in one place the repair was effected by a rough wrapping of sinew, and in the other by slipping over the wood a natural sheath of rawhide from the leg of a deer. The specimen is of added interest in that it combines bow [372] and nether fire-stick ("Strong-Kind-Mother"), one of the friction holes being worn out to the notched margin, and the other remaining in usable condition, as shown in the enlarged marginal drawing.[2]

Compared with the delicately finished and graceful arrow, the typical bow is a rude and clumsy device; it displays little skill in the selection and shaping of material, and evidently involves little labor in manufacture—indeed, the indications are that more actual labor is spent in the construction of a single arrow than in the making of a bow, while the arrow-making is expert work, betokening craft of a high order, and the bow-making little more than simple handiwork of the [174] lowest order. The comparison affords some indication of the genesis of Seri archery, and at the same time corroborates the independent suggestion that the arrow is of so much greater antiquity than the bow as to represent a distinct stage in cultural development—though the precise cultural significance of the bow is not easily ascertained.

Efforts were made to have different Seri warriors at Costa Rica in 1894 114 assume the normal archery attitude, with but moderate success, the 123 best pose obtained (illustrated in plate XXVIII) being manifestly unnat- 126 ural and a mere reflection of the attitude in the mind of the Caucasian poser; while the results of inquiries served only to indicate that the normal archery attitude was purposely avoided for reasons not ascertained. Fortunately another observer was more successful: in the course of the United States hydrographic surveys in 1873, Commander (now Admiral) Dewey received several visits from Seri warriors on board the *Narragansett*; and on the occasion of one of these visits, Mr 114 Hector von Hayer, of the hydrographic party, caught a photograph of 126 an archer in the act of drawing his bow. The negative was accident-

[1] Fire-making apparatus in the U. S. National Museum; Smithsonian Report for 1888, pt II, 1890, pp. 331-337, and elsewhere.

[2] Ordinarily the nether fire-stick is of soft and porous wood, fetonote palo-verde and water-logged pine being preferred.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

ally shattered, and no prints are known to have been made from it; but the fragments were carefully joined, and were kindly transferred to the Bureau by Mr Von Bayer in 1897, and from them plate XXIX was carefully drawn. The posture (partly concealed by the drapery) is extraordinary, being quite beyond the reach of the average human, and impossible of maintenance for any considerable interval even by the well-wonted Seri. The posture itself partly explains the difficulty of inducing the warriors at Costa Rica to assume it, since it is essentially a fleeting one, and indeed but a part of a continuous and stressful action—it is no less difficult to assume, or to catch in the camera, than the typical attitude of a baseball pitcher in action. The posture thus fortunately caught is quite in accord with the accounts of Seri archery from the esoteric side given by Mashém, and with the exoteric observations of Señor Encinas, Don Andrés, and others; for all accounts agree in indicating that the archer commonly rests inert and moveless as the watching feline up to a critical instant, then springs into movement as swiftly as the leaping jaguar, and hurls, rather than shoots, one, two, or three arrows before rushing in to the death or skulking to cover as the issue may require.

The Seri archery habit is in every way consistent with the general habits of the tribe, alike in the chase and in warfare, in which the tribes men, actuated by the fierce blood-craze common to carnivores, either leap on their prey with purpling eyes and gnashing teeth, or beat quick and stealthy retreat; and it is especially significant in the light thrown on the bow as a device for swift and vigorous rather than accurate offense, an apparatus for lengthening the arm still more than does the harpoon, and at the same time strengthening and intensifying its stroke. The quick-changing attitudes of half hurling are equally suggestive of the use of the atlatl, and support Cushing's hypothesis[1] that the bow was derived from the corded throwing-stick. While the critical posture of Seri archery is unique in degree if not in kind in the western hemisphere, so far as is known, an approximation to it (illustrated in fig. 22) has been observed in Central Africa.[2] On the whole the Seri mode of using the bow, like its crude form and rude finish, indicates that it is a relatively new and ill-developed artifact, possibly accultural though more probably joined indigenously with the archaic arrow to beget a highly effective device for food-getting as well as for warfare; while the genetic stages are still displayed not only in the homologies between arrow and harpoon, but by the common functions of both arrow and bow with the fire-sticks.

Concordantly, as indicated by the use of the archery apparatus, the individual taking of large game is effected either by stealthy stalking or by patient ambuscade ended by a sudden rush; when, if the chase is successful, the quarry is rent and consumed as at the finish of the

[1] The Arrow: Proceedings Am. Ass. Adv. Sci., vol. XLV, 1-26, pp. 202-240.
[2] Gibre's Journey to the Livingston Tree. The Century Magazine, vol. LI, 1896, p. 766.

1: McGee 7.-5 (1894-1895)1898 NU31 Ser: NU31

smaller implement is *hupf* or *hupf* (the initial sound explosive, combining the phonetic values of *h* and *k*; the vowel nearly as in "put", or like "oo" in "took"); the term is clearly an onomatope, imitating the sound of the blow delivered on flesh, on a mass of partially crushed mesquite beans, etc—indeed, both the word and the sound of the blow seem to connote food or eating, while regular pounding with the implement (either in ordinary use or by special design) is a gathering signal. So far as ascertained, the term is not extended to other objects save potential implements in the form of suitable pebbles; but it is significant that there is no distinction in speech—nor in thought, so far as could be ascertained—between the natural pebble and the wear-shaped implement.[1] The local terms ahst and hupf are explicit and specific, and without precise equivalents in other known tongues; moreover, the objects designated are too inchoate in development and hence too protean in function to be appropriately denoted by the designations of implements pertaining to more differentiated culture (mortar, metate, pestle, muller, mano, etc). Accordingly it seems desirable to retain the Seri designations.[2]

A typical specimen of intermediate size, used commonly as an ahst, but susceptible of employment as a hupf, is illustrated (natural size) in plates XXXV and XXXVI.[3] It is a hard, tough, hornblende-granite or greenstone, with a few structure-lines brought out by weathering and wave-wearing. Its weight is 4 pounds 10 ounces (2.10 kilograms); its form and surface are entirely natural, save for slight battering shown on the two principal faces and still less conspicuous bruises along one edge (as imperfectly shown toward the left of plate XXXV). The specimen was found in a jacal (illustrated in plate VI) on Isla Ballena, within a few hours after abandonment, in the position in which it was hastily left by the last users; it was smeared with blood and fat (which still remain, as is shown in plate XXXV) and bits of flesh, and bore bloody finger prints of two sizes—those of a man and those of a woman or large child; beside it lay the hupf depicted in plate XLII. In its last use the unwieldly cobble served as an ahst, but the markings on the edge record use also as a hand implement.

A functionally similar implement is illustrated in plate XXXVII (on reduced scale; maximum length 8¼ inches = 210 cm.). It is of tough

[1] The failure to discriminate natural objects from artificialized implements produced from such objects by wear of use is a noteworthy trait of primitive folk. It is conspicuous among the acorn Indians of California, who fail to appreciate the manufacture of their own mills and who conceive that their bowlder mortars and creek pebble pestles, even when completely artificialized by a generation's use, are merely found and appropriated; and a similar state of mind persists among the well-advanced Papago, who have no conception of making their well-finished mortars and pestles, or even the stone tomahawks occasionally surviving, but regard the implements as fruits of discovery or treasure-trove only.

[2] It should be noted that the terms used in the titles of the accompanying plates are not denotive, but merely descriptive.

[3] This, like the other illustrations of the series (except plate LVI, which is a lithograph, partly process and partly handwork), are photo-mechanical reproductions made directly from the objects; all are natural size unless otherwise specified.

I: McGee E-5 (1894-1895)1898 NU31 Seri NU31

411 and seldom stirred until the stranger approached within 50 or 60 yards; whence it may be assumed that these distances fairly indicate the ordinary range of Seri arrows. The few accounts of conflicts in which arrows are mentioned prove, however, that these missiles are discharged with great rapidity and in considerable numbers during the brief interval to which the fighting is customarily limited.

278 411 The most notorious feature of the Seri warfare, and that of deepest interest to students, is the reputed use of poisoned arrows. The scattered literature of the tribe, from the days of Coronado onward, abounds in references to this custom; the Jesuit authorities give somewhat varied yet fairly consistent descriptions of the preparation and the effects of these arrows; Hardy added his testimony as to the character of the poison; General Stone gave directly corroborative evidence; hacendero Encinas gives witness to the effects of the envenomed missiles on his own stock; while Mashém recounted to the 1894 expedition the various uses of the "poisoned" arrows and highly extolled their potency, though he was noncommittal—save in casual allusions—as to the details of the poisoning. A part of the arrows acquired by this expedition and now preserved in the National Museum were professedly poisoned; they are easily distinguished by a thin varnish of gummy and greasy substance over the iron tips and wooden foreshafts, and especially about the attachments of mesquite gum and sinew. According to Mashém's asseverations, such arrows are habitually used in war save when the supply is exhausted by continued demand; they are also used occasionally in hunting, especially for deer and lions (i. e., the swiftest and fiercest game of the region); and the use of the poisoned missile does not destroy the meat of the animal, though the portion immediately about the wound is "thrown away". Two of [126] the treated arrows brought back from Costa Rica were submitted to Dr S. Weir Mitchell some months afterward for examination, and for identification of any poisonous matter found on them; but no poison was detected. On the whole, the data concerning the reputed arrow poisoning are less definite than might be desired; yet they are sufficient to suggest the nature of the custom with considerable clearness.

278 [811] In any consideration of Seri customs it is to be realized that the folk are notably primitive in thought, and hence deeply steeped in that overweening mysticism which dominates all lowly folk—that they still cling to zoomimic motives in their simple handicraft, and are still wholly within zootheism in their lowly faith. In the light of this realization the numerous consistent records of the preparation of the poison are easily interpreted, and are found to be fully in accord with the prevailing motives of the tribe; and the interpretation serves to explain the somewhat discrepant accounts of the effects of the poison, effects ranging from nil to horrible sepsis. According to the more circumstantial recipes, the first constituent of the poison is a portion of lung, preferably human—a selection readily explained by pristine philosophy,

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

764 together by okatilla stems, the shocks being sometimes nearly as high and broad as the jacales. A few of the scatophagic shells were found about the bramble-marked graves at Pozo Escalante, and a single one [768] at Barranca Salina. In general the association of cemeteries and rancherias, or of graves and jacales, indicates that habitations are usually abandoned for a time when a death occurs within or near [415] them.

FIG. 39—Mortuary olla.

The most conspicuous cairn seen in Seriland was well within Tiburon. It stands on the southern side of a little rock-butte about a mile and a half east-southeast of Tinaja Anita, south of the main arroyo, and near where the trail from the tinaja bifurcates toward Arroyo Carrizal and Punta Narraganseett, respectively. It is shadowed by a notably large and widespreading paloverde, and is in the form of a cone estimated at 7 feet in height and 18 or 20 feet across the base. The materials, at least on the surface, are rounded pebbles and cobbles, possibly from the adjacent arroyos, though more probably from the beaches, of which the nearest is miles away. It was not determined to be mortuary.[1]

On the death of the matron, a grave is scooped out by means of shells

[126]

[1] As an indication of the conditions for observation in Seriland, this cairn is fairly typical: it was seen but once (on December 23, 1895), and the observation was limited to a few minutes by the attendant circumstances. On the evening before the party landed at Campo Navidad, with the hope of working up the coast nearly or quite to Punta Tormenta on the following day; but before morning a dowdy gale was whitening the waters of Bahia Kunkaak so fiercely as to prohibit embarkation. Meanthne the supply of water—that standard commodity of arid regions—was too nearly exhausted to permit inaction; so while Mr Johnson with three guards ascended the Sierra to establish a new topographic station, the leader of the party with the remaining seven men set out in search of water. The nearest known agnaje was that of Arroyo Carrizal; but under the hypothesis that some of the better-beaten trails turning northward might lead to nearer water, one of them was taken; and after turning back from half a dozen false scents, the principal trail was followed to the well-known Tinaja Anita, 13 miles by the trail from Campo Navidad; and here the party watered. It was on the return trip that the cairn was discovered; but the party were laden with filled canteens and sarapapes and coffeepots, the day was well spent, and the camp more than a dozen miles distant even over the air line traversing spall-sprinkled taluses and sharp-edged rocks; moreover, the men were naturally and necessarily heavily armed and on constant guard. Accordingly even the short stay and cursory notes involved an additional mile of darkness on a trail so rough as to cut through shoe-soles and sandals and catch scents of blood to tempt coyotes to the camp site. Thus it was that the cairn was not more critically examined and is not more fully described.

3:Davis & Dawson E-5 (1922-1940) 1965
NU31 Seri NU31

105 178 and a veteran of nearly a century of warfare against the soldiers of Sonora. The turtle remained their most important source of food, and the pitahaya harvest the most enjoyed. The crafts of their old culture were largely gone, however. Hoop-iron had come in for many uses: harpoon points, scrapers, and knives. The bow and arrow had been almost entirely supplanted by rifles of which the tribe possessed more than thirty. The handmade olla was fast disappearing in favor of the five-gallon tin can, and water [482] carrying, now much done by the males, was accomplished by means of a palanca, borne on the heavily calloused shoulder, to which a can was suspended from each end.

178 396 It seemed that the balsa building art was encountered barely as it passed into extinction, for the last balsa known to have been made by the Seris was found in use near [126] Kino, in 1922. This rare prize was immediately bargained for and in exchange it was agreed that the tribesman should have lumber to build a boat large enough for all the people of his family. A few months later the finished craft, caulked with a "pitch" made

[p. 264(A)]

documentary data and second, also the archaeological data. The subject matter unfortunately is absent from the first. As for the archaeological data, there is none as yet to date for the area except Giffor's unpublished manuscript. Nor have we the kind of ethnography that would be of help—not until ethnographers will pay greater attention to the naturalistic knowledge of the people. Nor can the matter of the Seris' cultural connections be undertaken with the present material with any degree of reliability, simply because no such material exists for the neighboring group.

However, few suggestions outside the limitations and the main object of the present analysis can be made. From the fragmentary data available I shall try to show the change in utilization of animals by the Seris. I think I can also indicate a few points in support or denial of this or that idea of the Seris' cultural connections. I can also suggest the direction of the attitudes toward animals in the Seri culture, in a sphere which normally we assign variously within the domain of religion or world view. I can also indicate some of the major changes in the Seris' exploitation of general environment. All these can be suggested only fragmentarily, as only small bricks toward a generalized structure of our knowledge of the Seri culture. To this extent the present analysis should be helpful to the future student of the Seri culture and to our general understanding of it.

Procedure

The field work on which this material is based has been done during the summer of 1953, June-September and again for one week in May, 1955. The second visit took place at a most inopportune time, amidst bad measles, dysentery and a flu epidemic which completely disorganized the tribe and persuaded most of them to flee Desemboque into the coastal desert.

The work was accomplished mostly in Desemboque, the Seris' largest and most permanent settlement after 1940 where most of them lived. Occasional side trips were undertaken later to Hermosillo, Estero Sargente, Campo Vivora, Tiburon and some of the other places mostly with the view of evaluating their ecological nature and for the observation and acquisition of the zoological materials not available in Desemboque. These trips had been undertaken in the company of the Seris who then also doubled up as informants.

During the first two weeks of my stay in Desemboque, I did no interviewing but concentrated on the collections of zoological material, occasionally and informally asking for the name of this or that animal. After two weeks regular interviewing work was commenced, first with an aid of Mr. Leo Sandoval, Mexican, U.S.—educated school teacher, but later on entirely without an interpreter. There are sound reasons for this practice. Direct questioning allows the interrogator to evaluate the replies in their less obvious nuances, the reactions of the informant to the question, his hesitations, uncertainties and the like.

In the event of well-known animals with those colloquial Spanish name everybody, Mexican and

Schmalkin E-5 (1963-1968)1982 MUSI Seri MUSI

Scientific	Common Name
Octopus bimaculatus	Two spotted octopus
Tetinebrachiata	Sea-hare
Ischnochiton Magdalenensis	Gulf Chiton
Ischnochiton lecpigatus	Chiton
Cadakia distinguenda	Clam
Cardium consors	Cockle
Laevicardium elatum	Giant Cockle
Carditamera affinis	Ruffled clam
Acmaea dollians	Limpet
Crucibulum spinosum	Spiry Limpet
Chione undatella	Frilled chione
Chione californiensis	California chione
Pteria peruviana	Wing shell
Isognomon chemnitzianus	Pouch shell
Volsella capax	Horse mussel
Crepidula aqueosa	Boat shell
Olivella dama	Olive shell
Cypraea annettae	Annetta's cowry
Tegula rugosa	Turban shell
Conus regularis	Cone shell
Phyllonotus erythrostomus	Pink-mouthed Murex
Turritella broderipiana	August shell
Polinices reclusiana	Southern moon-shell
Phallium abbreviatum	
Chlamys subnodosa	Noded scallop
Atrina maura	Pen shell
Naicuia pacifica	
Turbo (Callopoma) fluctuosa	Turban shell
Solenostira pallida	Top shell
Cerithium stercusmuscarum	Spindle
Knefastia funiculata	Spindle
Neritina luteofasciatus	Nerite
Columbella fuscata	Dove shell
Trivia radians	Coffee bean
Tellina rufescens	Tellen shell
Fiona ventricosus	Fig shell
Nioche histrionico	?

While most specimens were identified from live material collected in tide-pools and kept in buckets as long as they lasted, some dead shells had also been used, especially those from the kitchen-middens rather numerous in the immediate Descmboque area.

By far most of the species had been identified by Dr. J. P. E. Morrison of the United States National Museum. To these I added a few identifications of my own, while Dr. Grace Pickford of the Osborn Laboratories, Yale University, identified the octopus and Dr. Rudolf Stohler of the University of California identified the chitons.

Economy

A very considerable proportion of the molluscs is used by the Seris in various ways. The tabulation will present the data much more clearly than could be done in a discussion.

[P. 38 A]

000 wear ceremonial feathers as did our western Indians. I saw no skin or
164 cutaneous disease, or evidence of tuberculosis or of trachoma---the curse of our Indians.

192 One boy-child of five years was a handsome child---fat, round,
302 sturdy, with roving great black eyes, large thick lips, a picture of
[24] perfect health. He was almost naked. His hair was done in a pigtail
[657] with a red string braided into it. His face like all the others was dirty, but he waded into the shallow water with a short spear and I saw him catch two crabs with his little harpoon. The water did not bother his face.

415 They had no plates or eating tools, except large deep clam shells,
412 cast up by the sea, which served as cups and dippers. Their long, keen
364 belt knives were used for cutting, carving or skinning, and always the
[238] fingers for eating. They gathered in a circle around an olla of seeds of long grass growing on the sea bottom prepared by winnowing, parching and grinding, and then cooked with turtle oil. Each one dipped his or her fingers into the olla and conveyed them to the mouth without losing a drop, and licked them off with great relish.

231 The dogs eat with the family. There were six or seven half-starved
264 ones. If someone picked up a piece of turtle flipper the dog often took the first lick at it, bit off a piece or licked it before it reached the owner's mouth. The dogs were not punished. They were just slapped to keep them out of the pots.

123 We had a great time that evening in Seriland. The young man played
534 his violin. This consisted of a hollow box cut out of a *palo verde*
[229] tree, and a piece of pine about sixteen inches long; terminating in a
[233] hollow where a single peg was fitted. The one string was twisted deer
[237] sinew, and the bridge was a small round clam shell at the far end. The
[513] bow was a small bent stick and some black horsehair. On the handle was a wad of rosin fastened underneath. By fingering this string a few weak squeaky notes were made, and this was the classical music of the Seris.

Manuel Encina seized his gourd rattle and began chanting. Herrera tapped a tin can and I beat on an inverted basket and the orchestra
535 was in full swing. A young girl, Rosa, dragged out a turtle shell and
123 standing on it began to dance. This dance consisted of stepping up and down quickly with each foot alternately, and this stamping, barefooted, emitted a hollow sound. Every once in a while I let out an
[124] Indian yell which pleased the Seris very much. For two hours they had a real swell time. We took one flashlight of the proceeding.

[393] Each family was in their hut, which afforded very slight shelter
[385] as they were only partially roofed over and the sides were broken
[359] down in places. The huts were all adjoining and each had a little
[341] campfire, which did not give much illumination, so the dancing was in semi-darkness.

(text continues on p. 163)

123 relief and contentment rose, and everybody smiled. This concoction I placed on the fire while the Indian stirred with a long stick. It took half an hour to cook into a thick sticky paste, gummy white.

[415] Meanwhile, the women vanished and returned with various vessels: greasy baskets, a black chamber pot, frying pans, ollas, stew pots, shells, any old thing---even a cuspidor. When ready, the Indians dipped the sticky mess out with a cup into the various vessels and the women and children licked it up. Some of the children covered the back of a large clam shell with the paste and then licked it off, repeating this until it was gone. Most of the people hooked their fingers into it and licked them off time and again. Any drip on the outside was carefully licked off that four gallons of goo. I do not think one single drop was lost.

• 126 123 As one little girl was carrying away a clam shell of paste I secured her photograph. It was a sight not soon to be forgotten, to watch these little ones dip in their fingers, mostly two, sometimes three fingers and contentedly lick them off.

Wishing to secure a photo of the Indians in Pelican skin kilts, Roberto induced Chico Romero to strip and wrap a kilt of Pelican skins around his waist. He did this and Roberto secured a good photograph. For this service, Chico demanded three oranges which he gave to his children.

By coaxing and wheedling and joking, Roberto finally persuaded a young woman to put on the Pelican kilt, and she gradually pulled off her shirt, or waist, or whatever name it goes by, and laughingly permitted it. As her brown shoulders and breasts were exposed she covered them with her arms and hands while I took the photo. I gave her some blue powder to decorate herself and a little round mirror.

372 Chico Romero made a fire drill out of a piece of dry driftwood from a cottonwood tree, and then made a fire by turning the stick between his hands. After three or four minutes the fine dust became punk and turned into a live coal. This he carefully put in some dry grass and by holding it up in the wind it was fanned into a flame. The price of this was a red bandanna.

372 773 825 The legend of Fire was told to me later by the campfire. The Seris' god sent down a fly to Seriland to show the Indians how to make fire. The fly was pointed out to me one day. It was a trifle larger than a house fly with a body of shining green and blue.

"Now," they said to me, "notice when it lands. Did you not see it take its two hands, rub them over its head and then rub them together a few times?". . ."Each time it settles it rubs its hands together, and our Indians noticed this and in this way we were taught by this little fly how to make fire by rubbing a stick between our two hands, back and forth. One fly came to earth and found something dead and he rubbed a stick between his hands and made a smoke signal

12: Moser L-5 (no date) 1964
(ca. 1960) NU31 Seri NU31

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ACKNOWLEDGMENTS

I am indebted to Richard Felger, Department of Zoology, University of Arizona, for information concerning plants referred to in this article. H. Wesley Peirce of the Arizona Bureau of Mines identified the mineral material used in the pigment.

NOTES

104 386 114

1. The phonetic values of the symbols used are the following: t is voiceless dental stop; k is vl. velar stop; ? is glottal stop; W is vl. labial grooved-rounded spirant; s is vl. alveolar spirant; z is vl. alveo-palatal spirant; l is vl. lateral spirant; j is vl. velar spirant; x is vl. back velar spirant; m is labial nasal; n is dental nasal; i is a high close front vowel; e is a low close front vowel; a is a low open central vowel; o is a mid close back vowel.

386 784 881

2. The restriction as stated to me by various women pertains only to young girls below the age of menarche. Actually, however, none of the above-mentioned young men and women, most of them in their twenties, was allowed to observe.

126

3. Plant specimens are deposited in the Herbarium of The University of Arizona.

386 114

4. The blue "pencil" which McGee describes (McGee 1898: 166) and pictures (McGee 1898: Plate XXVII facing p. 170) is apparently the ?anterj koil.

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113

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1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

The principal ethnologic results of both expeditions relating to the Seri Indians are incorporated in the following pages; the data concerning the Papago are reserved for further study. The topographic surveys of the 1895 expedition covered a zone averaging 50 miles in width, extending from the international boundary to somewhat beyond Rio Sonora. Mr Johnson, by whom these surveys were executed, was on furlough from the United States Geological Survey, and his resumption of survey work prevented the construction of finished maps, except that of Seriland (plate I), which forms but a small fraction of the area surveyed. The results of the remaining, and by far the greater, part of the topographic surveys are withheld pending completion of the inquiries concerning the Papago Indians.

The geographic nomenclature found requisite in the field and in writing is partly new and partly restored, yet conforms with general and local custom so far as practicable; and nearly all of the new names have been applied in commemoration of explorers or pioneers. Most of the names pertaining to Seriland proper are incorporated in the map forming plate I; the others (including a few minor corrections) appear in the outline map forming figure 1, prepared after the larger sheet was printed.[1]

The following list of place-names is designed primarily to give the meaning and raison d'être of the nomenclature; with a single exception,[2] the names are Hispanized or Mexicanized in accordance with local usage.

Nomenclature of Seriland.[3]

*SERILAND: Extra-vernacular name of tribe, with English locative.

MAR DE CORTÉS (Sea of Cortés=Gulf of California): Customary Sonoran designation, applied by Ulloa (1539) in honor of Hernando Cortés, first discoverer of the gulf.

*PASAJE ULLOA (Ulloa passage): Generic Spanish; specific applied in honor of Captain Francisco de Ulloa, first navigator of the passage and the upper gulf, 1539.

*ESTRECHO ALARCON (Alarcon strait): Named in honor of Hernando de Alarcon, second navigator of the gulf, 1540.

EL INFIERNILLO (The Little Hell): Local designation, retained by the Hydrographic Office, U. S. N. (miswritten "Estrecho Infernillo" on larger map).

†BOCA INFIERNO (Mouth of Hell): A colloquial local designation (miswritten "Puerto Infierno" on larger map).

*BAHIA KUNKAAK (Kunkaak bay): Generic Spanish; specific the vernacular name of the Seri tribe (miswritten "Tiburon bay" on plates IV and V).

[1] The larger map was drawn early in 1895, and a preliminary edition in the form of a photolithograph of the drawing was published in the National Geographic Magazine, vol. VII, 1895. It is proper—and historically desirable—to explain that while a considerable part of the copy for this paper was prepared at about the same time, circumstances prevented the completion of the manuscript and the final rectification of the nomenclature and bibliographic references until September 1, 1898.

[2] Johnson peak. It is proper to say that this name was applied by the author (and leader of the expedition) after the drawing was completed and submitted by Mr Johnson, as a meager tribute to his excellent work in the field and on the drawings named.

[3] An asterisk indicates new names, an obelisk old names restored or colloquial names adopted.

114 128 103 114 175 [128]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

SOMATIC CHARACTERS

142 Several physical characteristics of the Seri Indians are so conspicuous as to attract attention even at first sight. Perhaps the most striking is the noble stature and erect yet easy carriage; next in prominence is the dark skin-tint; a third is the breadth and depth of chest; another is the slenderness of limbs and disproportionately large size of extremities, especially the feet; still another is length and luxuriance of hair; and an impressive character is a peculiar movement in walking and running.

141 The mean stature of the adult Seri may be estimated at about 6 feet (1.825 meters) for the males, and 5 feet 8 inches (1.727 meters) or 5 feet 126 9 inches (1.73 meters) for the females, these estimates resting on visual comparisons between Caucasians of known stature and about forty 128 adult Seri of both sexes at Costa Rica in 1894. In several of the accompanying photomechanical reproductions (e. g., plates XIII, XVI, XIX, XXIII, and XXVIII) a unit figure, introduced partly for the encouragement of the individuals and groups but chiefly to afford a basis for approximate measurement, gives opportunity for test of the estimate, the figure measuring 5 feet 11 inches (1.80 meters) to 5 feet 11¼ inches (1.812 meters), and weighing about 215 pounds in the costume shown, including hat and boots.[1] These pictures and some thirty unpublished 141 photographs, like the observations on the ground, indicate that practically all of the fully adult males and several of the females overtop the Caucasian unit. The only definite measurement known is that of the youthful and apparently immature female skeleton examined by Dr Hrdlička, of which the dimensions indicate a stature (estimated by the method of Manouvrier) of about 5 feet 3⅞ inches (1.62 meters),[2] or 3½ inches above the female normal of 5 feet ¼ inch (1.53 meters) given by Topinard; but this considerable stature is, probably on account of the youth of the subject, much below the mean indicated by the ocular and photographic comparisons (it corresponds fairly with that of the Seri maiden represented in plate XXV, whose age was estimated at 18 years). Naturally this striking stature, especially that of the warriors, has been much exaggerated by casual observers; the typical warrior, El Mulo, depicted in plate XIX, is indeed commonly reckoned as a 7-footer, though his actual stature (diminished somewhat in the pictures by fearsome shrinking from the ordeal of photographing) can hardly exceed

[1] The average net height and weight of the unit figure (that of the author) are about 5 feet 9½ inches and 200 pounds, respectively.

[2] Or about 1.6470 meters estimated by the method of Bollet. The Races of Man, J. Deniker, London, 1900, p. 89).

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1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

142 Mashém (aged about 30 years), who had a few gray strands about the
145 temples; but it may be significant that the hair of the tribal outlaw
Koluaio, who has lived with white men for full three score years, is iron-
[115] gray. Koluaio's pelage is trimmed in Caucasian fashion; that of Mashém
is cut off mid-length in a manner exciting comment, if not derision,
[302] on the part of his fellows and others, and resulting in his (Spanish)
sobriquet, Pelado (literally, Peeled, or idiomatically, Shorn); but with
few exceptions the hair is kept long as it can be made to grow, and
receives careful attention to this end. Naturally the length is some-
what variable; in many cases it depends to or slightly below the waist,
while in other cases it merely sweeps the shoulders; and in general it
appears to increase in both length and luxuriance not only throughout
adolescence, but up to late maturity, for the best pelages are presented
by moderately aged persons, while none of the youths are so luxuriantly
tressed as their elders. Not the slightest tinge of baldness appears.
The infantile pelage is short, brownish in color, soft or even silky, and
inclined to curl toward the tips. It is not until the age of several
months that the hair begins to acquire the adult character, and at
least some children retain traces of the infantile pilary character up to
5 or even 10 years; and none of the children display such jet-black
shock-heads as are frequently found among other tribes, whose adult
pelage may nevertheless be much less luxuriant than that of the Seri.
On the whole, it may be said that the Seri hair is luxuriant and vigorous
beyond the aboriginal average, and that it, like various other somatic
features, indicates a relatively late maturation in the life-history of the
individual.

142 Both sexes are beardless. The female faces seen were entirely free of
strong pilary growth; one or two of the warrior faces showed scattering
hairs, and Mashém sported a feeble and downy but jet-black mustache
with an exceptional number of scattered hairs about the chin; while
Koluaio shaved regularly, and might, apparently, have grown moder-
ately stiff but straggling mustaches and beard. Axillary hair seems to
be wanting; pubic hair is said to be scanty; otherwise the bodies are
practically hairless (more nearly so than those of average Caucasians).

The teeth are solid, close-set, and even, and impress the observer as
large; they close with the upper incisors projecting slightly beyond
the lower dentare in the usual manner.

128 The skeletal characteristics of the Seri are known only from a single
specimen obtained in the course of the 1895 expedition in such manner
141 as to establish the identification beyond shadow of question. This
skeleton was submitted to Dr Aleš Hrdlička for measurement and
discussion.[1]

In making his examination, Dr Hrdlička compared the unquestion-

[1] A separate cranium was obtained by the 1895 expedition, having been sought and picked up by a Mexican member of the party in verification of his account of the killing of one of the Seri; but, in view of the possibility of erroneous identification, this skull was not submitted in connection with

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

ably authentic cranium of the entire skeleton with two skulls preserved in the American Museum of Natural History, viz, No. 99/84, designated as a skull of a Tiburon mound-builder, and No. 99/85, labeled as having

the complete skeleton. Subsequently this specimen also was put in Dr Hrdlička's hands at his request, and was kindly examined, with the results recorded in the following letter:

MARCH 28, 1898.

Professor W J McGee,

Bureau of American Ethnology, Washington, D. C.

DEAR SIR: The skull which you submitted to me for examination shows the following:

The skull is that of a male between 40 and 50 years of age. The facial parts and a portion of the left temporal bone are wanting; otherwise the specimen shows nothing pathologic. There are signs that the skull belonged to a very muscular individual. The occipital depressions, ridges, and protuberances are very marked, and the temporal ridges approach to within 1.7 cm. on the left and 2.2 cm. on the right of the sagittal suture. The whole skull is rather heavy and massive; thickness of parietal bones 4.8 mm.

The shape of the skull is unusual. The frontal region is rather broad (frontal diameter, minimum, 9.7; frontal diameter, maximum, 12.1 cm.), but quite flat and sloping. Frontal ridges wanting (broken away).

The sagittal region is elevated into a crest which begins 4 cm. posteriorly from the bregma, is most marked at the vertex, and proceeds in the tapering diverging cross to the lambdoid suture. The whole vertex region is considerably elevated and forms a blunt cone, which is particularly noticeable when the skull is viewed from the side.

The temporo-parietal regions are moderately convex and expanded posteriorly, but become flattened and gradually narrow toward the parietal bones. The parietal bones measure each 11 cm. along the coronal, but only 8.8 cm. along the lambdoid suture. The gradual tapering of the parietal regions from their middle backward continues on the occipital bone up to the inion, and gives the norma verticalis of the skull a peculiar appearance.

The occipital region, as a whole, does not protrude much, as in true dolichocephals, but it shows a prominent broad crest, formed by the two superior semicircular lines and the region between them. The extreme occipital protuberance is pronounced and shows signs of strong muscular attachments. A small distance above the foramen magnum, on each side of the median line, is a very marked depression, surmounted by a [illegible] ridge.

Of the mastoids, the right has been broken off and the left is damaged, but they do not seem to have been of extraordinary size.

The base of the skull is fairly well preserved and shows the following characters: The basilar process and the petrous portions of the temporal bones are more massive than usual. The glenoid fossæ are broad and of fair depth. The styloids are quite massive (right 0.7, left 0.8 cm. long). The foramen magnum is hexagonal in outline; it is 4.1 cm. long, 3.4 cm. wide; its plane is inclined backwards in such a way that its antero-posterior diameter prolonged would touch about the lower borders of the nasal aperture.

The cranial cavity can be well inspected through the opening caused by injury. The internal surface of the frontal bone shows but very few traces of brain impressions. There are several large impressions on each parietal bone, and deep, though rather small, fossæ for the extremities of the occipital lobes on the occipital bone. The superior border of the foramen seems shows in the middle a rounded notch about 3 mm. deep.

The sutures of the osteon is throughout very simple.

Measures.—The glabello-occipital length and maximum width of the skull can not be accurately determined on account of injuries to the bones. They amount, respectively, to about 18.8 and 14 cm., giving the cephalic index of about 74.4 (moderate dolichocephaly). The basion-bregma height is 14.1 cm.; basion-vertex, 11.6 cm.; basion-nasion, 13.0 cm.; basion-lambda, 12.2 cm. The two more anterior of these measures characterize the skull as a rather high one. The two more posterior measures show the rapid downward slope of the posterior half of the sagittal region. The maximum circumference of the skull (above the ridges) is 51 cm.

The bregma-lambda arc measures 12.3, the lambda-opisthion arc 12.2 cm. The arc between the asterions = 10.7 cm.

If the skull under examination is considered from a purely evolutionary standpoint, it must be pronounced to be in many points inferior to the average white and even to the majority of Indian crania. An anthropological identification of the specimen is difficult, for the reason that we are still very imperfectly acquainted with the craniology of the peoples of southwestern United States and northern Mexico. From what we know of the crania of the Pima, and the extinct Santa Barbara, Santa Catalina, etc, Californians, it is possible to say that the individual whose skull is here reported upon may have belonged to a people physically related to either of these groups. The skull is very distinct from that of an Apache. The female Seri cranium examined by me is here shown certain of the peculiarities of this specimen, nevertheless it is very possible that both crania belonged to individuals of the same tribe.

ALES HRDLIČKA.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

●128 141 been found in a shell mound at Tiburon, California; but, in view of the possible error in identification in these cases, the comparisons are omitted. Otherwise, Dr Hrdlička's determinations are as recorded in the following report (and his drawings of the anterior and left lateral aspects of the cranium are reproduced in figure 6):

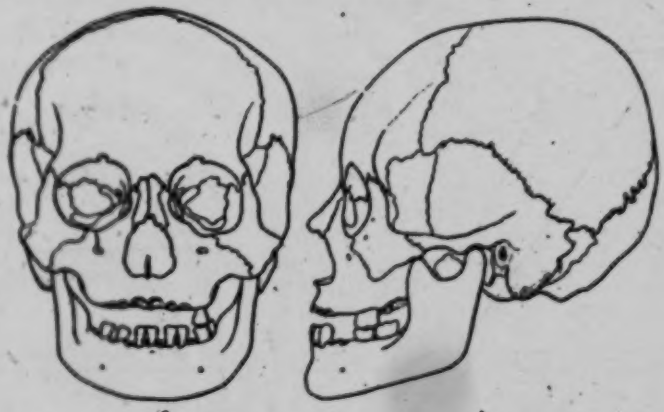

FIG. 6.—Anterior and left lateral aspects of Seri cranium.

REPORT ON AN EXAMINATION OF A SKELETON FROM SERILAND

[By Dr ALEŠ HRDLIČKA, Associate in Anthropology, Pathological Institute, New York]

The Skeleton

141 All the bones of the skeleton are present, except the sternum, the coccyx, a few of the teeth, and a few of the small bones of the extremities.

It is a skeleton of a young adult, between 20 and 24 years of age, female. The age of the subject is indicated mainly by the unattached epiphyses of the long and some of the short bones, those epiphyses, namely, which are the last to ossify. The femininity of the subject is indicated by the generally slightly marked ridges, etc, of muscular attachment, and by the decidedly feminine character of the pelvis (light, well-spread ilia, broad subpubic arch) and of the skull (lack of supraorbital ridges, thin dental arches, small mastoids, etc).

There are no wounds or pathological conditions noticeable on the skeleton. Several peculiarities and anomalies are observable. They will be described with the parts they concern.

[128] The measurements to follow are expressed in centimeters. The French anthropometric methods and nomenclature have been adopted.

The Skull

The skull is of fair size, and is symmetrical throughout, with the exception of a slight irregularity in the occipital region. All the sutures, with the exception of the basilar, open; nerve foramina all large; serrations rather simple; no intercalate bones of any kind.

Norma frontalis—Visage symmetrical. Forehead well arched, medium height.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

DEMOTIC CHARACTERS

000 The Seri, like all other peoples, are characterized by various collective attributes which vastly transcend in interest and importance the somatic attributes exhibited by the individuals. These superorganic attributes are essentially activital—i. e., they represent what the people *do* rather than what they merely *are;* and in both collective and activital aspects they serve to distinguish the human realm from the organic realm, and to afford a basis for the classification of mankind—i. e., they combine to form demotic characters.

128 The demotic characters of the Seri, like those of other peoples, may be classed as (1) esthetic, (2) industrial, (3) institutional, (4) linguistic, and (5) sophic; and in this order the essentially human attributes of the tribe (except the last named) may be described. It is a matter of deep regret that the data concerning the demotic characters of the tribe are too meager to afford more than a mere outline of their activities, and that their suggestive mythology must be passed over for the present.

Symbolism and Decoration

Face-painting

302 One of the most conspicuous customs of the Seri is that of painting the face in designs by means of mineral pigments. Of the 55 members of the tribe shown in the group forming plate XIII, 28 (in the original photograph; a somewhat less number in the reproduction) exhibit face-painting more or less clearly, and this proportion may be regarded as typical; i. e., about half of the tribe are painted.

On noting the individual distribution of face-painting, it is found to be practically confined to the females, though male infants are sometimes marked with the devices pertaining to their mothers, as adult warriors are said to be on special occasions; and so far as observed all the females, from aged matrons to babes in arms, are painted, though sometimes the designs are too nearly obliterated by wear to be traceable. About 35 of the individuals shown in the group (plate XIII) are females; of these, fully four-fifths showed designs or definite traces of the paint, while the remaining fifth bore traces too faint to be caught by the camera; but none of the men or larger boys were painted. In the smaller group shown in plate XIV all of the females display paint, as does the small boy in the center also, while the man (husband of the middle-aged matron) reveals no trace of the symbol. The two pictures typify the prevalence and the distribution by sex of the painting.

2: Kroeber E-5 (1930)1931 NU31 Seri NU31

McGEE ON THE SERI

The pages that follow deal with McGee's well-known monograph on the Seri,[1] discussing first points on which his data are fuller or mine confirm or modify his, and then points on which I believe him to have been in error or to have misconstrued his observations. McGee spent little more time in actual contact with the Seri than I did.[2] His work impresses me as that of an extraordinarily good observer, keen in seeing significant evidence, but of uncontrolled imagination and unconscious of his preconceptions. It is only fair to state that where he founds an interpretation on slender or uncertain data, he generally indicates the fact to a careful reader.

Data and Discussion

The ratio of kilogram weight to liter capacity of water jars is given by McGee (p. 183) as follows: 2 Seri, .126-.147; 2 Papago, .239-.279; 4 modern Pueblo, .252-.295. There is no doubt that the Seri olla is unusually thin-walled. Sherds seen at a campsite near San Rafael, on the dry course of the Bacuachi, 20 or more miles from the coast, ran from 2 to 5.5 millimeters in thickness, averaging 3.8; their curvature was slight, indicating large vessels. McGee remarks (p. 184) that the purpose of nearly all Seri pottery is to hold or transport water, other uses being secondary, generally after breakage. My observations on the island confirm this.

Head loads are carried on a ring of "yucca" fiber (p. 184).

The carrying stick or yoke, with nets to hold ollas, is considered aecultural by McGee (p. 184), although he mentions (p. 68) that Ugarte in 1721 saw the device in use by men, the women carrying single ollas, presumably on their heads. Nordenskiöld has recently shown the "coolie yoke" to be ancient in the area.[3] It is used today in Sinaloa and Sonora.

McGee (pp. 11, 191, 292) thought that he understood that the "Ancient of Pelicans" was the chief creative deity and brought up the islands and earth with the help of the Turtle or Shark. This

[1] W J McGee, The Seri Indians, BAE-R 17, part 1, pp. 1-128, 129*-344*, 1898. (In citations of the higher page numbers, the asterisk is omitted.)

[2] McGee (pp. 13, 98, 291) in 1894 spent "about a week" at Costa Rica west of Hermosillo where some 60 Seri were temporarily congregated, his principal informants being subchief Mashém who spoke Spanish, and Juana María. A Spanish-English interpreter is referred to. In 1895 the coast and Tiburon Island were visited, camps examined, but not a single Seri encountered. The vocabulary was obtained chiefly at Hermosillo from Kahuis, an old Seri official interpreter who had left the island in childhood, never particularly liked it, considered himself an outlaw in Seri eyes, and had long had no dealings with them except under Mexican protection. I spent six days or parts of days with Seri, sleeping two nights on Punta San Miguel and three in the rancherías on the island opposite. Two Seri accompanied us back to Hermosillo to draw their government stipends, and were available for some supplementary questioning and revision of notes on the two following days.

[3] Comparative Ethnographical Studies, No. 9, 284, 1930.

2: Kroeber E-5 (1930) 1931 NU31 Seri NU31

farm, but because they have secondarily specialized their culture away from the old Seri-Walapai substratum.

The Baja Californians must be reckoned as having participated in the same basal, low-level, desert culture, though of course, like every other people, with certain variants and developments of their own. That we can name fewer Seri traits in their culture than in that of the preceding groups, is probably due to the less store of our knowledge of them. More significant of relationship is the smallness of the number of Seri traits which they are known to lack. It is entirely possible that if there existed adequate information for both sides of the Gulf, Seri and Cochimi similarity would prove to be the closest of all. But at present this possibility cannot be either conclusively proved or disproved.

Seri similarities with southern and even central California are fairly numerous, and can be attributed partly to the common non-agricultural subsistence, which would tend to induce the adoption or retention of similar cultural traits. On the other hand, the basic farming life of the Opata, Mayo, and north Sinaloan peoples must have operated at many points in the opposite direction in spite of their geographical nearness. Pueblo culture is so highly specialized that its mass would expectably show little kinship to Seri, and such is the trend of the available comparative data.

The Seri thus relate culturally to other peoples much as might be anticipated from their geographical position and subsistence opportunities. The Seri problem consequently has to be removed from the category of those which hold out a hope or illusion of being particularly significant for the solution of basic questions or broad hypotheses. It is essentially a problem of specific local ethnography, with wider significances revealable only by impartial comparative studies; but of special interest because of the relatively well-preserved status of parts of old Seri culture and the human appeal of three centuries of outlaw history. The thorough study of this culture will involve much grinding physical hardship and possibly some danger. It is to be hoped that when the work is undertaken, it will not be in a spirit of personal adventure, with emphasis on the external difficulties to be overcome, but with a serious desire and competence to secure facts and understanding.

ABBREVIATIONS USED

AA—American Anthropologist.
AMNH-AP—American Museum of Natural History, Anthropological Papers.
BAE-B—Bureau of American Ethnology, Bulletin.
BAE-R—Bureau of American Ethnology, Reports.
JAFL—Journal of American Folk-Lore.
UC-PAAE—University of California, Publications in American Archeology and Ethnology.

9: Malkin E-5 (1953-1955) 1962 NU31 Seri NU31

Editorial Comment

121 This paper was originally written by Borys Malkin as a thesis in partial fulfillment of the requirements of the degree for Master of Arts in Anthropology at the University of Minnesota, 1960. It has since been 128 edited to verify scientific names and to drop some of the original introductory portions of the manuscript. Unfortunately, because of technical problems involved in reproducing them, the Seri names also had to be dropped.

At the time the manuscript went to press, the author was in South America conducting field work. It was not feasible to send various stages of proof to him for his personal attention, and the editors were not always certain of the appropriate decision.

000 *Seri Ethnoecology* represents an extension of the Idaho State College Museum's previous publishing policy in anthropology. However, its content and its quality are important and fall within our intent to publish items of wide as well as of regional scholarly interest.

E.H.S., B.R.B.

[p. iv]
[p. iii is blank]

©Malkin F-5 (1953-1955)1962 NU31 Seri NU31

121 Another Point in the Procedure is of par-
amount importance in this type of research. Fair
[120] general knowledge of practical field natural history can have no substitute. The investigator must have this basic knowledge, to realize the range of possibilities in the answers and identify any answers not commensurate with the actual events. This way, even without interest in the mythology, one may get on the track of a myth. Although, in
825 general, anthropologists seem to think that na-
121 tural history knowledge of the primitive folks must be ridden with the mythology and must be different than ours, my rather extensive field work persuaded me that this is not so at all. Mythology there is, if one looks for it. But the bulk of their knowledge is based on sound obervation as anyone acquainted with the natural history will readily discover. One must be able to disentangle the two qualities. That this is so is well indicated in a large number of animals where the informants simply replied to queries on this or that subject in the usual *quien sabe*. And indeed, the more obscure the subject, the more likely one got that sort of an answer.

● 128 In the analysis of the actual material a certain schematic programme has been followed. For the sake of convenience, material has been grouped according to the major divisions of the animal kingdom. Some may object to this sayihg that this is just our way of classifying animals but that aboriginal classification does not follow these lines. For certain purposes, this may be true, but for my own purpose I find my procedure more convenient. Regardless of the hypothetical native mode of classification, one may form a question.
128 How do the Seri distinguish different mammals?
825 I may say also that our own groupings are not different from those of the Seri or any other tribes. Their recognition of differences among animals may be at times hazy or from our point of view erroneous. But by and large, birds to them are birds and snakes are snakes and even within the insects, without actually naming differences, they tended to group together insects according to their order. Exceptional cases, bat, whale and the like, remain exceptions just as they were to the early Western naturalists, the 16th century Gesner or Alrovandi, for example, to whom their place in the scheme of nature was based on the analogies. But this didn't prevent these men from grouping other animals much the same as we do. In the same way, the South African Bushmen may regard Mantis as a supreme diety, but this does not prevent them to say that it is also like an insect.

128 The scheme I followed turned out useful. In the end I have obtained generalized ideas on the salient features of natural history of different animal groupings which I could compare with each other. The internal evidence is most interesting, more so that in some details it differs qualitatively and quantitatively from the materials I have gathered among other tribes.

[P. 5 B]

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III

MAMMALS

Scientific	Common Name
Antrozous pallidus	Pallid bat
Bassariscus astutus	Ringtail cat (Cacomistle)
Spilogale gracilis	Spotted skunk
Taxidea taxus	Badger
Urocyon cinereoargenteus or Vulpes macrotis	Grey fox or kit fox
Canis latrans	Coyote
Felis concolor	Mountain Lion.
Felis onca	Jaguar
Felis eyra	Juguarundi
Zalophus californianus	California sea lion
Dipodomys sp.?	Kangaroo rat
Erethizon dorsatum	Porcupine
Lepus californicus	Blacktailed rabbit
Sylvilagus audubonii	Desert cottontail
Pecari angulatus	Peccary
Odocoileus hemionus	Mule Deer
Ovis canadensis	Bighorn
Eschrichtius glaucus	California grey whale
Orcinus rectipinna	Killer whale
Tursiops gillii	Bottlenosed dolphin

Identification here has been obtained largely with an aid of field guides or by mentioning a colloquial local name of the mammal in Spanish. All these were later checked by Dr. Robert T. Orr of the California Academy of Sciences. While there is no doubt of the identity of the most common forms, such as peccary or sea-lion, there are also several of the identifications which can't be certain either because of inadequate line drawings or lack of specimens, either alive at a distance or even parts of them. In this somewhat dubious category are Ringtail cat, Jaguarundi and the Killer whale.

On the other hand, there is no doubt as to the identity of the following: Pacific pale bat, badger, bighorn, coyote, kangaroo rat, blacktail rabbit, cottontail jackrabbit, deer and dolphin. Live, free or captive individuals, or part of them, such as horns, hide or skulls were available.

Economic Uses

Food: Only 6 out of 21 species for which information is available are used today as food. Three more were mentioned as "eaten in the past" and one more as "possibly eaten in the past." Since the oldest of the informants who provided this data, Miguel Barnett, is a man in his fifties (and it is he who talked most often about the animals "eaten in the past but not now") we may surmise that these were part of the Seri diet 25-45 years ago, that is between 1910-1930.

Five species are important as a supplementary source of food: the bighorn, the deer, peccary and both species of rabbits. Some, the deer especially, are considered to be delicacies. The sixth species is the badger but it appears neither important nor frequently killed. I saw one badger captured by José Juan Moreno. The animal was tied to the pole, and kept as a pet, fed on fish, snake and

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IV

BIRDS

Scientific	Common Name
Pelecanus erythrorhynchos	White pelican
Pelecanus occidentalis	Brown pelican
Phalacrocorax	Cormorant
Fregata magnificens	Frigate bird Man-O'War Bird
Casmerodius albus *Leucophoyx thula*	American egret or Snowy egret
Botaurus lentiginosus	American bittern
Plegadis chihi	White-faced ibis
?	Duck, species?
Cathartes aura	Turkey vulture
Coragyps atratus	Black vulture
Aquila chrysaetos	Golden eagle
Haliaetus leucocephalus	Bald eagle
Pandion haliaetus	Osprey
Odontophorinae	Quail
Numenius sp.	Curlew
Scolopacidae	Sandpiper
Catoptrophorus *semipalmatus*	Willet
Larus occidentalis	Western gull
Larus heermanni	Heermann gull
Columbidae	Dove
Geococcyx californianus	Roadrunner
Tyto alba	Barn owl
Trochilidae	Hummingbird
Centurus uropygialis	Gila woodpecker most likely
Hirundinae	Swallow
Corvus corax	Raven

Identifications had been mine from sightings and from Blake's *Birds of Mexico* and a few other field manuals and then were checked by Dr. R. T. Orr. In many cases, especially where sightings were from geat distances or actual specimens were not available, the exact identification is uncertain and this fact should be indicated here. In several instances here are several possibilities and these are as follows:

Cormorant—Here there are three possibilities according to Dr. Orr:
1. Double crested cormorant (*Ph. auritus albociliatus*)
2. Mexican cormorant (*Ph. Olivaceus mexicanus*)
3. Pelagic cormorant (*Ph. Pelagicus resplendens*)

Egret—Two possibilities:
1. American egret (*Casmerodius albus*)
2. Snowy egret (*Leucophox thula*)

Duck—Identification impossible since no specimens were seen. It is supposedly black in color. Undoubtedly it is a duck, but which sp?

Eagle—Probably either Golden eagle or the Bald eagle. The size militates against any other bird of prey.

Quail—No identification beyond the family possible

Curlew—Dr. Orr suggests that it is either the Long Billed Curlew (*Numenius americanus sp?*) or Hudsonian Curlew (*N. hudsonicus*)

Sand-piper—One of many possible species in the area

Sea-gull—Most gulls I have seen are Heermann gulls (*Larus heermanni*) but some were the Western gull (*L. occidentalis*). These are the two common summer species. But there are also others and, according to Dr. Orr, also there are several others wintering in the region. So, Seris' generalized comments on the seagulls may well apply to several species.

Dove—Seri information applies to several species common in the area.

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IV

BIRDS

136 Woodpecker—There are several species in the area but
Gila woodpecker (*Centurus uropygialis*)
●128 is certainly one of them.

Hummingbird—Unspecified species, one of several occurring in the area according to Dr. Orr.

Economic Uses

262 Such use as had been made of the birds is largely in the form of an addition to the diet. Reading McGee, one gets the impression that the importance of the birds in the Seri diet, in contrast to the marine animals of all description, has declined greatly. We do know that in the past various birds and, most especially, the seagulls and the pelicans represented a significant item. But today out of the basic list of 24 species, only six has been reported as eaten and, all, with an exception of the duck, in the past tense. The duck
*[825] evidently is the only bird which the Seri consider really fit to eat and yet, even here, there is temporary avoidance. Moreno told me that this bird "we eat only when we visit the island (Isla Patos).
[223] But we do not eat it in September because it is
[252] too lean. We like it in December when it is fat. We then kill it at night with stones. It is roasted."[1]

All other birds were reported as eaten only in the past and this has been expressed more or less as follows: sea-gull eaten a few years ago, cormorant 8-10 years ago, pelicans 30-35 years ago. This would mean that the pelicans had been discarded as food, at least according to the official Seri version, in the early twenties, before Kroeber's visit. But the Seri disclaimers on the subject
183 of the bird diet are not entirely correct and re-
262 flect less the total rejection and more only low esteem in which these birds are held. For I have seen myself the sea-gull and the pelican eaten on few occasions when times were tough, and the
[261] food supply was non-existent, owing to the choppy
*[825] and windy seas. The Seris caught in the act of cooking the meagre flesh of the pelican or the sea-gull were obviously apologetic.

262 It is interesting that some of the birds present in the area, the quail or the woodpeckers, are not eaten although these birds figure prominently in the diet of some of the other groups. It may well be that the Seris consider them too small to bother.

[252] As far as I could find out, eggs of only two species of birds, the sea-gull and the heron, are collected, boiled and eaten. But the eggs of the

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[1] His statement requires some explanation. There is no taboo on eating duck but the bird does not occur in Desemboque or any other place known to the Seris, with
[136] the exception of Isla Patos. Here these birds winter,
*[825] arriving in September and arrive worn out and lean, to recoup the fat, a few months later. The Seri unfamiliarity with their eggs is another indication that the birds come to Isla Patos only for the winter.

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V

REPTILES AND AMPHIBIANS

136

Scientific Name	Common Name
Lizards	
Phrynosoma platyrhinos goodei	Horned toad
Callisaurus draconoides inusitatus	Gridiron-tailed lizard
Cryptophytus wislizeni	Common leopard lizard
Cnemidophorus scalaris	Spotted race runner
Cnemidophorus tigris aethiops	Race runner
Sauromalus obesus tournoueri	Northern chuckawalla
Sauromalus varius	Chuckawalla
Dipsosaurus dorsalis sonoriensis	Northern crested lizard
Heloderma suspectum	Gila monster
Uta ornata linearis	Uta
Uta stansburiana steinegeri	Striped ground uta
Sceloporus magister	Fence lizard
Coleonyx variegatus sonoriensis	Variegated ground gecko
Xantusia vigilis	Desert night lizard
Snakes	
Crotalus cerastes cercobombus	Side winder
Crotalus atrox	Western diamondback
Micruroides euryxanthus	Coral snake
Coluber flagellum frenatus *	Red racer
Coluber flagellum piceus *	Black whipsnake
Salvadora hexalepis deserticola	Patch nose snake
Trimorphodon lambda	Lyre snake
Turtles	
Gopherus agassizi	Agassiz' desert tortoise
Sp?	Loggerhead
Sp?	
Amphibians	
Bufo alvarius	Desert toad

*These two are color varieties of the same species.

Reptile Identification

136
128 With the exception of the marine turtles, all species had been identified from preserved specimens either by myself or by Dr. R. Zweifel, Dr. C. M. Bogert, and Mrs. Hecht from the American Museum of Natural History, who also checked my identifications. There is then no question of dubious identification. But circumstantial evidence
* 825 suggests that belief in the mildness of the coral snake bite, to themselves at least, may well be in-
136 fluenced by the proliferation of the false coral snakes in the area. Mrs. Hecht lists the following of these as likely to occur in the area:

Lampropeltis nelsoni
Lampropeltis pyromelana
Rhinocheilus lecontei antoni
Chionactis occipitalis organica
Chionactis occipitalis palarostris
Chilomeniscus cinctus

These snakes are very similar to the coral snakes and may well fool most observers, unless they know the differences in the color pattern. Unfortunately, I have not found any of them; there-

[P.22A]

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VI

FISHES

Scientific	Common Name
Stereolepis gigas	
Mycteroperca jordani	
Cynoscion macdonaldi	
Epinephelus analogus	
Trachinotus paitensis	
Verrunculus polylepis	
Myrichthys tigrinus	
Gymnothorax castaneus	Moray
Batrdiella iridina	
Anchovia macrolepidota	
Cynoscion parvipinnis	
Mugil sp.	
Cetengraulis mysticetus	
Lythrulon flavigutatum	Flounder?
Paralabrax maculato fasciatus	
Paraques viola	
Sphaeroides annulatus	
Aniaotremus davidsonii	
Girella simplicidens	
Abudefduf saxatilis	
Gobiosoz pinniger	
Hypsoblennius gentilis ricketti	
Gilliichthys seta	
Scorparna sonorae	
Malacoctenus zonifer	
Cypselurus sp. or Fodiator acutus	Flying fish
Neothunnus albacares	Tuna
Ogilbia sp.	
Lutjanus argentiventris	
Conodon servifer	
Manta birostris	Horned manta
Urolophus halleri	Sting ray
Mustelus lunulatus	
Shark undet.	
Shark undet.	
Shark undet.	Dogfish?
Shark undet. A.	
Shark undet. B.	
Shark undet. C.	
Sphyrna	
Galeocerdo cuvieri	

The largest number of specimens were identified from preserved specimens by Dr. W. I. Follett of the California Academy of Sciences. This included all smaller fishes. But the largest were determined solely from the well-known vernacular names. The large fishes of the Gulf are well-known and have established local names among the Mestizos. These names are also much in use among the Seris. In several instances, however, it was impossible to determine the species of animal. In such cases, no scientific identification has been made, but their distinct traits were drawn from the Seri comments about them, their natural history, behaviour and ecology. Seris' clear-cut recognition of many of these features as applied to the fishes makes most such differentiations fairly easy.

Out of 42 species in the list, nine are sharks. There are, of course, many more species of sharks in the Gulf. But Seri recognition of nine speaks pointedly of their interest in the fishes.

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Scientific	Common Name
Octopus bimaculatus	Two spotted octopus
Tetibranchiata	Sea-hare
Ischnochiton Magdalenensis	Gulf Chiton
Ischnochiton laevigatus	Chiton
Codakia distinguenda	Clam
Cardium consors	Cockle
Laevicardium elatum	Giant Cockle
Carditamera affinis	Ruffled clam
Acmaea dolliana	Limpet
Crucibulum spinosum	Spiry Limpet
Chione undatella	Frilled chione
Chione californiensis	California chione
Pteria peruviana	Wing shell
Isognomon chemnitzianus	Pouch shell
Volsella capax	Horse mussel
Crepidula squama	Boat shell
Olivella dama	Olive shell
Cypraea annettae	Annette's cowry
Tegula rugosa	Turban shell
Conus regularis	Cone shell
Phyllonotus erythrostomus	Pink-mouthed Murex
Turritella broderipiana	August shell
Polinices reclusiana	Southern moon-shell
Phallium abbreviatum	
Chlamys subnodosa	Noded scallop
Atrina maura	Pen shell
Naicula pacifica	
Turbo (Callopoma) fluctuosa	Turban shell
Solenostira pallida	Top shell
Cerithium stercusmuscorum	Spindle
Knefastia funiculata	Spindle
Neritina luteofasciatus	Nerite
Columbella fuscata	Dove shell
Trivia radians	Coffee bean
Tellina rufescens	Tellen shell
Ficus ventricosus	Fig shell
Nioche biatrionica	?

While most specimens were identified from live material collected in tide-pools and kept in buckets as long as they lasted, some dead shells had also been used, especially those from the kitchen-middens rather numerous in the immediate Desemboque area.

By far most of the species had been identified by Dr. J. P. E. Morrison of the United States National Museum. To these I added a few identifications of my own, while Dr. Grace Pickford of the Osborn Laboratories, Yale University, identified the octopus and Dr. Rudolf Stohler of the University of California identified the chitons.

Economy

A very considerable proportion of the molluscs is used by the Seris in various ways. The tabulation will present the data much more clearly than could be done in a discussion.

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IX

MISCELLANEOUS

136

Scientific	Common Name
ANNELIDA	
Annelid worm (tube)	
POLYCHAETA	
Eurythoe	Stinging worm
ECHINODERMATA	
Heliaster sp.	Star fish
Holothurioidea	Sea cucumber
Encope grandis	Sand dollar
Echinometra vanbrutti	Regular sea urchin
COELESTERATA	
Anthozoa	Sea-anemone
Medusa	Jelly-fish
PORIFERA	
Porifera	Sponge

128
136 All these miscellaneous animals are grouped together and discussed together simply because only few species from each group are represented and any generalized comments are not reliable.

The following individuals identified the material. Annelid worm (from tube only)—J. E. P. Morrison, U.S. National Museum.

Sea-urchins — Elisabeth Deichman, Harvard University.

Remainder—Borys Malkin

Taxonomy

*825 With an exception of the sponge, all of the forms listed here are considered animals and not plants. The criterion is movement and when questioned for reasons the informants invariably replied "this is an animal because it moves." It applies equally to the jelly-fish and the *Echinoderms*. The *Annelid tubular worm* is also considered an animal and its shell is instantly recognized as an animal shell. This is surely owing to the movement of the worm in and out of the shell, although the worm does not move with the shell, being imbedded on rocks.

[824] The sponge, on the other hand, was said to "stay on rocks for 5-6 years. It does not walk. It is an alga or plant, not an animal. There are several different kinds, different in color." Thus the minutest sort of movement is shown again to be the basic criterion for the distinction between animals and plants.

Sexing

The Seris know nothing about sex differences in these groups. Of course, several of these beasts are hermaphroditic and self-fertilizing, and there are no visible differences. But in any case the informants simply didn't know what the differences between the sexes are.

Food

No knowledge.

[P-45A]

so named must be of the same sex as the first. The significance of land ownership needs further investigation.

Many of the Seri still prefer, when possible, to live in their chosen band area. Sometimes a person, when he is approaching death, will ask to be taken to his own i?iziiting, where he can die and be buried in the area of his choice.

NOTES

1. Due to printing limitations, stress on Seri words has been omitted, and several orthographic symbol changes have been made for this paper. The phonetic values of the symbols used are the following: *p* is voiceless labial stop; *t* is vl. dental stop; *k* is vl. velar stop; ? is glottal stop; *f* is vl. labial flat spirant; *w* is vl. labial grooved-rounded spirant; *s* is vl. alveolar spirant; *z* is vl. alveo-palatal spirant; *l* is vl. lateral spirant; *h* is vl. velar spirant; *x* is vl. back velar spirant; *m* is labial nasal; *n* is dental nasal; *ng* is velar nasal; *y* is palatal semivowel; *i* is a high close front vowel; *e* is a low close front vowel; *a* is a low open central vowel; *o* is a mid close back vowel.

2. These data were compiled during field trips to the Seri camps during the years 1956-61, the studies being carried out under the auspices of the Summer Institute of Linguistics. The principal informant was R. Herrera T. whose information was checked with and supplemented by nine of the older members of the tribe. I am indebted to my colleague, David Thomas, who read an earlier draft of this paper and made helpful suggestions.

3. 1) W. J. McGee, "The Seri Indians," *Bureau of American Ethnology, Annual Report*, No. 17, Part 1. Washington, 1898. 2) A. L. Kroeber, "The Seri," *Southwest Museum Papers*, No. 6. Los Angeles, 1931. 3) W. B. Griffen, "Notes on Seri Indian Culture, Sonora, Mexico," *Latin American Monograph Series*, No. 10, Gainesville, 1959.

4. It will be noted that between subdivision 3 and 4 on Fig. 3 there is an unnumbered area, the status of which is uncertain.

5. Kroeber states that McGee's concept of Seri maternal lineages crystallized into totemic clans with matron rule seem a fantasy. In Kroeber's opinion, "The Seri may never have had sibs or clans; but the fact that they appear to lack them now is no positive evidence that they were without them three centuries ago. Shifts of residence, contraction of territory, shrinkage of numbers, amalgamation of distinct bands, may well have obliterated much of such social fabric as they once possessed."

Griffen discusses the nature of the former Seri bands and states, "they may have been patrilineal and exogamous. The criteria . . . that Julian Steward has exposited for the formation of exogamous, patrilineal bands . . . are and presumably would have been met formerly in the Seri habitat." Griffen lists other aspects of this type of band which are also verified to some extent by his data. From reading his material, it is obvious that he suspects the existence of clans at some earlier period. He emphasizes the need for further investigation.

6. G. P. Murdock, *Social Structure*, Macmillan Co., New York, 1949.

7. Marriages were usually contracted within the band.

8. As Kroeber points out, their memory likely covers only the latter part of the period of Spanish contacts.

9. The Seri recall nothing of Seri-Pima contacts and little of Seri-Apache relations.

10. The story is related that one day some Seri entered a cave where they found several Papago jugs filled with seeds. Being hungry, the people ate the seeds and left some arrows as token payment. The Seri say that the Papago apparently believed the arrows were intended as an insult. Fighting broke out soon afterward.

11. The Seri concept of the band annihilations is seen to be in contradiction to McGee's statement (p. 132): "Concordantly with their primary characteristic, the Seri have avoided ethnic and demotic union beyond the narrow limits of their own kindred; and even of these they seem to have cast out parts, annihilating the Guaymas and Upanguaymas, displacing and nearly destroying the Tepokas, and outlawing individuals and (apparently) small groups."

12: Moser L-5 (no date) 1964
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ACKNOWLEDGMENTS

I am indebted to Richard Felger, Department of Zoology, University of Arizona, for information concerning plants referred to in this article. H. Wesley Peirce of the Arizona Bureau of Mines identified the mineral material used in the pigment.

NOTES

104 386 114

1. The phonetic values of the symbols used are the following: t is voiceless dental stop; k is vl. velar stop; ? is glottal stop; W is vl. labial grooved-rounded spirant; s is vl. alveolar spirant; z is vl. alveo-palatal spirant; l is vl. lateral spirant; j is vl. velar spirant; x is vl. back velar spirant; m is labial nasal; n is dental nasal; i is a high close front vowel; e is a low close front vowel; a is a low open central vowel; o is a mid close back vowel.

386 784 821

2. The restriction as stated to me by various women pertains only to young girls below the age of menarche. Actually, however, none of the above-mentioned young men and women, most of them in their twenties, was allowed to observe.

926

3. Plant specimens are deposited in the Herbarium of The University of Arizona.

386 114

4. The blue "pencil" which McGee describes (McGee 1898: 168) and pictures (McGee 1898: Plate XXVII facing p. 170) is apparently the ?antezj koil.

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1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

hours tumultuous waves come and go sporadically, while about the mile-wide boca the choppy sea sometimes takes the form of spire-like jets, spurting 5 or 10 feet high and breaking into aigrettes of glittering spray in most unwaterlike and wholly indescribable fashion. Dewey described the strait as "unsafe for navigation by any except the smallest class of vessels"; it is safe, indeed, only for portable and indestructible craft like the Seri balsas, which may be put off or carried ashore at will by craftsmen willing to wait for wind and tide, and unpossessed of impedimenta of a sort to be injured by wetting. Of such an environment the balsa is a natural product.

The adjunct islets of Seriland are miniatures of Tiburon in all essential respects, save that they are without fresh water. The largest is San Esteban, a somewhat complex butte rising sharply from the waters in a nearly continuous sea-cliff recording vigorous work by storms and tides; it is occasionally visited by the Seri, chiefly in search of water-fowl and eggs. The most important of the series in Seri economy and mythology is Isla Tasnae, off the mouth of Bahia Kino; it is a rugged butte some 600 feet high, rising in wave-cut cliffs on the sea side and pedimented by low spits and banks of sand toward the lea; the sand-banks are literally flocked with pelicans, while other fowl cover the flatter ledges and crowd the crannies of the pinnacle. Isla Turner is a somewhat smaller and still more rugged butte, bounded on both sides by precipitous cliffs, while Roca Foca is merely a great rock shelving upward from the storm-swept waters off the most exposed angle of Tiburon; in the crannies of the former birds nest abundantly, while the lower ledges of both are haunted by seals. Isla Patos, north of Tiburon, is a breeding-place for different water-fowl, and is especially noted as a refuge for ducks; it, too, is for the most part a rocky butte, with a sandy shelf at the eastern base. Beyond San Esteban lies the similar but smaller Isla San Lorenzo, while Isla Salsipuedes and a few other islets stretch thence northward half way to the southern point of Isla Angel de la Guarda, the second-largest island of the gulf. San Lorenzo and the smaller islets are occasionally visited by the Seri, partly for a mineral pigment used in face-painting, partly in quest of game; and they sometimes push on to the larger island to enjoy its fairly abundant game, including the easily taken iguana, amid the ruins of an ancient culture apparently akin to that of southern Mexico. Even the most frequented islets, Tasnae and Patos, can be reached only by crossing miles of open sea; but in their way the Seri are as canny navigators as they are skilful boat-builders—it is their habit to hug the shore in threatening weather, to await wind and tide for hours or days together, to set out on distant journeys only when all conditions favor, and in emergency to seize inspiration from the storm like the vikings of old, and bend supernormal power to the control of their craft.

Summarily, the prevailing features of Seriland may be said to be

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

13 characterized by extreme development or intensity, many of them being of such sort as to be adequately described only by the aid of strong comparatives or superlatives. Seriland is the most rugged portion of piedmont Sonora, and is bounded by its most forbidding desert; the territory is nearly if not quite the most arid and inhospitable of the Sonoran province; the diurnal and sporadic temperature-ranges are apparently the widest, and the gales and other storms apparently the severest of the entire province; the flora is among the most meager and least fruitful, and the mountains are among the craggiest of the continent; the tides are among the strongest and the tidal currents among the swiftest of the world; and, as shown by the limited direct observations and by the extraordinary marine transgression, the waters are among the most turbulent known. At the same time, the waters washing Seriland are among the richest of America in sea-food, so that the habitat is one of the easiest known for a simple life depending directly on the product of the sea. It is but natural that these extreme factors of environment should be measurably reflected in pronounced characteristics on the part of the inhabitants.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

000 and groups; the linguistic activities serve to extend social relations in space and time, and the sophic activities to integrate and perpetuate all relations; but it is through the industrial activities that human intelligence interacts with physical nature and makes conquest of the material world. Accordingly, industries act as a steady and never-ceasing stimulus to intelligence; accordingly, too, the industrial activities afford the simplest and surest measure of intellectual advancement.

Under this view of the place of industrial activities in human phylogeny, certain phases of Seri technology acquire importance and especial significance.

105 177 1. One of the most conspicuous features of Seri craft is its local character. The foodstuffs, the materials for apparelling and habitations, and the substances utilized in the several lines of simple handicraft are essentially local; moreover, the characteristic methods and devices evidently reflect local environmental conditions. There are, indeed, a few phenomena suggesting, and a still less number demonstrating, extraneous origin; the balsa and the kilt are sufficiently similar to devices of other districts to suggest, though not to prove, genetic identity (indeed, the sum of indications of local origin is much weightier than the several suggestions of extraneous derivation); the iron harpoon-points and arrow-tips are mainly of local flotsam, and are essentially provincial in modes of employment; the chipped stone arrow-tips, though local in material, are foreign in motive; but on summarizing the industrial phenomena, it would appear that by far the greater share are essentially local, while the few of exceptional (and extraneous) character can be pretty definitely traced to importation through the social interactions of recent centuries.

105 182 13 2. An equally conspicuous feature of the industrial craft of the Seri is the dominance of chance in both processes and devices. The traditional "fisherman's luck" is made exceptionally uncertain by the sudden gales and shifting currents of Seriland shores, while the absolute necessaries of life on land are still more capricious than those alongshore; this uncertainty of resources has profoundly affected the somatic features of the tribesman, as indicated elsewhere (ante, p. 159); and that the mental attributes of the folk are even more profoundly affected is attested by the rôle played by chance in the selection and shapement of the prevailing tools of stone and shell. The large rôle of chance in Seri life is also revealed, though less directly, in the overweening [771] mysticism of zoötheistic faith, with its material reflection in zoömimic craft.

3. When the local and fortuitous features of the Seri industries are juxtaposed they are found to express a notably inchoate or primitive stage of industrial development. In both the local and the fortuitous or accidental aspects, the activities are so closely adjusted to the immediate environment as to approach the instinctive agencies and movements of bestial life, and correspondingly to diverge from the composite

1: McGee E-5 (1894-1895)1896 NU31 Seri NU31

and cosmopolite characters of higher humanity; the dearth of extraneous devices denotes absence or intolerance of that secultural interchange accompanying and marking the progress of peoples; and the dearth of inventions denotes feebleness of creative faculty and absence of that self-confidence which accompanies and measures progress in nature-conquest. 105 13 182 [177]

4. When the local and fortuitous features of the Seri craft are viewed in their serial or sequential relations, they are found to reflect and attest autochthonal development. Excepting the few secultural processes and devices whose acquisition may confidently be traced to certain social interactions of the historic period, the Seri technic is too closely tied to local environment to warrant any supposition of importation from other districts. The question of the birthplace of the people may be left open in this case as in every other; but the birthplace of practically all those activities and activital products which define the folk as human was manifestly Seriland itself—so that the tribe, considered as a human folk rather than as a zoic variety, must be classed as autochthonous. 105 177

Summarily, then, the Seri industries are significant as (1) local, (2) fortuitous, (3) primitive, and (4) autochthonous; and these features combine to illumine a noteworthy stage in primitive thought. 105

5. On juxtaposing these significant features of Seri technic, they are found to reflect the tribal mind with noteworthy fidelity, and hence to indicate the sources of Seri mentations, and of the local culture in which these mentations are integrated. The local foodstuffs—especially that vital standard of values in arid regions, water—are perhaps sources of the strongest aspirations and inspirations of industrial life, and the methods and devices for food-getting are but the legitimate offspring of the inevitable relation between effort and environment; the conspicuous rôle of chance is but the composite of the hard and capricious environment on the one hand, and of the lowly thought reflecting that environment on the other hand; the zoic faith into which the magma of recurrent chance has semicrystallized finds carnate symbols either in local beasts or in fantastic monsters suggested by those beasts; even the mating instinct, second only to thirst among the impelling action-factors of the folk, is so profoundly and bitterly provincial as to exclude foreign ideals to a degree unparalleled among known peoples. The industrial materials are local—but not more local than the thoughts in which they are reflected; the technical methods are unmistakably the offspring of the environment—but they are equally the offspring of minds reflecting that environment and no other; the few and simple devices stand for integrations of experiences, instinctive rather than ratiocinative, the germ of invention rather than even its opening bud—but the experiences bear the marks of that environment and no other. Accordingly, the mental side of Seri industry, and, indeed, of all Seri life, appears to be the counterpart of the physical side. 13 181 182

2: Kroeber E-5 (1930)1931 NU31 Seri NU31

SUMMARY AND CONCLUSIONS

121 Knowledge of the Seri is still in its infancy. McGee's actual
114 observations are excellent but slender in range. He has interwoven them with conjectures, some of which are erroneous and others unproved and doubtful. Intensive study of the Seri will be difficult, chiefly for physical and practical reasons, but, to judge from such explicit data as are in hand, should prove them to be a tribe unusually interesting indeed, yet fundamentally similar to others in the same region. So many of their known traits are shared with one or another of these tribes, that it is practically precluded that complete investigation will leave the Seri as a unique people or even as one set widely apart, except in their historical fortunes.

● 13 The most distinctive thing about the Seri is their environment.
182 This is extremely arid and lacking in water supply, but not desert in the ordinary, untechnical sense. Botanists describe it as a succulent vegetation desert. It is fairly well stocked with food inland and rich in food along shore. This territory is able to support a fair sized population, but scatters it and keeps it from settling down. The land is also inhospitable and difficult to strangers who are not ready to adopt the Seri mode of life. This fact has helped preserve Seri ethnic integrity and culture to an unusual degree. A considerable fraction of original Serian territory is wholly unoccupied by civilization today, a full three centuries after its frontier was settled. The Indian neighbors of the Seri, all being farmers in fertile valleys, had no more incentive or ability than Caucasians to penetrate Seri territory sustainedly.

Across the Gulf, the peninsula of California presents a very
171 similar environment, and was inhabited by tribes of very similar
174 subsistence and residential habits, culture level, and temperament. But the Baja Californians differed from the Seri in being so situated, with reference to the rest of the world, that the length of the peninsula cut them off, except in the northern portion, from nearly all outside relations. Each group in the peninsula thus had contacts and stimuli only from others of similar culture. The Seri, on the contrary, having long been surrounded on the landward side by peoples of higher cultural level, were able to exploit this difference, in part by adopting cultural traits from their neighbors; and perhaps still more largely by preying upon them economically; while their habitat afforded them a refuge from destructive reprisals. Such may have been the condition in pre-Columbian days. At any rate it has been such since the coming of the Spaniards, and has made the "history" of the Seri different from that of the Baja Californians.

174 Three islands, Tiburon, San Estehan, and San Lorenzo, form stepping stones from Seri mainland to the peninsula. The water gaps between them are navigable to native craft and have been navigated

6: Mexico--1 E-5 (1952) 1953 NU31 Seri NU31

Seri Social Structure (1)

1. The material presented here was collected on a three-week visit to the Seri zone, the costs of which were defrayed by the I.N.A.H. [Instituto Nacional de Antropología e Historia], for the purpose of planning later investigations. It took place in January, 1952, in the company of Mr. Paul Finninger of M.C.M. [Mexico City College].

The permanent system of interacting influences that is presented among the Seri is of great scientific interest for its extreme characteristics of geographic isolation, environmental hostility, poverty, and the small size of the community.

The Seri occupy coastal territory in Sonora on the Gulf of California; formerly they covered a territory that toward the end of the 18th century, along the coast extended from Guaymas Bay, including it, to Punta Peñasco and, on the mainland, included the area in the vicinity of the present city of Hermosillo. They have been reduced little by little, now occupying only some isolated points on Cape Tepoca, Desemboque, and Tiburón Island, places from which, in spite of their inclemency, they are also being displaced.

Until some 30 years ago, most of the contacts of the Seri with Western culture had been warlike, ferociously defending their skins from the attacks of the yori (Mexican) invaders. Their contacts with the natives have been with the Yaqui, Papago, and those of Santa Rosalía (crossing the gulf). It was not until about 20 years ago, when the establishment of fishing camps was initiated with mestizo capital, that a new orientation in the treatment of the Seri came into being. Existing side by side with them at present are various Mexicans who exploit the products of Seri fishing, and some scientific investigators, principally from the United States.

They form enclaves in the heart of Aridamerica, with its cactus, shrubs and grasses, without flowing water, and with abundant flying and, especially, marine fauna.

8: Ascher E-5 (1960) 1962 NU31 Seri NU31

Elsewhere (Ascher 1961) I have disputed this portrayal of the potential of existing ethnography, citing examples where qualitative and quantitative models have been constructed from ethnography and suggesting that one task for archeology is to codify the literature in a manner useful to itself. Regardless of doubts about existing ethnographies for archeological purposes, the worth of future ethnography for archeology will depend on the acquisition of the relevant kinds of information. Although discussion on the subject has been recorded (Tax *et al.* 1953: 229-232), no specific guides have been produced. This paper provides and discusses an example, which can be used as a paradigm, model, or guide of the kind of information to be collected from ongoing communities which would be of general value for archeology. The subject culture is that of the Seri Indians of Sonora, Mexico; the example describes a persistent trait complex associated with fishing for the Pacific green turtle, with particular emphasis on one trait in the complex, the harpoon foreshaft.

Example from the Seri Indians

The Seri, who numbered approximately 200 individuals in 1960, occupy a band of coastal desert about four miles wide and seventy miles long in the state of Sonora in western Mexico. The band extends along the Gulf of California from Kino Bay in the south to Desemboque in the north, opposite the largest island in the Gulf, Tiburon. Although the region is desert, with an estimated average rainfall of less than eight inches per year, falling mostly in July and August, it is comparatively rich in succulents and small land mammals. The Gulf forms a natural trap for large fish and marine mammals and is a breeding ground for the Pacific green turtle. The scantiness of fresh water has constituted, in the past and present alike, the single crucial limiting factor to agriculture and human occupancy.

In the past the Seri may have comprised from four to six tribal groups, and they were certainly numerically larger, with a maximum estimated population of 2,000 (Kroeber 1931: 53, 30). Until very recently they also occupied Tiburon Island, and at some more remote period they extended south, north, and east over a territory whose bounds are uncertain (Kroeber 1931: 5). On the basis of linguistic change, Kroeber (1931: 54) calculated that the Seri could have inhabited this general region for 1,000 years. It is uncertain whether the original occupation stemmed from Baja California via the Gulf of California or from the north and west via an overland route or routes (Kroeber 1931: 39-51). The first contact with Europeans occurred as early as 1540 (McGee 1898: 51).

In culture content the Seri are most closely affiliated with the Pima (Kroeber 1931: 51), but they do not share the practice of agriculture with them or with their western neighbors. The Seri are primarily fishermen; secondarily they gather the fruits of succulents; and to a still lesser extent they hunt game. McGee (1898: 214)

9:Malkin E-5 (1953-1955)1962 NU31 Seri NU31

I

INTRODUCTION

localities, but I think it is advisable to include others, whose nature is not so different from the main places of Seris' habitations.

I have selected then 25 localities and I shall give their main characteristics below:

1. **Punta Peñasco** — a village along the upper shores of the Gulf of California, close to the U.S., connected by a paved highway from Gila Bend. Typical Sonoran zone with extensive sand flats. Very rarely visited by the Indians.

2. **Porto Libertad** — rocky shores, located some 30 miles north of Desemboque. A Mexican village frequently visited by the Seris.

3. **Desemboque** — Seris' main settlement after 1940, just north of and around Punto Tepopa, only a few miles from Tiburon. A narrow strip of poor land, thoroughly permeated with alkali and salt. Vegetation is very sparse. The mesquite, elephant bush, creosote bush, *Cholla* and *Sahuaro* are the main trees. No *Palo Verde* or *Palo Fierro*. *Ocotillios*, *Sahuaros* and mesquite are stunted and scarce, only toward the mountains increasing in frequency and size. Along the shores, sand dunes with kitchen middens, partly covered by vegetation. An arroyo nearby is empty except on a few occasions during the year when flash flood after rains rushes through. Rainfall very scarce. During the summer of 1953 I spent there, it rained very little—only twice and that was short and feeble. Water is obtained from a well, near which there is a Mexican ranch where, owing to irrigation, some vegetables are grown and weeds are present such as *Datura*. The coast is largely rocky. Narrow beaches lack wide sand bars. Hence the fauna here is poor.

4. **Estero Sargente** — alkali flats and mud flats some 25 km. south of Desemboque along the coast. Vegetation very scarce. *Sahuaros* and *Ocotillios* and other desert trees grow some distance from the shore. Short grasses in some places clump the coastal dunes. Breeding and feeding place of many shore birds, especially of willets and egrets. On the alkali flats near the shore are many peculiar insects, not found in Desemboque, particularly tiger beetles and Oedemerids.

5. **Campo Vivora** — little more than half way down toward Desemboque from Estero Sargente, also along the coast. So named after supposedly numerous rattlesnakes. Clumpy grasses. Favorite encampment of the Seris and others while fishing and hunting turtle. The only loggerhead turtle I have seen was right here.

6. **Porto Kino** — fishing village directly due east of Hermosillo, nowdays connected with Sonora's

9:Malkin F-5 (1953-1955)1955 MU31 Seri MU31

361 capital by paved road. Formerly, in the twenties and early thirties, Seris' chief mainland settlement. Now with the influx of the Mexicans, the Seris deserted the place completely as a camp site, although they still visit it occasionally. Distinct in the extensive sand beaches and sand marine flats which harbor peculiar bird, fish and insect fauna.

7. **Guaymas**—southernmost point considered here and probably also of the Seris' historical extension. Nowadays very rarely visited by them and probably only while cruising with the Mexicans. Large settlement, many tourists. Backlands; rocky desert.

8. **Tepopa**—spectacular rocky head just south of Desemboque, opposite to Tiburon. Caves, usual mountainous vegetation, *Sahuaro*. Many Seri hunting encampments and one of the places where the Sonoran bighorn is still hunted.

9. **Coast of Baja California**—very rocky area across the bay—almost never visited by the Indians.

10. **Tiburon**—island in the Gulf of California separated from the mainland by a narrow channel called "Infernillo," only a mile wide. Rugged, mountainous. By **Tiburon** is meant an overall island area in distinction from **Tecomate** or the mountains.

11. **Tecomate**—a water-hole and Seri campsite on the northern shore of Tiburon. Today this is the only permanent site on the island where these Indians, actually only a few families among them, still go to live for part of the year.

12. **Mountains of Tiburon**—rugged interior of the island, reaching up to almost 4000 feet. Usual vegetation cover with *Sahuaro* and other typically Sonoran floral components, fauna much as on the mainland except lacking cougar, bighorn and some other larger forms. The interior does have some "tenajas," that is water-holes and there is said to be a rivulet up in the mountains.

13. **Infernillo**—narrow channel between Tiburon and the mainland, often called locally "canal." For the terrestrial fauna and for birds reference is made to the mainland shores of Infernillo. For the marine fauna is meant either the open water in this channel or to the littoral off the mainland. The opposite shores and littorals are covered as "Tiburon." Maximum depth is said to be up to 25 fathoms.

14. **Isla Patos**—small island north of Tiburon and directly due west of Estero Sargente and halfway between Tiburon and Punto Tepopa. Visited by the Indians only occasionally, mostly in connection with the duck hunt.

15. **Isla Raza**—a small island between Angel de la Guarda and San Lorenzo.

16. **San Esteban Island**—a round island between Tiburon and San Lorenzo, up to 1700 feet elevation. Visited occasionally during fishing or turtle hunt trips or in search of a chuckawalla.

[P. 2A]

9:Malkin E-5 (1963-1965)1962 NU31 Seri NU31

●13 17. **San Lorenzo Island** — a narrow long island along the coast of Baja, California, and opposite to Tiburon. Altitude up to 1200 feet. Fauna limited, owing to the distance from the mainland. Vegetation much as elsewhere but impoverished. Visited incidentally as is San Esteban.

18. **Angel de la Guarda** — large island along the coast of the peninsula, longer but narrower than Tiburon, slightly lower at its highest point, pretty much waterless. Vegetation as elsewhere, fauna limited. Visited by the Seris very rarely.

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19. **Desemboque (Mountains)** — high mountains immediately back of Desemboque, 5 miles away, rising perhaps to 1200 feet. Vegetation much richer than in Desemboque, with giant *Sahuaro* growing to considerable size. More moisture than immediately near the sea-shore. Full Sonoran fauna with cougar and bighorn. Frequently visited during hunts.

20. **Tepopa (Mountains)** — in distinction from Punto Tepopa as a whole, this refers only to the rugged head. The mountain reaching to over 1800 feet. Thus by Punto Tepopa are meant only the shores and the littoral.

21. **Buena Vista** — a ranch inland on the way to Hermosillo, newly deserted. Water present in the large well and periodically in the dry river. Willows, large mesquite, Palo Verde, etc. Now only incidentally visited by the Seris but formerly of some importance as a camp site.

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22. **San Francisco de Costa Rica**—a ranch inland halfway between Kino and Hermosillo near the main road, presently a large Mexican ranch. Formerly a frequent Seri campsite. The distinctive feature of this locality is extensive sandy areas with very peculiar fauna.

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23. **Hermosillo**—capital of Sonora of some 40,000 people. Extensive agriculture, irrigation, river and water-dammed reservoir and cattle and cotton ranges. Once the Seris ranged almost as far as this town but presently they come here only on special business, to the hospital or for a ride to town, with the Mexican truckers. Their observations in Hermosillo are only incidental.

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[484] 24. **Nogales**—U.S.-Mexican frontier town. Seris come here very rarely and only certain individuals. Observations less than incidental.

25. **Campo Utah** — large track of irrigated flat lands given up to cotton, operated by the Utah Construction Company between San Francisco and Hermosillo. Somewhat off the main road. Selected as a distinct region owing to the irrigation and cotton fields with their ecological peculiarities. Seris visit this only in transit or on most unusual occasions when they work a few days for the Mexicans.

[484]
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The Problem

121 The basic problem concerns the state of Seris' zoological knowledge, that is the general knowledge of the natural history of animals in its main outlines; of their ecology, habits, reproduc-

[P2B]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

THE SERI INDIANS

By W J McGee.

INTRODUCTION

Salient Features

Something has been known of the Seri Indians (Seris, Ceris, Ceres, Heris, Tiburones) since the time of Coronado, yet they remain one of the least-studied tribes of North America. The first systematic investigation of the tribe was made in the course of expeditions by the Bureau of American Ethnology in 1894 and 1895; it was far from complete. 114

The Seri Indians are a distinctive tribe in habits, customs, and language, inhabiting Tiburon island in Gulf of California and a limited adjacent area on the mainland of Sonora (Mexico). They call themselves *Kun-kaak* or *Kmike:* their common appellation is from the Opata, and may be translated "spry". Their habitat is arid and rugged, consisting chiefly of desert sands and naked mountain rocks, with permanent fresh water in only two or three places; it is barred from settled Sonora by a nearly impassable desert. Two centuries ago the population of the tribe was estimated at several thousands, but it has been gradually reduced by almost constant warfare to barely three hundred and fifty, of whom not more than seventy-five are adult males, or warriors. 101 [131] 133 161

The Seri men and women are of splendid physique; they have fine chests, with slender but sinewy limbs, though the hands and especially the feet are large; their heads, while small in relation to stature, approach the average in size; the hair is luxuriant and coarse, ranging from typical black to tawny in color, and is worn long. They are notably vigorous in movement, erect in carriage, and remarkable for fleetness and endurance. 142 [147]

The Seri subsist chiefly on turtles, fish, mollusks, water-fowl, and other food of the sea; they also take land game, and consume cactus fruits, mesquite beans, and a few other vegetal products of their sterile domain. Most of their food is eaten raw. They neither plant nor cultivate, and are without domestic animals, save dogs which are largely of coyote blood. 105

The habitations of the Seri are flimsy bowers of cactus and shrubbery, sometimes shingled rudely with turtle-shells and sponges; in some

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

HABITAT

Location and Area

131 Seriland, the home from time immemorial of the Seri Indians, lies in northwestern Mexico, forming a part of the State of Sonora. It comprises Tiburon island, the largest and most elevated insular body in Gulf of California, together with a few islets and an adjacent tract of mainland; the center of the district being marked approximately by the intersection of the parallel of 29° with the meridian of 112°. The territory is divided by the narrow but turbulent strait, El Infiernillo. It is bounded on the west and south by the waters of the gulf with its eastward extensions to Kino bay, on the east by a nearly impassable desert, and on the north by a waterless stretch of sandy plains and rugged sierras 50 to 100 miles in extent.

Tiburon island is about 30 miles in length from north to south and 12 to 20 miles in width; its area, with that of the adjacent islets, is barely 500 square miles. The mainland tract held by the Seri is without definite boundary; measured to the middle of the limiting desert on the east and halfway across the waterless zone on the north, its area may be put at 1,500 square miles. To this land area of 2,000 square miles may be added the water area of the strait, with its northern and southern embouchures, and the coastwise waters habitually navigated by the Seri balsas as far as Kino bay, making half as much more of water area. Such is the district which the Seri claim and seek to control, and have practically protected against invasion for nearly four centuries of history and for uncounted generations of prehistory.

Physical Characteristics

133 Seriland forms part of a great natural province lying west of the Sierra Madre of western Mexico and south of an indefinite boundary about the latitude of Gila river, which may be designated the Sonoran province; it differs from Powell's province of the Basin ranges in that it opens toward the sea, and also in other respects; and it is allied in many of its characteristics to the arid piedmont zone lying west of the Andes in South America.

In general configuration the province may be likened to a great roof-slope stretching southwestward from a comb in the Sierra Madre to a broad eaves-trough forming Gulf of California, the slope rising steeper toward the crest and lying flatter toward the coast; but the expanse is warped by minor swells, guttered by waterways, and dormered by out-

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

133 the discharge from the waterways of adjacent sierras and buttes; they are commonly miles and frequently dozens or scores of miles in width, and the linear flow may range from a fraction of a mile to scores of miles according to the heaviness of the rainfall and the consequent dilution of the mud. Such sheetfloods, especially those produced by considerable rains, are characteristic agents of erosion throughout most of the province; their tendency is to aggrade depressions and corrade laterally, and thus to produce smooth plains of gentle slope interrupted only by exceptionally precipitous and rugged mountain remnants. A part of the sheetflood water joins the stronger mountain-born streams, particularly toward the end of the great storm whereby earth and air are saturated; another part forms ground-water, which slowly finds its way down the slopes toward the principal valleys, perhaps to reappear as springs or to supply wells. These with certain other conditions determine the water-supply available for habitation throughout Seriland and adjacent Papagueria.

Another condition of prime importance arises in a secular tilting of the entire province southwestward. This tilting is connected with the upthrust of the Sierra Madre and the uplifting of the plateau country and the southern Rocky mountain region north of the international boundary. Its rate is measured by the erosion of the Grand Canyon of the Colorado and other gorges; and its dates, in terms of the geologic time-scale, run at least from the middle Tertiary to the present, or throughout the Neocene and Pleistocene. Throughout this vast period the effect of the tilting in the Sonoran province has been to invigorate streams flowing southward, and to paralyze streams flowing toward the northerly and easterly compass-points; accordingly the streams flowing toward the gulf have eroded their channels effectively during the ages, and have frequently retrogressed entirely through outlying ranges; so that throughout the province the divides seldom correspond with the sierra crests.

A typical stream of the province is Rio Bacuache, one of the two [131] practicable overland ways into Seriland (albeit never surveyed until traversed by the 1895 expedition). Viewed in its simple geographic aspect, this stream may be said to originate in a broad valley parallel with the gulf and the high sierra, 200 miles northeast of Kino bay; its half-dozen tributary arroyos (sun-baked sand-washes during three hundred and sixty days and mud-torrents during five days of the average year) gather in the sheetflood plain and unite at Pozo Noriega, where the ground-water gives permanent supply to a well; then the channel cleaves a rocky sierra 3,000 feet high in a narrow gorge, and within this canyon the ground-water gathered in the valley above seeps to the surface of the sand wash and flows in a practically permanent streamlet throughout the 4 or 5 miles forming the width of the sierra; then the liquid sinks, and 25 miles of blistering sand-wash (interrupted by a single lateral spring) stretch across the next valley

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

into the saguesa forests of the eastern base of Sierra Seri; on the east it is miles in breadth, passing gradually into the normal Sonoran plain; on the south it widens still farther, stretching all the way to Arenales de Gil and Pozo Escalante, and merging into the playa-like mud-flats bordering Laguna la Cruz, into which the gulf waters are sometimes forced by southwesterly gales at high spring tides. Throughout this portion of the desert, marine shells are scattered over the playa-like flats or lodged in the adjacent banks, sometimes in great beds; the vegetation is scantier than usual and largely of salt-loving habit; the mud-flats are usually coated with saline and alkaline crusts, while the dunes are soft and fluffy, and expand into broad belts perforated with the tunnels of the surprisingly abundant rodents. Across this plain of bitter sand-dust lie the two hard land routes to Seriland—the supposed Escalante route of 1700, down the fan of Rio Bacuache and thence by Barranca Salina; and the Encinas route, down the northern border of the Rio Sonora fan and thence by Pozo Escalante to the shores of Bahia Kino.[1]

Desierto Encinas is an impossible human habitat in any proper sense; it is merely a broad and hardly passable boundary between habitats. The hardy stock of the frontier ranchos, pasturing partly on the thorny fruit of the cholla, push far out on the plains, and are sometimes watered for short periods, under strong guards of heavily armed vaqueros, at Barranca Salina; yet the greater part of the expanse is trodden only by the Seri. Two or three ruined frames of Seri jacales and a few graves crown the low knoll near Pozo Escalante, and there are one or two house remnants near Barranca Salina; these are notable not only as the easternmost remaining outposts of Seri occupancy, but because they represent the only known instances in all Seriland of the erection of even temporary houses adjacent to water. Distinct paths, trodden deep by bare Seri feet, radiate from both waters toward the Seriland interior, but no traceable trails extend eastward.

The southern limit of Desierto Encinas is marked either by the broad mud-flats opening into Laguna la Cruz or by the coast of the gulf, the coast cutting the lower portions of the plain being accentuated by a sand-bank 30 or 40 feet high, against which the surf thunders in nearly continuous roar, audible halfway or all the way to Pozo Escalante. A Seri trail skirts the crest of this bank, sending occasional branches into

[1] Both the routes were traversed by the expedition of 1895, the former from the headwaters of Rio Bacuache to the upper portion of its alluvial fan, and thence from the abandoned Rancho Libertad on the lower portion of the fan across Desierto Encinas by way of Barranca Salina. In the northern crossing a light vehicle (the first to traverse this portion of the desert), drawn by four horses and aided by several horsemen, was taken from Rancho Libertad across the northern portion of Playa Noriega and thence up Arroyo Mitchell to a point midway between Barranca Salina and Johnson peak, and was brought back over the same route. The Encinas trail from Rancho San Francisco de Costa Rica was traversed four times each way by the same outfit, and once each way by the running gear of a heavy wagon carrying the rude craft (about 1,000 pounds in weight) in which the Seri waters were navigated, this vehicle being drawn by 8 to 12 horses, frequently changed. Typical aspects of both routes are shown in plate III, the upper figure representing the Encinas trail and the lower a distant view of Sierra Seri, taken from Playa Noriega, in the depths of Desierto Encinas.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

133 inner margin of the shelf is a sea-cliff, usually 30 to 50 feet high, of which the lower half is commonly granite and the upper half unconsolidated and recent-looking mechanical debris collected by sheetflood erosion. Sometimes the granite of the subterrane is replaced by volcanics; sometimes ancient and firmly cemented talus deposits separate the superficial mantle from the subterrane, as shown in the lower part of plate V; sometimes the line of sheetflood planation passes below tide-level, when the waves beat against the unconsolidated deposits in a deep embayment; sometimes the sharply defined planation surface ends abruptly at the sides of subranges or buttes shooting upward in the abrupt slopes characteristic of the sierra proper; yet this 10-mile stretch of coast is a nearly continuous revelation of the structure of sheetflood-carved plains and of modern marine transgression. The debris of the combined processes forms an abundant and varied assortment of bowlders, cobbles, and pebbles, whence the inhabitants readily derive their simple implements without need for studied forethought or manual cunning.

The long sand-spit terminating in Punta Miguel and the shorter one terminating in Punta Arena are the product of geologically recent wave building, and consist of irregular series of V-bars, backed by lagoon-like basins and enclosing considerable bodies of brine in the central portions; and the bars and basins become successively higher outward, in such wise as to attest the secular subsidence of this coast.

[361] [487] Several jacales are located on the higher portion of the southern sand-spit, midway between Punta Granita and Punta Miguel, while foot-paths traverse the flat and skirt the coast. Toward the terminal portion of the spit the sand is blown into hummocks, held by clumps of salt-enduring and sand-proof shrubbery; but there are no rancherias here, despite the fact that it is a natural point of embarkation—doubtless because no Seri structure could withstand the sand-drifting gales and storm inundations of this exposed spot. The more protected lagoons behind the outer bars harbor abundant waterfowl, within bowshot of shrub-clumps and dunes well adapted to the concealment of hunters, while the mud-flats open to the tide abound in clams and other edible things. The features of the Punta Miguel sand-spit are repeated with variations along the eastern shore of El Infiernillo; and

[1326] [361] Seri jacales, evidently designed for temporary occupancy, occur here and there, usually on higher banks above reach of the severer storms.

3. Tiburon island itself is apparently the chosen home of the Seri—

[131] a habitat to which the mainland tract is at once a dependency, an alternative refuge, and a circumvallation. Its dominant range, Sierra Kunkaak, mates Sierra Seri in its essential features, though the rocks are for the greater part ordinarily obdurate eruptives rather than exceptionally obdurate granites, as in the mainland sierra; accordingly the range is somewhat lower and broader, while the sheetflood sculpture, with its sharp transition into precipitous cliffs, is somewhat less trench-

1: McGee E-5 (1894-1895)1898 NU31 Ser. NU31

he defined (apparently on the basis of the Tenochio vocabulary systematized and published by Pimentel) as a distinct linguistic family with two dialectic branches,[1] viz:

IX FAMILIA.—SERI.

XXXIII. *Séri*, por los séris, séris, tiburones, tepocas, salineros, en Sonora.
81. 1. *Upanguaima*, por los upanguaimas, en Sonora.
82. 2. *Guaima*, por los guaimas, guaymas, gayymas, cocomaques, en Sonora.

Orozco's map assigns to the Seri family an immense area (recalling Villa-Señor's "despoblado") extending from just above the mouth of the Yaqui, northward to the thirtieth parallel on the coast, stretching inland nearly to Cucurpe, Opodepe, and Ures, and including Tiburon; the "Salineros" lying adjacent to the coast in the north, the "Tepocas" medially, and the "Guaymas" in the south, within this area. In elucidating the map he wrote, under the title "El séri.—El upanguaima.—El guaima":

The séris, a tribe inhabiting Sonora, forms, with its subtribes, a separate family. By their language, by their customs, and by their physiognomy, they are completely set apart from affiliation with the surrounding nations; and apparently they have lived in the district which they now occupy from times anterior to the establishment of the Pima race and its affines; their use of poisoned arrows recalls the Caribs of the islands, as well as of the continent, and it seems not unlikely, although very serious, that they are related to them. The séris, known also as Tiburones, a name derived from the island of Tiburon in the Mar de Cortés, which serves them as a shelter, considered as parts of their tribe the Tepocas and the Salineros.

The "Upanguaima" (a very small tribe occupying the Seri border) and the "Guaimas", as well as the "Cocomaques" were combined chiefly on the authority of Jesuit writers.[2] In describing the State of Sonora he further wrote:

The séris, bounded by the sea on the west, the Pimas Altos on the north, the Opatas and the Pimas Bajos on the east, and the pueblos of Rio Yaqui on the south, form the smallest nation of Sonora, but at the same time the most cruel and deceitful and the least capable of reduction to political organization. Hardly uniting with the smaller pueblos as at Populo and Belen, the rest of the nation engaged so constantly in cruel warfare that it was necessary to persecute and exterminate them. . . . Small as was the tribe, three divisions are known: the Salineros, extending to the confines of Pimeria Alta; south of them the Tepocas, nearest to the island of Tiburon; the Guaymas and Upanguaymas occupying the territory adjacent to the harbor of the same name, afterward added to the pueblo at Belen and blended with the Indians of Rio Yaqui. Ferocious and savage, they preferred to die in war against the whites rather than adopt their usages and customs; lazy and indolent, they so surrendered themselves to the passion of intoxication that mothers conveyed aguardiente from their mouths to the smallest babes. They are tall and well formed, the women not lacking in beauty. The poison with which they envenom their arrows is proverbial for deadly effect; they compound the venomous juice from a multitude of ingredients and fortify the compound by superstitious practices.[3]

[1] Geografía de las Lenguas y Carta Etnográfica de México, Precedidas de un Ensayo de Clasificacion de las Mismas Lenguas y de Apuntes para las Emigraciones de las Tribus, por el Lic. Manuel Orozco y Berra; Mexico, 1864, p. 66.
[2] Ibid., p. 62. [3] Ibid., pp. 282-284.

I: McGee E-5 (1894-1895)1898 NU31 Seri NU31

101 UPAN GUAIMAS—1763; [Keutwig?]. Rudo Ensayo, p. 229.
UPANGUAIMA—1864; Orozco y Berra, Geografía de las Lenguas, p. 42.
1475 UPANGUAIMAS—1878; Malte-Brun, Congrès International des Américanistes, tome II, p. 38.
UPANGUAYMA—Synthetic form.
UPANGUAYMAS—1882; Bancroft, Works (Native Races, vol. I, p. 605).
UPAN-GUAYMAS—1890; Bandelier, Investigations in the Southwest, p. 75.

Possibly the name *Cocomaques* (1864, Orozco y Berra, Geografía de las Lenguas, p. 42), or *Cocomaques* (1727, Rivera, Diario y Derrotero, I. 1514–1519) should be introduced among the synonyms of the Seri, but in the absence of definite information it may perhaps better be left unassigned.[1]

Of the four tribes assigned to the stock, the Upanguayma have been
101 extinct probably for more than a century; the Guayma may survive in
197 a few representatives probably of mixed blood and adopted language; the Tepoka have never received systematic investigation, but appear to survive in limited numbers on the eastern coast of Gulf of California about the embouchure of the Rio Ignacio sand-wash; while the Seri alone continue to form a prominent factor in Sonoran thought.

EXTERNAL RELATIONS

131 The most conspicuous characteristic of the Seri tribe as a whole is
648 isolation. The geographic position and physical features of their habitat favor, and indeed measurably compel, isolation: their little principality is protected on one side by stormy seas and on the other by still more forbidding deserts; their home is too hard and poor to tempt conquest, and their possessions too meager to invite spoliation; hence, under customary conditions, they never see neighbors save in chance encounters on their frontier or in their own predatory forays—and in either case the encounters are commonly inimical. The natural isola-
[186] tion of the habitat is reflected in modes of life and habits of thought; and during the ages the physical isolation has come to be reflected in a bitter and implacable hereditary enmity toward aliens—an enmity apparently forming the strongest motive in their life and thought, and indeed grown into a persistent instinct. Thus the Seri stand alone in every respect; they are isolated in habitat and still more intensely isolated in habits of thought and life from all contemporaries; they far out-Ishmael the Ishmael of old on Araby's deserts.

648 The isolation of the Seri in thought and feeling is well illustrated by the relations with their nearest neighbors (activitally as well as geographically), the Papago Indians. The Papago are much esteemed
[115] in Sonora as fearless fighters, always ready to join or even to lead a forlorn hope; yet when the expedition of 1895 was projected it was found no easy matter to induce the picked Papago guards quartered at Costa Rica to enter Seriland. They were ready, indeed mildly eager, for fray, provided it were on the frontier; but they held back in dread

[1] These names seem rather to be Yaquis, cf. Cocopa, Cocomina, Cocomaricopa, Kahua, etc.

I: McGee E-5 (1894-1895)1898 NU31 Seri NU31

appear to form a fairly trustworthy basis for consideration of the Seri food habits. 262

On reviewing the constituents it would appear that the Seri must be regarded as essentially a maritime people, in that about two-thirds of their food is derived from the sea; also that they must be deemed essentially carnivorous, since fully five-sixths of their diet (84 per cent plus a share of the miscellaneous—chiefly scatophagous—category) is animal. The tabulation does not show the relative proportions of the several constituents cooked and eaten raw, but the best available data indicate that fully three-fourths of the ordinary dietary, both animal and vegetal, is ingested in raw condition, and that the greater part of the remaining fourth is imperfectly cooked.

In recapitulating the devices for food-getting, it is found that nearly all of the more distinctive artifacts and crafts are either directly or indirectly connected with that primary activity of living things, food-conquest. Foremost among the distinctive artifacts of the Seri, in its relation to daily life and in its technical perfection, is the canteen-olla; probably second in importance, and also in technical perfection, is the balsa—whose functions, however, extend beyond simple food-getting; next comes the crude and simple, yet economically perfected, turtle-harpoon, with its variants in the form of arrow (with a function in warfare as well as in food-getting) and fire-drill; while the light basket-tray, although capable of carrying ten to twenty-five times its own weight, is perhaps the least perfect technically of the artifacts directly connected with sustentation. And it should be noted that the prevailing tools—hupf, ahst, multifunctional shell, and awl of mandible or bone or tooth—have either an immediate or a secondary connection with food-getting. 182

NAVIGATION

At first sight Seriland seems an abnormal habitat for a primitive people, since its land area is cleft in twain by a stormy strait—a strait whose terrors to the few Caucasian navigators who have reached its swirling currents are indicated by their appellations, "El Canal l'eligroso de San Miguel"[1] and "El Infiernillo"; for such a stretch of troubled water is commonly a more serious bar to travel than any moderate land expanse. This intuitive notion of the effectiveness of a water barrier, and the correlative feeling of the incongruity of a land barrier insuperable for centuries, is well illustrated by prevailing opinion throughout northwestern Mexico; for it is commonly supposed in Sonora and neighboring states that Seriland is conterminous with Isla Tiburon, i. e., that the mainland portion of the province (including Sierra Seri with its flanking footslopes) lies beyond the diabolic channel. Yet longer scrutiny shows that the superficial impression merely mirrors Caucasian thought and fails to touch the essential conditions, 131

[1] Hardy, Travels, p. 296.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

especially as they are reflected in the primitive minds of the local tribe; and careful study of the habits and history of the Seri shows that the dangerous strait has been a potent factor in preserving tribal existence and perpetuating tribal integrity. Naturally the factor operates through navigation; for it is by means of this art that the tribesmen are able to avoid or to repel the rare invaders of either mainland or insular portions of their province, the overland pioneers from the east being stopped by the strait and the maritime explorers from south and west being unable to maintain themselves long about the stormy shores and never outfitted for pushing far toward the mainland retreats and strongholds; while by means of their light and simple craft the Seri were able to retreat or to advance across the strait as readily as over the adjacent lands to which they were wonted by the experience of generations. In their minds, indeed, El Infiernillo is the nucleus of their province. So the Seri were among the lowliest learners of that lesson of highest statecraft, that lands are not divided but united by intervening sea; and their ill-formulated and provincial notions are of much significance in their bearing on autochthonous habits and habitats.

The water craft of which the Seri make so good use is a balsa, made of three bundles of carrizal or cane lashed together alongside, measuring barely 4 feet abeam, 1½ feet in depth, and some 30 feet in length over all. A fine specimen (except for a slight injury at one end) is shown in plan and profile in plate XXXI. It was obtained near Boca Infierno in 1895, partly towed and partly paddled thence to Embarcadero Apalrade, wagoned laboriously across Desierto Encinas and on to Hermosillo, conveyed in an iron-sheathed box on two gondolas of the narrow-gage Ferrocarril de Sonora to the international frontier, and finally freighted to the United States National Museum, where (in the Mall just outside the building) the photographs reproduced in the plate were taken.

The manufacture of the balsa has never been seen by Caucasian eyes, but the processes are safely inferred from the structure, whose testimony is corroborated in part by Mashém's imperfect descriptions. The first step is the gathering of the carrizal from one of the patches growing about the three or four permanent fresh waters of Seriland, the canes being carefully selected for straightness, symmetry, and uniformity in size; these are then denuded of leaves and tassels, tied in bundles of convenient size (one seen on Tiburon contained 40 or 50 canes), and carried to the shore. In actual construction the canes are laid butt to butt, but overlapping 2 or 3 feet, the overlap being shifted this way and that with successive additions, so that the aggregate length of overlapping in the bundle reaches 10 or 12 feet—i. e., the full length of the body of the finished craft. The growing bundle is wrapped from time to time with lashings of mesquite root or maguey fiber, and kept in cylindrical form by constant rolling and by means of the lashing; though the cord used for the purpose is so slender as to do little more than serve the purposes

2: Kroeber E-5 (1930) 1931 NU31 Seri NU31

[p.3]

THE SERI

By A. L. KROEBER, *University of California*

INTRODUCTION

The present paper is the first product of field studies made between January and March, 1930, in Arizona, Sonora, and Sinaloa, under a joint expedition of the Southwest Museum, Los Angeles, and the University of California. The financial contribution of the University was the gift of Mrs. Ethel W. Crocker. While the purpose of the trip was to define rather than solve problems, the following pages contain part of the positive observations obtained.

The Seri, who live on Tiburon Island, Sonora, in the Gulf of California, are often considered the wildest and most primitive tribe surviving in North America. They owe this repute partly to McGee's monograph about them, in the Seventeenth Annual Report of the Bureau of American Ethnology. It is easy to read between the lines of this description that McGee leaned toward a romantic and imaginative interpretation of the Seri. Also, his actual contacts with the people themselves were brief, and hampered by imperfect communication. Moreover, the Seri have been for three hundred years in contact with Spaniards and Mexicans, part of the time even under direct mission control. It therefore seems doubtful whether their backwardness could be the result wholly of preserved primitiveness, and may not rather be attributable to a recalcitrant degeneration. In order to answer this question, and to place Seri culture at least tentatively among the other tribal cultures of the Southwest instead of leaving it as an unexplained and lurid abnormality, a brief visit to them was undertaken.

The success of this visit was due wholly to Sr. Roberto Thomson of Hermosillo and Rancho San Rafael, who is now the Mexican Government's *Jefe de Vigilancia* for the Seris, and in effect what in the United States would be known as Indian Agent for the tribe. He has protected and befriended them, kept them in turn in bounds, and secured some governmental assistance for them, under which they are making a beginning of adaptation to the modern world. At any rate, the mutual raidings and killings have stopped, and the Seri, though still very suspicious of most of the neighboring settlers and of strangers, look upon Sr. Thomson as their protector and friend. Without his introduction and experience, many less data could have been collected in a longer stay.

The Seri now live wholly on Tiburon Island. I was with them six days, half of them on the island. This is about as long a time as McGee spent with them—all of it at the cattle ranch of Costa Rica. McGee also explored the island and its camps at some length, but without encountering any Seri, who eluded his party.

Inasmuch as Mr. Edward H. Davis of Mesa Grande, California, has three times visited Tiburon to form an ethnological collection for the Museum of the American Indian, Heye Foundation, I attempted no examination of Seri material or economic culture, which Mr.

2: Kroeber E-5 (1930)1931 NU31 Seri NU31

Davis has had fuller opportunity to investigate, but confined my attention to the social and religious sides of their life. There was the more reason for this since it is in dealing with these latter aspects, where verbal communications are as important as observation, that McGee's monograph is most tenuous and dubious. I also secured linguistic notes for the preliminary placing of the curious tonal speech of the Seri.

Seri culture in its present form is a fragmentary thing such as could hardly have existed under purely native conditions. Religion especially has suffered, no doubt under Christian influence, without many elements of Christianity having been taken over in exchange. Of mythology, only tatters seem to remain; of ritual, little more; only shamanism seems to be fairly well preserved. Nor, beyond the Spanish names for God and the cross, do the Seri give evidence of being or having been Catholics. The result is that they seem remarkably religionless. I do not know of a native people that appears so free from superstition and so unspiritual in its attitudes. Possibly I conferred with the wrong informants; but those I talked with seemed unsecretive. Social culture is better preserved, as is evident from a set of kinship terms that are numerous, precise, and untouched by Spanish concepts. On the other hand, there is little formal social organization. Whether this is also the result of a loss, is hard to say. The Seri may never have had sibs or clans; but the fact that they appear to lack them now is no positive evidence that they were without them three centuries ago. Shifts of residence, contraction of territory, shrinkage of numbers, amalgamation of distinct bands, may well have obliterated much of such social fabric as they once possessed. Games and the calendar are wholly native and intact, but taboos connected with sex, age, food, and the like seem fewer than among the backward tribes of the southwestern United States. It seems reasonable to construe this condition as the result of varyingly hostile, parasitic, and missionizing Spanish-Mexican contacts; especially when one realizes how overwhelmingly, though also spottily, this influence has affected the other tribes of Sonora—the Yaqui, Mayo, Pima, and Opata.

Historically the Seri are not a tribe but the consolidated remnant of a series of dialectically distinct tribes that once held the barren coast of Sonora from Guaymas to Puerto Libertad. Tiburon Island is the stronghold in which the mixed survivors, probably now numbering less than 200, have taken refuge, and, owing to its inaccessibility, drought, and poverty, have succeeded in maintaining themselves and their blended and reduced culture. Toward the interior, it is doubtful if they ranged beyond the present line of the Southern Pacific railroad, if that far. Orozco y Berra indeed assigns them territory up the Sonora River to Ures, on his famous map, which is still basic to all other ethnic maps of Mexico. But from Hermosillo

2: Kroeber E-5 (1930) 1931 NU31 Seri NU31

to Ures is good farming country, and why the only non-agricultural people in Sonora should have held this stretch, is hard to see. Moreover, Oroaco's bringing the Serian tribes so far inland as to abut on the Opata, severs the continuity of the American Pima Alto and Papago with the Mexican Pima Bajo, whose speech is almost identical. This identity is best understood as the reflection of a continuous occupation by the Pima of the whole foothill country from the Gila to the Mayo, between the Serian desert lowlanders and the Opata in their mountain valleys, with the Yaqui, Mayo, and other Cahita peoples replacing the Serians south of Guaymas where heavier rainfall and large flowing rivers made the lowlands attractive to farming peoples. The natural inland frontier of the Seri along the Sonora River would have been at the Siete Cerros, a low range some 25 miles, more or less, west of Hermosillo, where grass ends and creosote bush and giant sahuaro cactus soon become dominant beside mesquite. This boundary would have put the farmers on farm land, the roving gatherers into the succulently overgrown desert and along the food-stocked coast.

The Seri, then, in the wider sense, including the Guaymas, Tepocas, etc., were anomalous among the native peoples of Sonora in habitat as well as in culture. Now a similar country, almost waterless and cactus dominated, is the central segment of Mexican California. Here lived the Cochimi, dialectically the most divergent of the Yuman peoples, and with a culture similar to that of the Seri at least in its level. The habitat enforced a similar subsistence economy, unsettled living, scattering of population, inability of serious accumulation of property, and hence no doubt a relative paucity of most organizational aspects of culture. Whether the content of Cochimi culture was equally similar is difficult to say because of the melting away of the people. At any rate the question arises whether Cochimi and Seri are not historically connected, especially as both their languages are related to Yuman, whereas all other Sonora tribes are Uto-Aztecans. The connection seems the more possible in that southwest of Tiburon lies San Esteban Island; beyond that, San Lorenzo; and beyond, the great peninsula. The open-water distance nowhere exceeds fifteen miles. This is a difficult but not impossible gap to cross on cane rafts; and the Seri have skilful knowledge of currents and winds. The passage across the Infiernillo between mainland and Tiburon is little more than a mile at the narrowest point, but they often paddle five in their open boats to take advantage of weather conditions. The Seri remember navigating to San Esteban, and there is historical mention of crossings of the Gulf.

The final evidence for or against derivation of the Seri from Baja California will probably be linguistic, and if, as seems possible though doubtful, Cochimi speech can still be recorded in the peninsula, the answer may be definitive. The materials at present available

2: Kroeber E-5 (1930) 1931 NU31 Seri NU31

SERIAN TERRITORY AND TRIBES

The close speech unity of the Seri, Tepoca, Salineros, Guaymas, and Upanguaymas is affirmed by all the older authors. The name Seri has however been used in several senses, even in pre-ethnologic days: (1), for the entire group of related tribes, sometimes excluding and sometimes including the Guaymas; (2), for the inhabitants of Tiburon Island and the immediately opposite stretch of mainland; (3), for the inlanders more or less associated with the mission establishments from Hermosillo upstream, in contrast with the "Tiburones" of the island; (4), for the modern fusion of mainlanders and islanders, which evidently includes descendants of all Serian tribes except the Guaymas and Upanguaymas, who became absorbed in the lowermost Yaqui tribe or village of Belem. It is in this fourth and last sense that I use the term; my principal informant, in the tradition given, employed the third meaning; McGee mostly the second, with a strong implication of the thorough apartness and greater primitiveness of the islanders, as compared with their ethnic kinsmen.

The Tastioteños of my informant appear not to be known otherwise. The coastwise alignment of tribes from south to north seems to have been: Guaymas, Upanguaymas, Tastioteño, Seri or Tiburones, Tepoca, Salinero.

As already mentioned in the Introduction, it seems inherently unlikely that Serian territory extended as far up the Sonora river as Ures, near which Orozco y Berra puts the boundary. His undue extension is probably due to the fact that the missions to which Serians (other than Guaymas-Upanguaymas) became attached, were situated in the valley of the Opodepe or Horcasitas branch of the Sonora. According to McGee[10] these Missions were: Santa Magdalena de Tepoca, founded in 1699, soon abandoned, location long lost but probably up-stream from next; Nacameri, 7 leagues below Opodepe; Nuestra Señora del Pópulo, 9 leagues down, at Horcasitas; Nuestra Señora de los Angeles, 3-4 leagues down, maintained, with preceding, until 1767; Pitic or Pueblo de los Seris, more than 12 leagues down (opposite Hermosillo), founded last, in 1742. Nacameri and Pitic sound like Pima, not Seri, words. Whether the river valleys from Hermosillo up were actually Pima territory, as here surmised, will have to be established from documentary sources, possibly supplemented by recollections of the Pima surviving about Ures. It is conceivable that Serian tribes had driven the Pima out of the Sonora valley shortly before the founding of the missions, thus effectuating the division into Pima Bajos and Altos; or that the Pima shrinkage out of the middle of their territory began after their mis-

[10] Pp. 66, 69, 70, 72.

Davis & Dawson E-5 (1922-1940) 1945
NU31 Seri NU31

THE SAVAGE SERIS OF SONORA—I

By EDWARD H. DAVIS AND R. YALE DAWSON

000 us first acquaint ourselves with the life and habits of the Seri before the Spaniard trod upon his thorny land.

● 131 His homeland speaks first of isolation. Tiburon Island, in the Gulf of California, and the adjacent coast of Sonora are pro-

[142]
[291]
[283]

FIG. 1. CHICO ROMERO, SERI CHIEF
WEARING A KILT OF PELICAN SKINS WHICH USED TO BE THEIR ONLY MATERIAL FOR GARMENTS. NOTE THE CORD MADE OF HUMAN HAIR CARRIED IN THE HAND.

tected on one side by stormy seas and on the other by even more forbidding deserts. The natural isolation of this habitat set its people apart from all other human beings, and the two or three thousand Seris, wandering between their desert island and the mountain-

[p.193(B)]

3:Davis & Dawson E-5 (1922-1960) 1945
MU31 Seri MU31

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FIG. 2. THE PELICAN SKIN ROBE
A TYPICAL WOMAN'S GARMENT BEFORE THE ADVENT OF THE COTTON CLOTH AND RAGS THAT REPLACED IT.

131 bounded coastal plain, lived a life so independent and so oblivious of the outside world that they might well have been on another planet.

182 The hard, inhospitable natural environment afforded by Seriland long ago moulded 105 the characteristics of its people and their whole mode of life. The distance between reliable food sources in the sea and supplies of fresh water created a pedestrian habit whereby they acquired a remarkable fleetness of foot and tremendous physical endurance against thirst and weariness on the trail. The monotonous sea-food diet induced a wandering, roving life in search of game and vegetal produce to supplement their meager rations. They became a homeless, burden-bearing people, wandering in family

[p. 194(A)]

S.Davis & Deeanne E-5 (1922-1940) 1945
NU31 Seri NU31

621 are four or five hundred people there, more during the peak of the season, and some fifty or more wattle and daub shacks arranged without plan or order, facing at every angle, but all near the beach on which the fishing boats land and are pulled up on shore. Refrigerated trucks carry fifteen to twenty-five tons of fish away daily during the height of the season, mostly the huge endemic totuava (Fig. 21). These great fish are dragged from the boats and lined up on the shore, where the heads are chopped off and the entrails are pulled out and left to be carried away by the tides or consumed by hundreds of scavenger gulls of the beach. A quarter mile
● [131] north of Kino is the present-day Seri village where nearly all the Seris now live semi-permanently because of the easy money and
[439] living. They have their own boats, fish a
[262] little for profit, and also bake the discarded fish heads for food. The Seri dwellings are
342 now scarcely inferior to many of the wattle and daub shacks of the Mexicans. Indeed,
[439] many of the Mexican shacks are built by Seris in exchange for manta cloth or food.

[p. 268(B)]

6: Monzón--1 E-5 (1952) 1953 NU31 Seri NU31

Seri Social Structure (1)

1. The material presented here was collected on a three-week visit to the Seri zone, the costs of which were defrayed by the I.N.A.H. [Instituto Nacional de Antropología e Historia], for the purpose of planning later investigations. It took place in January, 1952, in the company of Mr. Paul Finninger of M.C.M. [Mexico City College].

The permanent system of interacting influences that is presented among the Seri is of great scientific interest for its extreme characteristics of geographic isolation, environmental hostility, poverty, and the small size of the community.

The Seri occupy coastal territory in Sonora on the Gulf of California; formerly they covered a territory that toward the end of the 18th century, along the coast extended from Guaymas Bay, including it, to Punta Peñasco and, on the mainland, included the area in the vicinity of the present city of Hermosillo. They have been reduced little by little, now occupying only some isolated points on Cape Tepoca, Desemboque, and Tiburón Island, places from which, in spite of their inclemency, they are also being displaced.

Until some 30 years ago, most of the contacts of the Seri with Western culture had been warlike, ferociously defending their skins from the attacks of the yori (Mexican) invaders. Their contacts with the natives have been with the Yaqui, Papago, and those of Santa Rosalía (crossing the gulf). It was not until about 20 years ago, when the establishment of fishing camps was initiated with mestizo capital, that a new orientation in the treatment of the Seri came into being. Existing side by side with them at present are various Mexicans who exploit the products of Seri fishing, and some scientific investigators, principally from the United States.

They form enclaves in the heart of Aridamerica, with its cactus, shrubs and grasses, without flowing water, and with abundant flying and, especially, marine fauna.

7: Marroquin E-5 (1955) 1957 NU31 Seri NU31

Geographical Distribution

The Seri Indians live in two small Indian villages on the coast of the Gulf of California, State of Sonora, Desemboque and Punta Chueca. From there they frequently go to Isla Tiburón in the Gulf of California.

Approximately 35 Seri families live in Desemboque and 16 in Punta Chueca. Only in the first of these two places are there five "yori" (mestizo) families.

Sanitary Problems

The Seris have no defense against certain diseases which, like measles and flu, they acquire in their relations with the "yoris"; these diseases cause many deaths among the Indians. According to the ancient Seri Chico Romero, last Seri Governor, there was a great smallpox epidemic there about 1897 which caused the death of a third of the tribe which was living in Costa Rica, a small ranch on the coast of Sonora.

Seri Indian woman of Desemboque, Sonora. *Photo Henriette Yurchenco.*

In 1955 measles appeared among the Seris, with a great number of victims, children and adults; the actions of the rural teacher Leo Sandoval, the Linguistic Eduardo Mosser and of the sanitation authorities of Hermosillo, succeeded in keeping the mortality rate down; nevertheless, the number of deaths reached 5% of the total native population.

8: Ascher E-5 (1960) 1962 NU31 Seri NU31

Elsewhere (Ascher 1961) I have disputed this portrayal of the potential of existing ethnography, citing examples where qualitative and quantitative models have been constructed from ethnography and suggesting that one task for archeology is to codify the literature in a manner useful to itself. Regardless of doubts about existing ethnographies for archeological purposes, the worth of future ethnography for archeology will depend on the acquisition of the relevant kinds of information. Although discussion on the subject has been recorded (Tax *et al.* 1953: 229-232), no specific guides have been produced. This paper provides and discusses an example, which can be used as a paradigm, model, or guide of the kind of information to be collected from ongoing communities which would be of general value for archeology. The subject culture is that of the Seri Indians of Sonora, Mexico; the example describes a persistent trait complex associated with fishing for the Pacific green turtle, with particular emphasis on one trait in the complex, the harpoon foreshaft.

Example from the Seri Indians

The Seri, who numbered approximately 200 individuals in 1960, occupy a band of coastal desert about four miles wide and seventy miles long in the state of Sonora in western Mexico. The band extends along the Gulf of California from Kino Bay in the south to Desemboque in the north, opposite the largest island in the Gulf, Tiburon. Although the region is desert, with an estimated average rainfall of less than eight inches per year, falling mostly in July and August, it is comparatively rich in succulents and small land mammals. The Gulf forms a natural trap for large fish and marine mammals and is a breeding ground for the Pacific green turtle. The scantiness of fresh water has constituted, in the past and present alike, the single crucial limiting factor to agriculture and human occupancy.

In the past the Seri may have comprised from four to six tribal groups, and they were certainly numerically larger, with a maximum estimated population of 2,000 (Kroeber 1931: 53, 30). Until very recently they also occupied Tiburon Island, and at some more remote period they extended south, north, and east over a territory whose bounds are uncertain (Kroeber 1931: 5). On the basis of linguistic change, Kroeber (1931: 54) calculated that the Seri could have inhabited this general region for 1,000 years. It is uncertain whether the original occupation stemmed from Baja California via the Gulf of California or from the north and west via an overland route or routes (Kroeber 1931: 39-51). The first contact with Europeans occurred as early as 1540 (McGee 1898: 51).

In culture content the Seri are most closely affiliated with the Pima (Kroeber 1931: 51), but they do not share the practice of agriculture with them or with their western neighbors. The Seri are primarily fishermen; secondarily they gather the fruits of succulents; and to a still lesser extent they hunt game. McGee (1898: 214)

9:Malkin E-5 (1953-1955)1962 NU31 Seri NU31

I

INTRODUCTION

The territory discussed in this paper is somewhat larger than the historical area occupied by the Seris. While Seri settlements are limited today to a quite narrow range, the Tiburon Island and the coast of Sonora immediately adjacent to it, they are familiar with a far larger region, owing to their periodic trips, either on their own after fish, turtle and game or, occasionally, in the temporary employ of the Mexican fish-traders and even farmers. The further away from Tiburon perimeter, the lesser their familiarity with a locality.

The area is limited by Hermosillo in the east, Punta Penasco and Porto Libertad in the north, and Nogales in the south, and finally it includes also the coast of Baja California which the Seris sometimes visit. It also includes all of the islands within that area, Tiburon, Patos, Rasa, Angel de la Guarda, San Lorenzo and San Esteban.

With very minor variations this entire region belongs properly to the Sonoran desert. *Palo Verde, Palo Fierro, Pithaya, Mesquite, Cholla, Sahuaro,* prickly pear, elephant tree and creosote bush are the basic plants. Among the vertebrates, such forms as the Sonoran bighorn, deer, cougar, jumping rat, badger, coyote, skunk, rattlesnake, sidewinder and Gila Monster are most conspicuous and diagnostic. Among the birds are the roadrunner, the raven, as well as many pelagic or littoral birds, the pelican and cormorant among them.

The region is one of very low rainfall, limited to the hot summer months, in some places occuring only a few times in a year. Winters are chilly and dry with persistent winds and dust, with the temperature falling down, on rare occasion, to just above the freezing point. Summers are intensely hot, with daily temperatures usually over 100 and the water temperature of the sea along the shore not infrequently as much as 85 degrees. There are great differences between diurnal and nocturnal temperatures, very much influencing the desert life.

Within this region there are several different ecological zones or perhaps sub-zones, varying from the alkaline flats like Playa Noriega, and the alkali-and salt-permeated soils of Desemboque to the more bountiful slopes of the mountains and the irrigated mud-flats around Hermosillo.

For the sake of distinction, I have selected several of the typical localities or zones as a point of reference either because of their ecological distinctions or because of their signficance as a landmark, readily delineating a peculiar habitat. Personally I am familiar only with some of the

9:Malkin E-5 (1953-1955)1962 NU31 Seri NU31

II

[P6A]

OUTLINE OF SERI CULTURE

Territory

131 Historically the Seri territory at its greatest expansion extended from the coast of Mar del Cortez to Hermosillo and from Porto Libertad to Guayamas and included also the Tiburon Island. 101 Ethnically, the Seris represented a collection of [197] dialectically distinct tribes, the Guyma, Tepoca, etc., perpetually at war with each other, whose common characteristic was their culture, and who were framed in to the north by the Pima Alto and Papago, to the west by the now extinct Cochimi, to the east by the Opata and Pima Bajo and to the south by the Cahita, Mayo and the Yaqui.

648 But their area had fluctuated much. After the 131 bitter and disastrous wars against the Mexicans from the late 18th century through most of the 19th, the Seris lost out and were forced by the Mexican government to settle on Tiburon. This incarceration did not last long. McGee had already in 1894 found them on the mainland and Kroeber found them equally divided between Tiburon and Kino. In 1930 when he visited, evidently they lived largely in Kino Bay. As the Mexicans pressed on Kino moving in, in ever greater numbers, and as Japanese fisheries worked the Gulf out of Desemboque attracting the fish-loving Seris, their main settlement has moved once more. About 1940 most of the Seris moved into Desemboque and at the time of my visit, almost all of them lived [361] there while only two families made Tiburon their "permanent" camp. School and availability of the medical facilities as well as the location of the Mexican traders in Desemboque, part of whose scheme the Indians have become, attracted the Seris. Only occasionally today they roam inland or visit other areas, either owing to the hunting or fishing expeditions.

Numbers

161 Seri numbers fluctuated as much as their territory and had suffered immense diminution. I shall list the estimates below, indicating the source of the information:

	Authority		Source
1780	Velasco	2,000	McGee
1824	Troncoso	1,000+	"
1826	Ratio (Tiburon only)	1,000-1,500	"
1826	Hardy	3,000-4,000	"
1841	de Mofras	1,500	"
1844	....	550	"
1846	Velasco	500	"
c.1855	Encinas	500-600	"
c.1865	"	250-300	"
1894	Mashem, native	250-350	"
1930	Thomson	175	Kroeber
1934	Mex. En. Cifras	160	Ethn. Synth. Mex.
1953	Smith, Jr.	248	MS. Univ. of Ariz.
1955	Malkin	236	Malkin

10:Davis E-5 (1922-ca. 1939) 1965 NU31 Seri NU31

Section V

The Seri Indian

Unfinished Book Manuscript

War Chief of the Seris

The Pelican Skin Robe

175 131 Three centuries ago they were a friendly people living along the banks of the Sonora River from Hermosillo to where the flow of water sinks into the marshy banks along the coast of the Gulf of California.

175 197 The great Padre of the Pimas, Eusebio Francisco Kino, first visited the Seris in 1685, and found them "a very gentle people." After a short preachment to them he noted that "With very great insistency they begged me to remain with them and baptize them saying they would give me horses, fish and many products of the country, and that they would build me a house and a church. On three different days I said Mass in their country."

The Padre could not remain but two years later (1687), he sent Father Adan Lily to them. Lily established a mission---Santa Maria del Populo---on the banks of the River near what is now Hermosillo. The Seris remained faithful to the Padres when the whole country rose in revolt some years later.

175 [134] The withering hand of time worked against them, however. They were pushed farther and farther down onto the barren lands along the gulf coast until, finally, in a fierce and desperate retreat out into the sea and onto the desert Island of Tiburon. The swift and deadly channel between the Island and the Sonoran mainland gave them protection. They retrogressed through the centuries into a fierce and, perhaps, cannibalistic tribe.

114 [123] As late as 1922, when Edward Davis first visited Tiburon Island, a man was putting his life on the line when he stepped on the Island. But perhaps the quality of the man had something to do with it. As did Father Kino, Edward Davis was able to make friends of them.

The following manuscript is an incompleted book on the Seris which was found among his papers.

[pp. 6-138 not processed]

123 As a concrete result of that first trip to Tiburon, I secured a
115 *balsa* (boat) made of *carrizo* canes lashed together with native fibre,
581 which *balsa* Mr. Heye said it was the finest one in North America.

[226] This *balsa* was given to me without hesitation, although it furnished one or two families with sea food.

115 I wish to pay tribute to Senor Roberto Thomson who has been my constant companion, friend, guide and interpreter during the past twenty years, on all my trips to Tiburon and various parts of Mexico. I found him absolutely dependable, using excellent judgment in critical situations. He was honest, fair, intelligent, looking out constantly for my safety and comfort always, enduring hardships cheerfully. A better all-round out-door man I have never seen equaled. In short, he is a real *hombre*, and *muy simpatico*.

13 Tiburon, or *Shark Island*, long noted for its evil reputation as
181 the home of the most savage and treacherous Indians of North America,
193 lies in latitude 29°north and 112°30' west longitude, in the Gulf of California. It is shaped like a parallelogram about thirty-five miles long and eighteen to twenty miles wide, and lies parallel to the coast of Sonora, Mexico, of which, no doubt, at some remote period, it once formed a part.

It is separated from the mainland, for the most part, by a strait
[127] called *El Infernillo*, or The Little Hell, through which the rising tides pour a resistless flood. It is a desert island and supports a desert arboreal vegetation which includes several varieties of the cactus family and the *mesquite, palo verde, palo fierro, torote, palo blanco, ocotillo* and others. The giant *saguaro, sarbueso* and *pitahalla (pit-a-haya)* cactus are found here also.

Two desert ranges run lengthwise of the Island, which, on its westward or windward side, terminate in sea-worn cliffs against whose ramparts dash the heavy breakers of the Gulf, and on its eastern side, by long alluvial aprons from the foot of the mountains, sloping gently down to the lovely shell-strewn beaches. From this side the foot of the mountains lies from two to five miles distant. On this, the leeward side of Tiburon, the sea is much calmer, and often, in the early morning, it is as smooth and placid as a lake, reflecting each rosy, lavender and purple tint of the rugged Sierra Seri along the Sonoran coast, as in a mirror. The exquisite loveliness of marvelous sunrises over the pure limpid waters of the *Estrecho Infernillo* is mystical.

134 The soil is loose and sandy, unsuitable for cultivation, and im-
241 possible for producing domestic crops of any
142 Kind.

possible for producing domestic crops of any kind. There is no water for irrigation, and drinking water is very scarce, rising in only a few parts of the Island in places known only to the Indians.

For centuries these nomads of the wastes have borne an evil reputation as killers and cannibals, and many an expedition to the Island for trade or exploration has never left its beautiful shores. Lured away from their boats by friendly gestures of the Indians, every last man has been killed by arrow or rifle and the expedition never heard from. No survivor has ever returned to relate his experience and, up to the time of my visit, a man risked his life to go among the Seris on their Island.

Time after time, for four hundred years, the Spaniards, and later the Mexicans, have tried to exterminate them. They have been ambushed, hunted, killed on sight for years; diseases have decimated them; they have been the Ishmaelites among the native tribes of Mexico, with every man's hand against them. Now only a small remnant survives.

They have also taken heavy toll of those who have invaded their territory, which at one time extended from Altar on the north to Guaymas on the south, and from Hermosillo to the coast. When hard pressed, they retired to their Island sanctuary where, deep in the rugged ranges, they have defied pursuit. They are strong, brave, neither asking nor giving quarter in battle---men of marvelous endurance, tireless walkers, swift runners, wonderful trackers.

Within the last few years the Government has definitely set aside Tiburon as their exclusive home and sanctuary, with a strip along the mainland as their hunting and fishing ground, and where they can harvest the fruits of the giant cacti without fear of being killed. No person is allowed on this Island without special permission from the Governor of Sonora, or their Superintendent and devoted friend, Roberto Thomson. The Government has declared a permanent closed season on Seris.

As to the reputation of these nomads of the wastes of being cannibals, I quote the following extract from the *Life of Bill Fain:*

> After I had been in Yuma some time, a Yuma school teacher asked what I knew about Tiburon Island and the Seris. He said he had heard there was gold on the Island and he in company with a sailor intended to go down there. I said "Partner, I have been at the head of the Gulf several times, and interviewed many Mexican sailors and fishermen. These Seris are murderers and cannibals and my advice is, don't go, for as sure as God made little apples, you and your friend will make a fine feast for the *Tiburones.*"
>
> He said the sailor would manage the boat and they would prospect on the Island and pack the gold out. And besides, they were going unarmed and trust themselves to the tender mercies of the most treacherous Indians in North America. I told him, "My advice is to stay just as far away from that Island as you can, if you want to teach school any longer." My advice was thrown away.
>
> Some weeks later several mining men in skirting the coast opposite Tiburon, came across a place where the Seris had evidently been feasting on human flesh,

SERI BANDS

EDWARD MOSER

Mr. Moser, of the Summer Institute of Linguistics, holds a Master's degree in Linguistics from the University of Pennsylvania. He has been doing research on the Seri language during trips to Sonora since 1952.

ABSTRACT

In previous publications on the Seri, frequent reference to distinct Seri groups points to historical tribal divisions at some level. Recent research among the Seri has determined the former existence of six bands which included three dialect groups. Three of the bands were subdivided into clans. These six bands, whose formation may have been caused largely by internal struggles, were eventually crushed and reduced to a single group by the devastation brought about by external conflict.

INTRODUCTION

The Seri tribe is located in Mexico along the coast of Sonora between Bahia Kino and Puerto Libertad, and on Tiburon Island (Fig. 1). Today it consists of approximately two hundred and eighty persons who call themselves *kongkaak*[1] "the people." Although at one time it was comprised of six distinct bands (Fig. 2), the tribe has now lost its band organization. However, much of the late history of these now-defunct tribal units remains vivid in the minds of the Seri. The purpose of this paper is to present some of the salient features of these former bands, to discuss certain interrelations between them, and to recount the Seri version of the disintegration of the band system.[2]

Three published studies on the Seri should be mentioned.[3] Of these, the reports by Kroeber and by Griffen are the more reliable. All three investigators mention tribal divisions which Griffen rightly designates as bands.

BANDS

BAND I *xika ?ai kkoii* "they who live toward the true wind"

This group is commonly referred to in the literature as the Tepoca or Salinero. As shown on Fig. 1, they inhabited an area which extended from a point slightly north of Puerto Lobos to Punta Tepopa on the south. The territory extended inland, encompassing the general area delimited by the San Ignacio River.

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FIG. 1. Area of Present Seri Occupation

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One descendant of this band states that long ago his ancestors wandered north from the region of Guaymas. Eventually, they established land rights to the coastal area extending from Campo Ona on the south to Puerto Lobos on the north. Before long, however, they relinquished claim to the area between Campo Ona and Punta Tepopa. [173] [167] [425]

It is to be understood, of course, that groups from this band, as well as groups from other bands, at times ranged far afield from their respective territories. Band I, for instance, had campsites as far north as the mouth of the Colorado River. [484]

642 BAND II *xika xnai kkoii* "they who live toward the south wind"
101 This group is commonly referred to as the Tastioteño. These
● 131 people roamed the coastal area from Guaymas to Bahia Kino.

BAND III *ta?eowkw kongkaak* "the people of Tiburon Island"

This band is referred to in the literature as the Seri or Tiburones. At one time their territory included only the northern and eastern coasts of Tiburon Island. Later it was extended to include the whole coastal strip of the mainland directly opposite the island.

BAND IV *?eno kongkaak* "the people of the desert"

The area this band occupied in the center of Tiburon Island is shown in Fig. 2.

642 BAND V *xnaamotat* "they who came from the direction of the
131 south wind"
173 The Seri believe that this band came originally from a region
628 south of Guaymas. It may have been the Upanguayma group
[101] mentioned in the literature. Its members came in contact with the members of Band II with whom they resided, apparently for a period of years. Whether the *xnaamotat* were Seri or non-Seri,
[197] I have been unable to ascertain. Since no informant suggests that this group spoke another language besides Seri, it seems reasonable to believe that it was simply a distinct dialect group.

642 The *xnaamotat* were a belligerent people and, after fighting
628 broke out between them and the members of Band II, they
721 traveled northward. Eventually they established themselves on
[131] the relatively small coastal strip located east of Punta Tepopa as shown in Fig. 2.

642 BAND VI *xika ?ast ano koii* "they who live in the mountains"

[101] This group, which has been recognized previously only by
[131] Griffen, inhabited San Esteban Island. It laid claim also to the greater part of the coast on the southern end of Tiburon Island. One informant stated that in earlier times this band had ranged over all of Tiburon Island except for the northern two-thirds of the eastern coast, but that they were slowly pushed southward by the movements of other groups.

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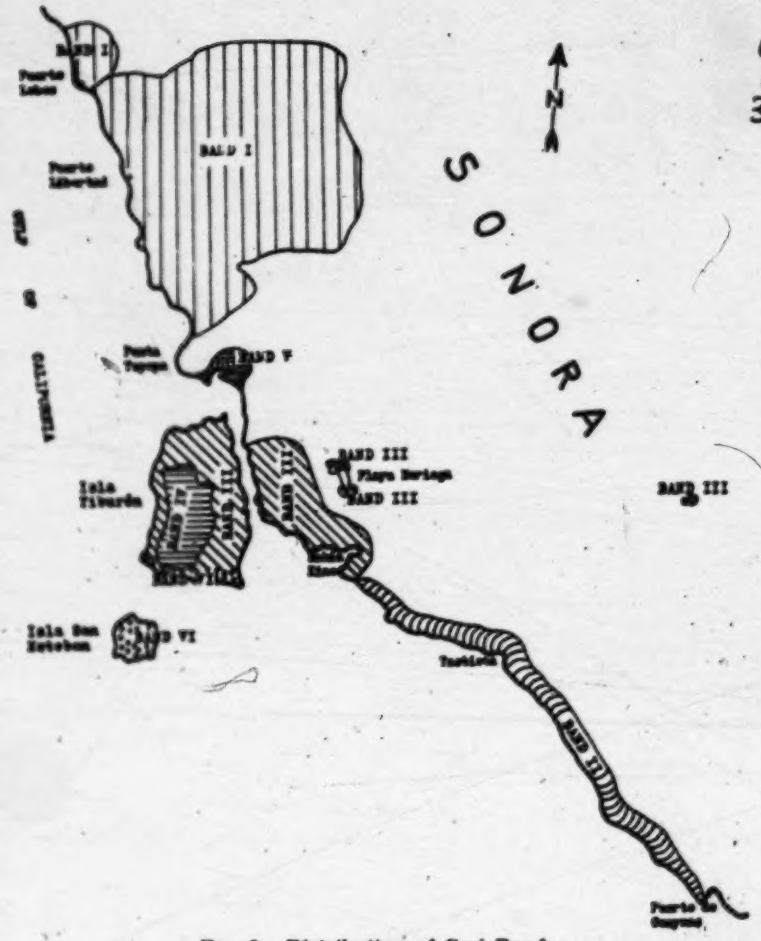

FIG. 2. Distribution of Seri Bands

DIALECTS

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The existence in former times of three distinct but mutually intelligible dialects seems evident.

Dialect 1 was spoken by Bands I, II, III, and IV. Any diversity of speech among these four bands seems to have been confined to word formation. The Seri language of today is derived largely from this dialect. [192]

Dialect 2 was spoken by Band V. This dialect is extinct and only scanty data on it can be gathered. From a number of expressions gathered, it appears that the dialect was characterized by extreme intonational contours. [194]

11: Moser L-5 (1956-1961) 1963
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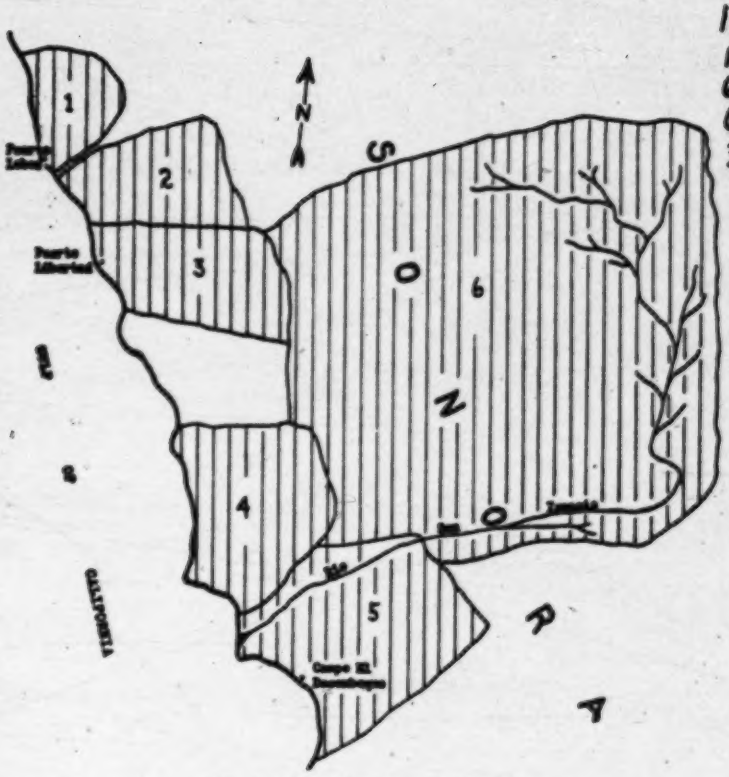

FIG. 3. Subdivisions of Band I

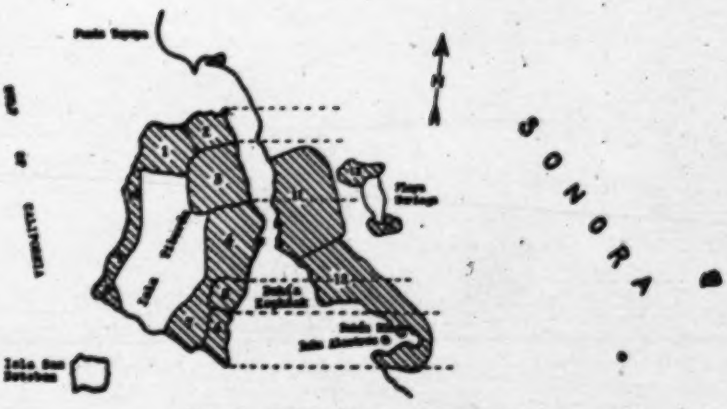

FIG. 4. Subdivisions of Band III

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621 Little information could be elicited about subdivisions 7, 8, 9, and 10. The reason for this might be that Band VI was slow in
[167] abandoning those coastal areas (if it actually did inhabit them)
[628] as it was being displaced by Bands III and IV.

621 The Seri say that long ago several men, called *?ant i?akimhoh*
642 "they who explain the land," came to Tiburon Island and told the
173 people along the eastern shore that they owned also a corre-
425 sponding strip of land on the mainland. Thus the inhabitants of
167 subdivisions 2, 3, 4, 5, and 6 laid claim to the coastal areas directly across the channel from them as shown by the dotted lines on Fig. 4. They assumed that their new territories extended inland
[922] to include as much terrain as they chose to claim. At first the people went to their mainland areas primarily to gather cactus fruit. Eventually some of them remained on the mainland and established subdivisions 11 and 12. This establishment superseded the claims of the five Tiburon Island subdivisions to their main-
[101] land territories. Although the mainland subdivisions 11 and 12 formed, in some respects, a separate band in their own right, they retained their name, *ta?eowkw kongkaak* "the people of Tiburon Island." Eventually this group returned to Tiburon.

621 Of subdivisions 13 and 14 which are shown on Fig. 4, very
642 little is known. The people of subdivision 13 inhabited an area
131 encompassing the northern end of the dry lake, La Playa Noriega
[829] (San Bartolo). Some of the Seri believe that these people were giants. Although in this area I have found clay figurines and other
[172] artifacts common to abandoned camps elsewhere, the Seri do not
[173] know the names of the camps of this subdivision. Subdivision 14 occupied the area surrounding the southern end of the same dry lake.

Subdivision 15 occupied the general area which is now Villa de Seris, a settlement on the southern edge of Hermosillo. As
[167] Hermosillo grew, it became increasingly difficult for these Seri to maintain their customary way of life, and they eventually returned to Tiburon Island.

642 BAND VI
621 Band VI became divided into four subdivisions, the names of
101 which are:

xnitom	"_____"
pahii	"flint"
kofte okl ifa	"large iguana peninsula"
koiih	"tubular"

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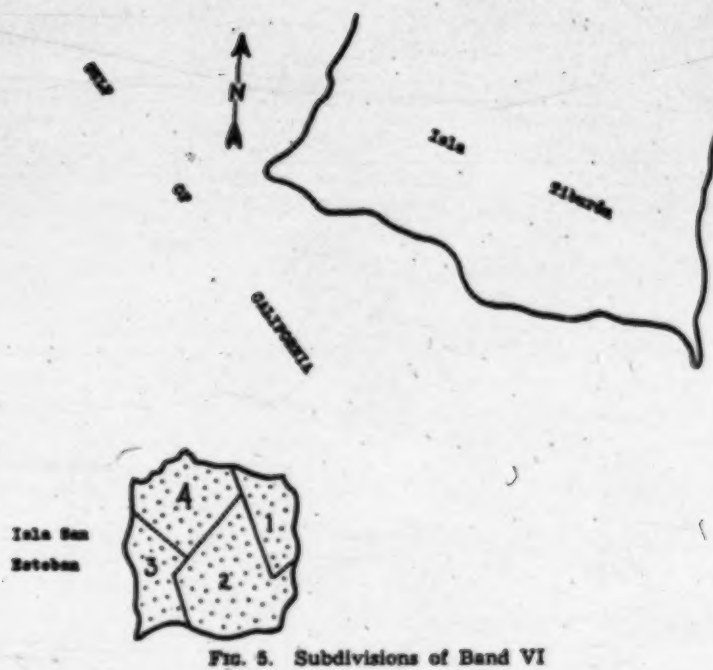

FIG. 5. Subdivisions of Band VI

BAND SOCIAL STRUCTURE

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The social structure of the bands can be properly understood only in relation to the social structure of their smaller units, the *i?iziitang*. The kin group which resided in and dominated each such subdivision constituted a clan.[5] This group conforms to Murdock's three major specifications for clan designation.[6]

Murdock's first specification states that a kin group, to constitute a clan, must be based explicitly on a unilinear rule of descent. The kin group of each Seri band subdivision was based on patrilineal descent. An individual was closely associated with the group of kinsmen of his subdivision, all of whom were related to him through males only. The father was the head of his household. For example, he assumed leadership in marriage negotiations. Upon his death, the eldest son took his place.

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The second specification states that such a kin group must have residential unity. Seri marriages were exogamous with respect to the subdivision,[7] and the rule of residence was patrilocal. The domicile was set up near the home of the groom's parents.

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BAND V

These people were apparently hunters, gatherers, and fishermen. It is said that they speared fish from the shore since they did not use balsas. They too apparently raided the ranches. Their warring nature has already been discussed; it resulted in the acquisition of few friends. However, several marriages between members of this band and members of subdivision 2 of Band III are said to have occurred.

BAND VI

The members of Band VI lived on San Esteban Island and were the most primitive of the tribe. They lived in huts made of driftwood and in caves and made extensive use of the balsa. Although they did not have the bow and arrow, they did become expert in the use of the spear. The people depended mainly on a seafood, iguana, and maguey diet.

Perhaps it was due to the confined living space on the small island with the accompanying lack of fresh water that relations between the four subdivisions were precarious and fights broke out frequently. The Seri today stress the fact that the members of this band were impetuous and unpredictable.

Their relations with the other bands were generally good however. Seri from Band III were free to visit San Esteban where they were well treated.

The San Esteban people seldom traveled to the mainland, and, since they spoke no Spanish, it is probable that they made no peaceful contact with non-Seri groups.

COLLAPSE OF THE BAND SYSTEM

Internal strife in the Seri tribe was probably a major factor in the establishment of the band system. External strife was a major factor in its downfall.

Reference has been made to the plundering, killings and rustling of cattle to which certain of the bands were dedicated. The concern of the Sonora government was aroused, and steps were taken to crush the rebellious groups. According to the present-day Seri, military action by army units and rancher outfits against the various bands resulted in the near-destruction of the whole tribe.[11]

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[131]
[173]

BAND V

It was stated above that this band fought with Band II and then with Band I. Since Band V was likely killing cattle, they also may have been harassed by soldiers. Eventually Band V abandoned its territory near Punta Tepopa and headed south along the coast to a camp near present-day Bahia Kino. From this camp the entire group disappeared and was never seen again by members of the other bands. The Seri of today believe that Band V either traveled inland or was destroyed by a non-Seri force.

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[175]

BAND II

These people were rustlers and marauders. Government intervention in the situation was inevitable. The Seri recount the following final encounter between this group and the government forces.

The entire remaining membership of Band II was hiding out in a nearly inaccessible swamp thicket at Bahia Kino. Knowing that an armed force of soldiers and ranchers was searching for them, the people left their camp to seek safety elsewhere. Almost immediately they were attacked by the superior armed force which proceeded to wipe out the whole group. A youth who had avoided capture is said to have reported the affair to the Seri on Tiburon Island. This event may have occurred during the Encinas Wars fought from 1855 to 1865.

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BAND VI

The members of this band on San Esteban Island were little interested in the mainland and did not participate in the raids on man and livestock there. Nevertheless, they were to share in the severe punishment meted out to the bands guilty of multitudinous depredations.

Sometime after the massacre of Band II, a ship arrived at San Esteban, and many of the people were induced to go aboard. The rest of the inhabitants followed the ship to a camp on the eastern side of Tiburon Island where they were to receive gifts. As the people congregated, they were herded into a stone corral. Apparently, some of the San Esteban men were killed at this time. The rest of them, along with the women and children, were taken to Santa Rosa point on the mainland. Here, the Seri say, more of the men were killed. The remaining men were strung together by wire and led away, never to return.

The San Esteban women and children, along with some Tiburon Island women and children (of Band III), were taken in

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

lying ranges and buttes. The most conspicuous inequality of the slopes (partly because of its coincidence with tide-level) is offered by the rugged ranges of Seriland. These may be considered four in number, all approximately parallel with each other and with the coast; the first is a series of eroded remnants (Cerros Anacoretos) from 600 to 1,200 feet in height; the second is the exceedingly ragged Sierra Seri, culminating in Johnson peak 5,000 feet above tide; the third is Sierra Kunkaak, attaining about 4,000 feet in its highest point; the fourth is Sierra Menor, some 2,000 feet high, with the northern extremity sliced off obliquely by marine erosion. The principal arm of Desierto Encinas lies between the first two ranges, El Infiernillo separates the second and third, while a subdesert valley divides the third from the fourth. The valleys correspond more closely than the ranges; if the land level were 100 feet higher the strait and its terminal bays would become an arid valley like the others, while if the sea-level were 500 feet higher the four ranges would become separate islands similar to Angel de la Guarda and others in the gulf. 133

The Sonoran province is notably warm and dry. The vapor-laden air-currents from the Pacific drift across it and are first warmed by conduction and radiation from the sun-scorched land, to be chilled again as they roll up the steeper roof-slope to the crest; and the precipitation flows part way down the slopes, both eastward and westward from the Sierra Madre—literally the Mother (of waters) range. A climatal characteristic of the province is two relatively humid seasons, coinciding with the two principal inflections of the annual temperature-curve, i. e., in January-February and July-August, respectively. In the absence of meteorologic records the temperature and precipitation may be inferred from the observations at Yuma and Tucson,[1] which are among the warmest and driest stations in America, or indeed in the world; though it is probable that such points as Caborca, Bacuachito, and Hermosillo are decidedly warmer and perhaps slightly moister than Yuma. The ordinary midday summer temperature at these points may be estimated at about 110° in the shade (frequently rising 5° or 10° higher, but dropping 20° to 50° in case of cloudiness); the night temperature at the same season is usually 50° to 75°, though during two-thirds of the year it is liable to fall to or below the freezing point. The sun temperature is high in comparison with that measured in the shade, the exposed thermometer frequently rising to 150° or 160°, according to its construction, while black-finished metal becomes too hot to be handled, and dark sand and rocks literally scorch unprotected feet. The leading characteristic of the temperature is the wide diurnal range and the relatively narrow annual range; another characteristic is the uniformity, or periodic steadiness, of the maxima, coupled with variability and nonperiodicity of the minima. 132

[1] The following monthly and annual meteorologic summaries, compiled from United States Weather Bureau records at these stations, have been kindly furnished by Prof. Willis L. Moore, Superintend-

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

132 The precipitation on the Sonoran province is chiefly in the form of rain; in the winter humid season snow falls frequently on the Sierra Madre and rarely on the outlying ranges; in both humid seasons (and in humid spots at all seasons) dew forms in greater or less abundance. Fog frequently gathers along the coast, especially during the winter and in the midsummer wet season, and sometimes drifts inland for miles. The mean annual precipitation may be estimated at 20 or 25 inches toward the crest and half as much toward the base of the high sierra; thence it diminishes coastward, probably to less than 2 inches; the mean for the extensive plains forming the greater part of the province may be estimated at 3 or 4 inches. The greater part of the precipitation is in

out of the Sonora. The tabulated records represent the observations of twenty years at Yuma and ten years at Tucson.

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
Absolute maximum temperature, Fahr.:													
Yuma	81	91	100	105	112	117	110	115	113	100	92	83	110
Tucson	81	85	88	101	100	111	110	100	100	97	89	82	111
Absolute minimum temperature, Fahr.:													
Yuma	22	25	31	39	45	52	61	60	56	41	31	25	22
Tucson	14	20	24	32	35	39	44	49	40	31	23	11	11
Mean maximum temperature, Fahr.:													
Yuma	65.1	70.7	75.3	85.4	93.2	105.3	106.7	104.9	99.6	87.2	75.9	67.4	88.6
Tucson	63.9	67.0	74.5	85.4	91.4	100.3	96.0	94.0	92.3	82.3	71.5	65.7	81.8
Mean minimum temperature, Fahr.:													
Yuma	42.0	45.1	50.0	58.1	65.4	68.6	77.3	77.4	70.3	58.5	48.0	44.7	58.4
Tucson	34.0	41.0	44.0	48.1	55.3	62.6	70.0	70.0	67.3	52.1	42.5	35.1	52.9
Mean temperature, Fahr.:													
Yuma	54.1	57.6	62.5	72.0	77.5	86.9	92.0	90.7	84.4	73.0	61.9	56.0	73.3
Tucson	49.4	53.2	59.5	66.9	73.9	81.5	82.3	82.5	77.7	68.5	57.0	50.0	67.4
Mean precipitation (inches and hundredths):													
Yuma	0.49	0.91	0.78	0.07	0.01	T.	0.14	0.93	0.10	0.32	0.20	0.49	3.94
Tucson	0.75	0.93	0.80	0.27	0.10	0.39	2.06	3.03	1.10	0.33	0.37	0.85	11.10
Prevailing winds:													
Yuma	E.	E.	W.	W.	W.	SW.	S.	S.	NE.	NE.	E.	E.	E.
Tucson	S.	S.	S.	W.	S.	SW.	SE.	SE.	S.	S.	S.	SE.	S.
Average cloudiness (scale 0-10):													
Yuma	2.4	2.4	2.6	1.6	1.3	0.8	1.0	2.3	1.1	1.3	1.7	2.3	1.8
Tucson	3.0	2.9	2.5	1.8	1.0	1.5	4.3	4.4	1.9	1.0	1.8	2.9	2.6

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

local storms, frequently accompanied by thunder-gusts or sudden tempests, though cold drizzles sometimes occur, especially at the height of the winter humid season. Except where the local configuration is such as to affect the atmospheric movements, the distribution of precipitation is erratic, in both time and space; some spots may receive half a dozen rains within a year, while other spots may remain rainless for several years; and the wet spot of one series of years may be the dry spot of the next. 132

The climatal features of Seriland are somewhat affected by the pronounced topographic features of the district. Snow sometimes falls on Sierra Seri, and probably on Sierra Kunkaak; gales gather about the rugged ranges at all seasons, and sometimes produce precipitation out of season; the extreme heat of midday and midsummer is tempered by the proximity of the tide-swept gulf; and since most of the local derangements tend to augment precipitation and reduce temperature, it would seem safe to estimate the mean annual rainfall of the tract at 4 or 5 inches, and the mean temperature at about 70°, with a mean annual range of some 30° and an extreme diurnal range of fully 80°.

The configuration and climate combine to give distinctive character to the hydrography of the Sonoran province. The melting snows and more abundant rains of the high sierras form innumerable streams flowing down the steeper slopes toward the piedmont plains, or soak into the pervious rocks to reappear as springs at lower levels; sometimes the streams unite to form considerable rivers, flowing scores of miles beyond the mountain confines; but eventually all the running waters are absorbed by the dry sands of the plains or evaporated into the drier air; and from the mouth of the Colorado to that of the Yaqui, 500 miles away, no fresh water ever flows into the sea. During the winter wet season, and to a less extent during that of summer, the mountain waterways are occupied by rushing torrents, rivaling great rivers in volume, and these floods flow far over the plains; but during the normal droughts the torrents shrink to streamlets purling among the rocks, or give place to blistering sand-wastes furlongs or even miles in width and dozens of miles in length, while beyond stretch low, radially scored alluvial fans, built by the great freshets of millenniums. Only a trifling part of the rainfall of the plains ever gathers in the waterways heading in the mountains, and only another small part gathers in local channels; the lighter rains from higher clouds are so far evaporated in the lower strata of the air as to reach the earth in feeble sprinkles or not at all; the product of moderate showers is absorbed directly by earth and air; while the water of heavy rains accumulates in mud-burdened sheets, spreading far over the plains, flowing sluggishly down the slopes, yet suffering absorption by earth and air too rapidly to permit concentration in channels. These moving mud-blankets of the plains, or sheetfloods,[1] are often supplemented by 133

[1] Defined and described in Sheetflood Erosion, Bull. Geol. Soc. Am., vol. VIII, 1897, p. 87.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

is approximately doubled at neap tide and tripled at spring tide twice in each twenty-four hours. Then, as the crest of the main debacle advances into the upper gulf beyond Punta Tepopa, the trough of the ebb is already approaching the Tiburon-San Francisquito constriction; and even before the final flooding of El Infiernillo from the north is completed, the waters of Bahia Kunkaak are receding and a tiderip is roaring through Boca Infierno at a rate sufficient to half empty the reservoir of its accumulated volume before the ebb trough has rounded the island to the head of the strait. Thus the effect of the exceptional tides of the gulf and the peculiar configuration of Seriland is to concentrate and accentuate tidal currents in El Infiernillo, and to convert the channel into a raceway for nearly continuous tide rips. According to Dewey, the spring tides are 10 feet and the neaps 7 feet about the northern end of the strait;[1] in December, 1895, the tides about Punta Blanca and Punta Granita were roughly determined as 13 or 14 feet at spring and 7 or 8 at neap, the range varying considerably with the direction and force of the wind; and the consequent current through Boca Infierno was estimated at 4 to 8 miles per hour, the higher velocity of course coinciding with the spring tide. The change in direction of the current is almost instantaneous—indeed, the run is in opposite directions on opposite sides of the narrow strait when the wind sets obliquely—so that the tidal flow is practically continuous. The currents are of course slacker in the body of the strait, but even here suffice to transport coarse sediments; and it is to this agency that the "shoals and sand spits" noted by Dewey[2] and the maintenance of a deep channel through Boca Infierno are chiefly to be ascribed. The materials of Punta Tormenta and Punta Tortuga attest the transportation of pebbles up to 3 or 4 inches in diameter by the combined work of waves and tidal currents.

Like other mountain-bound water bodies, the portion of the gulf washing Seriland is exceptionally disturbed by winds of given velocity by reason of the high angle of incidence; and moreover the exceptionally prominent local configuration disturbs the atmospheric currents in a manner somewhat analogous to that in which the tidal currents are disturbed; so that the winds are highly variable but generally strong. Under the combined action of tide and wind the waters are normally ruffled; choppy seas freely flecked with whitecaps are rather the rule than the exception,[3] and are replaced less frequently by calms than by steadier billows breaking in continuous surf on sand-beaches (figure 5) and dashing into foam-flecked and rainbow-tinted spray-jets, bathing the rocky cliffs for 50 feet above their bases. Sometimes the wind stills suddenly, when the sea sinks to rythmic swells, soon extinguished by reaction from the irregular shores and by the interference of tide-currents; but the swell seldom dies away before the gale springs again.

[1] Publication No. 50, U. S. Hydrographic Office, Bureau of Navigation, 1880, p. 142.
[2] Op. cit., p. 142.
[3] A stiller and navigable condition of the sea is shown in the view of Punta Tgnacio, plate IV.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

132 The broad valley between Sierras Seri and Kunkaak, bottomed by El Infiernillo, is especially beset by fierce and capricious gales; the general atmospheric drift is disturbed by the leading and lesser sierras, as well as by temperature convection from the gulf, and eddies are developed in such wise as to send air-currents directly or obliquely up or down the valley. These local or sublocal winds are characteristic. Judging from observations covering several weeks, the valley is wind-swept longitudinally for an average of eighteen or twenty hours daily, the winds ranging from strong breezes to gales so stiff as to load the air with sand ashore and spray asea; and even the calms may be broken

[122]

FIG. 5.—Embarking on Bahia Kunkaak in la lancha Anita.

any minute by sudden gusts and williwaws, passing rapidly as they arrive. Not only waves but wind itself combines with tides to shape the [134] structural features of the valley; nowhere within it do flour-fine sands like those of Desierto Encinas occur, save as a hardly perceptible constituent of the dunes and banks of coarser sand—they have been blown into the sea or beyond the limits of the valley. Throughout the strait so expressively named by its explorers, the capriciousness of the sea 132 culminates, despite the shoalness and the protection from easterly and 133 westerly winds; the storm currents and tide-currents are half the time opposed, raising breakers even when the air is nearly still; eddies and whirls and cross-currents arise constantly, and even at the stillest

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

hours tumultuous waves come and go sporadically, while about the mile-wide boca the choppy sea sometimes takes the form of spire-like jets, spurting 5 or 10 feet high and breaking into aigrettes of glittering spray in most unwaterlike and wholly indescribable fashion. Dewey described the strait as "unsafe for navigation by any except the smallest class of vessels"; it is safe, indeed, only for portable and indestructible craft like the Seri balsas, which may be put off or carried ashore at will by craftsmen willing to wait for wind and tide, and unpossessed of impedimenta of a sort to be injured by wetting. Of such an environment the balsa is a natural product.

The adjunct islets of Seriland are miniatures of Tiburon in all essential respects, save that they are without fresh water. The largest is San Esteban, a somewhat complex butte rising sharply from the waters in a nearly continuous sea-cliff recording vigorous work by storms and tides; it is occasionally visited by the Seri, chiefly in search of water-fowl and eggs. The most important of the series in Seri economy and mythology is Isla Tasane, off the mouth of Bahia Kino; it is a rugged butte some 600 feet high, rising in wave-cut cliffs on the sea side and pedimented by low spits and banks of sand toward the lea; the sand-banks are literally flocked with pelicans, while other fowl cover the flatter ledges and crowd the crannies of the pinnacle. Isla Turner is a somewhat smaller and still more rugged butte, bounded on both sides by precipitous cliffs, while Roca Foca is merely a great rock shelving upward from the storm-swept waters off the most exposed angle of Tiburon; in the crannies of the former birds nest abundantly, while the lower ledges of both are haunted by seals. Isla Patos, north of Tiburon, is a breeding-place for different water-fowl, and is especially noted as a refuge for ducks; it, too, is for the most part a rocky butte, with a sandy shelf at the eastern base. Beyond San Esteban lies the similar but smaller Isla San Lorenzo, while Isla Salsipuedes and a few other islets stretch thence northward half way to the southern point of Isla Angel de la Guarda, the second-largest island of the gulf. San Lorenzo and the smaller islets are occasionally visited by the Seri, partly for a mineral pigment used in face-painting, partly in quest of game; and they sometimes push on to the larger island to enjoy its fairly abundant game, including the easily taken iguana, amid the ruins of an ancient culture apparently akin to that of southern Mexico. Even the most frequented islets, Tasane and Patos, can be reached only by crossing miles of open sea; but in their way the Seri are as canny navigators as they are skilful boat-builders—it is their habit to hug the shore in threatening weather, to await wind and tide for hours or days together, to set out on distant journeys only when all conditions favor, and in emergency to seize inspiration from the storm like the vikings of old, and lend supernormal power to the control of their craft.

Summarily, the prevailing features of Seriland may be said to be

252 of nutritious material which was ground to powder on their stone ahsts, winnowed in shallow baskets and made into a meal or paste.

764 824 The abundant cacti of many species served several other functions in the domestic economy of the Seris. The thorny cholla whose insipid fruits were not fit to eat and whose spines were a constant threat to the unprotected bodies of the Seris, found one use, nevertheless, in the burial procedure. After a body was partly covered with earth in the three foot deep grave, it was densely overlaid with chollas before leveling, to discourage the coyotes from digging for the body.

396 824 The dry skeletons of the giant cacti provided the long, cylindrical poles used in knocking off ripe pitahayas as well as in all other instances in which a straight, slender pole was needed. Since the advent of the open boat in modern times, the cactus skeleton has come in for a new use, for after trituration between stone ahst and hupf, it was found to yield a satisfactory caulking compound when mixed with sea-lion oil.

312 824 The barrel cacti, *Ferocactus Wislizenii* and *F. Coulteri*, though ordinarily abundant on the Sonoran desert are rare in Seriland and practically absent from Isla Tiburon where they may easily have been exterminated by the improvident Seris during their centuries of occupancy on account of their recognized value as water providers on the wastelands over which the Seris so frequently ventured.

342 [132] 824 These Indians found housing no problem, for, living under a climate in which frost is rare and rain infrequent, they found little need for shelters except for protection against the blazing desert sun. Camps that were occupied for more than a day or two, however, usually saw the appearance of a group of crude sun shelters. These were usually made of long, flexible ocotillo branches, *Fouquieria splendens*, stuck in the sand and fashioned into an arched framework over which a more or less complete covering of brush was piled. If, by the sea, a windbreak were desired, the brush top and siding were usually augmented by the addition of several empty turtle shells.

262 824 On the delta plain of the Rio Sonora, the mesquite, *Prosopis juliflora*, grows in remarkable luxuriance, these gnarled, spiny trees forming an almost continuous open forest 20-40 feet high. Its fruit, consisting of small, hard beans borne in slender, woody pods forms a concentrated, starchy food that the Seris found highly nutritious if not appetizing. In late summer when all fresh vegetable food had withered and disappeared, provided the turtle fisheries had not yet attracted them back to their island, they often spent [252] some weeks gathering the beans and grinding them into a meal which was eaten as a watery atole or as a paste mixed with sea-lion oil. The more straggly and thorny cat's claw mesquite, *Acacia Greggii*, and the ironwood, *Olneya tesota*, also yielded woody beans in limited quantity.

[298] In the deeper gorges of the mountains the Seris found *Guaiacum Coulteri* yielding a berry of medicinal properties and also *Jacquinia pungens* which [534] produced a nut, edible when not quite ripe, and forming a favorite rattle-bead when dry.

Along sandy washes, particularly on the lower flood plain of the llano grows a low, shrubby weed, *Hymenoclea monogyra*. Although during times of drought it shrinks to stunted tussocks, after periods of heavy rain its flourishing fens produce abundant seeds eaten both by the beasts of the plain and formerly by the Seris.

385 [1771] Before the advent of the tin can and the cardboard carton, basketry was an important handicraft among these Indians.

[Text continues on p. 138--Analyst]

9:Malkin E-S (1953-1955)1962 NU31 Seri NU31

I

INTRODUCTION

[13] [12] [36] [22] [46] The territory discussed in this paper is somewhat larger than the historical area occupied by the Seris. While Seri settlements are limited today to a quite narrow range, the Tiburon Island and the coast of Sonora immediately adjacent to it, they are familiar with a far larger region, owing to their periodic trips, either on their own after fish, turtle and game or, occasionally, in the temporary employ of the Mexican fish-traders and even farmers. The further away from Tiburon perimeter, the lesser their familiarity with a locality.

The area is limited by Hermosillo in the east, Punta Penasco and Porto Libertad in the north, and Nogales in the south, and finally it includes also the coast of Baja California which the Seris sometimes visit. It also includes all of the islands within that area, Tiburon, Patos, Rasa, Angel de la Guarda, San Lorenzo and San Esteban.

137 With very minor variations this entire region belongs properly to the Sonoran desert. *Palo Verde, Palo Fierro, Pithaya, Mesquite, Cholla, Sahuaro,* prickly pear, elephant tree and creosote bush are the basic planta. Among the vertebrates, 136 such forms as the Sonoran bighorn, deer, cougar, jumping rat, badger, coyote, skunk, rattlesnake, sidewinder and Gila Monster are most conspicuous and diagnostic. Among the birds are the roadrunner, the raven, as well as many pelagic or littoral birds, the pelican and cormorant among them.

132 The region is one of very low rainfall, limited to the hot summer months, in some places occuring only a few times in a year. Winters are chilly and dry with persistent winds and dust, with the temperature falling down, on rare occasion, to just above the freezing point. Summers are intensely hot, with daily temperatures usually over 100 and the water temperature of the sea along the shore not infrequently as much as 85 degrees. There are great differences between diurnal and nocturnal temperatures, very much influencing the desert life.

134 Within this region there are several different ecological zones or perhaps sub-zones, varying from the alkaline flats like Playa Noriega, and the alkali-and salt-permeated soils of Desemboque to the more bountiful slopes of the mountains and the irrigated mud-flats around Hermosillo.

121 For the sake of distinction, I have selected several of the typical localities or zones as a point of reference either because of their ecological distinctions or because of their signficance as a landmark, readily delineating a peculiar habitat. Personally I am familiar only with some of the

[P. 1A]

[123] *Dono*. It has fallen into sad decay---many buildings in ruins, ditches gone, mill and machinery idle; no water, very few people and a general appearance of slow, peaceful and painless disintegration.

The one redeeming feature is the daughters of the *senor*. Two of them were remaining at home, and in all Sonora I do not believe there are two more charming, modest, industrious as well as lovely maidens than are Laura and Clara Feliz. In addition, they are perfectly artless and very unassuming and retiring. I had with me some slight gifts for Laura and her father whom I had met before, but nothing for Clara, a tall handsome girl of sixteen. Laura thanked me with grace and charm.

After a visit of half an hour we continued on our journey, and after we had travelled about twenty miles more, passing the end mountain of *Siete Cerros*, or Seven Mountains, we reached San Carlos Rancho, another of Yaabel's ranches, containing four and a half square leagues or about forty square miles.

Another very sweet daughter of Feliz's---Lupe, or Guadalupe, lived here. She teaches school with twenty-six Mexican children and a night school for older boys. The school building is a low one-story structure of *carriso* reeds and earth roof. Both wind and sun can come through the cracks. The tables are built of rough boards and the benches had no backs. Everything was as neat and clean as conditions would permit.

At a little Mexican house, whose owner was a friend of Roberto, the wife cooked our meat and coffee and dished up the ever-ready beans. We ate outside the house by the light of a camp fire while a crowd of men and children stood gaping at us and drinking in the news that Roberto brought from the great metropolis. The conversation was a rapid-fire Mexican and sounded like machine guns going off, and this kept up long after Stan and I retired. We slept under a shed. Roberto insisted that I sleep on a bed, instead, with rawhide springs.

The Indians curled up around the camp fire, blankets on top, earth below.

In the morning we ate breakfast in the living room of the stick-mud house, which was poor---so poor, but hospitable. Tortillas of flour and corn, beans and meat were our fare.

We bought a sack of beans and one of corn, twenty pounds each, and then we took a photograph of the school. There were a few extra little girls whose fond mothers had decked out for the occasion. The children had swept the grounds clean and pulled outside the tenderly nursed vines in a jar inside the window, so that they also could be taken.

[131] [132] The dry parched desert is unkind to domestic plants and flowers and these are always blooming in jars or ollas or tin cans under ramadas or in other shade. They secure their share of precious water

[text continues on p. 194]

123 the same as do children and dogs, even though it may be hauled for
[132] six or eight miles on mule-back.
[137]

With gifts and hand-shaking all around, we bade goodbye to Lupe and the children and started on our way.

After leaving San Carlos we travelled through a cholla and giant cactus country until we reached Roberto's ranch at Santa Cruz. We had picked up Pancho Oliverria at San Carlos.

Just before leaving the ranch several men lifted a poor woe-begone mare to her feet. She was so poor and weak she could not get up by herself, but once up she managed to stand and finally staggered out into the *mesquital*, the place of mesquite. One eye was missing and watery matter was oozing out and running down her cheek. A night or two before, a lion caught and destroyed her colt, and probably in an effort to protect it the mare came too near the scene and the lion tore out her eye with one sweep of its paw.

Midway to Santa Cruz we stopped a moment at Blevens ranch *Costa Rica*. Blevens is a large, florid white-haired American who has lived in this country for fifteen or twenty years and hasn't much use for the Seris as they have killed so much of his stock.

[24] At one time he noticed a dead cow which was all swelled up and badly spoiled. No white man could stand the smell. He told some Seris about it, and they flocked around it, and when they had finished all that was left were the hoofs and horns.

Nene's wife cooked dinner for us at their house which was composed of *carrizos* and mud roofed with earth, all supported by mesquite logs. Surrounding it was a hog tight mesquite fence, and in this corral was a fifty-foot deep well which furnished the water supply. Half a bull's hide laced on to an iron hoop and holding about fifteen or twenty gallons, was the water bucket. This was hauled up by a long rawhide rope passing through an over-head block drawn by a mule.

After leaving Santa Cruz with none added to our crew, we wended our way through a maze of mesquite, cottonwood and other timber, gradually working out of the timber to more open country where traveling was not so strenuous. The steering gear was worn so that the old truck would often head for a saguaro or mesquite and stop just short of being smashed.

At last we reached a region of flat baked lake-beds, covered in flood times. Sometimes we could travel fast at fifteen miles and then again we would go in the low where it was soft. About three miles from our destination we took off half our load and piled it to one side and jogged along through a wild desert country with no roads or trails, through chollas, desert brush and terote trees.

123 When we neared a hill of dark volcanic rock a number of Seri In-
312 dians darted out, and with their help we reached a camp near the coast
361 where Roberto had recently located a small well of sweet water.

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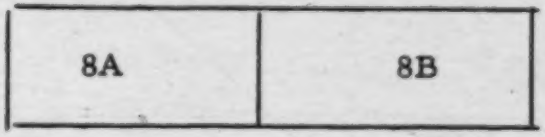
The map of Seriland appearing on pp. 8A and 8B has been processed for the files in the following manner:



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SERII

[p. 8 blank]

[p. 8-A]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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103
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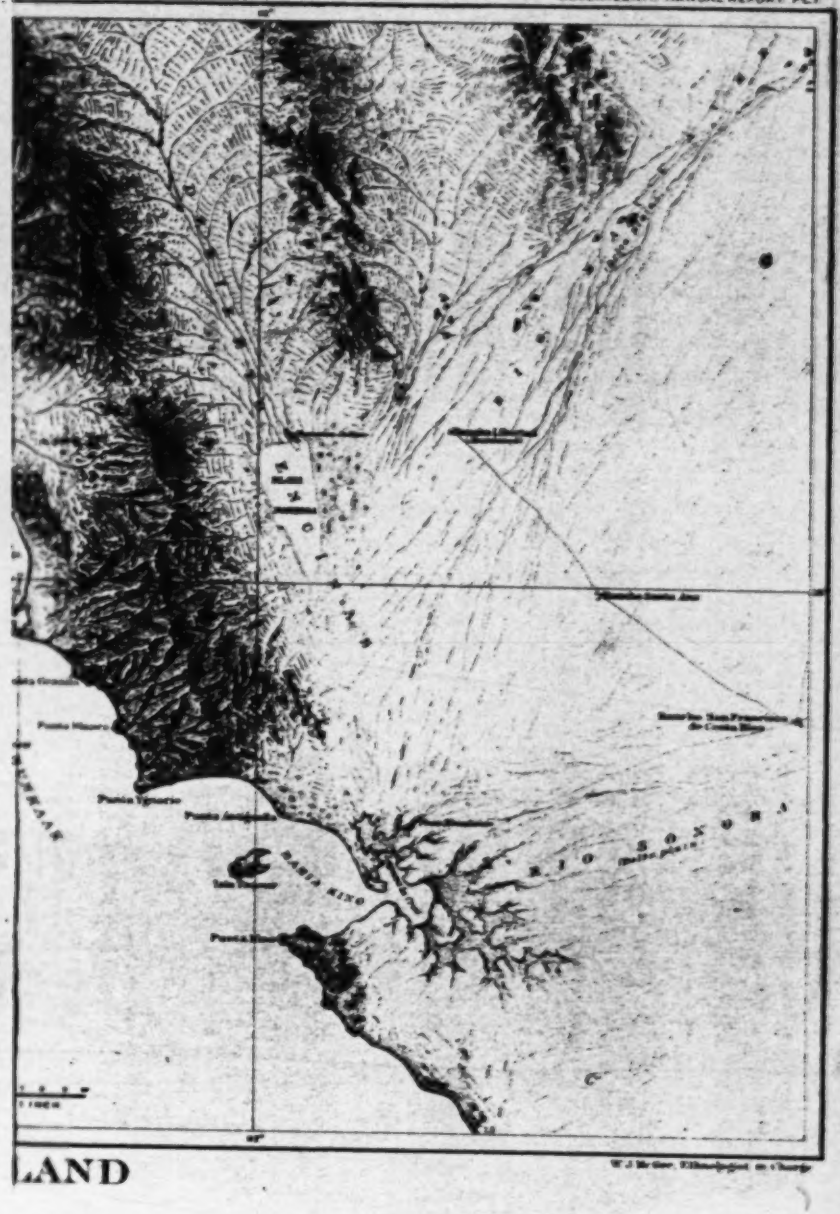

LAND

[p. 8-8]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

THE SERI INDIANS

By W J McGee.

INTRODUCTION

Salient Features

Something has been known of the Seri Indians (Seris, Ceris, Ceres, Heris, Tiburones) since the time of Coronado, yet they remain one of the least-studied tribes of North America. The first systematic investigation of the tribe was made in the course of expeditions by the Bureau of American Ethnology in 1894 and 1895; it was far from complete. 114

The Seri Indians are a distinctive tribe in habits, customs, and language, inhabiting Tiburon island in Gulf of California and a limited adjacent area on the mainland of Sonora (Mexico). They call themselves *Kun-kak* or *Kmike:* their common appellation is from the Opata, and may be translated "spry". Their habitat is arid and rugged, consisting chiefly of desert sands and naked mountain rocks, with permanent fresh water in only two or three places; it is barred from settled Sonora by a nearly impassable desert. Two centuries ago the population of the tribe was estimated at several thousands, but it has been gradually reduced by almost constant warfare to barely three hundred and fifty, of whom not more than seventy-five are adult males, or warriors. 101 [131] 133 161

The Seri men and women are of splendid physique; they have fine chests, with slender but sinewy limbs, though the hands and especially the feet are large; their heads, while small in relation to stature, approach the average in size; the hair is luxuriant and coarse, ranging from typical black to tawny in color, and is worn long. They are notably vigorous in movement, erect in carriage, and remarkable for fleetness and endurance. 142 [147]

The Seri subsist chiefly on turtles, fish, mollusks, water-fowl, and other food of the sea; they also take land game, and consume cactus fruits, mesquite beans, and a few other vegetal products of their sterile domain. Most of their food is eaten raw. They neither plant nor cultivate, and are without domestic animals, save dogs which are largely of coyote blood. 105

The habitations of the Seri are flimsy bowers of cactus and shrubbery, sometimes shingled rudely with turtle-shells and sponges; in some

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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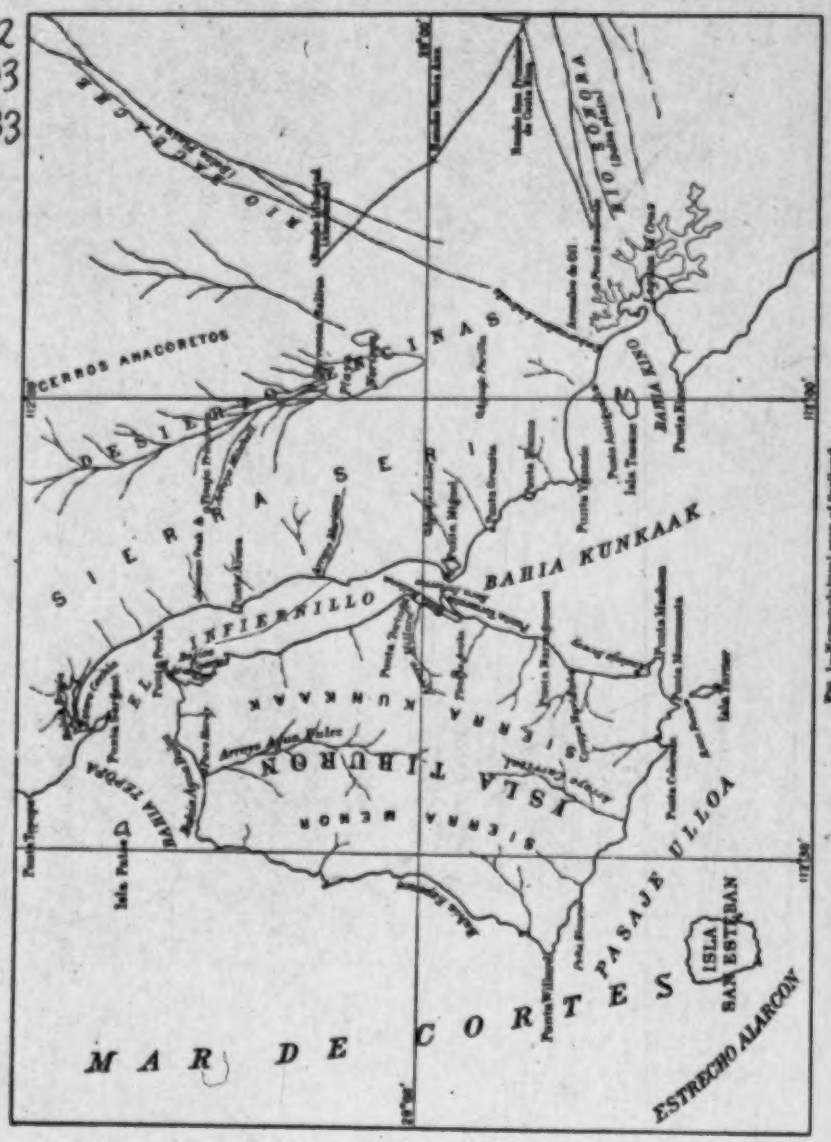

PIG. 1—Kramer-Schmal map of Northland.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

HABITAT

Location and Area

131 Seriland, the home from time immemorial of the Seri Indians, lies in northwestern Mexico, forming a part of the State of Sonora. It comprises Tiburon island, the largest and most elevated insular body in Gulf of California, together with a few islets and an adjacent tract of mainland; the center of the district being marked approximately by the intersection of the parallel of 29° with the meridian of 112°. The territory is divided by the narrow but turbulent strait, El Infiernillo. It is bounded on the west and south by the waters of the gulf with its eastward extensions to Kino bay, on the east by a nearly impassable desert, and on the north by a waterless stretch of sandy plains and rugged sierras 50 to 100 miles in extent.

Tiburon island is about 30 miles in length from north to south and 12 to 20 miles in width; its area, with that of the adjacent islets, is barely 500 square miles. The mainland tract held by the Seri is without definite boundary; measured to the middle of the limiting desert on the east and halfway across the waterless zone on the north, its area may be put at 1,500 square miles. To this land area of 2,000 square miles may be added the water area of the strait, with its northern and southern embouchures, and the coastwise waters habitually navigated by the Seri balsas as far as Kino bay, making half as much more of water area. Such is the district which the Seri claim and seek to control, and have practically protected against invasion for nearly four centuries of history and for uncounted generations of prehistory.

Physical Characteristics

133 Seriland forms part of a great natural province lying west of the Sierra Madre of western Mexico and south of an indefinite boundary about the latitude of Gila river, which may be designated the Sonoran province; it differs from Powell's province of the Basin ranges in that it opens toward the sea, and also in other respects; and it is allied in many of its characteristics to the arid piedmont zone lying west of the Andes in South America.

In general configuration the province may be likened to a great roof-slope stretching southwestward from a comb in the Sierra Madre to a broad eaves-trough forming Gulf of California, the slope rising steeper toward the crest and lying flatter toward the coast; but the expanse is warped by minor swells, guttered by waterways, and dormered by out-

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

lying ranges and buttes. The most conspicuous inequality of the slopes (partly because of its coincidence with tide-level) is offered by the rugged ranges of Seriland. These may be considered four in number, all approximately parallel with each other and with the coast; the first is a series of eroded remnants (Cerros Anocoreteo) from 600 to 1,200 feet in height; the second is the exceedingly rugged Sierra Seri, culminating in Johnson peak 5,000 feet above tide; the third is Sierra Kunkaak, attaining about 4,000 feet in its highest point; the fourth is Sierra Menor, some 2,000 feet high, with the northern extremity sliced off obliquely by marine erosion. The principal arm of Desierto Encinas lies between the first two ranges, El Infiernillo separates the second and third, while a subdesert valley divides the third from the fourth. The valleys correspond more closely than the ranges; if the land level were 100 feet higher the strait and its terminal bays would become an arid valley like the others, while if the sea-level were 500 feet higher the four ranges would become separate islands similar to Angel de la Guarda and others in the gulf. 133

The Sonoran province is notably warm and dry. The vapor-laden air-currents from the Pacific drift across it and are first warmed by conduction and radiation from the sun-scorched land, to be chilled again as they roll up the steeper roof-slope to the crest; and the precipitation flows part way down the slopes, both eastward and westward from the Sierra Madre—literally the Mother (of waters) range. A climatal characteristic of the province is two relatively humid seasons, coinciding with the two principal inflections of the annual temperature-curve, i. e., in January-February and July-August, respectively. In the absence of meteorologic records the temperature and precipitation may be inferred from the observations at Yuma and Tucson,[1] which are among the warmest and driest stations in America, or indeed in the world; though it is probable that such points as Caborca, Bacuachito, and Hermosillo are decidedly warmer and perhaps slightly moister than Yuma. The ordinary midday summer temperature at these points may be estimated at about 110° in the shade (frequently rising 5° or 10° higher, but dropping 20° to 50° in case of cloudiness); the night temperature at the same season is usually 50° to 75°, though during two-thirds of the year it is liable to fall to or below the freezing point. The sun temperature is high in comparison with that measured in the shade, the exposed thermometer frequently rising to 150° or 160°, according to its construction, while black-finished metal becomes too hot to be handled, and dark sand and rocks literally scorch unprotected feet. The leading characteristic of the temperature is the wide diurnal range and the relatively narrow annual range; another characteristic is the uniformity, or periodic steadiness, of the maxima, coupled with variability and nonperiodicity of the minima. 132

[1] The following monthly and annual meteorologic summaries, compiled from United States Weather Bureau records at these stations, have been kindly furnished by Prof. Willis L. Moore, Superintend-

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

local storms, frequently accompanied by thunder-gusts or sudden tempests, though cold drizzles sometimes occur, especially at the height of the winter humid season. Except where the local configuration is such as to affect the atmospheric movements, the distribution of precipitation is erratic, in both time and space; some spots may receive half a dozen rains within a year, while other spots may remain rainless for several years; and the wet spot of one series of years may be the dry spot of the next. 132

The climatal features of Seriland are somewhat affected by the pronounced topographic features of the district. Snow sometimes falls on Sierra Seri, and probably on Sierra Kunkaak; gales gather about the rugged ranges at all seasons, and sometimes produce precipitation out of season; the extreme heat of midday and midsummer is tempered by the proximity of the tide-swept gulf; and since most of the local derangements tend to augment precipitation and reduce temperature, it would seem safe to estimate the mean annual rainfall of the tract at 4 or 5 inches, and the mean temperature at about 70°, with a mean annual range of some 30° and an extreme diurnal range of fully 80°.

The configuration and climate combine to give distinctive character to the hydrography of the Sonoran province. The melting snows and more abundant rains of the high sierras form innumerable streams flowing down the steeper slopes toward the piedmont plains, or sonk into the pervious rocks to reappear as springs at lower levels; sometimes the streams unite to form considerable rivers, flowing scores of miles beyond the mountain confines; but eventually all the running waters are absorbed by the dry sands of the plains or evaporated into the drier air; and from the mouth of the Colorado to that of the Yaqui, 500 miles away, no fresh water ever flows into the sea. During the winter wet season, and to a less extent during that of summer, the mountain waterways are occupied by rushing torrents, rivaling great rivers in volume, and these floods flow far over the plains; but during the normal droughts the torrents shrink to streamlets purling among the rocks, or give place to blistering sand-wastes furlongs or even miles in width and dozens of miles in length, while beyond stretch low, radially scored alluvial fans, built by the great freshets of millenniums. Only a trifling part of the rainfall of the plains ever gathers in the waterways heading in the mountains, and only another small part gathers in local channels; the lighter rains from higher clouds are so far evaporated in the lower strata of the air as to reach the earth in feeble sprinkles or not at all; the product of moderate showers is absorbed directly by earth and air; while the water of heavy rains accumulates in mud-burdened sheets, spreading far over the plains, flowing sluggishly down the slopes, yet suffering absorption by earth and air too rapidly to permit concentration in channels. These moving mud-blankets of the plains, or sheetfloods,[1] are often supplemented by 133

[1] Defined and described in Sheetflood Erosion, Bull. Geol. Soc. Am., vol. viii. 1897, p. 87.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

133 the discharge from the waterways of adjacent sierras and buttes; they are commonly miles and frequently dozens or scores of miles in width, and the linear flow may range from a fraction of a mile to scores of miles according to the heaviness of the rainfall and the consequent dilution of the mud. Such sheetfloods, especially those produced by considerable rains, are characteristic agents of erosion throughout most of the province; their tendency is to aggrade depressions and corrade laterally, and thus to produce smooth plains of gentle slope interrupted only by exceptionally precipitous and rugged mountain remnants. A part of the sheetflood water joins the stronger mountain-born streams, particularly toward the end of the great storm whereby earth and air are saturated; another part forms ground-water, which slowly finds its way down the slopes toward the principal valleys, perhaps to reappear as springs or to supply wells. These with certain other conditions determine the water supply available for habitation throughout Seriland and adjacent Papagueria.

Another condition of prime importance arises in a secular tilting of the entire province southwestward. This tilting is connected with the upthrust of the Sierra Madre and the uplifting of the plateau country and the southern Rocky mountain region north of the international boundary. Its rate is measured by the erosion of the Grand Canyon of the Colorado and other gorges; and its dates, in terms of the geologic time-scale, run at least from the middle Tertiary to the present, or throughout the Neocene and Pleistocene. Throughout this vast period the effect of the tilting in the Sonoran province has been to invigorate streams flowing southward, and to paralyze streams flowing toward the northerly and easterly compass-points; accordingly the streams flowing toward the gulf have eroded their channels effectively during the ages, and have frequently retrogressed entirely through outlying ranges; so that throughout the province the divides seldom correspond with the sierra crests.

[134] A typical stream of the province is Rio Bacuache, one of the two practicable overland ways into Seriland (albeit never surveyed until traversed by the 1895 expedition). Viewed in its simple geographic aspect, this stream may be said to originate in a broad valley parallel with the gulf and the high sierra, 200 miles northeast of Kino bay; its half-dozen tributary arroyos (sun-baked sand-washes during three hundred and sixty days and mud-torrents during five days of the average year) gather in the sheetflood plain and unite at Pozo Noriega, where the ground-water gives permanent supply to a well; then the channel cleaves a rocky sierra 3,000 feet high in a narrow gorge, and within this canyon the ground-water gathered in the valley above seeps to the surface of the sand-wash and flows in a practically permanent streamlet throughout the 4 or 5 miles forming the width of the sierra; then the liquid sinks, and 25 miles of blistering sand-wash (interrupted by a single lateral spring) stretch across the next valley

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

133 to Pueblo Viejo, where another sierra is cleft by the channel, and where the water again exudes and flows through a sand-lined rock-bed (figure 2). In the local terminology this portion alone is Rio Bacuache, the upper stretches of the waterway bearing different names; it supplies the settlement and fields of Bacuachito, flowing above the sands 5 to 15 miles, according to season; then it returns to the sand-wash habit for 50 miles, throughout much of which distance wells may find supply at increasing depths; finally it passes into the delta phase, and enters northeastern Seriland in a zone marked by exceptionally vigorous mesquite forests. Normally the 200 miles of streamway is actual stream only in two stretches of say 5 miles each, some 25 miles apart,

FIG. 2.—Gateway to Seriland—gorge of Rio Bacuache.

and the farther of these stops midway between the head of the channel and the open sea toward which it trends and slopes; but during and after great storms it is transformed into a river approaching the Ohio or the Rhine in volume, flowing tumultuously for 150 miles, and finally sinking in the sands of Desierto Encinas, 30 to 50 miles from the coast. Viewed with respect to genesis, Rio Bacuache has responded to the stimulus of the southwestern tilting, and has retrogressed up the slope through two sierras, besides minor ranges and 100 miles of sheetflood-carved plains; while the debris thus gathered has filled the original gorge to a depth of hundreds of feet, and has overflowed the adjacent sheetflood-flattened expanses to form the great alluvial fan of eastern Seriland. The genetic conditions explain the distribution

1: McGee E-4 (1894-1895)1898 NU31 Seri NU31

133 of the water: the product of the semiannual storms suffices to form a meager supply of ground water, which is diffused in the sands and softer rocks of the plains, and concentrated in the narrow channels carved through the dense granites of the sierras; and enough of the flow passes the barriers to supply deep wells in the terminal fan, as at the frontier ranches Libertad (abandoned) and Santa Ana, just as the subterranean seepage from the Sonora more richly supplies the deep well at San Francisco de Costa Rica. In these lower ranches the mineral salts, normally present in minute quantities, are concentrated so that the water from these wells is slightly saline, while deeper in the desert the scanty water is quite salt.

133 312 In Serriland proper the distribution of potable water is conditioned by the meager precipitation, the local configuration (shaped largely by sheetflood erosion), and the disturbance of equilibrium of the scanty ground-water due to the tilting of the province. The most abundant permanent supply of fresh water is that of Arroyo Carrizal, which is fed by drainage and seepage from the broad and lofty mass of pervious rocks forming the southern part of Sierra Kunkaak, the abundant supply being due to the fact that the eastern tributaries are energetically retrogressing into the mass in deep gorges which effectually tap the water stored during the semiannual storms. The arroyo and valley of Agua Dulce are less favorably conditioned by reason of a trend against the tilting of the province and by reason of the narrower and lower mass of tributary rock in the northern part of the range, and the flow is impermanent, as indicated by the absence of canes and other stream plants; yet four explorers (Ugarte, 1721; Hardy, 1826; Espence, 1844; Dewey, 1875) reported fresh water, apparently in a shallow well tapping the underflow, at the embouchure of the arroyo. On the eastern slope of Sierra Kunkaak there are several arroyos which carry water for weeks or even months after the winter rains, and sometimes after those of summer; but the only permanent water—Tinaja Anita—is at the base of a stupendous cliff of exceptionally pervious and easily eroded rocks, so deeply cut that ground-water is effectually tapped, while an adjacent chasm—Arroyo Millard—is so situated that the cliff-faced spur of the sierra above the tinaja absorbs an exceptional proportion of the surface flowage from the main crest. The tinaja (figure 3) is permanent, as indicated by a canebrake some 20 by 50 feet in extent, and by a native fig and a few other trees—though the dry-season water-supply ranges from mere moisture of the rocks to a few gallons caught in rock basins within the first 50 yards of the head of the arroyo. No other permanent supplies of fresh water are known on the island, though there are a few rather persistent tinajas along the western base of Sierra Menor above Willard point.

On the mainland tract there is a cliff-bound basin, much like that of Tinaja Anita, at the head of Arroyo Mitchell and base of Johnson peak, christened Tinaja Trinchera; but the range is narrow and the rocks

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

133 312

granitic, and hence the supply is not quite permanent.[1] A practically permanent supply of water is found in one or more pools or barrancas at the head of Playa Noriega in Desierto Encinas. The liquid lies in pools gouged by freshets in the bottoms of arroyos coming in from the northward, just where the flow is checked by the spread of the waters over the always saline playa; and, since they are modified by each freshet, they are sometimes deep, sometimes shallow, sometimes entirely sand-filled. When the barrancas are clogged, or when their contents are evaporated, coyotes, deer, horses, and vaqueros obtain water by excavating a few feet in the sand lining the larger arroyos. Commonly the barranca water is too saline for Caucasian palates save

FIG. 3—Tinaja Anita.

in dire extremity, but the salinity diminishes as the arroyos are ascended. An apparently permanent supply of saline and nitrous water is found in a 10-foot well, known as Pozo Escalante, or Agua Amarilla (yellow water), near the southern extremity of Desierto Encinas, reputed to have been excavated by Juan Bautista de Escalante in 1700, and still remaining open; its location is such that it catches the subterranean seepage from both Bacuache and Sonora rivers. The water is potable but not palatable. Among the vaqueros of San Francisco de Costa Rica there is a vague and ancient tradition of a carrizal-marked tinaja or arroyo (Aguaje Parilla) at the eastern base of the southern portion of Sierra Seri; and both vaqueros and Indians

[1] Tinaja Trincheza was entirely dry and without trace of carrizal in December, 1894.

1:McGee E-5 (1894-1895)1898 NU31 Seri NU31

133 refer to one or more saline barrancas about the western base of the same semirange, probably in Arroyo Mariana.

312 In brief, Arroyo Carrizal, Tinaja Anita, and Pozo Escalante are the only permanent waters, and Pozo Hardy, Barranca Salina, and Tinaja Trinchera the only subpermanent waters actually known to Caucasians in all Seriland, though it seems probable that permanent water may exist at Aguaje Parilla and in Arroyo Mariana, and impermanent supplies near Bahia Espence. There may be one or two additional places of practically permanent water in smaller quantity, and a few other places in which saline water might be found either at the surface or by slight excavation, and which may be approximately located by inspection of the map under guidance of the principles set forth in the preceding paragraphs; but this would seem to be the limit of trustworthy water supply. During the humid seasons the waters are naturally multiplied, yet it is improbable that any of the arroyos except Carrizal and Agua Dulce and a few minor gulches along the more precipitous shores shed water into the gulf save at times of extraordinary local flood.[1]

133 The geologic structure of the Sonoran province is complex and not well understood. So far as the meager observations indicate, the basal rocks are granites, frequently massive and sometimes schistose, sometimes intersected by veins of quartz, etc. The granitic mass is upthrust to form the nuclei of Sierra Madre and other considerable ranges; it also approaches the surface over large areas of plains. Resting unconformably on the granites lie heavy deposits of shales and limestones, commonly more or less metamorphosed; these rocks outcrop on the slopes of most of the main ranges and form the entire visible mass of some of the lower sierras and buttes, while they, too, sometimes approach the surface of the sheetflood-carved plain. The rocks, both calcareous and argillaceous, combine the characters of the vast Mesozoic limestone deposits of eastern Mexico and the immense shale accumulations of corresponding age in California, and hence probably represent the later half of the Mesozoic. This is the only sedimentary series recognized in the province. Both the granites and the sedimentary beds are occasionally overlain by volcanic deposits, chiefly in the form of much-eroded lava-sheets and associated tuff-beds, which sometimes form considerable ranges and buttes (notably Sierra Kunkaak, of Isla Tiburon); these remnantal volcanic deposits are probably late Mesozoic or early Tertiary. Newer volcanics occur locally, forming mesas, as about Agua Nueva (40 miles northwest of Hermosillo), or even coulees apparently filling barrancas of modern aspect, as in the vicinity of Bacuachito,[2] or rising into cinder cones surrounded by

113 [1] The physiographic features of the Sonoran province in general are treated in greater detail in a paper on Floodplain Erosion, Bull. Geol. Soc. Am., vol. VIII, 1897, pp. 87-112, and in a paper on Papaguería, Nat. Geog. Mag., vol. IX, 1898, pp. 343-371; while certain local features are described in a paper on Seriland, prepared jointly with Willard D. Johnson, Nat. Geog. Mag., vol. VII, 1895, pp. 126-133. The aggregate available fresh water of Seriland is estimated on p. 181.

[2] Noted by Willard D. Johnson.

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ejectamenta, as at Pico Pinacate, in northwestern Sonora. The various rocks are usually bare or meagerly mantled with talus in the mountains; over the greater part of the plains they are commonly veneered with sheetflood deposits, ranging from a few inches to a few yards in thickness; while the central portions of the larger valleys are lined with alluvial accumulations reaching many hundreds of feet in thickness. 133

The clearly interpretable geologic history began with extensive degradation and eventual baseleveling of a granitic terrane in Paleozoic or early Mesozoic time; then followed the deposition of the shales and associated limestones during the later Mesozoic; next came elevation, accompanied or followed by corrugation, chiefly in folds parallel with the present coast, whereby the granite-based sierras were produced, and accompanied also by the earlier vulcanism to which the volcanic sierras owe their existence. A vast period of degradation ensued, during which the land stood so high as to induce greater precipitation than that of today and to permit the streams to carve channels far below the present level of tide, and during which the present general configuration was developed; then came the southwestward tilting and consequent climatal desiccation, the filling of the deeper valleys, the inauguration of sheetflood erosion, some local vulcanism, and the progressive shifting of the divides.

The geologic structure affects the hydrography, especially that factor determined by subterranean circulation, or ground-water; for the superficial sheetflood and alluvial deposits are highly pervious and many of the volcanics hardly less so, while the shales and limestones are but slightly pervious and the granites nearly impervious. The geologic structure also determines the character of the soil with exceptional directness, since the dryness of the air and the dearth of vegetation reduce rock decay to a negligible quantity. The characteristically precipitous sierras and cerros are of naked ledges, save where locally mantled with a mechanical débris of the same rocks (much finer than the frost product of colder and humider regions); the soil of the normal plains is but the little-oxidized upper surface of sheetflood deposits made up of the mechanical debris of local rocks and varying in coarseness with the slope; while the soil of the valleys is detrital sand and silt, derived from tributary slopes, passing into adobe where conditions are fit, and essentially mechanical in texture and structure save where cemented by ground-water solutions at the lower levels. 134

Flora

The flora of the Sonoran province affords a striking example of the adjustment of vegetal life to an unfavorable environment. The prevailing vegetation is perennial, of slow growth and of stunted aspect; and it is not distributed uniformly but arranged in separate tufts or clusters, gathering into a nearly continuous mantle in wetter spots, though commonly dotting the plains sparsely, to completely disappear 137

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

and more than ordinary littoral variety; for the waters of the gulf are warmed by radiation and conduction from its sun-parched basin, while the concentrated tides distribute and stimulate the species and keep the vital streams astir.

Local Features

Considered as a tribal habitat, Seriland comprises four subdivisions of measurably distinct character, viz, (1) the broad desert bounding the territory on the east; (2) the mountainous zone of Sierra Seri; (3) Tiburon island and the neighboring islets; and (4) the navigable straits and bays contiguous to island and mainland.

1. So far as its marginal portions are concerned, Desierto Encinas is a typical valley of the Sonoran province, sparsely dotted with vital colonies of the prevailing type and variegated by the exceptionally luxuriant mesquite forests of the Bacuache and Sonora fans; but the interior of the valley is rendered distinct by the fact that it lies near, if not below, the level of the sea.[1] The central feature is Playa Noriega—a film of brackish water for a few days after each considerable semiannual freshet, a sheet of saline mud for a few weeks later, and for the greater part of the year a salt-crusted sheet 20 square miles in area, level as a floor and unimpressionable as a brick pavement. The playa is rimmed by dunes 10 to 40 feet in height, and about these and along the arroyos which occasionally break into it there is some aggregation of salt-enduring shrubs, evidently sustained in part by the semiannual freshet with its meager vapors and fogs. Outside this rim the surface is exceptionally broken; low dunes and irregularly wandering banks of soft and dust fine sand are interspersed with meandering salt flats much like the central playa, ranging from a few feet in width and a few yards in length up to mappable dimensions, as in the lesser playa lying east of the great one; and many of the dust-banks are honeycombed with squirrel burrows. This annulus of broken surface is narrow on the west, soon passing into okatilla scrub and then

[1] The expedition of 1895, during which Seriland was surveyed, was not provided with apparatus for accurate vertical measurement, and hence altitudes were only approximately determined. The determinations by Mr Johnson, who executed the topographic surveys, indicated that even the lowest part of the valley is somewhat above sea-level; but other facts indicate that it actually lies below the level of the waters of the gulf, and forms a miniature boundary-sag of Colorado desert (in southern California); in the first place the central playa, which is undoubtedly flooded occasionally if not semiannually, does not embouch into, and has no channels extending toward, the sea; in the second place it is highly saline; again, the alluvial fans of Rio Bacuache and (especially) of Rio Sonora are so placed as to intercept and dam the trough occupied by Laguna la Cruz in its southern portion and Playa Noriega in its northern portion; concordantly, the detail configuration of the coast indicates marine transgression, apparently due to secular subsidence of the land—though the abundant marine shells of recent species toward the valley-bottom attest recent displacement of the sea. On the whole, the facts seem to indicate that, during recent geologic times, the lower portion of this valley was a shallow gulf extending northward (and probably also southward) from the eastern limit of Bahia Kino; that the importation and deposition of sediment, chiefly by Rio Sonora, outran the secular subsidence of the land so far as to displace the waters of the gulf in its central portion and to separate the northern arm from the sea; and that the waters of this northern arm were subsequently evaporated, disappearing finally in the central playa in which local inflow and evaporation are balanced by the usual mechanism of interior basins.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

into the saguesa forests of the eastern base of Sierra Seri; on the east it is miles in breadth, passing gradually into the normal Sonoran plain; on the south it widens still farther, stretching all the way to Arenales de Gil and Pozo Escalante, and merging into the playa-like mud-flats bordering Laguna la Cruz, into which the gulf waters are sometimes forced by southwesterly gales at high spring tides. Throughout this portion of the desert, marine shells are scattered over the playa-like flats or lodged in the adjacent banks, sometimes in great beds; the vegetation is scantier than usual and largely of salt-loving habit; the mud-flats are usually coated with saline and alkaline crusts, while the dunes are soft and fluffy, and expand into broad belts perforated with the tunnels of the surprisingly abundant rodents. Across this plain of bitter sand-dust lie the two hard land routes to Seriland—the supposed Escalante route of 1700, down the fan of Rio Bacuache and thence by Barranca Salina; and the Encinas route, down the northern border of the Rio Sonora fan and thence by Pozo Escalante to the shores of Bahia Kino.[1]

Desierto Encinas is an impossible human habitat in any proper sense; it is merely a broad and hardly passable boundary between habitats. The hardy stock of the frontier ranchos, pasturing partly on the thorny fruit of the cholla, push far out on the plains, and are sometimes watered for short periods, under strong guards of heavily armed vaqueros, at Barranca Salina; yet the greater part of the expanse is trodden only by the Seri. Two or three ruined frames of Seri jacales and a few graves crown the low knoll near Pozo Escalante, and there are one or two house remnants near Barranca Salina; these are notable not only as the easternmost remaining outposts of Seri occupancy, but because they represent the only known instances in all Seriland of the erection of even temporary houses adjacent to water. Distinct paths, trodden deep by bare Seri feet, radiate from both waters toward the Seriland interior, but no traceable trails extend eastward.

The southern limit of Desierto Encinas is marked either by the broad mud-flats opening into Laguna la Cruz or by the coast of the gulf, the coast cutting the lower portions of the plain being accentuated by a sand-bank 30 or 40 feet high, against which the surf thunders in nearly continuous roar, audible halfway or all the way to Pozo Escalante. A Seri trail skirts the crest of this bank, sending occasional branches into

[1] Both the routes were traversed by the expedition of 1895, the former from the headwaters of Rio Bacuache to the upper portion of its alluvial fan, and thence from the abandoned Rancho Libertad on the lower portion of the fan across Desierto Encinas by way of Barranca Salina. In the northern crossing a light vehicle (the first to traverse this portion of the desert), drawn by four horses and aided by several horsemen, was taken from Rancho Libertad across the northern portion of Playa Noriega and thence up Arroyo Mitchell to a point midway between Barranca Salina and Jalapeño peak, and was brought back over the same route. The Encinas trail from Rancho San Francisco de Costa Rica was traversed four times each way by the same outfit, and once each way by the running gear of a heavy wagon carrying the rude craft (about 1,000 pounds in weight) in which the Seri waters were navigated, this vehicle being drawn by 8 to 12 horses, frequently changed. Typical aspects of both routes are shown in plate III, the upper figure representing the Encinas trail and the lower a distant view of Sierra Seri, taken from Playa Noriega, in the depths of Desierto Encinas.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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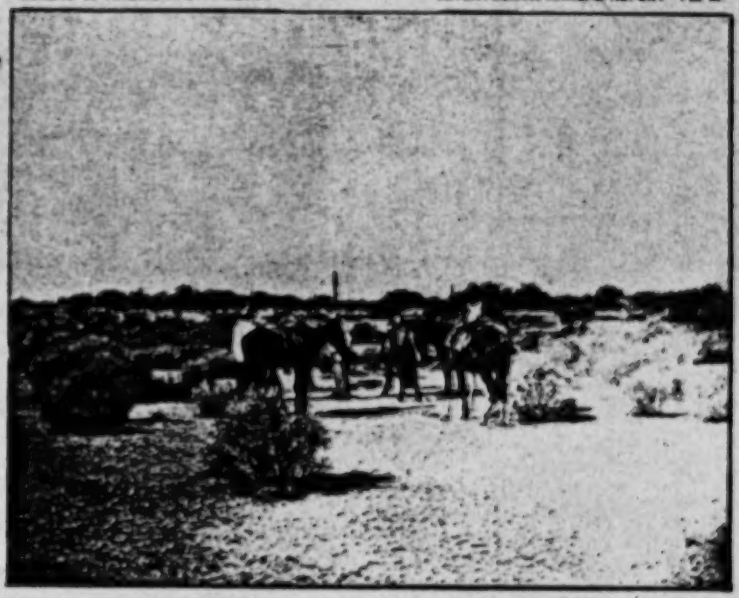
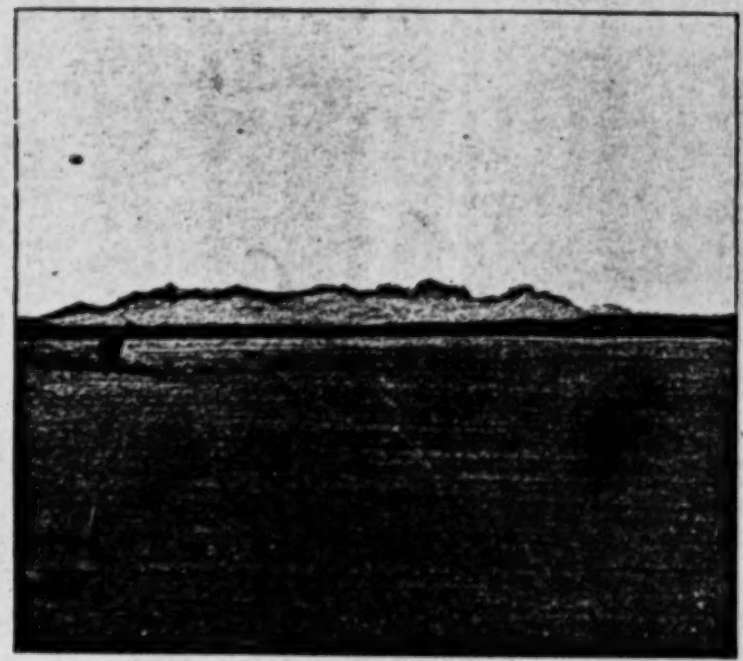


SERI FRONTIER



SIERRA SERI FROM ENCINAS DESERT

40a

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

the interior. At Punta Antigualla the bank expands and rises into a great mammillated shell-mound nearly 100 feet high, with several of the cusps occupied by more or less ruined jacales; and occasionally occupied houses occur midway thence to the southernmost point of Sierra Seri, and again at the base of the first spur east of Punta Ygnacio. Beyond Punta Antigualla the sweep of the waves is stronger than in Bahia Kino, and the coastal sand-bank is generally higher. Between the rocky buttresses of Punta Ygnacio and the next spur eastward the sand-ridge rises fully 50 feet above mean low tide, and here, as elsewhere, its verge is protected by a fog-fed chaparral thicket with occasional clumps of okatilla and other cacti. Behind the coast barrier lie lagoon-like basins, generally dry and floored with saline silt-beds, though sometimes occupied by briny pools formed through seepage during southwesterly gales; and there are physiographic indications that the northwestward extension of Laguna la Cruz formerly stretched some miles farther than now and lay in the rear of Punta Antigualla in such wise as to form a source of supply of the clam-shells of which the eminence is built.

2. Sierra Seri is a double range, divided mid-length by a broad saddle barely 2,000 feet in height.[1] Like other Sonoran ranges, the nucleal portions are exceedingly ragged and precipitous—at least two of its pinachos shoot so boldly that they commonly seem to overhang, and have been called leaning peaks. In large part the precipices rise abruptly from a symmetrical dome molded by sheetflooding, much as the insulated buttes rise from the Bacuache fan in northeastern Seriland; so that the tract lying between Desierto Encinas and El Infiernillo is a composite of exceptionally precipitous and exceptionally smooth mountain slopes. One of the Seri trails radiating from Barranca Salina lies across the mid-sierra saddle; others push into several mountain valleys, and the largest leads to Tinaja Trincbera, at the base of Johnson peak, where there are a few low walls of loose-laid rubble, somewhat like those of the tringheras (entrenched mountains) farther eastward—the only structures of the sort seen in Seriland. Toward the southern end of the range lie various trails, the most conspicuous paralleling the coast, either near the shore or over the steep salients, according to the configuration; while here and there ruinous jacales a few yards from the coast attest sporadic habitation. The eastern shore of Bahia Kunkaak from Punta Ygnacio northward reveals a typical geologic section of the Sonoran provinces: the transgressing waves have carved in the granitic subterrane a broad shelf lying just below mean low tide and usually stretching several furlongs offshore; this shelf is relieved here and there by remnantal crags of obdurate rocks, cumbered by bowlders and locally sheeted with sand and arkose derived from mechanically disintegrated granite; while the

[1] The northern portion, as seen from the east, is shown in plate III; the southern portion, as seen from the west, appears in the upper part of plate IV, while the southwesternmost point is shown in the lower part of the same plate.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

133 inner margin of the shelf is a sea-cliff, usually 30 to 50 feet high, of which the lower half is commonly granite and the upper half unconsolidated and recent-looking mechanical debris collected by sheetflood erosion. Sometimes the granite of the subterrane is replaced by volcanics; sometimes ancient and firmly cemented talus deposits separate the superficial mantle from the subterrane, as shown in the lower part of plate v; sometimes the line of sheetflood planation passes below tide-level, when the waves beat against the unconsolidated deposits in a deep embayment; sometimes the sharply defined planation surface ends abruptly at the sides of subranges or buttes shooting upward in the abrupt slopes characteristic of the sierra proper; yet this 10-mile stretch of coast is a nearly continuous revelation of the structure of sheetflood-carved plains and of modern marine transgression. The debris of the combined processes forms an abundant and varied assortment of bowlders, cobbles, and pebbles, whence the inhabitants readily derive their simple implements without need for studied forethought or manual cunning.

The long sand-spit terminating in Punta Miguel and the shorter one terminating in Punta Arena are the product of geologically recent wave building, and consist of irregular series of V-bars, backed by lagoon-like basins and enclosing considerable bodies of brine in the central portions; and the bars and basins become successively higher outward, in such wise as to attest the secular subsidence of this coast.

[361] [487] Several jacales are located on the higher portion of the southern sand-spit, midway between Punta Granita and Punta Miguel, while foot-paths traverse the flat and skirt the coast. Toward the terminal portion of the spit the sand is blown into hummocks, held by clumps of salt-enduring and sand-proof shrubbery; but there are no rancherías here, despite the fact that it is a natural point of embarkation—doubtless because no Seri structure could withstand the sand-drifting gales and storm inundations of this exposed spot. The more protected

[136] lagoons behind the outer bars harbor abundant waterfowl, within bowshot of shrub-clumps and dunes well adapted to the concealment of hunters, while the mud-flats open to the tide abound in clams and other edible things. The features of the Punta Miguel sand-spit are repeated with variations along the eastern shore of El Infiernillo; and

[361] Seri jacales, evidently designed for temporary occupancy, occur here and there, usually on higher banks above reach of the severer storms.

3. Tiburon island itself is apparently the chosen home of the Seri—

[131] a habitat to which the mainland tract is at once a dependency, an alternative refuge, and a circumvallation. Its dominant range, Sierra Kunkaak, mates Sierra Seri in its essential features, though the rocks are for the greater part ordinarily obdurate eruptives rather than exceptionally obdurate granites, as in the mainland sierra; accordingly the range is somewhat lower and broader, while the sheetflood sculpture, with its sharp transition into precipitous cliffs, is somewhat less trench-

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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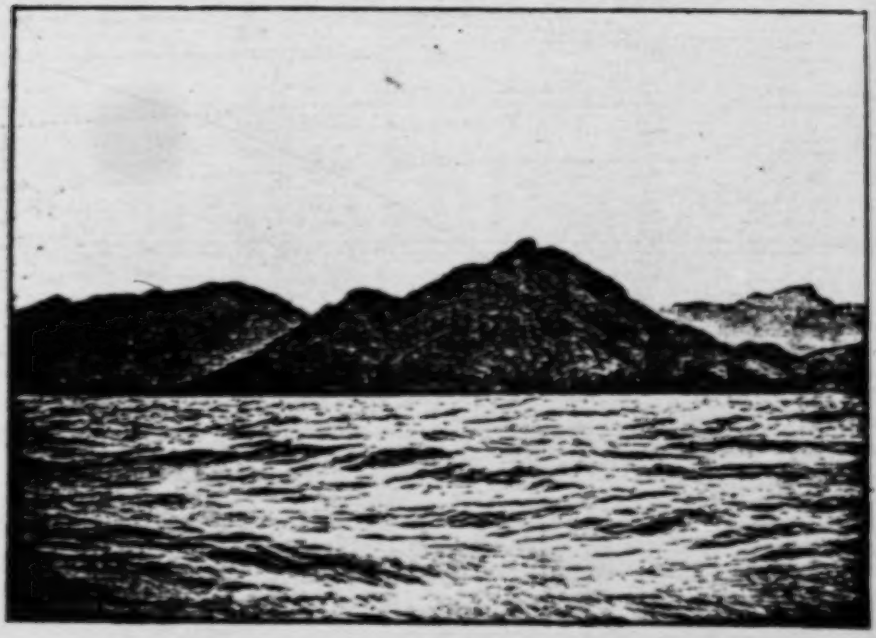
SIERRA SERI FROM TIBURON ISLAND



PUNTA YGNACIO, TIBURON BAY

[p. 42a]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

ast. Sierra Menor is a third term in the mountain series, in structure and geomorphy as in altitude; while the interior plain is a homologue of that portion of Desierto Encinas lying north of Playa Noriega—i. e., of its (potentially) free-drained portion. Almost the entire perimeter of Tiburon is suffering marine transgression, and is faced with sea-cliffs overlooking wave-carved shelves; and in both form and structure the greater part of the coast repeats, with minor variations, the features of the mainland coast from Punta Ygnacio northward. Partly because of the superior magnitude and height of its debris-yielding sierra, partly because of protection from the wave-beat of the open gulf, the eastern shore is skirted with a talus-shape slope, usually two to four miles wide; and while there are unmistakable evidences of sheetflood carving in the higher portions of this plane, the coastal cliff commonly reveals nothing but heterogeneous debris, sometimes rising thirty or forty feet above tide. Somewhat the greater part of the volume of this debris is fine—i. e., sand and silt and nondescript rock-matter; but there is always a considerable element of larger rock-fragments, which gather along the shore in a pavement of bowlders and cobbles (upper figure of plate v). These coarse materials—important factors in aboriginal industry—are harmoniously distributed: more conspicuously on the ground than on the map, the coast is set with salients (of which Punta Narragansett is a type), consisting merely of exceptional accumulations of debris from gorges in the sierra and from shallow arroyos, or pebble washes, traversing the coastwise plain. These salients owe their prominence partly to the relative coarseness, partly to the abundant supply, of fragmental material from the heights; and about their extremities the beach is paved with bowlders, which grade to cobbles or even to pebbles along the reentrant shores on either hand. This distribution of cobbles is one of the conditions governing the placement of Seri rancherias; and in many cases the jacales are located, either singly or in groups, where the coastal salients and reentrants meet, and where there is an abundant supply of cobbles of convenient size and wave-tested hardness.

The coastwise plain skirting eastern Tiburon has a few wave-built projections analogous to those east of El Infiernillo; the most conspicuous of these are Punta Tormenta, Punta Tortuga, and Punta Perla with its tide-swept extensions, Bajias de Ugarte. All of these are located primarily by sierra-fed arroyos, but all are greatly extended by wave-borne material laid down along lines determined by the prevailing currents of this best-protected portion of the coast. The long outer face of Punta Tormenta, shaped by the storms of Bahia Kunkaak, is strikingly regular and symmetric; its broad extremity and inner face are diversified by subordinate bars and lagoons, evidently tending to connect with the main coast toward Punta Tortuga, and thereby to transform the whole of Rada Ballena into a lagoon. Already the narrow embayment is so shallow that, although a com-

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

133 fortable haven at high tide, it is mostly mud-flat and sand-waste at extreme low tide—a condition which explains the stranding of an 80-foot whale in this treacherous harbor about 1887. The rada is between two and three miles in length. It abounds in marine life of
136 kinds preferring quieter waters: clams are plentiful in its mud-flats, a sponge lines portions of the bottom toward its inner extremity, oysters cluster numerously on bowlders and on the mangrove-like roots and trunks of a large shrub along the outer shore, and various fishes find refuge here from the fierce currents and the hungry sharks and porpoises of the open strait; these and other creatures form food for innumerable waders and other water-fowl that seek shelter in the quiet bay, which is still further protected by salt-enduring shrubbery on the bars of the point and by the shrubby thickets and wave-cast banks and wind-built dunes on the mainland side.

The combination of conditions renders this portion of the Tiburon
361 coast the optimum habitat of the Seri Indians. There are, indeed, no houses or other traces of permanent habitation on Punta Tormenta itself, which is not only swept by gales but must sometimes be inundated by gale-driven waters at high spring tide; but at the inner end of the long sand-spit, and also on the mainland opposite the outer portion of Rada Balleña, there are extensive and well-kept rancherías, capacious enough to accommodate comfortably thirty or forty Seri families, i. e., 150 or 200 persons. Toward its landward end the sand-spit is built
311 largely of pebbles and cobbles, of which thousands of tons are adapted to industrial use; sea-food is practically unlimited and is readily taken; water-fowl literally crowd the protected rada within arrow-shot of natural cover; the outer slope of the bar is admirably suited for landing and embarking balsas in calm weather, while the bay is an ideal harbor for the portable craft, and the shrub-grown shores give unlimited opportunity for concealing them when not in use; the dunes and banks are high enough to protect the low jacales from storm-winds, while the abundant sponges and turtle-shells afford material for thatching and shingling the more exposed walls and roofs; and finally,
[312] it is but a favorite distance (about 4 miles) to the permanent fresh
487 water of Tinaja Anita. From this Seri metropolis well-trod trails radiate toward all other parts of the island; the best-beaten leads to the tinaja, sending branches into all the neighboring gorges, in which game is sometimes taken; next best-worn is the trail laid across Sierra Kunkaak to strike Arroyo Carrizal mid-length of its permanently wet portion; others pass northward to rancherías at different points on the coast, and still another skirts the coast southward by several smaller rancherías to the considerable jacal collection near Punta Narragansett—this, like other longshore routes, having alternative trails, the evanescent fair-weather one following the beach, while the permanent path threads the thorn-set thickets marking the crest of the sea-cliff or cuts across the longer salients. The Narragansett ranchería is

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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WESTERN SHORE OF TIBURON BAY

EASTERN SHORE OF TIBURON BAY

[p. 44a]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

also a center for radiating trails, the best-beaten of these leading toward the fresh waters of Tinaja Anita and Arroyo Carrizal; and even the rancherias half-way thence to Punta Mashém send their most permanent paths over 15 miles of intervening ranges and spall-strewn valleys toward the same waters. According to Mashém's cautious statements, there is a minor Seri metropolis at the northwestern spur of Sierra Kunkaak, within reach of Pozo Hardy and Arroyo Agua Dulce, and two or three smaller rancherias along the western shore; but these were not reached by the 1895 expedition.

4. The seas washing Seriland are notably troubled by tides and winds. Gaping toward the Pacific, and narrowing and shoaling for the 800 miles of its length (measured from midway between Islas de Tres Marias and Cabo San Lucas), Gulf of California approaches Bay of Fundy, Bristol channel, and Broad sound as a tide accumulator; while the semidiurnal sweep of the waters in the upper half of the gulf is conditioned by the constriction of the basin to a fraction of its average cross-section at the narrows between Isla Tiburon and Punta San Francisquita. Toward the head of the gulf the ordinary spring tides range from 20 to 25 feet, and may be much increased by favoring winds; the debacles culminate there, but the currents culminate off Seriland in the great tide-gate half dammed by the islands of Tiburon, San Esteban, San Lorenzo, and Salsipuedes,[1] with their marine buttresses, and through the breaches of Pasaje Ulloa, Estrecho Alarcon, and Canal de Salsipuedes flow, four times daily, some two or three cubic miles of water in tremendous tidal floods, probably unsurpassed in vigor elsewhere on the globe. Naturally the islands and the adjacent coasts afford extraordinary examples of marine transgression; and while exceptional wave-work is a factor, the transgression is undoubtedly due mainly to the extraordinary tidal currents in this gateway of the gulf. The fierce currents and the frequent storms of the region condition local navigation, and have undoubtedly contributed to the development of the peculiarly light, strong, and serviceable water-craft of the aboriginal navigators among the islands.

El Infiernillo derives its distinctive characteristics largely from the local character of the tides. Bahia Kunkaak is a funnel-shape embayment so placed as to catch half the volume of the incoming tide and to

[1] Originally the name Islas Sal-si-puedes (Get-out-if-canst) was applied to the various islands of this gateway of the gulf, including San Lorenzo, San Esteban, and San Agustin (now Tiburon), together with the smaller islets, as shown in the map of Padre Fernando Consag (in Noticia de la California y de su Conquista, etc., por el Padre Miguel Venegas, 1757, tomo iii, p. 194); and Padre Consag's account of the currents encountered in 1746 explains the designation: "The great sea which runs here even in fair weather would not allow us to stay, and it was with great difficulty we took in a little water. We now attempted to weather the Cape of San Gabriel de Sal-si-puedes, so greatly dreaded by mariners on account of those islands, several contiguous points of land and many ledges of sunken rocks extending a great way from the land. Here the sea is so agitated by the current that a gale or a calm makes but little difference" (English translation of Venegas' Noticia, titled *A Natural and Civil History of California*, 1759, vol. ii, pp. 343-352). Hittell speaks of "the group of islands known as Salsipuedes, the largest of which is now called Tiburon" (History of California, 1898, vol. i, p. 225). Dewey restricted the name to a single small island near the Baja California coast. Further references to the islands and their designations are noted postea, p. 68.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

133 concentrate the flow into a bore hurtling through Boca Infierno and thence throughout the shoaling strait with greatly accelerated velocity; meantime the body of the tidal stream is diverted around Tiburon, and thus enfeebled in its northward flow by the expansion of the gulf above the Tiburon-San Francisquito gateway, so that the entire strait is flooded (to the limit fixed by the capacity of Boca Infierno) before the main tide flows into its head past Isla Patos and through Bahia Tepopa; and with this unobstructed inflow the strait is reflooded with a counterbore, whereby the waters are heaped and pounded into an unstable, swirling, churning mass.[1] The flooding is little less than catastrophic in magnitude and suddenness; indeed, the volume of water in the body of the strait between Punta Peria and Boca Infierno

[114]

[1] Unquestionably the clearest view of El Infiernillo ever enjoyed by Caucasian eyes was that of Messrs Johnson and Mitchell from the culminating point of Sierra Seri (Johnson peak), which they occupied for about twenty-three hours on December 7 and 8, 1895. Mr Johnson's notes on the appearance of the strait are as follows: "On the occasion of the ascent of Sierra Seri, which rises from the coast, shutting off the view of Isla Tiburon from the desert on the east, I received a striking impression of the elaborate and beautifully symmetrical plan of the long swirling currents of El Infiernillo. The climb had been made from the east direct to the summit peak, so that the first sight of both island and gulf was not only from close at hand, but from an elevation of about a mile. The crest of the ridge was reached at the instant of sunset, and the spectacle of the innumerable current-markings was brief. Our position was nearly opposite the northern end of the strait; and its elevation was so great that the opposite mainland and island shorelines were seen in map effect rather than in perspective. The entire strait, to its northern end at Punta Peria, was in the shadow of the island; and the current design was revealed only in the shadow. At the shadow-margin extending from the northern tip of the island the lines were sharply cut off; and beyond, along the westward bend of waters forming Bahia Tepopa and opening into the gulf in full sunlight, there was no suggestion of them. Within the shadow the effect was that of a film of oil on a water-surface which had been stirred and allowed to come to rest—though the regularity of the lines was as though the stirring had been orderly. Not the slightest motion was perceptible from the peak during the minute or two that the spectacle lasted before the sun disappeared and twilight fell, though the suggestion from configuration alone was that of violent swirling. The general movement was evidently southward toward Boca Infierno, and the swirls were apparently the result of frictional resistance along both shores; the system of curving lines as a whole was very much that which would be presented by a broad feather thrust into a bottle. There were central lines in great number, somewhat sinuous though never crossing, diverging one by one toward the shores on either hand, where they curved backward with complex interbraiding in large reversing arcs and many minute civelings. The straightening out of the curves in perspective was quite perceptible toward Boca Infierno, and beyond it was pronounced. The air appeared to be still, so that the current pattern was not at all obscured by waves; and the spectacle of the broad strait, appearing almost beneath me, inclosed with a crowded delight of swooping fine lines, the delicate sinuosities of which recalled a steel engraving, was peculiarly impressive. That we had been fortunate in the moment of reaching the summit was apparent next day. The spectacle was, indeed, repeated at sunrise and for a short period thereafter, though the general design was markedly different, and less intricacy of pattern was discernible, while the general effect was comparatively vague; perhaps the shadow of Sierra Seri was too heavy, or, more probably (as was my impression at the time), our position was not favorable for that direction of illumination. In full light during the day up to the hour of our departure in late afternoon, no hint or vestige of the current design remained. It was evident that the lines were brought out with expected clearness by the favorable illumination and comparative stillness of air; and it was particularly evident that the lines marked movements in the water, even if there were corresponding air-currents, since they harmonized perfectly with the configuration of the shores and with the trend of spits and bars and offshore markings seen through the shallow waters, especially toward the northern end of the strait. The accord between shore curves and the current lines seen in the evening indicated a southward motion much more vigorous than the reverse movement witnessed next morning; for the marked variation in the design noted in the morning was of a character strongly suggesting a reversed movement of the water, while the faintness of the markings then may perhaps have been due to comparative feebleness of current rather than to unfavorable lighting. Certainly the close agreement between the elaborate system of markings, so clearly revealed in the evening, and the prevailing curves of the shores would seem to indicate unmistakably that, whatever the direction and strength of flow, the markings were a product of current motion."

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

is approximately doubled at neap tide and tripled at spring tide twice in each twenty-four hours. Then, as the crest of the main debacle advances into the upper gulf beyond Punta Tepopa, the trough of the ebb is already approaching the Tiburon-San Francisquito constriction; and even before the final flooding of El Infiernillo from the north is completed, the waters of Bahia Kunkaak are receding and a tiderip is tearing through Boca Infierno at a rate sufficient to half empty the reservoir of its accumulated volume before the ebb trough has rounded the island to the head of the strait. Thus the effect of the exceptional tides of the gulf and the peculiar configuration of Seriland is to concentrate and accentuate tidal currents in El Infiernillo, and to convert the channel into a raceway for nearly continuous tide ripe. According to Dewey, the spring tides are 10 feet and the neaps 7 feet about the northern end of the strait;[1] in December, 1895, the tides about Punta Blanca and Punta Granita were roughly determined as 13 or 14 feet at spring and 7 or 8 at neap, the range varying considerably with the direction and force of the wind; and the consequent current through Boca Infierno was estimated at 4 to 8 miles per hour, the higher velocity of course coinciding with the spring tide. The change in direction of the current is almost instantaneous—indeed, the run is in opposite directions on opposite sides of the narrow strait when the wind sets obliquely—so that the tidal flow is practically continuous. The currents are of course slacker in the body of the strait, but even here suffice to transport coarse sediments; and it is to this agency that the "shoals and sand spits" noted by Dewey[2] and the maintenance of a deep channel through Boca Infierno are chiefly to be ascribed. The materials of Punta Tormenta and Punta Tortuga attest the transportation of pebbles up to 3 or 4 inches in diameter by the combined work of waves and tidal currents.

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Like other mountain-bound water bodies, the portion of the gulf washing Seriland is exceptionally disturbed by winds of given velocity by reason of the high angle of incidence; and moreover the exceptionally prominent local configuration disturbs the atmospheric currents in a manner somewhat analogous to that in which the tidal currents are disturbed; so that the winds are highly variable but generally strong. Under the combined action of tide and wind the waters are normally ruffled; choppy seas freely flecked with whitecaps are rather the rule than the exception,[3] and are replaced less frequently by calms than by steadier billows breaking in continuous surf on sand-beaches (figure 5) and dashing into foam-flecked and rainbow-tinted spray-jets, bathing the rocky cliffs for 50 feet above their bases. Sometimes the wind stills suddenly, when the sea sinks to rythmic swells, soon extinguished by reaction from the irregular shores and by the interference of tide-currents; but the swell seldom dies away before the gale springs again.

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[1] Publication No. 88, U.S. Hydrographic Office, Bureau of Navigation, 1889, p. 102.
[2] Op. cit., p. 103.
[3] A calmer and navigable condition of the sea is shown in the view of Punta Tepopa, plate IV.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

132 The broad valley between Sierras Seri and Kunkaak, bottomed by El Infiernillo, is especially beset by fierce and capricious gales; the general atmospheric drift is disturbed by the leading and lesser sierras, as well as by temperature convection from the gulf, and eddies are developed in such wise as to send air-currents directly or obliquely up or down the valley. These local or sublocal winds are characteristic. Judging from observations covering several weeks, the valley is wind-swept longitudinally for an average of eighteen or twenty hours daily, the winds ranging from strong breezes to gales so stiff as to load the air with sand ashore and spray seaa; and even the calms may be broken

[122]

FIG. 5.—Embarking on Bahia Kunkaak in la lancha Anita.

any minute by sudden gusts and williwaws, passing rapidly as they arrive. Not only waves but wind itself combines with tides to shape the structural features of the valley; nowhere within it do flour-fine sands [134] like those of Desierto Encinas occur, save as a hardly perceptible constituent of the dunes and banks of courser sand—they have been blown into the sea or beyond the limits of the valley. Throughout the strait so expressively named by its explorers, the capriciousness of the sea 132 culminates, despite the shoalness and the protection from easterly and 133 westerly winds; the storm currents and tide-currents are half the time opposed, raising breakers even when the air is nearly still; eddies and whirls and cross-currents arise constantly, and even at the stillest

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

hours tumultuous waves come and go sporadically, while about the mile-wide boca the choppy sea sometimes takes the form of spire-like jets, spurting 5 or 10 feet high and breaking into aigrettes of glittering spray in most unwaterlike and wholly indescribable fashion. Dewey described the strait as "unsafe for navigation by any except the smallest class of vessels"; it is safe, indeed, only for portable and indestructible craft like the Seri balsas, which may be put off or carried ashore at will by craftsmen willing to wait for wind and tide, and unpossessed of impedimenta of a sort to be injured by wetting. Of such an environment the balsa is a natural product. 132 133 [501]

The adjunct islets of Seriland are miniatures of Tiburon in all essential respects, save that they are without fresh water. The largest is San Esteban, a somewhat complex butte rising sharply from the waters in a nearly continuous sea-cliff recording vigorous work by storms and tides; it is occasionally visited by the Seri, chiefly in search of water-fowl and eggs. The most important of the series in Seri economy and mythology is Isla Tasane, off the mouth of Bahia Kino; it is a rugged butte some 600 feet high, rising in wave-cut cliffs on the sea side and pedimented by low spits and banks of sand toward the lea; the sand-banks are literally flocked with pelicans, while other fowl cover the flatter ledges and crowd the crannies of the pinnacle. Isla Turner is a somewhat smaller and still more rugged butte, bounded on both sides by precipitous cliffs, while Roca Foca is merely a great rock shelving upward from the storm-swept waters off the most exposed angle of Tiburon; in the crannies of the former birds nest abundantly, while the lower ledges of both are haunted by seals. Isla Patos, north of Tiburon, is a breeding-place for different water-fowl, and is especially noted as a refuge for ducks; it, too, is for the most part a rocky butte, with a sandy shelf at the eastern base. Beyond San Esteban lies the similar but smaller Isla San Lorenzo, while Isla Salsipuedes and a few other islets stretch thence northward half way to the southern point of Isla Angel de la Guarda, the second-largest island of the gulf. San Lorenzo and the smaller islets are occasionally visited by the Seri, partly for a mineral pigment used in face-painting, partly in quest of game; and they sometimes push on to the larger island to enjoy its fairly abundant game, including the easily taken iguana, amid the ruins of an ancient culture apparently akin to that of southern Mexico. Even the most frequented islets, Tasane and Patos, can be reached only by crossing miles of open sea; but in their way the Seri are as canny navigators as they are skilful boat-builders—it is their habit to hug the shore in threatening weather, to await wind and tide for hours or days together, to set out on distant journeys only when all conditions favor, and in emergency to seize inspiration from the storm like the vikings of old, and bend supernormal power to the control of their craft. 133 136 [222] 224 [135] [172] 502

Summarily, the prevailing features of Seriland may be said to be 13

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

smaller rodents, especially the long-tail nocturnal squirrel, are excluded from the Seri menu by a rigidly observed tabu of undiscovered meaning. A general consequence of this tabu is readily observed on entering Seriland; there is a notable rarity of the serpents, the high-colored and swift efts, and the logy lizards and dull phrynosomas so abundant in neighboring deserts, as well as of song birds and their nests; and this dearth is coupled with a still more notable abundance of the rodents, which have increased and multiplied throughout Seriland so abundantly that their burrows honeycomb hundreds of square miles of territory. A special consequence of the tabu is found in the fact that the myriad squirrel tunnels have rendered much of the territory impassable for horses and nearly so for pedestrians, and have thereby served to repel invaders and enable the jealous tribesmen to protect their principality against the hated alien. Seriland and the Seri are remarkable for illustrations of the interdependence between a primitive folk and their environment; but none of the relations are more striking than that exemplified by the timid nocturnal rodent, which, protected by a faith, has not only risen to the leading place in the local fauna, but has rewarded its protectors by protecting their territory for centuries.

In both the collective and the strategic chase, constant advantage is taken of weakness and incapacity, whether temporary or permanent, of the prospective quarry; so that diseased and wounded as well as sluggish and stupid animals are eliminated. The effect of this policy on the fauna is undoubtedly to extinguish the less capable species and to stimulate and improve the more capable; i. e., the presence of the human factor merely intensifies the bitter struggle for existence in which the subhuman things of this desert province are engaged. At the same time, the entrance of the human folk into the struggle characteristic of subhuman species serves to bar them from one of the most helpful ways to the advancement of their kind—i. e., the way leading through cotoleration with animals to perfected zoeculture. The most avidly sought weanlings in the Seri chase are the helpless young, and the heavily gravid dams which are pursued and rent to fragments with a horrid fury doubtless reflecting the practical certainty of capture and the exceptionally succulent tidbits afforded by the fetal flesh; naturally the cruel custom reacts on habitual thought in such wise that the very sight of pregnancy or travail or newborn helplessness awakens slumbering blood-thirst and impels to ferocious slaughter. To such custom and deep-planted mental habit may be ascribed some of the most shocking barbarities in the history of Seri rapine, tragedies too terrible for repetition save in bated breath of survivors, yet explaining the utter horror in which the Seri marauder is held on his own frontier. At the same time the hunting custom and the mental habit explain the blindness of the Seri to the rudiments of zoeculture, and clarify their intolerance of all animal associates, save the sly coyote that habitually

3:Davis & Dawson E-5 (1922-1940)1945 NU31 Seri NU31

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FIG. 3. THE SERI HOME—A BOWER OF BRUSH

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FIG. 4. AN AGUAJE ON TIBURON ISLAND
THE PRINCIPAL WATER SUPPLY AND SOURCE OF THE CARRIZO REED USED IN CONSTRUCTING THE BALSA.

[p.195]

5:Dawson N-5 (1940) 1944 NU31 Seri NU31

DESERT
PLANT LIFE

SIXTEENTH YEAR NUMBER 9

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SOME ETHNOBOTANICAL NOTES ON THE SERI INDIANS

105 121 If the natural resources of a region may be said to reflect the degree of cultural and social development of its aboriginal people, we may easily understand why the Seris of Sonora, now approaching extinction and with much modified habits and culture, are considered the most primitive and savage of American Indians. Certainly the arid coast of Sonora, destitute of water but for a few widely separated, stagnant holes, with a dry, rocky [133] soil habitable only by the most frugal and thorny of desert vegetation, presents little in the way of resources to a native people. It was, indeed, [262] only along the ocean shore that the Seris found animal food sufficient to sustain them, principally, the sea turtle and the pelican. This food source proved adequate to support a tribe of some 2000 in pre-Columbian times, but the limited habitat of the pelican and turtle brought about extreme isolation of the people. Thirty-mile-long Tiburon Island became their principal home, separated from the mainland by the narrow but tempestuous channel, El Infiernillo, across which they frequently voyaged in their buoyant balsas to search out vegetal supplements to their monotonous sea food diet. It is this use of vegetable materials, not only as food but in other phases of the domestic economy of these people in earlier times, with which these notes are particularly concerned.

225 Primary occupation of the Seris aside from their continual movement to and from the water holes was, necessarily, their search for food, for they cultivated nothing and conserved little. Fish were exceedingly abundant in the waters around their island, but their very limited tool sense, pro- [247] viding them with almost no fishing devices, excluded much of this food from their diet. Clams and other shellfish were to be had, but it was the abundant green sea turtle, feeding upon luxuriant growths of marine grass, *Ruppia maritima*, in the shallow, sandy lagoons along El Infiernillo, that provided their meat staple. The turtles could be captured with ease during egg laying season as they crawled over the beach, but at other times they had to be 396 speared from a watercraft. No sizable timber grows in Seriland and before the advent of flotsam boards and hoop-iron it would have strained the

5:Dawson N-5 (1940) 1944 NU31 Seri NU31

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Preparing a mesquite bean meal cake on the stone metate.

Seri women carrying firewood back to camp. Note the baskets and the head pads made of mesquite or torote.

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Tiburon Island - 1936

123 As a concrete result of that first trip to Tiburon, I secured a
115 *balsa* (boat) made of *carrizo* canes lashed together with native fibre,
501 which *balsa* Mr. Heye said it was the finest one in North America.

[226] This *balsa* was given to me without hesitation, although it furnished one or two families with sea food.

115 I wish to pay tribute to Senor Roberto Thomson who has been my constant companion, friend, guide and interpreter during the past twenty years, on all my trips to Tiburon and various parts of Mexico. I found him absolutely dependable, using excellent judgment in critical situations. He was honest, fair, intelligent, looking out constantly for my safety and comfort always, enduring hardships cheerfully. A better all-round out-door man I have never seen equaled. In short, he is a real *hombre*, and *muy simpatico*.

13 Tiburon, or *Shark Island*, long noted for its evil reputation as
181 the home of the most savage and treacherous Indians of North America,
• 133 lies in latitude 29°north and 112°30' west longitude, in the Gulf of California. It is shaped like a parallelogram about thirty-five miles long and eighteen to twenty miles wide, and lies parallel to the coast of Sonora, Mexico, of which, no doubt, at some remote period, it once formed a part.

It is separated from the mainland, for the most part, by a strait
[127] called *El Infernillo*, or The Little Hell, through which the rising tides pour a resistless flood. It is a desert island and supports a desert arboreal vegetation which includes several varieties of the cactus family and the *mesquite, palo verde, palo fierro, torote, palo blanco, ocotillo* and others. The giant *saguaro, sarbueso* and *pitahalla (pit-a-haya)* cactus are found here also.

Two desert ranges run lengthwise of the Island, which, on its westward or windward side, terminate in sea-worn cliffs against whose ramparts dash the heavy breakers of the Gulf, and on its eastern side, by long alluvial aprons from the foot of the mountains, sloping gently down to the lovely shell-strewn beaches. From this side the foot of the mountains lies from two to five miles distant. On this, the leeward side of Tiburon, the sea is much calmer, and often, in the early morning, it is as smooth and placid as a lake, reflecting each rosy, lavender and purple tint of the rugged Sierra Seri along the Sonoran coast, as in a mirror. The exquisite loveliness of marvelous sunrises over the pure limpid waters of the *Estrecho Infernillo* is mystical.

134 The soil is loose and sandy, unsuitable for cultivation, and im-
241 possible for producing domestic crops of any
142 kind.

175 if they were as hungry then as they are today, they would not stop to
641 spike a man up preparatory to serving him. Their only tools then were
266 rocks to use as hammers and hoop iron for knives, and these are in
114 universal use today.

[412] There is no doubt that the men were killed, but I think these mining men purposely exaggerated their findings, if any.

648 There is no doubt that the Seris were brave fighters, treacherous
721 murderers, sparing neither men, women or children on their raids,
727 killing ruthlessly. But there is one charge which cannot be brought against them, which cannot be said of many tribes north of the border. So far as I could find out, they never tortured nor scalped.

648 The Seris never took prisoners and they never inter-married with
721 other tribes, so their strain is pure.

727 There was one exception. Sixty or seventy years ago, the Seri
563 Chief Coyote Iguana and his band of warriors held up the stage between Hermosillo and Guaymas, and killed all except a handsome Spanish girl of the better class. This girl, Coyote Iguana made his wife and by her raised a family. One granddaughter still survived in 1924, and while more attractive than the general run of Seri, her complexion was fully as dark.

The Seris, Ishmaelites among the native tribes of Mexico---the most fascinating Indians in North America!

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123 *Reception Committee, Tiburon Island - 1935*

115 On the twenty-fifth of April, nineteen twenty-two, I engaged the services of Roberto Thompson, who with his father and grandfather

[text continues on p. 149]

[123 [15] before him, has been a friend of the Seris for years. It was his father who brought McGee to Tiburon in 1895, and in many ways they have shown kindness to the Seris.

[122] I hired an auto-truck for fifty dollars to take the necessary people and supplies. These supplies consisted of some fine-tooth combs, needles, thread, one bolt of white muslin, 150-pounds of flour, panoche, saws, nails, harmonicas, little round mirrors, fish twine, hooks, 2-bits and other things.

We left at 6:30 a.m. With us was the driver Ricardo, his friend Rafael Ysabel, son of an ex-governor of Sonora. When we reached Bob's ranch, *El Providencia*, five or more miles out, we added a one-eyed Mexican and Bob's brother.

After a simple dinner at the ranch house we drove across the mouth of the Sonora river, a broad, flat alluvial plain probably four or five miles across. We circled about and turned north, stopping at the edge of a broad shallow bay. The tide was down and the shore was slimy mud and filled at places with sharp-edged clam and oyster shells. There were oyster flats at the edge of the mud, so Roberto and the Mexican waded out and secured enough of them for supper.

[130] During the day we ran close to a Gila monster, a horrid looking black and orange mottled fat lizard who waddled along. Rafael held his head with a rifle, reached down and caught him in back of the head, and held him up. He hissed like a snake and bears a bad reputation.

[133] The country was flat and the road pretty good. Detached mountains we passed during the day and one range called *Siete Cerros*, Seven Mountains, with peaks all in one row, reached for fifteen or twenty miles. We passed a few ranches where the people were pumping water from wells or hauling in the old turn-table way with a mule and rawhide buckets. Then we made camp, got everything ready for an early start the next day and turned in.

At dawn three men took the boat with all our traps and groceries and fifteen gallons of fresh water, and Rafael and I walked up to the point to meet it. Louis and the driver and truck returned to the ranch. The weeds and ground were very wet and we came to some sloughs filled with soft ooze. These were impossible to cross, so we went around them and then decided to strike for the ocean side and go along a sand bank. This we did, and when we reached the end we saw the boat waiting for us half a mile or more across a great flat.

[133] The ocean view was grand. A great rock, *Alcatraz Island*, protruded from the sea a short distance out, on which countless cormorants roost and raise their young. Bob often gathers their eggs.

We reached the boat and climbed in and pushed off into deep water. There was no wind and the tide was part way against us, but we rowed, three of us, for many many miles. We landed in a small cove, drew up

[text continues on p.15]

10: Davis E-5 (1922-ca. 1939) 1965 NU31 Seri NU31

Roberto Thomson waving white bandera as signal of peace. In the Gulf - Sonora. April 26, 1922

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Pulling the boat up the beach above high tide - Kino Bay and Alcatraz Island - 1936

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123 Mile after mile. We got very dry and had almost given up finding the
[133] water. We had gone up a sandy wash for miles, barren arid mountains terminating in regular saw tooth pinnacles on all sides, some of beautiful red rock---red as blood; some gray and some lavender.

312 At last we came to the water hole which had also been frequented
123 by coyotes, skunks and other animals, and their flavor was easy to taste. But we had ceased to be critical long ago. The hole was really a crooked shaft and led down crude steps worn into the rock for ten or twelve feet. It had been dug by clam shells and bones and sticks, and may have dated back many years. Part of it was through rock and it was a work of great patience to dig with such primitive tools.

123 At the foot, a seepage came through the sand and formed a shallow pool from which, in the semi-darkness, we dipped water and filled our cans. After a rest, all partook of a generous drink. It took us two and a quarter hours---six miles to go there, and we were probably the only white men who had ever been there. I am glad I went for the experience, but we were all completely exhausted on reaching camp. Ricardo and the Mexican carried the cans of water six miles on a stick balanced over the shoulder. Roberto left his sign along the trail. We slept in the Seri huts, all tired out. My feet were tender from walking on the sharp shells and my shoes had shrunk from being wet in salt water, and that pained my feet greatly by cramping them too much.

We heard many interesting tales about the Seris: their wonderful endurance, their susceptibility to disease, their marvelous feats of tracking and swimming, their habit of getting food only when necessary and laying up none ahead, and other queer customs.

The breaking of dawn brought a marvelously beautiful sunrise. It was very low tide and the boat was stranded nearly two hundred feet from water. The sky and sea were crimson and the mountains purple on the Sonora side. The sea was calm, without a ripple, and mirrored every peak and color and made a picture of indescribable beauty.

We ate a hasty breakfast and strained ourselves to the utmost to move the boat. It slowly slid over the grass and shells to the water's edge, and then we had to push it out seventy-five feet in the water to get it deep enough to float. A slight breeze was blowing, so we raised the sail and rounded the point and headed across for another point, across a stretch of water five or six miles.

[202] At last we saw a few huts and as we neared shore we saw two men with rifles. We waved the white banner, laid our rifles handy, fixed our revolvers, and ran the boat ashore. The men had darted back into the brush as experience had told them to beware of strangers. Roberto and his brother Nene leaped out, leaving their rifles, seized the white flag, ran after the men and called to them and said they were friends who had come to see them. They recognized Roberto, returned to the brush shelters, left their rifles and came to the boat bare-

[text continues on p. 157]

157 The women are virtuous and faithful and perform all the duties of
152 wife and mother and bear their share of hardships. The hard life,
[145] exposure and struggle for existence soon causes hard features, wrinkles
[165] and ugliness. Many babies die young and the tribe probably numbers
[167] only about two hundred.

The dancing by the driftwood fires continued as we turned in to
123 rest, our eyes constantly drawn to the flame and the glittering eyes in the wild dark faces, while the waves of the sea accompanied the chanting in that mysterious isle of Seriland.

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Seris off to the fishing grounds - December 1934. Alcatraz Island in distance.

222 In Seriland most of the food comes from the sea. During April and May, at the time of my first visit, a green grass growing on the sea bottom was detached and washed ashore. The women dragged it up on the bank near camp and spread it out to dry. Some of the stalks contained about seven fine green seeds the size of a pin head. When dry, the
[285] women threshed them out with sticks on a piece of canvas. These are cleaned by the deft use of the *batea*, or winnowing basket, of which these people are pastmasters.

252 A pint of these fine seeds were parched in an olla over coals of driftwood and constantly stirred to prevent burning. It was then ground
262 on a flat rock like a *metate*---any flat rock---into a green meal which was very nourishing. This was cooked in an olla with turtle oil, making a porridge like thick green paint. It was then drunk or eaten with the fingers. If there is plenty, two fingers are used; if not, only one finger.

262 The Seris also eat the fruit of the *cholla* cactus, *pitchalla* and *sag-*
222 *uaro*, and probably many other plants in season, but they are wild to get flour. But the principal diet is *cahuasa*, or sea turtle.

225 After a day or so with the Seris, their food supply became exhaust-
123 ed and they made arrangements to take our boat (all they had was a
[177] *balsa*) and get a sea turtle. So at four o'clock in the morning, with Roberto and Nene, his brother, and myself, they shoved off for the fishing ground. It took two hours of hard rowing to reach the Sonora
[33] side, as the tide was racing up the *Infernillo*. Most of the waters are shallow, with patches of dark and light sandy bottom, with seaweed or grass. On this green grass the turtle feeds; it is their alfalfa field, and it takes a keen-practised eye to see a turtle at the bottom and harpoon him before he escapes.

225 Once on the hunting ground, water, one of the Seris stood in the
[411] bow with a harpoon twenty feet long, a detachable barb on the end of it, and a heavy line attached. The Seri in the bow motioned with his hand this way or that, slow or fast, and watched the bottom. At last
[411] he plunged his spear and withdrew the pole. The turtle swam awhile until exhausted, and then he was drawn alongside, his head pounded with an ironwood club, and then he was turned on his back and drawn on board. This called for great skill in balancing the cranky, smooth-bottomed boat to keep it from shipping a wave.

225 When a Seri goes in his native *balsa*, which only holds one man, he
501 straddles the middle part on his knees, resting them on seaweed. The craft is light and is a good sea craft, but it is low in the water and the man is wet all the time. He uses a double-bladed paddle, and his harpoon rests against pegs set in the *carrisos*. A rock which serves to quiet the turtle, two pointed stakes and a heavy fish line complete the equipment. He has to paddle across to the other side in that cramped position, say eight or ten miles, very early in the morning, then watch his chance to harpoon. If successful he brings up the turtle, knocks him on the head with the rock, pulls him on the end of the craft by skillful manipulation, cut slots in the front flippers, put stakes through and into the *carriso*, pinning him firmly in place, then paddle back.

225 The wind came up strong when we started to return from our turtle
123 hunt and with wind and tide against us we rowed across the Island. Bob and his brother disembarked and took it afoot for camp, a distance of ten miles, reaching there at two p.m. The Seris made a tump line and towed the boat, one towing and two warping off-shore until we arrived at camp about four p.m.

When the bow was run up on the shore everybody came down, the women and children talking a steady stream in their strange jargon.
123 They soon jerked the heavy turtle out, dragged him up the beach on
262 his back, and began immediately to cut him up. Bob spoke for the breast, which is a white plate on the underside of the turtle with

[text continues on p. 168]

five-gallon cans full. They were fastened one each end of a *palance*, 123
or shoulder pole, and thus brought to camp. If anyone thinks this is
easy they should try it over rocky, uneven, sandy, stony ground,
dodging thorny vegetation at every step.

The colors of the mountains were mostly red of volcanic character, [133]
with great streaks of yellow and pink, deeply cut with side canyons
and sharp ridges, all similar to other desert ranges.

The men caught a few crabs and gathered clams in the afternoon,
which helped out our larder. One of them told about his wife being
shot. He said they had a big fiesta and during the drunk, a Seri shot
at his head. He happened to be stooping alongside his wife and the
bullet buried itself in his wife's thigh. We could feel it through
her clothes.

A good many years ago when stages ran between Nogales and Guaymas, 648
the Seris held up the stage, killed the men and captured one Mexican 727
girl. She was brought here and made the wife of one of the chiefs, 563
Coyote Iguana, and she bore children. Some years later her brothers
came here to induce her to return, but she refused, saying that she
was ashamed to go back and she had children here. About fifteen years
ago in a battle with the Papagos, two of her sons were killed.

The Papagos have taken toll of many Seris, these hunted Indians 648
who are such fascinating and ingenious companions, whether they are
harpooning turtle or packing water through the thorny wastes.

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Seris making fire (with fire drill) - Island of Tiburon

123 225 *cahuamas*, or sea turtle. After two or three hours' use of the boat they had harpooned two and brought them to shore. Then the whole bunch went to the shore and dragged them out and began cutting them up as they were all hungry and had had nothing to eat hardly. They gave us one breast, the most delicate part of the turtle. It is tender juicy white meat.

123 We soon had the boat loaded again, paddled to the Indian camp, and took the *carriso* boat in tow. We raised the sail and a good wind sprung up and we made a fast run before the breeze. This also whipped up a nasty sea, and the great green rollers would come and slop against the freeboard to an inch of coming on board. At a critical time our slight tow-line parted and we stood a good chance of being swamped in order to hold the *balsa* until we could bend a heavy fish line with great fishhooks which we jabbed into it.

The boat, all the time, was ripping through the water, the boom was slopping in the waves, and each green roller threatened to come on board. We dared not spit overboard for fear of dipping up a wave. The wind and waves got so nasty we decided to make a landing. To add to our anxiety, the *balsa* had broken loose again, but we held it with our hands despite the waves. We unstepped the mast after dropping the sail, and just in time, as the seas got bigger and the wind stronger. We were so cramped we could not row, so the paddles were used, and eventually we reached a sandy beach, all safe and sound, and pulled the boats up out of the water.

I had sent a note ahead, in English and Spanish, to the car to meet us at a designated place on the coast to the south about fifteen or twenty miles. He had stopped to eat *cahuamas* to give him strength. He was a big raw-boned man, Chico Romero, son of the Chief.

123 • 133 On the two points nearest Tiburon and Sonora, the most beautiful rocks had been washed up by the sea, that I ever saw. All colors of the rainbow were represented, but lavender and violet prevailed. The sands were a delicate lavender while the shore at Tinajanita, up the bay, was a deep lavender. Many beautiful shells were left by the tide as well as various colored pumice.

Our present camp was at the foot of the granite hills, and the sand was almost white. It was made much whiter by tiny shell fragments only as large as grains of sand.

180 Ten or twelve years ago Bob's uncle and cousin were captured by the Yaquis. They suffered the most inhuman tortures. The soles of their feet were sliced off and they were made to walk over sharp rocks. Their eyes were gouged out and they were scalped.

Another captive was used like a piece of beef. He was staked out and one Yaqui would ask the other:

"What cut would you like?"

"I'll take a piece of leg," the other would answer.

A chunk of living flesh would be cut out and piece by piece the captive was hacked to pieces.

Only two or three years ago Bob and two friends had trouble. Bob escaped by a very narrow margin, but they tracked him like hounds for twelve miles. His friends were captured and stripped of clothes and everything, and expected every moment to be shot. They caught a hog, hung it up alive and cut a long strip off the back and left it hanging. They got frightened away suddenly and left the two friends unharmed. His uncle was captured on his way to Royon, on the San Miguel River twenty miles south of Opodepe.

648 The Yaquis and the Seri Indians have been enemies for untold years. What grim scenes the eyes of the desert have witnessed in the past!

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Entering cave - Tiburon - 1936

123 One night when the sea was quiet Bob and his brother went sea turtle hunting but didn't catch any. We made a bright fire of drift to guide them back. The sea murmured gently, accompanying the crackle of the fire.

We turned in on-shore in the clean white sand. We roasted the turtle breast that the Seris gave us, by standing it on edge in front of the fire. It was tender and elegant. For bread we made pancakes, mixed with sea water. We were out of baking powder. The green coffee secured from the Yaqui fishermen was wasted in a frying pan until it

123 was black. He then ground it in the frying pan by rolling it with a tin can. When made, the coffee was black and bitter, but they were used to it that way.

At three thirty in the morning we were up from our sand beds and drank coffee. At four we pushed off, towing our *balsa* on which we lashed our turtle shells, antlers and other things. Our boat rode the waves like a duck.

As we glided by the foot of some mountains we could hear the surf break sullenly. We had the sail up but soon had to resort to the oars as the slight wind died out. Day soon began to grow light. The sea was glassy, reflecting the rosy morning tinge. There was a swell on but the waves were smooth.

136 The cormorants, in threes and fives, began flying to their feeding grounds with swift wings and necks outstretched. Then a few Pelicans drifted idly by on lazy wings. A school of sardines fretted the water near us, chased by a hungry fish from its depths. A few porpoises rose and dived, rose and dived, rose and dived, time after time. At one time eight of them came within twenty feet of us and one dived right under our bow, bouncing the boat up and down.

• 139 123 Soon we were passing some red volcanic hills, with caves and blow holes in the cliff and sea caves below, in which the sea roared. Giant cactus secured a precarious footing in the crannies of the cliffs. Then a long beach, then *Cerro Prieto,* another red cliff descending to the sea, penetrated with numerous caves and roosting places for cormorants.

123 As we neared Alcatraz *(Pelican)* Island, we saw a fishing boat in the distance. The wind had freshened and was ahead and the waves seemed almost to come in board, but the hollowed tree arose and rarely shipped any water. A boat put off from the fishing boat and was rowed to shore, and as we came up we hailed the crew and grounded our own boat. They had seen us from Alcatraz Hill, and seeing the balsa thought the Seri Indians had stolen a fishing boat and were towing their own boat. Each man had a belt of cartridges and if the Seris had been there instead of us they were going to kill them. Bob knew them from Guaymas.

We pushed off from shore again, and after rowing a half or three quarters of a mile further we beached our boats, cooked dinner and waited for our auto truck. Our provisions were almost gone. We had only enough for one meal left. No meat at all. Water was almost gone. None other for miles.

415 264 262 One of the cherished vessels used by the Seris is an agate chamber pot. It is black from much use. When I saw it, it contained a green slimy mess made from meal of seaweed seeds and the green fat or oil of the turtle. The Seris stick their fingers into the pot and then lick them off. If any is left the dog licks out the pot. No vessel is ever washed; it is licked clean.

10: Davis E-5 (1922-ca. 1939) 1965 NU31 Seri NU31

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516
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Seri Indians at home

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415

Seri Indians preparing their meal

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373
826 so all the other flies could see and also come to this dead thing."

707 A few weeks ago, Antonio Herrera had a very vivid dream. He dreamed
[118] that he was hunting in the mountains for deer and came across a cave. (These volcanic mountains are pitted with caves.) He went into the cave and saw all kinds of things dear to the heart of a Seri---plenty of rifles, lots of cartridges, knives, *manta* (unbleached cotton), necklaces, red bandannas, blue overalls, *plata*, or silver, and many other things.

[058] When he awoke he sought his father Manuel Encinas, who is a medicine man and interpreter of dreams, to explain his dream to him. The price demanded by Manuel was six *tiras*---or 30-30 cartridges, a very high price, according to Seri standard. The explanation was this:

It was true that the cave was there and all the things in it just as seen and described by Antonio, but in order to find it he would have to fast nine days and go without water that length of time also, in the heat of summer. Then the way would appear to reach the cave. So far, Antonio has not attempted the fast.

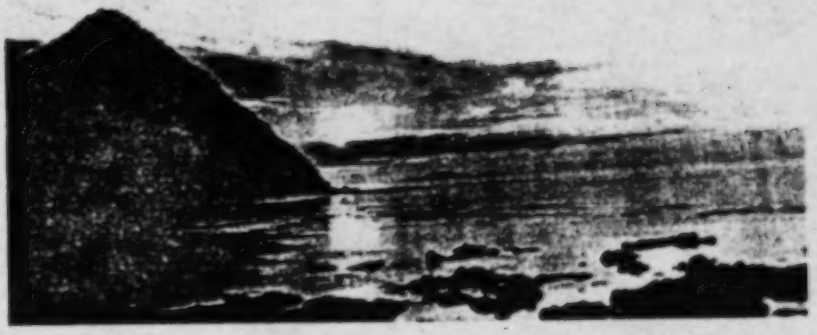
381 I witnessed the operation of making a certain kind of pitch or
396 tar which the Seris use to make the seams in their canoes or boats tight. The women pound up the dried pulp next to the outside skin of a dead *pitahella* cactus (organ cactus). This is very dry and brown in color and the pieces are pounded up to a dry powder with a wash or shore rock in a dried deer hide. This is placed in a *batello*, or flat basket, and manipulated so that the coarse pieces come to the top and are scraped off and thrown away. The fine powder is then put in a five gallon can and some porpoise or sea-lion oil or horse oil is poured on it and stirred into a thick gummy mass. When thoroughly mixed it is put over the fire, in an olla, to boil and continually stirred for an hour or two until it is the consistency and has the appearance of coal tar. While being worked it is kept heated and applied to seams inside and outside the boat. It hardens just like tar and answers the same purpose.

123 Since the corn, which had kept this band of Seris in food, disap-
225 peared two days before we came, and they had barely kept going on
[089] seeds and a few fish, and they all had decided to leave camp with us in the morning---the women walking and the men and some children in boats---it was necessary to supply them with some food to take them to the hunting grounds of the *cahuama*, or sea turtles, and land them
[262] on the Island. The *cahuama* would furnish them meat---their favorite and national food, and the shores would supply them with clams, oysters, crabs and other sea food.

123 So the whole band was called around our camp and each family was furnished with two cups of corn, two of beans, some green coffee and a cup of cube sugar. For the first time our camp was free of Indians, and we ate and went to bed in peace.

The amenities of civilization were laid aside and forgotten in

• 133



Sunrise - Tiburon Island - 1936

The Pelican Skin Robe

133 •

Toshne or Pelican Island - Kino Bay - 1936

It was the dark of the moon and a very black night, ideal for surprising the Pelicans asleep, roosting on the steep slope above the waters of the Sea of Cortez. The Pelican is a very wary bird and cannot be approached in the light of the moon. 123 223

At sundown we had climbed several hundred feet to the saddle between two peaks on the Island of Alcatraz in Kino Bay off the coast of Sonora. We rolled up in our blankets and hugged the great volcanic rocks at the crest, to be as inconspicuous as possible to the great birds circling the peaks to seek a roosting place on the west slope of the Island.

Santo Blanco had provided himself with a torch made from the slender rods of a dead *pitahalla* (organ) cactus which he had tied together in a long bundle. The four young Seris who joined him also had a torch and in addition, each had provided himself with a club. We took no fire arms. Senor Roberto Thomson, my companion, had arranged this trip with Santo Blanco, for my benefit. [416] [124]

[text continues on p. 215]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

elevements, as at Pico Pinacate, in northwestern Sonora. The various rocks are usually bare or meagerly mantled with talus in the mountains; over the greater part of the plains they are commonly veneered with sheetflood deposits, ranging from a few inches to a few yards in thickness; while the central portions of the larger valleys are lined with alluvial accumulations reaching many hundreds of feet in thickness. 133

The clearly interpretable geologic history began with extensive degradation and eventual baseleveling of a granitic terrane in Paleozoic or early Mesozoic time; then followed the deposition of the shales and associated limestones during the later Mesozoic; next came elevation, accompanied or followed by corrugation, chiefly in folds parallel with the present coast, whereby the granite-based sierras were produced, and accompanied also by the earlier vulcanism to which the volcanic sierras owe their existence. A vast period of degradation ensued, during which the land stood so high as to induce greater precipitation than that of today and to permit the streams to carve channels far below the present level of tide, and during which the present general configuration was developed; then came the southwestward tilting and consequent climatal desiccation, the filling of the deeper valleys, the inauguration of sheetflood erosion, some local vulcanism, and the progressive shifting of the divides.

The geologic structure affects the hydrography, especially that factor determined by subterranean circulation, or ground-water; for the superficial sheetflood and alluvial deposits are highly pervious and many of the volcanics hardly less so, while the shales and limestones are but slightly pervious and the granites nearly impervious. The geologic structure also determines the character of the soil with exceptional directness, since the dryness of the air and the dearth of vegetation reduce rock decay to a negligible quantity. The characteristically precipitous sierras and cerros are of naked ledges, save where locally mantled with a mechanical debris of the same rocks (much finer than the frost product of colder and humider regions); the soil of the normal plains is but the little-oxidized upper surface of sheetflood deposits made up of the mechanical debris of local rocks and varying in coarseness with the slope; while the soil of the valleys is detrital sand and silt, derived from tributary slopes, passing into adobe where conditions are fit, and essentially mechanical in texture and structure save where cemented by ground-water solutions at the lower levels. 134

Flora

The flora of the Sonoran province affords a striking example of the adjustment of vegetal life to an unfavorable environment. The prevailing vegetation is perennial, of slow growth and of stunted aspect; and it is not distributed uniformly but arranged in separate tufts or clusters, gathering into a nearly continuous mantle in wetter spots, though commonly dotting the plains sparsely, to completely disappear 137

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

132 The broad valley between Sierras Seri and Kunkaak, bottomed by El Infiernillo, is especially beset by fierce and capricious gales; the general atmospheric drift is disturbed by the leading and lesser sierras, as well as by temperature convection from the gulf, and eddies are developed in such wise as to send air-currents directly or obliquely up or down the valley. These local or sublocal winds are characteristic. Judging from observations covering several weeks, the valley is wind-swept longitudinally for an average of eighteen or twenty hours daily, the winds ranging from strong breezes to gales so stiff as to load the air with sand ashore and spray seaward; and even the calms may be broken

[122]

FIG. 5.—Embarking on Bahia Kunkaak in la lancha Anita.

any minute by sudden gusts and williwaws, passing rapidly as they arrive. Not only waves but wind itself combines with tides to shape the [134] structural features of the valley; nowhere within it do flour-fine sands like those of Desierto Encinas occur, save as a hardly perceptible constituent of the dunes and banks of coarser sand—they have been blown into the sea or beyond the limits of the valley. Throughout the strait 132 so expressively named by its explorers, the capriciousness of the sea 133 culminates, despite the shoalness and the protection from easterly and westerly winds; the storm currents and tide-currents are half the time opposed, raising breakers even when the air is nearly still; eddies and whirls and cross-currents arise constantly, and even at the stillest

RMalkin F-5 (1953-1955)1962 NU31 Seri NU31

I

INTRODUCTION

The territory discussed in this paper is somewhat larger than the historical area occupied by the Seris. While Seri settlements are limited today to a quite narrow range, the Tiburon Island and the coast of Sonora immediately adjacent to it, they are familiar with a far larger region, owing to their periodic trips, either on their own after fish, turtle and game or, occasionally, in the temporary employ of the Mexican fish-traders and even farmers. The further away from Tiburon perimeter, the lesser their familiarity with a locality.

The area is limited by Hermosillo in the east, Punta Penasco and Porto Libertad in the north, and Nogales in the south, and finally it includes also the coast of Baja California which the Seris sometimes visit. It also includes all of the islands within that area, Tiburon, Patos, Rasa, Angel de la Guarda, San Lorenzo and San Esteban.

With very minor variations this entire region belongs properly to the Sonoran desert. *Palo Verde, Palo Fierro, Pithaya, Mesquite, Cholla, Sahuaro,* prickly pear, elephant tree and creosote bush are the basic plants. Among the vertebrates, such forms as the Sonoran bighorn, deer, cougar, jumping rat, badger, coyote, skunk, rattlesnake, sidewinder and Gila Monster are most conspicuous and diagnostic. Among the birds are the roadrunner, the raven, as well as many pelagic or littoral birds, the pelican and cormorant among them.

The region is one of very low rainfall, limited to the hot summer months, in some places occuring only a few times in a year. Winters are chilly and dry with persistent winds and dust, with the temperature falling down, on rare occasion, to just above the freezing point. Summers are intensely hot, with daily temperatures usually over 100 and the water temperature of the sea along the shore not infrequently as much as 85 degrees. There are great differences between diurnal and nocturnal temperatures, very much influencing the desert life.

Within this region there are several different ecological zones or perhaps sub-zones, varying from the alkaline flats like Playa Noriega, and the alkali-and salt-permeated soils of Desemboque to the more bountiful slopes of the mountains and the irrigated mud-flats around Hermosillo.

For the sake of distinction, I have selected several of the typical localities or zones as a point of reference either because of their ecological distinctions or because of their signficance as a landmark, readily delineating a peculiar habitat. Personally I am familiar only with some of the

[P.1A]

123 As a concrete result of that first trip to Tiburon, I secured a
115 *balsa* (boat) made of *carrizo* canes lashed together with native fibre,
581 which *balsa* Mr. Heye said it was the finest one in North America.

[226] This *balsa* was given to me without hesitation, although it furnished one or two families with sea food.

115 I wish to pay tribute to Senor Roberto Thomson who has been my constant companion, friend, guide and interpreter during the past twenty years, on all my trips to Tiburon and various parts of Mexico. I found him absolutely dependable, using excellent judgment in critical situations. He was honest, fair, intelligent, looking out constantly for my safety and comfort always, enduring hardships cheerfully. A better all-round out-door man I have never seen equaled. In short, he is a real *hombre*, and any *simperico*.

13 Tiburon, or *Shark Island*, long noted for its evil reputation as
181 the home of the most savage and treacherous Indians of North America,
183 lies in latitude 29°north and 112°30' west longitude, in the Gulf of California. It is shaped like a parallelogram about thirty-five miles long and eighteen to twenty miles wide, and lies parallel to the coast of Sonora, Mexico, of which, no doubt, at some remote period, it once formed a part.

It is separated from the mainland, for the most part, by a strait called *El Infernillo*, or The Little Hell, through which the rising
[137] tides pour a resistless flood. It is a desert island and supports a desert arboreal vegetation which includes several varieties of the cactus family and the *mesquite, palo verde, palo fierro, torote, palo blanco, ocotillo* and others. The giant *saguaro, sarbuesa* and *pitahalla (pit-a-haya)* cactus are found here also.

Two desert ranges run lengthwise of the Island, which, on its westward or windward side, terminate in sea-worn cliffs against whose ramparts dash the heavy breakers of the Gulf, and on its eastern side, by long alluvial aprons from the foot of the mountains, sloping gently down to the lovely shell-strewn beaches. From this side the foot of the mountains lies from two to five miles distant. On this, the leeward side of Tiburon, the sea is much calmer, and often, in the early morning, it is as smooth and placid as a lake, reflecting each rosy, lavender and purple tint of the rugged Sierra Seri along the Sonoran coast, as in a mirror. The exquisite loveliness of marvelous sunrises over the pure limpid waters of the *Estrecho Infernillo* is mystical.

• 134 The soil is loose and sandy, unsuitable for cultivation, and im-
241 possible for producing domestic crops of any
142 Kind.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

ant. Sierra Menor is a third term in the mountain series, in structure and geomorphy as in altitude; while the interior plain is a homologue of that portion of Desierto Encinas lying north of Playa Noriega—i. e., of its (potentially) free-drained portion. Almost the entire perimeter of Tiburon is suffering marine transgression, and is faced with seacliffs overlooking wave-carved shelves; and in both form and structure the greater part of the coast reports, with minor variations, the features of the mainland coast from Punta Ygnacio northward. Partly because of the superior magnitude and height of its debris-yielding sierra, partly because of protection from the wave-best of the open gulf, the eastern shore is skirted with a talus-shape slope, usually two to four miles wide; and while there are unmistakable evidences of shorefloor carving in the higher portions of this plane, the coastal cliff commonly reveals nothing but heterogeneous debris, sometimes rising thirty or forty feet above tide. Somewhat the greater part of the volume of this debris is fine—i. e., sand and silt and nondescript rock-matter; but there is always a considerable element of larger rock-fragments, which gather along the shore in a pavement of bowlders and cobbles (upper figure of plate V). These coarse materials—important factors in aboriginal industry—are harmoniously distributed: more conspicuously on the ground than on the map, the coast is set with salients (of which Punta Narragansett is a type), consisting merely of exceptional accumulations of debris from gorges in the sierra and from shallow arroyos, or pebble washes, traversing the coastwise plain. These salients owe their prominence partly to the relative coarseness, partly to the abundant supply, of fragmental material from the heights; and about their extremities the beach is paved with bowlders, which grade to cobbles or even to pebbles along the recentrant shores on either hand. This distribution of cobbles is one of the conditions governing the placement of Seri rancherias; and in many cases the jacales are located, either singly or in groups, where the coastal salients and recentrants meet, and where there is an abundant supply of cobbles of convenient size and wave-tested hardness.

The coastwise plain skirting eastern Tiburon has a few wave-built projections analogous to those east of El Infiernillo; the most conspicuous of these are Punta Tormenta, Punta Tortuga, and Punta Peria with its tide-swept extensions, Bajios de Ugarte. All of these are located primarily by sierra-fed arroyos, but all are greatly extended by wave-borne material laid down along lines determined by the prevailing currents of this best-protected portion of the coast. The long outer face of Punta Tormenta, shaped by the storms of Bahia Kunkaak, is strikingly regular and symmetric; its broad extremity and inner face are diversified by subordinate bars and lagoons, evidently tending to connect with the main coast toward Punta Tortuga, and thereby to transform the whole of Rada Ballena into a lagoon. Already the narrow embayment is so shallow that, although a com-

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

hours tumultuous waves come and go sporadically, while about the mile-wide boca the choppy sea sometimes takes the form of spire-like jets, spurting 5 or 10 feet high and breaking into aigrettes of glittering spray in most unwaterlike and wholly indescribable fashion. Dewey described the strait as "unsafe for navigation by any except the smallest class of vessels"; it is safe, indeed, only for portable and indestructible craft like the Seri balsas, which may be put off or carried ashore at will by craftsmen willing to wait for wind and tide, and unpossessed of impediments of a sort to be injured by wetting. Of such an environment the balsa is a natural product.

The adjunct islets of Seriland are miniatures of Tiburon in all essential respects, save that they are without fresh water. The largest is San Esteban, a somewhat complex butte rising sharply from the waters in a nearly continuous sea-cliff recording vigorous work by storms and tides; it is occasionally visited by the Seri, chiefly in search of water-fowl and eggs. The most important of the series in Seri economy and mythology is Isla Tasaue, off the mouth of Bahia Kino; it is a rugged butte some 600 feet high, rising in wave-cut cliffs on the sea side and pedimented by low spits and banks of sand toward the lee; the sand-banks are literally flocked with pelicans, while other fowl cover the flatter ledges and crowd the crannies of the pinnacle. Isla Turner is a somewhat smaller and still more rugged butte, bounded on both sides by precipitous cliffs, while Roca Foca is merely a great rock shelving upward from the storm-swept waters off the most exposed angle of Tiburon; in the crannies of the former birds nest abundantly, while the lower ledges of both are haunted by seals. Isla Patos, north of Tiburon, is a breeding-place for different water-fowl, and is especially noted as a refuge for ducks; it, too, is for the most part a rocky butte, with a sandy shelf at the eastern base. Beyond San Esteban lies the similar but smaller Isla San Lorenzo, while Isla Salsipuedes and a few other islets stretch thence northward half way to the southern point of Isla Angel de la Guarda, the second-largest island of the gulf. San Lorenzo and the smaller islets are occasionally visited by the Seri, partly for a mineral pigment used in face-painting, partly in quest of game; and they sometimes push on to the larger island to enjoy its fairly abundant game, including the easily taken iguana, amid the ruins of an ancient culture apparently akin to that of southern Mexico. Even the most frequented islets, Tasaue and Patos, can be reached only by crossing miles of open sea; but in their way the Seri are as canny navigators as they are skilful boat-builders—it is their habit to hug the shore in threatening weather, to await wind and tide for hours or days together, to set out on distant journeys only when all conditions favor, and in emergency to seize inspiration from the storm like the vikings of old, and bend supernormal power to the control of their craft.

Summarily, the prevailing features of Seriland may be said to be

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317

[For the use of various plants and minerals in the preparation of ?antez] kőil or blue clay used in Seri facial ornamentation, see category 386.]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

137 time of need, and it yields abundant seeds, consumed by birds, small animals, and men. About all of the permanent waters not invaded by white men and the white man's stock there are brakes of cane or carrizal (*Phragmites communis* ?); the jointed stems are half an inch to an inch in thickness and 8 to 25 feet in height; the seeds are edible, while the stems form the material for balsas and afford shafts for arrows, harpoons, fire-sticks, etc., and the silica-coated joints may be used for incising tough tissues.

The coasts of Seriland, both insular and mainland, are skirted by zones of exceptionally luxuriant shrubbery, maintained chiefly by fog moisture. Along the mountainous parts of the coast the zone is narrow and indefinite, but on the plains portions it extends inland for several miles with gradually fading characters; this is especially true in the southern portion of Desierto Encinas, where the fog effects may be observed in the vegetation 12 or 15 miles from the coast. Most of the fog fed species are identical with those of the interior, though the shrubs are more luxuriant and are otherwise distinctive in habit. On the Tiburon side of gale-swept El Infiernillo, and to some extent along other parts of the coast, some of these shrubs (notably *Maytenus phyllanthroides*) grow in dense hedge-like or mat-like masses, often yards in extent and permanently modeled by the wind in graceful dune-like shapes. Somewhat farther inland the flatter coastwise zones of Tiburon are rather thickly studded with shrubby clumps from 6 inches to 2 feet high, made up of *Frankenia palmeri* with half a dozen minor communals; while still farther inland follows the prevailing Sonoran flora of mesquite, scrubby paloverde, and chaparral (*Celtis pallida*), etc, only a little more luxuriant than the normal.

Throughout Seriland proper, and especially in the interior valleys of Tiburon, grasses are more prevalent than in other portions of the Sonoran province, their abundance doubtless being due to the rarity of graminiverous animals during recent centuries.

FAUNA

136 Considered collectively, the fauna of the Sonoran province is measurably distinctive (though less so than the flora), especially in the habits of the organisms. The prevailing animals, like the plants of extraneous type, evidently represent genera and species developed under more humid conditions and adjusted to the arid province through a long-continued and severe process of adaptation; and no fundamentally distinct orders or types comparable with the cacti and torotes of the vegetal realm are known. The prime requisite of animal life in the province is ability to dispense with drinking, either habitually or for long intervals, and to maintain structure and function in the heated air despite the exceptionally small consumption of water; the second requisite is ability to cooperate in the marvelously complete solidarity of animal and vegetal life characteristic of subdesert regions. No

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

systematic studies have been made of special structures in the animal bodies adapting them to retention of liquids, either by storage (as in the stomach of the camel) or by diminished evaporation, though the prevalence of practically nonperspiring mammals, scale-covered reptiles, and chitin-coated insects suggests the selection, if not the development, of the fitter genera and species for the peculiar environment. Much more conspicuous are the characters connected with cooperation in the ever severe but never eliminative strife for existence in the subdesert solidarity; the mammals are either exceptionally swift like the antelope, exceptionally strong like the local lion, exceptionally pugnacious and prolific like the peccary, or exceptionally capable of subsisting on waterless sierras like the bura and mountain goat; the reptiles are either exceptionally swift like the rainbow-hued lizards, exceptionally armed like the sluggish horned toads, exceptionally venomous like the rattlesnake, or exceptionally repulsive, if not poisonous, like the Gila monster; even the arthropodates avoid the mean, and are exceptionally swift, exceptionally protective in form and coloring, exceptionally venomous like the tarantula and scorpion and centipede, or exceptionally intelligent like the farmer ant and the tarantula-hawk; while there is apparently a considerable class of insects completely dependent on the cooperation of plants for the perpetuation of their kind, including the yucca moth and (undescribed) cactus beetle. Among plants the intense individuality (which is the obverse of the enforced solidarity) is expressed in thorns and heavily lacquered seeds and toxic principles; among animals it is expressed by chitinous armament, as well as by fleetness and fangs and deadly venom.

The larger land animals of Seriland proper are the mountain goat in the higher sierras, the bura (or mule-deer) and the white-tail deer on the mid-height plains and larger alluvial fans, with the antelope on the lower and drier expanses. Associated with these are the ubiquitous coyote, a puma, a jaguar of much local repute which roams the higher rocky sites, and a peccary ranging from the coast over the alluvial fans and mid-height plains of the mainland (though it is apparently absent from Tiburon). Of the smaller mammals the hare (or jack-rabbit) and rabbit are most conspicuous, while a long-tail nocturnal squirrel abounds, its burrows and tunnels penetrating the plains of finer debris so abundantly as to render these plains, especially on Tiburon, impassable for horses and nearly so for men. The California quail and the small Sonoran dove are fairly common; a moderate number of small birds haunt the more humid belts, and there is a due proportion of Mexican eagles and hawks of two or three forms, with still more numerous vultures. Ants abound, dominating the insect life, while wasps and spiders, with various flies and midges, gather about the vital colonies of the drier plains and swarm in the moister belts. Horned toads and various lizards—bright-colored and swift, or earth-tinted and sluggish—are fairly abundant, while black-tail rattlesnakes

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

● 136 haunt the more luxuriant vegetation of fog zones, permanent waters and cienegas. On the whole, the land fauna of Serriland is much like that of the province in general, though the various forms of life are less abundant than the average, since all (except the abounding squirrel) are sought for food by the omnivorous Seri; and the distribution, even when relatively abundant, is woefully sparse, as befits the scant and scattered vegetal foundation for the animal life.

Strongly contrasted with the meagerness of the land fauna is the redundant aquatic fauna of that portion of the gulf washing the shores of Serriland. Tiburon island is named from the sharks, said by some explorers to have been seen by thousands along its coasts; these voracious feeders find ample food in literal shoals and swarms of smaller fishes; a not inconsiderable number of whales have survived the early fisheries (one, estimated at 80 feet in length, was stranded in Rada Ballena about 1887); while schools of porpoises play about Boca Infierno and elsewhere, making easy prey of slower swimmers caught in the tide-rips and gale-swept breakers. Proportionately abundant and varied is the crustacean life; littoral mollusks cling to the ledges exposed along all the rocky coast stretches, and the entire beach from Punta Antigualla to Punta Ygnacio is banded by a practically continuous bank of wave-cast molluscan shells, the shell-drift being often yards in width and many inches in depth. Common crabs abound in many of the coves, and a large lobster-like crab frequently comes up from deeper bights and bottoms; oysters attach themselves to rocks and to the roots of shrubby trees skirting protected bays like Rada Ballena, while clams are numerous in all broad mud-flats, such as those of Laguna la Cruz; and the pearl oyster was fished for centuries toward Punta Tepopa, until the ferocity of the Seri put an end to the industry. Especially abundant and large are the green turtles on which the Seri chiefly subsist, leaving the shells scattered along the shore and about rancherias in hundreds; while two land tortoises (*Gopherus agassizii* and *Cinosternum sonoranse*) range about the margins of the lagoons, and one of these is alleged to enter the water freely.

The abundance of water-fowl is commensurate with that of the submarine life. The pelecin leads the avifauna in prominence if not in actual numbers, breeding on Isla Tasmo (Pelican island), and periodically patrolling the whole of Bahia Kunkaak and El Infiernillo in lines and platoons of military regularity; gulls are always in sight, and the cormorant is common; while different ducks haunt several of the inlets, and the shores are promenaded by curlews, snipes, and other waders. There is a corresponding wealth of plankton, which at low spring tide with offshore gale covers acres of shallow littoral with squirming or inert but always slimy life, the substratum for that of higher order; and jellyfish and echinoids are cast up by nearly every wave, while at night the surf rolls up the smooth strands in shimmering lines of phosphorescent light. On the whole, the aquatic life teems in tropic luxuriance

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

and more than ordinary littoral variety; for the waters of the gulf are warmed by radiation and conduction from its sun-parched basin, while the concentrated tides distribute and stimulate the species and keep the vital streams astir. 136

Local Features

Considered as a tribal habitat, Seriland comprises four subdivisions of measurably distinct character, viz, (1) the broad desert bounding the territory on the east; (2) the mountainous zone of Sierra Seri; (3) Tiburon island and the neighboring islets; and (4) the navigable straits and bays contiguous to island and mainland. 133 137

1. So far as its marginal portions are concerned, Desierto Encinas is a typical valley of the Sonoran province, sparsely dotted with vital colonies of the prevailing type and variegated by the exceptionally luxuriant mesquite forests of the Bacuache and Sonora fans; but the interior of the valley is rendered distinct by the fact that it lies near, if not below, the level of the sea.[1] The central feature is Playa Noriega—a film of brackish water for a few days after each considerable semiannual freshet, a sheet of saline mud for a few weeks later, and for the greater part of the year a salt-crusted sheet 20 square miles in area, level as a floor and unimpressionable as a brick pavement. The playa is rimmed by dunes 10 to 40 feet in height, and about these and along the arroyos which occasionally break into it there is some aggregation of salt-enduring shrubs, evidently sustained in part by the semiannual freshet with its meager vapors and fogs. Outside this rim the surface is exceptionally broken; low dunes and irregularly wandering banks of soft and dust fine sand are interspersed with meandering salt flats much like the central playa, ranging from a few feet in width and a few yards in length up to mappable dimensions, as in the lesser playa lying east of the great one; and many of the dust-banks are honeycombed with squirrel burrows. This annulus of broken surface is narrow on the west, soon passing into okatilla scrub and then

[1] The expedition of 1895, during which Seriland was surveyed, was not provided with apparatus for accurate vertical measurement, and hence altitudes were only approximately determined. The determinations by Mr Johnson, who executed the topographic surveys, indicated that even the lowest part of the valley is somewhat above sea-level; but other facts indicate that it actually lies below the level of the waters of the gulf, and forms a miniature boundary-sea of Colorado desert (in southern California): in the first place the central playa, which is undoubtedly flooded occasionally if not semiannually, does not embouch into, and has no channels extending toward, the sea; in the second place it is highly saline; again, the alluvial fans of Rio Bacuache and (especially) of Rio Sonora are so placed as to intercept and dam the trough occupied by Laguna la Cruz in its southern portion and Playa Noriega in its northern portion; concordantly, the detail configuration of the coast indicates marine transgression, apparently due to secular submergence of the land—though the abundant marine shells of recent species toward the valley-bottom attest recent displacement of the sea. On the whole, the facts seem to indicate that, during recent geologic times, the lower portion of this valley was a shallow gulf extending northward (and probably also southward) from the eastern limit of Bahia Kino; that the importation and deposition of sediment, chiefly by Rio Sonora, outran the secular subsidence of the land so far as to displace the waters of the gulf in its central portion and to separate the northern arm from the sea; and that the waters of this northern arm were subsequently evaporated, disappearing finally in the central playa in which local inflow and evaporation are balanced by the usual mechanism of interior basins. [126]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

133 inner margin of the shelf is a sea-cliff, usually 30 to 50 feet high, of which the lower half is commonly granite and the upper half unconsolidated and recent-looking mechanical debris collected by sheetflood erosion. Sometimes the granite of the subterrane is replaced by volcanics; sometimes ancient and firmly cemented talus deposits separate the superficial mantle from the subterrane, as shown in the lower part of plate v; sometimes the line of sheetflood planation passes below tide-level, when the waves beat against the unconsolidated deposits in a deep embayment; sometimes the sharply defined planation surface ends abruptly at the sides of subranges or buttes shooting upward in the abrupt slopes characteristic of the sierra proper; yet this 18-mile stretch of coast is a nearly continuous revelation of the structure of sheetflood-carved plains and of modern marine transgression. The debris of the combined processes forms an abundant and varied assortment of bowlders, cobbles, and pebbles, whence the inhabitants readily derive their simple implements without need for studied forethought or manual cunning.

The long sand-spit terminating in Punta Miguel and the shorter one terminating in Punta Arena are the product of geologically recent wave building, and consist of irregular series of V-bars, backed by lagoon-like basins and enclosing considerable bodies of brine in the central portions; and the bars and basins become successively higher outward, in such wise as to attest the secular subsidence of this coast. [361] [487] Several jacales are located on the higher portion of the southern sand-spit, midway between Punta Granita and Punta Miguel, while foot-paths traverse the flat and skirt the coast. Toward the terminal portion of the spit the sand is blown into hummocks, held by clumps of salt-enduring and sand-proof shrubbery; but there are no rancherías here, despite the fact that it is a natural point of embarkation—doubtless because no Seri structure could withstand the sand-drifting gales and storm inundations of this exposed spot. The more protected lagoons behind the outer bars harbor abundant waterfowl, within bowshot of shrub-clumps and dunes well adapted to the concealment of hunters, while the mud-flats open to the tide abound in clams and other edible things. The features of the Punta Miguel sand-spit are repeated with variations along the eastern shore of El Infiernillo; and [361] Seri jacales, evidently designed for temporary occupancy, occur here and there, usually on higher banks above reach of the severer storms.

3. Tiburon island itself is apparently the chosen home of the Seri—[131] a habitat to which the mainland tract is at once a dependency, an alternative refuge, and a circumvallation. Its dominant range, Sierra Kunkaak, mates Sierra Seri in its essential features, though the rocks are for the greater part ordinarily obdurate eruptives rather than exceptionally obdurate granites, as in the mainland sierra; accordingly the range is somewhat lower and broader, while the sheetflood sculpture, with its sharp transition into precipitous cliffs, is somewhat less trench-

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

133 fortable haven at high tide, it is mostly mud-flat and sand-waste at extreme low tide—a condition which explains the stranding of an 80-foot whale in this treacherous harbor about 1887. The rada is between two and three miles in length. It abounds in marine life of
● 136 kinds preferring quieter waters: clams are plentiful in its mud-flats, a sponge lines portions of the bottom toward its inner extremity, oysters cluster numerously on bowlders and on the mangrove-like roots and trunks of a large shrub along the outer shore, and various fishes find refuge here from the fierce currents and the hungry sharks and porpoises of the open strait; these and other creatures form food for innumerable waders and other water-fowl that seek shelter in the quiet bay, which is still further protected by salt-enduring shrubbery on the bars of the point and by the shrubby thickets and wave-cast banks and wind-built dunes on the mainland side.

The combination of conditions renders this portion of the Tiburon
361 coast the optimum habitat of the Seri Indians. There are, indeed, no houses or other traces of permanent habitation on Punta Tormenta itself, which is not only swept by gales but must sometimes be inundated by gale-driven waters at high spring tide; but at the inner end of the long sand-spit, and also on the mainland opposite the outer portion of Rada Ballena, there are extensive and well-kept rancherias, capacious enough to accommodate comfortably thirty or forty Seri families, i. e., 150 or 200 persons. Toward its landward end the sand-spit is built
311 largely of pebbles and cobbles, of which thousands of tons are adapted to industrial use; sea-food is practically unlimited and is readily taken; water-fowl literally crowd the protected rada within arrow-shot of natural cover; the outer slope of the bar is admirably suited for landing and embarking balsas in calm weather, while the bay is an ideal harbor for the portable craft, and the shrub-grown shores give unlimited opportunity for concealing them when not in use; the dunes and banks are high enough to protect the low jacales from storm-winds, while the abundant sponges and turtle-shells afford material for thatching and shingling the more exposed walls and roofs; and finally,
[312] it is but a favorite distance (about 4 miles) to the permanent fresh water of Tinaja Anita. From this Seri metropolis well-trod trails
487 radiate toward all other parts of the island; the best-beaten leads to the tinaja, sending branches into all the neighboring gorges, in which game is sometimes taken; next best-worn is the trail laid across Sierra Kunkaak to strike Arroyo Carrizal mid-length of its permanently wet portion; others pass northward to rancherias at different points on the coast, and still another skirts the coast southward by several smaller rancherias to the considerable jacal collection near Punta Narragansett—this, like other longshore routes, having alternative trails, the evanescent fair-weather one following the beach, while the permanent path threads the thorn-set thickets marking the crest of the sea-cliff or cuts across the longer salients. The Narragansett rancheria is

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

hours tumultuous waves come and go sporadically, while about the mile-wide boca the choppy sea sometimes takes the form of spire-like jets, spurting 5 or 10 feet high and breaking into aigrettes of glittering spray in most unwaterlike and wholly indescribable fashion. Dewey described the strait as "unsafe for navigation by any except the smallest class of vessels"; it is safe, indeed, only for portable and indestructible craft like the Seri balsas, which may be put off or carried ashore at will by craftsmen willing to wait for wind and tide, and unpossessed of impediments of a sort to be injured by wetting. Of such an environment the balsa is a natural product.

The adjunct islets of Seriland are miniatures of Tiburon in all essential respects, save that they are without fresh water. The largest is San Esteban, a somewhat complex butte rising sharply from the waters in a nearly continuous sea-cliff recording vigorous work by storms and tides; it is occasionally visited by the Seri, chiefly in search of water-fowl and eggs. The most important of the series in Seri economy and mythology is Isla Tasnę, off the mouth of Bahia Kino; it is a rugged butte some 600 feet high, rising in wave-cut cliffs on the sea side and pedimented by low spits and banks of sand toward the lea; the sand-banks are literally flocked with pelicans, while other fowl cover the flatter ledges and crowd the crannies of the pinnacle. Isla Turner is a somewhat smaller and still more rugged butte, bounded on both sides by precipitous cliffs, while Roca Foca is merely a great rock shelving upward from the storm-swept waters off the most exposed angle of Tiburon; in the crannies of the former birds nest abundantly, while the lower ledges of both are haunted by seals. Isla Patos, north of Tiburon, is a breeding-place for different water-fowl, and is especially noted as a refuge for ducks; it, too, is for the most part a rocky butte, with a sandy shelf at the eastern base. Beyond San Esteban lies the similar but smaller Isla San Lorenzo, while Isla Salsipuedes and a few other islets stretch thence northward half way to the southern point of Isla Angel de la Guarda, the second-largest island of the gulf. San Lorenzo and the smaller islets are occasionally visited by the Seri, partly for a mineral pigment used in face-painting, partly in quest of game; and they sometimes push on to the larger island to enjoy its fairly abundant game, including the easily taken iguana, amid the ruins of an ancient culture apparently akin to that of southern Mexico. Even the most frequented islets, Tasnę and Patos, can be reached only by crossing miles of open sea; but in their way the Seri are as canny navigators as they are skilful boat-builders—it is their habit to hug the shore in threatening weather, to await wind and tide for hours or days together, to set out on distant journeys only when all conditions favor, and in emergency to seize inspiration from the storm like the vikings of old, and bend supernormal power to the control of their craft.

Summarily, the prevailing features of Seriland may be said to be

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

224 semiceremonial collective chase. The fleet but wary antelope, the pugnacious peccary, the wandering puma and jaguar, and the mountain sheep of the rocky fastnesses, are among the favorite objects of this style of chase; while the larger land birds and some of the water-fowl are taken in similar fashion.

The smaller land game comprises a tortoise or two, all the local

[009]

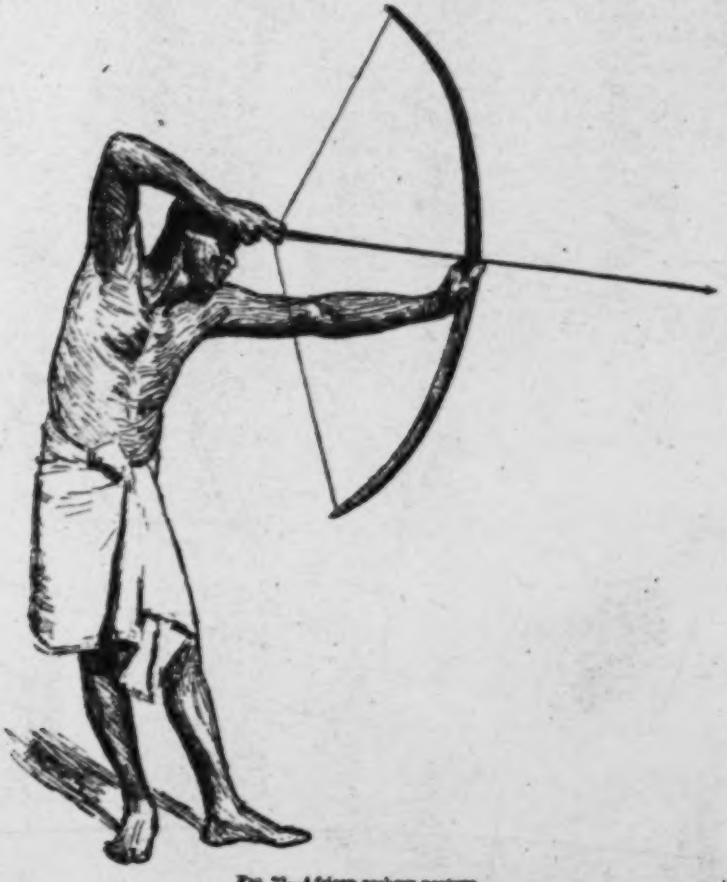

FIG. 22.—African archery posture.

snakes and lizards, and a good many insects, besides various birds, including hawks and owls, as well as the eaters of seeds and insects. The crow and vulture are also classed as edible, though they are rare in Seriland, probably because of the effective scavengering of the province by its human residents. It is a significant fact that the

[136]
[262]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

smaller rodents, especially the long-tail nocturnal squirrel, are excluded from the Seri menu by a rigidly observed tabu of undiscovered meaning. A general consequence of this tabu is readily observed on entering Seriland; there is a notable rarity of the serpents, the high-colored and swift efts, and the logy lizards and dull phrynosomas so abundant in neighboring deserts, as well as of song birds and their nests; and this dearth is coupled with a still more notable abundance of the rodents, which have increased and multiplied throughout Seriland so abundantly that their burrows honeycomb hundreds of square miles of territory. A special consequence of the tabu is found in the fact that the myriad squirrel tunnels have rendered much of the territory impassable for horses and nearly so for pedestrians, and have thereby served to repel invaders and enable the jealous tribesmen to protect their principality against the hated alien. Seriland and the Seri are remarkable for illustrations of the interdependence between a primitive folk and their environment; but none of the relations are more striking than that exemplified by the timid nocturnal rodent, which, protected by a faith, has not only risen to the leading place in the local fauna, but has rewarded its protectors by protecting their territory for centuries.

In both the collective and the strategic chase, constant advantage is taken of weakness and incapacity, whether temporary or permanent, of the prospective quarry; so that diseased and wounded as well as sluggish and stupid animals are eliminated. The effect of this policy on the fauna is undoubtedly to extinguish the less capable species and to stimulate and improve the more capable; i. e., the presence of the human factor merely intensifies the bitter struggle for existence in which the subhuman things of this desert province are engaged. At the same time, the entrance of the human folk into the struggle characteristic of subhuman species serves to bar them from one of the most helpful ways to the advancement of their kind—i. e., the way leading through cotoleration with animals to perfected zoöculture. The most avidly sought weaklings in the Seri chase are the helpless young, and the heavily gravid dams which are pursued and rent to fragments with a horrid fury doubtless reflecting the practical certainty of capture and the exceptionally succulent tidbits afforded by the fetal flesh; naturally the cruel custom reacts on habitual thought in such wise that the very sight of pregnancy or travail or newborn helplessness awakens slumbering blood-thirst and impels to ferocious slaughter. To such custom and deep-planted mental habit may be ascribed some of the most shocking barbarities in the history of Seri rapine, tragedies too terrible for repetition save in bated breath of survivors, yet explaining the utter horror in which the Seri marauder is held on his own frontier. At the same time the hunting custom and the mental habit explain the blindness of the Seri to the rudiments of zoöculture, and clarify their intolerance of all animal associates, save the sly coyote that habitually

7: Marroquin E-5 (1955) 1957 NU31 Seri NU31

In general, the Seris have a healthy appearance; the most frequent complaints are gastro-intestinal and visual defects due to avitaminosis. It is very possible that given the difficult living conditions resulting from the desert environment, a rigorous selective process among the newborn takes place so that only those who possess exceptional physical qualities survive. This explains why the majority of them retain the physical characteristics described by Hardy more than a century ago: "the Indians of Isla Tiburón are tall, healthy and well built". 164 147 142

In spite of attempts at education, the Seris do not practice the elemental rules of hygiene; their way of life, neglecting this aspect, contributes to increase the unhealthy foci which exist in the places where they have established themselves. 515 751

Dwellings.—The Seris retain many vestiges of their nomadic life, among them the hut which serves as their living quarters; many of them are simple provisional arrangements for sheltering themselves from wind and sun, and they bear no relationship to the stability and durability of our dwellings. The Seri hut was made to meet the necessities of a nomadic people who had no reason to spend much time nor work on making a dwelling which would only be used for a season (one, two or at the most three months). Nevertheless, some innovations have been introduced in the last 20 years, so that we must distinguish between two types of houses. The primitive model consists of a series of scrub pine arches interwoven with branches from the same shrub almost totally covered by foliage, tortoise shells, *zacate*, etc., with only a small hole in one of its ends as an entrance (this type of hut is the same that McGee saw in 1894 when the Seris still led a nomadic life). 342 [221] [177]

In the new model more resistent woods are used, like *sahueso*, *torote*, etc., and poles, between which is laid a layer mud. The house is rectangular, without windows; with only one entrance, but always larger than the entrance to the brush hut. Other models would have to be added to these two, due to the incorporation and utilization of tents made in the United States which some U. S. tourists or the Society of Friends have given them. The tent is used as permanent living quarters; or sometimes combined with branches to cover the primitive type huts. 342 178 [177]

Domestic Animals.—The Seris are very fond of domestic animals like the dog, cat, and finally, the chicken. For all practical purposes these animals live together with the family; they rest on the piles of rags and sand which serve the Indians as beds; lick the plates and cooking utensils; dirty the house; increase the household fauna with their fleas and other vermin thus contributing to create and unhealthy atmosphere in the home. 231 [136]

Problems of Intoxication.—Their dealings with the fish buyers, in whose stores are sold beer, *mezcal* and *tequila*, has turned them to the consumption of these drinks. The Seri drinks liquor in an uncontrolled 273 [275]

Whitaker E-5 (1953-1955)1962 NU31 Seri NU31

I

INTRODUCTION

[13] [12] [361] [221] [46] The territory discussed in this paper is somewhat larger than the historical area occupied by the Seris. While Seri settlements are limited today to a quite narrow range, the Tiburon Island and the coast of Sonora immediately adjacent to it, they are familiar with a far larger region, owing to their periodic trips, either on their own after fish, turtle and game or, occasionally, in the temporary employ of the Mexican fish-traders and even farmers. The further away from Tiburon perimeter, the lesser their familiarity with a locality.

The area is limited by Hermosillo in the east, Punta Penasco and Porto Libertad in the north, and Nogales in the south, and finally it includes also the coast of Baja California which the Seris sometimes visit. It also includes all of the islands within that area, Tiburon, Patos, Rasa, Angel de la Guarda, San Lorenzo and San Esteban.

137 With very minor variations this entire region belongs properly to the Sonoran desert. *Palo Verde, Palo Fierro, Pithaya, Mesquite, Cholla, Sahuaro,* prickly pear, elephant tree and creosote bush are the basic plants. Among the vertebrates, 136 such forms as the Sonoran bighorn, deer, cougar, jumping rat, badger, coyote, skunk, rattlesnake, sidewinder and Gila Monster are most conspicuous and diagnostic. Among the birds are the roadrunner, the raven, as well as many pelagic or littoral birds, the pelican and cormorant among them.

132 The region is one of very low rainfall, limited to the hot summer months, in some places occuring only a few times in a year. Winters are chilly and dry with persistent winds and dust, with the temperature falling down, on rare occasion, to just above the freezing point. Summers are intensely hot, with daily temperatures usually over 100 and the water temperature of the sea along the shore not infrequently as much as 85 degrees. There are great differences between diurnal and nocturnal temperatures, very much influencing the desert life.

134 Within this region there are several different ecological zones or perhaps sub-zones, varying from the alkaline flats like Playa Noriega, and the alkali-and salt-permeated soils of Desemboque to the more bountiful slopes of the mountains and the irrigated mud-flats around Hermosillo.

121 For the sake of distinction, I have selected several of the typical localities or zones as a point of reference either because of their ecological distinctions or because of their significance as a landmark, readily delineating a peculiar habitat. Personally I am familiar only with some of the

III

MAMMALS

Scientific	Common Name
Antrozous pallidus	Pallid bat
Bassariscus astutus	Ringtail cat (Cacomistle)
Spilogale gracilis	Spotted skunk
Taxidea taxus	Badger
Urocyon cinereoargenteus or Vulpes macrotis	Grey fox or kit fox
Canis latrans	Coyote
Felis concolor	Mountain Lion.
Felis onca	Jaguar
Felis eyra	Juguarundi
Zalophus californianus	California sea lion
Dipodomys sp.?	Kangaroo rat
Erethizon dorsatum	Porcupine
Lepus californicus	Blacktailed rabbit
Sylvilagus audubonii	Desert cottontail
Pecari angulatus	Peccary
Odocoileus hemionus	Mule Deer
Ovis canadensis	Bighorn
Eschrichtius glaucus	California grey whale
Orcinus rectipinna	Killer whale
Tursiops gillii	Bottlenosed dolphin

Identification here has been obtained largely with an aid of field guides or by mentioning a colloquial local name of the mammal in Spanish. All these were later checked by Dr. Robert T. Orr of the California Academy of Sciences. While there is no doubt of the identity of the most common forms, such as peccary or sea-lion, there are also several of the identifications which can't be certain either because of inadequate line drawings or lack of specimens, either alive at a distance or even parts of them. In this somewhat dubious category are Ringtail cat, Jaguarundi and the Killer whale.

On the other hand, there is no doubt as to the identity of the following: Pacific pale bat, badger, bighorn, coyote, kangaroo rat, blacktail rabbit, cottontail jackrabbit, deer and dolphin. Live, free or captive individuals, or part of them, such as horns, hide or skulls were available.

Economic Uses

Food: Only 6 out of 21 species for which information is available are used today as food. Three more were mentioned as "eaten in the past" and one more as "possibly eaten in the past." Since the oldest of the informants who provided this data, Miguel Barnett, is a man in his fifties (and it is he who talked most often about the animals "eaten in the past but not now") we may surmise that these were part of the Seri diet 25-45 years ago, that is between 1910-1930.

Five species are important as a supplementary source of food: the bighorn, the deer, peccary and both species of rabbits. Some, the deer especially, are considered to be delicacies. The sixth species is the badger but it appears neither important nor frequently killed. I saw one badger captured by José Juan Moreno. The animal was tied to the pole, and kept as a pet, fed on fish, snake and

BrMalkin E-5 (1953-1955)1962 NU31 Seri NU31

Coyote figures out probably

as an important and perhaps disreputable figure in the mythology although nothing but scraps and bits of information suggest this. It is possible that there is actually a taboo on eating this animal or perhaps it is so disreputable that eating its flesh would put a gourmant in an inferior position.

How important is the Seri mammalian diet is hard to tell. It certainly looms more heavily during the winter, because in the cool season hunting is easier than during the heat of the summer and in fact this is when most of it is done by the ardent hunters. Too, winter subjects the Seris to greater hazards and is apt to increase their dependence on the desert resources over that during the summer, even if these resources are scantier at that time.

To all of these animals one should add the semi-wild burros running about the extensive Mexican rancherias. The Indians poach on them frequently using their fire arms, usually the .22 caliber rifles. In any case, it appears that during the summer when the field work was carried out, the mammalian diet figures quite lightly on the Seri table.

Food preparation: Very little is done in the preparation of the mammalian meat. All that I could observe was the boiling of it in hot water spiced with salt. The Indians were saying that in order to have the meat of a peccary, deer or bighorn ready to eat one must boil it 2-3 hours. The same procedure is followed with the meat of the burros. In contrast to this, as shall be seen later, fish are boiled as well as roasted while the turtles are also dried and salted. Preparation of meat is done by women, certainly at least in the encampments when they are present.

Food preferences: Some of the Seri food preferences have already been mentioned. At the top of the list as the desirables are the peccary, the deer, the bighorn and the blacktail jackrabbit; at the bottom is the badger, whose meat "is not much good." There is also preference by sex. Females of both the bighorn and peccary are preferred over the males "because they do not have the bad odor like the males." This sort of favoritism also occurs among the Mexicans. However, the Indians did not elaborate beyond this point.

Other economic uses: Apart from meat, hides are also used. The hides of the deer, bighorn and peccary had been used for sleeping mats although this matter has been expressed in the past tense. Miguel Barnett also suggested that the bighorn hides had been used for clothing by the Indians in the past—but he neglected to say how long ago. During Kroeber's stays, no Seris went about in the animal or bird (pelican) skins but earlier when McGee visited them they went about in these simple garments. Judging then by Miguel's memory, the use of the bighorn hide for clothing must be pushed back to the period of World War I or even earlier.[1]

[1] Miguel Barnett indicated that the "fur" of the bighorn had once been worn for the cold season "but not now."

[P 10 A]

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BIRDS

Scientific	Common Name
Pelecanus erythrorhynchos	White pelican
Pelecanus occidentalis	Brown pelican
Phalacrocorax	Cormorant
Fregata magnificens	Frigate bird Man-O'War Bird
Casmerodius albus *Leucophoyx thula*	American egret or Snowy egret
Botaurus lentiginosus	American bittern
Plegadis chihi	White-faced ibis
?	Duck, species?
Cathartes aura	Turkey vulture
Coragyps atratus	Black vulture
Aquila chrysaetos	Golden eagle
Haliaetus leucocephalus	Bald eagle
Pandion haliaetus	Osprey
Odonthophorinae	Quail
Numenius sp.	Curlew
Scolopacidae	Sandpiper
Catoptrophorus semipalmatus	Willet
Larus occidentalis	Western gull
Larus heermanni	Heermann gull
Columbidae	Dove
Geococcyx californianus	Roadrunner
Tyto alba	Barn owl
Trochilidae	Hummingbird
Centurus uropygialis	Gila woodpecker most likely
Hirundinae	Swallow
Corvus corax	Raven

136 128

Identifications had been mine from sightings and from Blake's *Birds of Mexico* and a few other field manuals and then were checked by Dr. R. T. Orr. In many cases, especially where sightings were from geat distances or actual specimens were not available, the exact identification is uncertain and this fact should be indicated here. In several instances here are several possibilities and these are as follows:

Cormorant—Here there are three possibilities according to Dr. Orr:
1. Double crested cormorant (*Ph. auritus albociliatus*)
2. Mexican cormorant (*Ph. Olivaceus mexicanus*)
3. Pelagic cormorant (*Ph. Pelagicus resplendens*)

Egret—Two possibilities:
1. American egret (*Casmerodius albus*)
2. Snowy egret (*Leucophoa thula*)

Duck—Identification impossible since no specimens were seen. It is supposedly black in color. Undoubtedly it is a duck, but which sp?

Eagle—Probably either Golden eagle or the Bald eagle. The size militates against any other bird of prey.

Quail—No identification beyond the family possible

Curlew—Dr. Orr suggests that it is either the Long Billed Curlew (*Numenius americanus sp?*) or Hudsonian Curlew (*N. hudsonicus*)

Sand-piper—One of many possible species in the area

Sea-gull—Most gulls I have seen are Heermahn gulls (*Larus heermanni*) but some were the Western gull (*L. occidentalis*). These are the two common summer species. But there are also others and, according to Dr. Orr, also there are several others wintering in the region. So, Seris' generalized comments on the seagulls may well apply to several species.

Dove—Seri information applies to several species common in the area.

[P. 17 A]

StMalkin E-5 (1963-1965)1962 NU31 Seri NU31

IV

BIRDS

●136 128 Woodpecker—There are several species in the area but Gila woodpecker (*Centrurus uropygialis*) is certainly one of them.

Hummingbird—Unspecified species, one of several occurring in the area according to Dr. Orr.

Economic Uses

262 Such use as had been made of the birds is largely in the form of an addition to the diet. Reading McGee, one gets the impression that the importance of the birds in the Seri diet, in contrast to the marine animals of all description, has declined greatly. We do know that in the past various birds and, most especially, the seagulls and the pelicans represented a significant item. But today out of the basic list of 24 species, only six has been reported as eaten and all, with an exception of the duck, in the past tense. The duck *[825] evidently is the only bird which the Seri consider really fit to eat and yet, even here, there is temporary avoidance. Moreno told me that this bird "we eat only when we visit the island (Isla Patos). [223] [252] But we do not eat it in September because it is too lean. We like it in December when it is fat. We then kill it at night with stones. It is roasted."[1]

All other birds were reported as eaten only in the past and this has been expressed more or less as follows: sea-gull eaten a few years ago, cormorant 8-10 years ago, pelicans 30-35 years ago. This would mean that the pelicans had been discarded as food, at least according to the official Seri version, in the early twenties, before Kroeber's visit. 183 But the Seri disclaimers on the subject of the bird diet are not entirely correct and reflect less the total rejection and more only low esteem in which these birds are held. 262 For I have seen myself the sea-gull and the pelican eaten on few occasions when times were tough, and the [261] food supply was non-existent, owing to the choppy *[825] and windy seas. The Seris caught in the act of cooking the meagre flesh of the pelican or the seagull were obviously apologetic.

262 It is interesting that some of the birds present in the area, the quail or the woodpeckers, are not eaten although these birds figure prominently in the diet of some of the other groups. It may well be that the Seris consider them too small to bother.

[252] As far as I could find out, eggs of only two species of birds, the sea-gull and the heron, are collected, boiled and eaten. But the eggs of the

[1] His statement requires some explanation. There is no taboo on eating duck but the bird does not occur in Desemboque or any other place known to the Seris, with the exception of Isla Patos. Here these birds winter, arriving in September and arrive worn out and lean, to recoup the fat, a few months later. The Seri unfamiliarity with their eggs is another indication that the birds come to Isla Patos only for the winter. [136] *[825]

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V

REPTILES AND AMPHIBIANS

Scientific	Common Name
Lizards	
Phrynosoma platyrhinos goodei	Horned toad
Callisaurus draconoides inusitatus	Gridiron-tailed lizard
Cryptaphytus wislizeni	Common leopard lizard
Cnemidophorus sacki	Spotted race runner
Cnemidophorus tigris aethiops	Race runner
Sauromalus obesus townsendi	Northern chuckawalla
Sauromalus varius	Chuckawalla
Dipsosaurus dorsalis sonoriensis	Northern crested lizard
Heloderma suspectum	Gila monster
Uta ornata linearis	Uta
Uta stansburiana steinegeri	Striped ground uta
Sceloporus magister	Fence lizard
Coleonyx variegatus sonoriensis	Variegated ground gecko
Xantusia vigilis	Desert night lizard
Snakes	
Crotalus cerastes cercobombus	Side winder
Crotalus atrox	Western diamondback
Micruroides euryxanthus	Coral snake
Coluber flagellum frenatus	Red racer
Coluber flagellum piceus	Black whipsnake
Salvadora hexalrspis deserticola	Patch nose snake
Trimorphodon lambda	Lyre snake
Turtles	
Gopherus agassiz	Agassiz' desert tortoise
Sp?	Loggerhead
Sp?	
Amphibians	
Bufo alvarius	Desert toad

*These two are color varieties of the same species.

Reptile Identification

With the exception of the marine turtles, all species had been identified from preserved specimens either by myself or by Dr. R. Zweifel, Dr. C. M. Bogert, and Mrs. Hecht from the American Museum of Natural History, who also checked my identifications. There is then no question of dubious identification. But circumstantial evidence suggests that belief in the mildness of the coral snake bite, to themselves at least, may well be influenced by the proliferation of the false coral snakes in the area. Mrs. Hecht lists the following of these as likely to occur in the area:

Lampropeltis nelsoni
Lampropeltis pyromelana
Rhinocheilus lecontei antoni
Chionactis occipitalis organica
Chionactis occipitalis palarorostris
Chilomeniscus cinctus

These snakes are very similar to the coral snakes and may well fool most observers, unless they know the differences in the color pattern. Unfortunately, I have not found any of them; there-

9:Malkin E-5 (1953-1955)1962 NU31 Seri NU31

V

REPTILES AND AMPHIBIANS

fore it was impossible to check the Seris' ability to distinguish between these.

As for the marine turtles, there are several possible species in the area. There is no mistake about the loggerhead. I have seen one carapace and bones taken at Campo Vivora, while with the Seris. The others could be any two of the several species common in the Gulf.

Economic Uses

In 1956 I published data concerning economic exploitation of the reptiles by the Seris which need correction. Eleven species out of 25 had been reported as used economically. Additional work done in 1955 and after the completion of the MS. indicated a much higher percentage: 17 species out of 26 are used. Thus the percentage increases from 44% to 65%. The percentage of the species actually used will probably rise with additional field work because some of the informants are disinclined to admit eating certain animals or will simply say, "these had been eaten in the past but not now." However, close inspection and observation often contradict these statements.

The list of species reported as eaten is as follows:

Turtles and tortoises: all species
Snakes: both racers, patch nosed snake and both rattlesnakes
Lizards: both chuckawallas, Gila monster, race runner, northern crested lizard

This listing shows how much dependent are the Seris on the desert habitat for food. Even today, with all the available ready-made manufactured food or imported food from the *tienda*, they gather evidently most of the common reptiles to increase their menu.

Of the species in the list, only two, both smaller species of sea turtles, figure as really important items. McGee believed that here was by far the most important part of the Seri menu, with the marine birds running second.* Now, the importance of the sea turtles has declined, no doubt through a variety of outside influences. I doubt (on the basis of my observation) if altogether it comes to more than 10% of their total diet. The turtles had been replaced as number one food by the fish (with the introduction of hook and line fishing). But anther factor evidently is the depletion of the turtle population. The third species, the huge loggerhead, is so rare that during the entire summer of 1953, only one of them had been harpooned and that at Camp Vivora away from Desemboque. The two smaller species have also become very rare and hardly ever show up near the village. They can be taken on more distant expedi-

*Eggs of the turtles are considered a delicacy, especially of the smaller of the two. The Seris say that the loggerhead has been eaten once but now almost never, because it became so rare.

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VI

FISHES

Scientific	Common Name
● 136 *Stereolepis gigas*	
Myctetoperca jordani	
Cynoscion macdonaldi	
Epinephalus analogus	
Trachinotus paitensis	
Verrunculus polylepis	
Myrichthys tigrinus	
Gymnothorax castaneus	Moray
Bairdiella icistius	
Anchovia macrolepidota	
Cynoscion parvipinnis	
Mugil sp.	
Cetengraulis mysticetus	
Lythrulon flaviguttatum	Flounder?
Paraladbrax maculato fasciatus	
Pareques viola	
Sphoeroides annulatus	
Anisotremus davidsonii	
Girella simplicidens	
Abudefduf saxatilis	
Gobiesox pinniger	
Hypsoblennius gentilis rickettsi	
Gillichthys seta	
Scorpaena sonoras	
Malacoctenus zonifer	
Cypselurus sp. or Fodiator acutus	Flying fish
Neothunnus albacares	Tuna
Ogilbia sp.	
Lutjanus argentiventris	
Conodon serrifer	
Manta birostris	Horned manta
Urolophus halleri	Sting ray
Mustelus lunulatus	
Shark undet.	
Shark undet.	
Shark undet.	Dogfish?
Shark undet. A.	
Shark undet. B.	
Shark undet. C.	
Sphyrna	
Galeocerdo cuvieri	

136 128 The largest number of specimens were identified from preserved specimens by Dr. W. I. Follett of the California Academy of Sciences. This included all smaller fishes. But the largest were determined solely from the well-known vernacular names. The large fishes of the Gulf are well-known and have established local names among the Mestizos. These names are also much in use among the Seris. In several instances, however, it was impossible to determine the species of animal. In such cases, no scientific identification has been made. but their distinct traits were drawn from the Seri comments about them. their natural history, behaviour and ecology. Seris' clear-cut recognition of many of these features as applied to the fishes makes most such differentiations fairly easy. *[825]

* 825 Out of 42 species in the list, nine are sharks. There are, of course, many more species of sharks in the Gulf. But Seri recognition of nine speaks pointedly of their interest in the fishes.

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Walkin F-8 (1953-1955)1962 NU31 Seri NU31

Scientific	Common Name
● 136 *Octopus bimaculatus*	Two spotted octopus
Tetibranchiata	Sea-hare
Ischnochiton Magdalenensis	Gulf Chiton
Ischnochiton laevigatus	Chiton
Codakia distinguenda	Clam
Cardium consors	Cockle
Laevicardium elatum	Giant Cockle
Carditamera affinis	Ruffled clam
Acmaea dalliana	Limpet
Crucibulum spinosum	Spiry Limpet
Chione undatella	Frilled chione
Chione californiensis	California chione
Pteria peruviana	Wing shell
Isognomon chemnitzianus	Pouch shell
Volsella capax	Horse mussel
Crepidula squama	Boat shell
Olivella dama	Olive shell
Cypraea annettae	Annetta's cowry
Tegula rugosa	Turban shell
Conus regularis	Cone shell
Phyllonotus erythrostomus	Pink-mouthed Murex
Turritella broderipiana	August shell
Polinices reclusiana	Southern moon-shell
Phallium abbreviatum	
Chlamys subnodosa	Noded scallop
Atrina maura	Pen shell
Naicula pacifica	
Turbo (Callopoma) fluctuosa	Turban shell
Solenostira pallida	Top shell
Cerithium stercusmuscarum	Spindle
Knefastia funiculata	Spindle
Neritina luteofasciatus	Nerite
Columbella fuscata	Dove shell
Trivia radians	Coffee bean
Tellina rufescens	Tellen shell
Ficus ventricosus	Fig shell
Nioche bistrionico	?

136 128 [126] While most specimens were identified from live material collected in tide-pools and kept in buckets as long as they lasted, some dead shells had also been used, especially those from the kitchen-middens rather numerous in the immediate Desemboque area.

By far most of the species had been identified by Dr. J. P. E. Morrison of the United States National Museum. To these I added a few identifications of my own, while Dr. Grace Pickford of the Osborn Laboratories, Yale University, identified the octopus and Dr. Rudolf Stohler of the University of California identified the chitons.

Economy

* 825 A very considerable proportion of the molluscs is used by the Seris in various ways. The tabulation will present the data much more clearly than could be done in a discussion.

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X

INSECTS AND ARACHNOIDS

Scientific

136 COLEOPTERA
CINCINDELIDAE
Megacephala
Cicindela carthagena coloscana
Cicindela lemniscata
Cicindela californica brevihamata
Cicindela californica mojavi
CARABIDAE
Chlaenius orbus
Calosoma prominens
HISTERIDAE
Saprinus discoidalis
HYDROPHILIDAE
Hydrophilus insularis
ELATERIDAE
Chalcolepidius smaragdinus
Melanotus cribricollis
Heristonotus sp.
MELOIDAE
Meloidae-gen? sp?
CLERIDAE
Cymatodera sp. A.
Cymatodera sp. B.
OEDEMERIDAE
Oxacis sp.
BUPRESTIDAE
Polycesta volasco
Hippomelas sp.
DERMESTIDAE
Dermestes maculatus
TENEBRIONIDAE
Eleodes sp.
Asidina confluens
Cryptoglossa verrucosa
Sterriphanus punctatus
Edrotes ventricosa
Glypotus sp.
SCARABAEIDAE
Trox suberosus
Diplotaxis knausi
Cyclocephala longula
Anoplognatha dunnianus
Ligyrus gibbosus
Strategus
Scarabaeidae, gen? sp?
CERAMBYCIDAE
Monilema sp.
Anoplus prolixus
Anoplus
Derobrachus geminatus
Achryson surinamum
Acanthoderus peninsularis
BOSTRYCHIDAE
Apatides fortis
CURCULIONIDAE
Expagoderus sp.
ORTHOPTERA
Acheta assimilis
Eremopedes bilineatus
Insara covillae
Clematodes larreae
Periplaneta americana
Arenivaga sp. nov.
Ascocnia integra
Diapheromera calcarata
Stagomantis limbata
Stagomantis californica

HEMIPTERA
Rhytidolomia sayi
Lethaeocerus dolpontei
Ranatra thoracicus
Trinotoma rubida
Leptocoreus sp.
Reduviidae, gen? sp?
Hemalocoris minutus
HOMOPTERA
Descreprota sp.
Aconalonia sp.
FULGORIDAE
Scolopsella reticulata
DIPTERA
Eras? argyrocoma?
Hermetia sp.
Stratiomyidae
NEUROPTERA
Paruthaclisia hageni
Scotoleon congener
HYMENOPTERA
Chlorion aerarius
Hemisia sp.
Bee
Ptiloglossa mariensis
Dasymutilla kingi
Dasymutilla magna
Photopis sp.
Pepsis sp.
LEPIDOPTERA
Ascia sevata
Danaus gilippus strigosus
Agraulis vanillae
Amblyscirtes sp.
Phlegethontius sexta?
Sphingidae, gen? sp?
Sphingidae larva
Erebus odora
ARANEIDA
Artema atlanta
Syspira eclectica
Mecaenerus bivittatus
Latrodectus mactans
Aphonopelma
SCORPIONIDA
Hadrurus hirsutus
SOLPUGIDA
Eremoax calezievensis
MYRIAPODA
Scolopendra malkini
Orthorus sp.
ACARINA
Acarina, gen? sp?
IXODOIDERA
Ixodidae, gen? sp?

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IX

MISCELLANEOUS

Scientific	Common Name
ANNELIDA	
Annelid worm (tube)	
POLYCHAETA	
Eurythoe	Stinging worm
ECHINODERMATA	
Heliaster sp.	Star fish
Holothurioides	Sea cucumber
Encope grandis	Sand dollar
Echinometra vanbrutti	Regular sea urchin
COELESTERATA	
Anthozoa	Sea-anemone
Medusa	Jelly-fish
PORIFERA	
Porifera	Sponge

All these miscellaneous animals are grouped together and discussed together simply because only few species from each group are represented and any generalized comments are not reliable.

The following individuals identified the material. Annelid worm (from tube only)—J. E. P. Morrison, U.S. National Museum.

Sea-urchins — Elisabeth Deichman, Harvard University.

Remainder—Borys Malkin

Taxonomy

With an exception of the sponge, all of the forms listed here are considered animals and not plants. The criterion is movement and when questioned for reasons the informants invariably replied "this is an animal because it moves." It applies equally to the jelly-fish and the *Echinoderms*. The *Annelid tubular worm* is also considered an animal and its shell is instantly recognized as an animal shell. This is surely owing to the movement of the worm in and out of the shell, although the worm does not move with the shell, being imbedded on rocks.

The sponge, on the other hand, was said to "stay on rocks for 5-6 years. It does not walk. It is an alga or plant, not an animal. There are several different kinds, different in color." Thus the minutest sort of movement is shown again to be the basic criterion for the distinction between animals and plants.

Sexing

The Seris know nothing about sex differences in these groups. Of course, several of these beasts are hermaphroditic and self-fertilizing, and there are no visible differences. But in any case the informants simply didn't know what the differences between the sexes are.

Food

No knowledge.

[P-45A]

9:Malkin F-5 (1963-1965)1962 MU31 Seri MU31

*825 out during or after rains. The Red mite indeed is a habitual water lover and it does come out after rains in the desert. Actually, probably far greater numbers of insects are associated with the rains, and, of course, there are tremendous flights of insects to the lights following a great downpour but somehow the informants didn't seem to have associated this phenomenon or perhaps the matter eluded my questioning.

In some instances, the Indians indicated where the insects may be found during cold season. *Asica*, *Danaus*, *Agraulis* and *Amblycirtes*, all of them *Lepidoptera*, are supposed to spend their cold season in an inactive state "in the caves in the mountains," a most dubious proposition indeed. The *Hydrophilus* water beetle, on the other hand, "goes underground" for the cold—another invention. Finally the bees are active all year around but their "work" of honey gathering is limited to the hot season.

But what is most important, the scantiness of the insect sample should be kept in mind and any further work may undermine the conclusions suggested here.

●136 *825 Even more dubious are the conclusions reached concerning the Seris' knowledge of the distribution of insects. Not only the sample represents but a tiny fragment of the Sonoran insect fauna, which even in the impoverished Seriland must number many thousands—at least 3-4,000 for the *Coleoptera* alone, a most conservative estimate. Not only our own knowledge of the existing forms in the area is most limited, but we know even less of their distribution from place to place, from one ecological zone to another. The best that we may do is to guess the probable distribution of some forms on the basis of what we do know of their ecological preferences. As for the remainder, especially the strong fliers, we may assume that they occur everywhere within the area, unless there is special reason to believe otherwise. However, these special preferences, when they are known and exist, are of greater significance in the selection of specialized niches and host rather than in the overall distribution pattern.

*825 The 25 localities in the charts as will be remembered have been selected because they represent either important landmarks or because they represent a specific type of habitat to which different faunal elements are restricted.

An explanation of the chart may not be amiss. 1/1 Species for which no distribution symbols are indicated are those which the informants simply didn't know. On the other hand, those that show up in practically every square are those which the Seris covered with a blanket statement like "found all over the world . . ." or "found all over the world except in . . ." etc.

From the very first glance at the chart it is obvious that the greatest number of species are ascribed simply to the localties the Indians know best and where they spend most time: Desemboque, Porto Kino, Buena Vista, Tiburon and the mountains back of Desemboque. One would be also tempted to include San Esteban island in this

[P.50B] 1/[See category 116 - pp66-68 - Analyst.]

VIII

CRUSTACEA

Scientific	Common Name
Cirripedia	Barnacle
Axius vivesi	Mud-shrimp
Leptodius occidentalis	
Microphyrus platicoma	
Speleophorus schmitti	
Petrolisthus armatus	
Callinectes arcuatus	
Glyptoxanthus meandricus	
Pilumnus tournoudi	

All animals in this group are considered live animals—and not plants. This interestingly includes the barnacle. The only way one may account for this is probably the Seris' observation of the cracked barnacles and of the moving flesh inside. Barnacles growing on the marine turtles are also classed as animals, though of a different kind than the barnacles growing on rocks or on the mangroves. They are called *piojos de cahuama*, literally, turtle lice.

The Seris regard *Glyptoxanthus* and *Pilumnus* as the same kind of animal. *Pilumnus* is considered to be merely a large specimen and "maybe an adult," the other *Pilumnus* "is young." When questioned about the reason for the identity the informants pointed out the hairiness of both crabs.

On the other hand, although *Spelenophorus* and *Microphyrus* have the same Seri name, they are considered two different species.

Economy

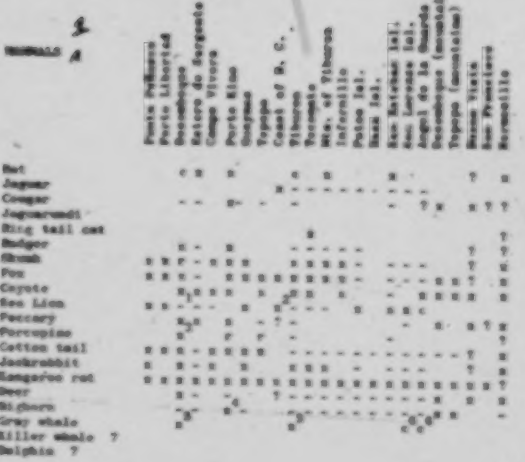
Crustaceans play little role in the Seri diet. Very few are eaten at all and when they are, the amounts are insignificant and they are considered an inferior sort of food. The informants denied that they have eaten any of them in recent years, but allowed that two species, *Callinectes* and *Axius*, had been part of their diet in the past, although how long ago they didn't specify. There is no doubt, however, that in time of frequent sub-famines, the Indians resort to these lowly creatures.

In addition to this, *Microphyrus* had been mentioned as a fish bait. It is possible that in a pinch other forms are also so used. Finally, the most frequent function that the crustaceans play in the Seri life is as objects of play for the boys who spear them with the miniature two-pronged "puieron."

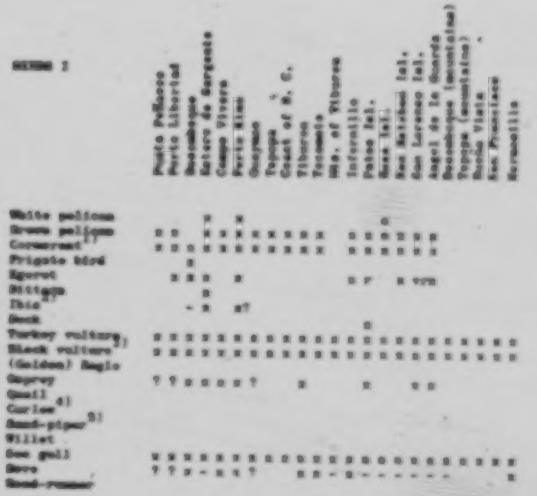
Sexing

For three species of the crustaceans the Seris indicated distinction differences between the sexes. In the two crabs, *Callinectes* and *Leptodius*, the males have narrow center plate while the female's center plate is wide, which in fact is a well-known sex difference in crab. In *Glyptoxanthus* and *Lep-*

136 1
825 MAMMALS A



r-rare
c-common
p-present
- absent
?-don't know
1-because on rocks
2-at Pt. Lobos
3-on level ground
4-big mountains near Kino
5-and all coastal esteros
6-deeper esteros, esp. near Satchan
7-in deeper esteros but in hot season rarer near shore



s-nesting
r-rare
vr-very rare

61- all mainland plus as indicated
21- also other esteros
31- nesting?
11- also everywhere along the coast
41- along sea-shore-unspecific
51- as above

[P.61]
[P.60 is blank]

1/1 [These Distribution Charts show the distribution of animals in the Seri environment as conceived by the Seris. - See Cat. 116, p 13 B - Analyst.]

● 136
* 825

BIRDS II

	Punta Peñasco	Puerto Libertad	Desemboque	Estero Sargento	Campo Vivora	Puerto Kino	Guaymas	Yaqui	Coast of B. C.	Tiburon	Tecomate	Infernillo	Mts. of Tiburon	Patos Isl.	Mano Isl.	San Esteban Isl.	San Lorenzo Isl.	Angel de la Guarda	Desemboque (mountains)	Yaqui (mountains)	Bacoa Vista	San Francisco	Bermejillo
Barn owl			x												x	x	x	x					
Hummingbird	?	?	x	-	x	x	?	x		x		-	-		-	-	-	x					
Woodpecker		x	x		x	?				x	x	-	-		-	-	-	-		?	?		
Swallow																							
Raven				x	x	x		x		x	x	x		-	x	x	?	?					

REPTILES I

	Punta Peñasco	Puerto Libertad	Desemboque	Estero Sargento	Campo Vivora	Puerto Kino	Guaymas	Yaqui	Coast of B. C.	Tiburon	Tecomate	Infernillo	Mts. of Tiburon	Patos Isl.	Mano Isl.	San Esteban Isl.	San Lorenzo Isl.	Angel de la Guarda	Desemboque (mountains)	Yaqui (mountains)	Bacoa Vista	San Francisco	Bermejillo	Hapolos
Horned toad				x	-	x	x			x	x				-	x					x	x	?	
Gridiron-tailed lizard				x	x	-	x				x	x											x	x
Leopard lizard				x	-		x				x	-											x	
Spotted rare runner	?	-	x	?	x	x	?				x	x	x	-	-	?	-	?	?	-				
Race runner			x	x		-	x					-				-x	x	x						
Northern chuckwalla	?	?	x	x	-	-	?				x	x		-		-	-	-						
Chuckwalla																x	x	x						
Northern crested lizard			-	-	-		-				-	-		-		x	x	x						
Gila monster			x	x	?	-	x	?			-	-		-		?	?	x						
Uta [2]	x		x	x	x	x	x	x	x	x	x	x	x	-		x	x	x						
Striped ground uta	x		x	x	x	x	x	x	x	x	x	x	x	-		x	x	x						
Fence lizard			x	x	-	x	x				x	x	x	-		x	x	x						
Ground gecko			?	?	-	x	x	?			x	x		-		?	?	?						
Night lizard			?	?	-	x	x	?			x	-		-		-	-	-						
Side winder		?	?	x		x	x					-		-		-	-	-						
Western diamondback [2]	x		?	x	x	x	x	x	x	x	x	x	x	-		x	x	x						
Coral snake	?	?	?	x	-	x	?				x	x		-		-	-	-						
Gad racer		-	x	x		x				x		-		-		-x	x				x			

1)-mountains back of Desemboque
2)-"found everywhere"
? -rare
x -common

REPTILES II

	Punta Peñasco	Puerto Libertad	Desemboque	Estero Sargento	Campo Vivora	Puerto Kino	Guaymas	Yaqui	Coast of B. C.	Tiburon	Tecomate	Infernillo	Mts. of Tiburon	Patos Isl.	Mano Isl.	San Esteban Isl.	San Lorenzo Isl.	Angel de la Guarda	Desemboque (mountains)	Yaqui (mountains)	Bacoa Vista	San Francisco	Bermejillo
Black whipsnake			x	-		?				-						-	?				x		?
Patch nose snake [2]			x	-		x										-??	?						?
Lyre snake	?		x	x												-	-	-					
Desert tortoise	?		x	x	?	-	x									-	-	x					
Desert toad			x	x	-	x				x	x							x					

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*825

FISHES I

	Ponta Pêlmoço	Porto Libertad	Rosenbergue	Estero Sargento	Campo Vivero	Porto Rico	Guayaba	Topoga	Coast of B. C.	Tiburon	Tarumala	Paton Isl.	Rasa Isl.	San Esteban	San Lorenzo	Angel de la Guarda	Infernillo
Pescada	r	r	r	[1]	-	r				[2]	-	r		r	?		
Mero			r	r	-	r	r			[2]	-	r		?	?		
Pinta	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	
sardinero		r	?	?						c	c						
Baya		r	r	r	r	r	r			r	r	r	r				
Totuava o)	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	
Cabrilla	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	
Sardina			[3]		r												
Cerrina		r	r	r	r	r	r			r	r	-		-			
Anchoveta		r	r	r	r	r	r			r	r	-		-	-	-	[4]
Lisza		r	r	r	r	r	r			r	r	-		-		r	[4]
Palometa		r	r	r	-	r	r			r	r	r	?	?	r	r	
Chano		r	r	-	-	r	r			r	r	r	-?	?			
Hypsoblennius		r	r	r	-					r	-	-		?			
Lenguado	?	r	r	r	r	r	?			r	r	-		-	-5-5m		
Mariosa	r	r	?	r	-	-	r			r	r	r		r	r	r	r
Myrichthys tigrinus	?	?	?	r	r	r	?			r	r	-	?	-		?	r
Sphoeroides annulatus		r	r	r	r	r	?			r	r			?	?		

1)-few
2)-near Alcatraz Rk.
r -rare
c -common
e -everywhere in winter, near in summer
[4]-rare in summer
4)-here largest of its kind
5)-too rocky

FISHES II

	Ponta Pêlmoço	Porto Libertad	Rosenbergue	Estero Sargento	Campo Vivero	Porto Rico	Guayaba	Topoga	Coast of B. C.	Tiburon	Tarumala	Paton Isl.	Rasa Isl.	San Esteban	San Lorenzo	Angel de la Guarda	Infernillo
Gillichthys seta	r	r	r	r	-					r	r	r		?	?		
Scorpaena annarus	r	r	r	r	-					r				r	?		
Malacosteus: zonifer	r	r								r				r	?		
Ophibia sp.																	
Lutjanus argentiventris																	
Paralabrax vivis	r	r	r	r	-	-	?			r	r	r		r	?		
Tuna	found south in the ocean																
Flying fish	in the ocean (hearsay)																
Sting ray	r																
Horned manta	r	r	r	r	r	r	r			r	r	r		r	?	?	
Cornuta	everywhere but stays away from banks																
Pleturoca	as above																
Gato	everywhere in deep waters																
Dogfish	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r
Chato	in all deep waters																
Cowpens	in all deep waters																
Aprox	as above																
S--pfpan (?)	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r

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PLANTS III

	Punta Pelícano	Porto Libertad	Desemboque	Estero de Bargeato	Campo Vivero	Porto Kino	Guaymas	Topolobampo	Coast of B. C.	Tiburon	Tecomate	Infiernillo	Patos Isl.	Bahia Isl.	San Ignacio	San Lorenzo	Angel de la Guarda
Anisocrinum davidsoni		x	c	c	-	-	?			x	x	x		?			
Girella simplicidens		x	x	x	r	-	?			x	x	x		x[4]			
Cuvieden semifer																	
Abudefduf concolius		x	r	x	-	-				x	x	x		?	?		
Cotylis pinniger		x	c	x	-	-	?			x	x	-		x		?	
Paralabrax maculatofasc.		x	c	x	x	-	?			x	x	x		-			

MOLLUSCS I

	Punta Pelícano	Porto Libertad	Desemboque	Estero de Bargeato	Campo Vivero	Porto Kino	Guaymas	Topolobampo	Coast of B. C.	Tiburon	Tecomate	Infiernillo	Patos Isl.	Bahia Isl.	San Ignacio	San Lorenzo	Angel de la Guarda
Octopus bimaculatus		r	r	c	r	●	?			c	c		●		?		?
Trachibranchiata		x	c	?	?					?	?				?		
Ischnochiton magdalenensis	?	x	x	x	x	x				x	x	x	x	x	?	x	? ?
Ischnochiton laevigatus	?	x	x	x	x	x				x	x	x	x	?	x	?	?
Codakia distinguenda	1)	x	x	r	x	x	x	x	x	x	x	x	x	x	x	-	x x
Polirices reclusiana			x	x	x	x	?			x	x	x					
Phallium abbreviatum	?	x	x	x	x	x	?				x	x	x		-	x	?
Phyllonotus erythrostomus			x	-	x						c			-	-	-	?
Chlamys subdudosa		x				?				x	x	x					
Ostrea mesfa		-	r	c	c	c	-			c	●	x	-	-	-		
Laevicardium elatum			x	r	x	x	x			x	●				-	-	
Chione californiensis		?	x	x	Com	x	?			x	-	x	x		x		?
Navicula pacifica		x	r	-	x	-				r	-	-	-	-	-	?	?
Turritella broderipiana		?	x	c	x		Com			x	-	x	-		-	?	?
Crucibulum spinosum			x	x	x	?	?			x	x		x		?		
Cardium consors			x			●							?		-	x	
Turbo fluctuosa			r			●								●	-		
Corithium stercomuscarum		x	c	x	x	x	-			x	x	x	-		?	?	?
Solenosteira polida		x	x	x	x	-				x	x	x			?	?	?
Chione undatella		-	r	x	x	Cc				-	-		-		-		

●-island too small
●-no rock
1)-everywhere except S. Est.
c-common
Cc-most common
r-rare
●-only on east shore
●-turbulent water
●-too rocky

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MOLLUSCS II

	Punta Peñasco	Puerto Libertad	Bocanboque	Estero de Sargento	Campo Vivero	Puerto Kino	Guaymas	Topolo	Coast of B. C.	Tiburon	Tecomate	Infiernillo	Palos Int.	Rasa Isl.	San Esteban	San Lorenzo	Angel de la Guarda
Conus regularis 1)	x	x	x	r	x	-	x	x	x	x	x	x	x	-	4	x	x
Columbella fuscata																	
Tegula rugosa	?	x	x	x	x	-	3			x	x	-	2	x		x	?
Kanfastia funiculata	?	x	x	x	x	x	?					-	2			-	x
Trivia radians			x								x	x	x			x	?
Nerotina luteofasciatus	?	?	x	x	x	?	?			x		-	-	?	?	?	?
Cypraea annettae		x	x	x	x	?	?			x	x		x		3		
Tellina rufescens 1)	x	x	c	x	x	x	x	x	x	x	x	x	-	x	-	?	?
Olivella dama		x	r	-	-	-				x	x	-	-		-		
Crepidula aquosa			x	x	x	x					x	x	x	x	-	x	?
Cardiamera affinis		?	c	x	3		?			x	x	x	-	?	-	?	?
Acmaea dallana		x	x	x	x	-					x	x			r	-	
Isognomon chemnitzianus	x	x	x	x	x	x	x			x	x	x	x		?	x	?
Volsella capax			x	x	x	x				x	x	x	-	3	x	x	x
Pteria peruviana	?	c	r	x	x	r	?			x	c		-	3	-	?	?
Pinna ventricosum		-	Cc	-	-	-	?			x	x	-	-		-		
Nicobe histrionica	?	-	x	x	x	x	?				x	-	-		-	-	?

CRUSTACEA

	Punta Peñasco	Puerto Libertad	Bocanboque	Estero de Sargento	Campo Vivero	Puerto Kino	Guaymas	Topolo	Coast of B. C.	Tiburon	Tecomate	Infiernillo	Palos Int.	Rasa Isl.	San Esteban	San Lorenzo	Angel de la Guarda
Cirripedia 1)	x	x	x	x	x	x	-	x	x	x	x	x	3	x	x	x	x
Azinus vivasi		x	c	x	-					-	3	x	-	4		-	
Leptodius occidentalis		?	x	x	x	3					x	x	-	4		?	?
Spaleophorys schmidtti	x		x		x	3				x	x					x	x
Microphyrus platycoma		x	x	x	-					x	x		x		?		
Petrolistes armatus		?	x	x	-	-	?			x	x				-		
Callinectes arcuatus	?	x	r	x	-	-	?			x	x	-	x		?	?	?
Glyptoxanthus acanthicus		x	r	x	-					x	x	x	-	-	?	?	?
Pilumnus townsendi		x	r	x	-					x	x	x	-	-	?	?	?

1) everywhere except at Kino
2 -in one part of it only
3 -too sandy
4 -too turbulent
5 -less than in Bocanboque

MISCELLANEOUS

	Punta Peñasco	Puerto Libertad	Bocanboque	Estero de Sargento	Campo Vivero	Puerto Kino	Guaymas	Topolo	Coast of B. C.	Tiburon	Tecomate	Infiernillo	Palos Int.	Rasa Isl.	San Esteban	San Lorenzo	Angel de la Guarda
Annelid worm 1)	x	x	x	x	x	x	?	x	x	x	x	x	x	x	?	x	x
Eurythoe		x	c	x	x	-	?			x	x		-		?		?
Holiaster		x	Cc	x	x	-	?			x	x		x		?		
Holothuroides		x	x	x			?			x	x		-		3		
Encope grandis 1)	x	r	x	x	c	x	x	x	x	x	x	x	x		3	x	x
Echinometra vanbrutti	x	r	x	x	4	2	3			x	x						
Asthacos	x	c	x	-	-					x	x		x				
Medusa																	
Porifera		x	c	x	x	?				x	x		-		x		

1) -Bocanboque and everywhere else
2 -too rocky
3 -more than in Bocanboque
4 -no rock

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INSECTS I

	Punta Pájaros	Punta Libertad	Bocachoque	Estero Aeropuerto	Campo Virora	Punta Kino	Guaymas	Tepopa	Coast of B. C.	Tiburon	Tecomate	Infiernillo	Mts. of Tiburon	Palos Int.	Mata Int.	San Esteban Isl.	San Lorenzo Isl.	Angel de la Guarda	Bocachoque (mountains)	Tepopa (mountains)	Bonta Vista	San Francisco	Bermudillo	Bagdad	Campo Utah
Hyperaspsis carolina		r		c						-						-	?				x	x			
Cicindela cartagena col.	x			x							x	x							-						
Cicindela californica Web.	x			x							x	x							-						
Cicindela lemniscata																									
Cicindela californica Beyr.	x			x							x	x							-						
Chlaenius erbus	x	x	x	x	x					x	x	x	x	-		-					x	x			
Calosoma prominens		x	-		x					?						-	?		x		x				
Dasprisa dimidiatipes		r			?					x						-			x			?	?		
Hydrophilus insularis		x			?						-	8				-						x	x		
Chalcolepidius smaragdinus	x	r	?	x	?					r	-	x	x	-		-						?	?	?	
Melanotus cribricollis																									
Horistonotus sp.																									
Haliplus sp.																									
Cymatodera sp. A																									
Cymatodera sp. B																									
Gnatio sp.																									
Polycesta velasco		x			x						x								x		x	x	?		
Hippomelas		x			x						x						-	?	x		x	x	?		
Horaeotes mexicatus		x			x						x						-	?	x		x	x	?		

INSECTS II

	Punta Pájaros	Punta Libertad	Bocachoque	Estero Aeropuerto	Campo Virora	Punta Kino	Guaymas	Tepopa	Coast of B. C.	Tiburon	Tecomate	Infiernillo	Mts. of Tiburon	Palos Int.	Mata Int.	San Esteban Isl.	San Lorenzo Isl.	Angel de la Guarda	Bocachoque (mountains)	Tepopa (mountains)	Bonta Vista	San Francisco	Bermudillo	Bagdad	Campo Utah
Elasdes		x	x	x	x	x				x	x	x	x	-		-					x	x			
Astidius confluens			x													-	-								
Cryptoglossa verrucosa			x													-	-								
Steriphanus punctatus			x		x					x									x		x	x	?		
Edrotes ventricosus			x		x					x						-	?				x	-			
Glyptotus sp.		?	x	*	x	x		x		x	x	x	-			-	?	?	x	x	x	x	x		
Trox suberosus		c		-	x					x						-			x		x				
Diplotaxis knausi		x	x	x	x	x				x	x	x	-			-					x	x			
Cyclocephala longula		c	x		x											x		-			?	-			
Cotalpa consobrina		x		?							-					-					x	x			
Scarabaeidae sp.																									
Anoplognatha dennisana			r	-	x	x				?	?	x	?	-		?			x		?	?			
Ligyrus gibbosus		c	x		x											x		-			?	-			
Strotogma		x		?						-						-					x	x			
Macrima		x	-	x	x		x			x	x	x	-			-	?	?	x	x	x	x	x		
Anoplus prolixus		r	x	x	x	x				?	?	?	x	-	-	?			?		?				
Anoplus sp.																									
Derotrachelus geminatus	x	r	?	x	x	?				x	x	x	?			-	?	?	x		x	?	x	?	
Asbryson surinamus																									

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INSECTS III

	Punta Pedernal	Punta Libertad	Ensenada	Entero Largarto	Campo Vivero	Punta Elma	Guaymas	Topolobampo	Coast of B. C.	Tiburon	Tecomate	Infernillo	Mts. of Tiburon	Punta Isl.	Kun Isl.	San Esteban Isl.	San Lorenzo Isl.	Angel de la Guarda	Ensenada (mantidae)	Topolobampo (mantidae)	Bonos Viatz	San Francisco	Bermudillo	Angelos	Campo Utah
Acanthoderus pennimaculatis																									
Apatides fortis x		x	c	x	x					x	x	x	x	x	-?	?		x		x	?	x		
Hypogamodorus x			x	?		x				x					-			gr		?	?			
Acheta simplis	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Brunspeolus bilineatus	?	?	?	x						x			x	-	-	-			x						
Ixaera covillei	?	?	x	-	x					x			x	-	-	-			x						
Clematodes larvae		?	x	-	-	x													-						
Periplaneta americana			r	-		x				x				-	-	?			x			-		x	
Arenivaga sp.			r	-		-				-	-	-	-	-	-	?	?	-						?	
Ancosia integra	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	-	?		x	x	x	x	x	x	x
Blaphercomer calcarata			r	-		-				x												x		x	
Stagmomantis limbata			r	-		-				x															
Stagmomantis californica			r	-		x				x															
Mantidae sp.			r	-		x				x						-		x						r	
Rhytidolomia oaxi																									
Lothocorus dolgentei			r	x		-				-						-						x		x	
Emonbus thoracicus			-	-	r					x						-		x		-		x		x	
Triatoma rubida			r	-		x				x						-		x		?		?			
Leptocoma sp.																									
Rhodovilidae sp.																									

INSECTS IV

	Punta Pedernal	Punta Libertad	Ensenada	Entero Largarto	Campo Vivero	Punta Elma	Guaymas	Topolobampo	Coast of B. C.	Tiburon	Tecomate	Infernillo	Mts. of Tiburon	Punta Isl.	Kun Isl.	San Esteban Isl.	San Lorenzo Isl.	Angel de la Guarda	Ensenada (mantidae)	Topolobampo (mantidae)	Bonos Viatz	San Francisco	Bermudillo	Angelos	Campo Utah
Homaloscelis minutus																									
Dicroproctia sp.	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	-	-	x	x	x	x	x	x	x	x
Acanpalonia		?	r	x	x					x	x	x	x	-	?					?	?	?			
Scolopocilla reticulata																									
Gryx argyrosoma	x	r	-		x					x	x	x	x	-	?					x	?	?			
Hermetia sp.		r								?				-	-										
Stratiomyidae larva?																									
House-fly (blow)																									
Furcathacliata hagani		r	x		x					x					x							x		
Scotaloca cosgamar		r	x		x					x					x							x		
Chlorion aerarium		r	x		r					x					-					?		x		
Scolia sp.		r	-		?					?					-	?	?			?		?		
Bee	x	x	x	-	x	x	x	x	x	x	x	x	x	-	x	-	x	x	x	x	x	x	x	x	x
Ptiloglossa occidens		x	r	x	x					-	-	x	-	-						?		?		
Emphytilla klugi			x		?					x					-	-		x				?		
Emphytilla hagro		x	x	-	x					x	x	-		x	-			x						
Photeppia																									
Pepsis			r		?					o					x							x		
Ancia sevata																									

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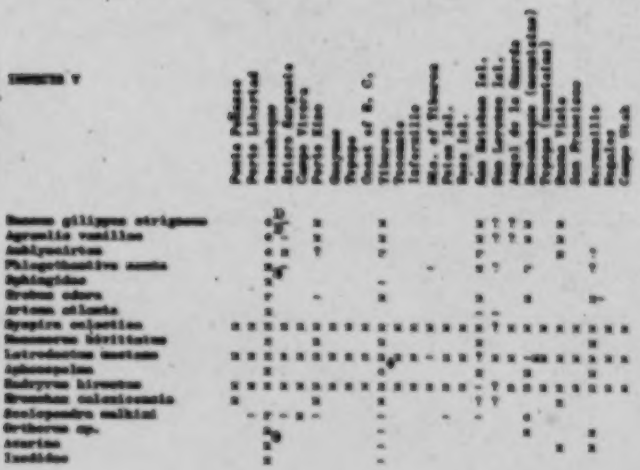
Punta Peñasco
Puerto Libertad
Desemboque
Bahía Kanpanito
Cabo Tiburón
Punta Sierra
Bahía
Tepopa
Coast of S. C.
Tiburón
Tecomate
Infiernillo
Mts. of Tiburón
Pelícano Isl.
Isla Isl.
San Esteban Isl.
San Lorenzo Isl.
Angel de la Guarda
Bahía Kino (Sonoita)
Tepopa (Sonoita)
Punta Tinaja
San Francisco
Bermejillo
Bapalos
Cabo Haro
Ramsey gilippus strigosus
Agrenilis vanillae
Ambiyostirus
Phlegethontius sexta
Sphingidae
Erebus odora
Artemo atlanta
Gyspira colpotias
Nannoarca bivittata
Latrodectus mactans
Aphonopelma
Eudyrrus hirsutus
Brunehan coloniensis
Scolopendra subtini
Orthorus sp.
Acarina
Isoptera

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10: Davis E-5 (1922-ca.1939) 1965 NU31 Seri NU31

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Rafael Ysabel with Gila monster - 1922

[23 before him, has been a friend of the Seris for years. It was his father
15] who brought McGee to Tiburon in 1895, and in many ways they have shown kindness to the Seris.

[22] I hired an auto-truck for fifty dollars to take the necessary people and supplies. These supplies consisted of some fine-tooth combs, needles, thread, one bolt of white muslin, 150-pounds of flour, panoche, saws, nails, harmonicas, little round mirrors, fish twine, hooks, 2-bits and other things.

We left at 6:30 a.m. With us was the driver Ricardo, his friend Rafael Ysabel, son of an ex-governor of Sonora. When we reached Bob's ranch, *El Providencia*, five or more miles out, we added a one-eyed Mexican and Bob's brother.

After a simple dinner at the ranch house we drove across the mouth of the Sonora river, a broad, flat alluvial plain probably four or five miles across. We circled about and turned north, stopping at the edge of a broad shallow bay. The tide was down and the shore was slimy mud and filled at places with sharp-edged clam and oyster shells. There were oyster flats at the edge of the mud, so Roberto and the Mexican waded out and secured enough of them for supper.

[36] During the day we ran close to a Gila monster, a horrid looking black and orange mottled fat lizard who waddled along. Rafael held his head with a rifle, reached down and caught him in back of the head, and held him up. He hissed like a snake and bears a bad reputation.

[33] The country was flat and the road pretty good. Detached mountains we passed during the day and one range called *Siete Carros*, Seven Mountains, with peaks all in one row, reached for fifteen or twenty miles. We passed a few ranches where the people were pumping water from wells or hauling in the old turn-table way with a mule and rawhide buckets. Then we made camp, got everything ready for an early start the next day and turned in.

At dawn three men took the boat with all our traps and groceries and fifteen gallons of fresh water, and Rafael and I walked up to the point to meet it. Louis and the driver and truck returned to the ranch. The weeds and ground were very wet and we came to some sloughs filled with soft ooze. These were impossible to cross, so we went around them and then decided to strike for the ocean side and go along a sand bank. This we did, and when we reached the end we saw the boat waiting for us half a mile or more across a great flat.

[33] The ocean view was grand. A great rock, *Alcatraz Island*, protruded from the sea a short distance out, on which countless cormorants roost and raise their young. Bob often gathers their eggs.

We reached the boat and climbed in and pushed off into deep water. There was no wind and the tide was part way against us, but we rowed, three of us, for many many miles. We landed in a small cove, drew up

[text continues on p.15]

10: Davis E-5 (1922-ca.1939) 1965 NU31 Seri NU31

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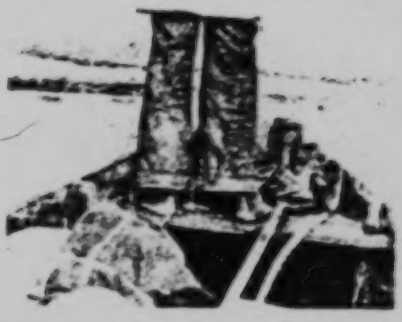
Poised for harpooning sea turtles off Tiburon Island - 1936



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The catch

10: Davis E-5 (1922-ca.1939) 1965 NU31 Seri NU31

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115

Nene Thomson, Pancho Olivares and Roberto Thomson at Tecomate, on north coast, spending whole ribs cast up on the beach. Although thoroughly dried and bleached for years by a semitropic sun, it took their united efforts to elevate these ribs.---E.W.D.

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Roberto Thomson, Santo Blanco and Edward W. Davis

10: Davis E-5 (1922-ca. 1939) 1965 NU31 Seri NU31

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Edward H. Davis with a rattlesnake around his neck - 1922

123 the sail, a very delicate operation in so cranky a boat, and between rowing and sailing, we reached our destination about eight o'clock, all worn out. Before landing, we called and halloed to notify possible strange Seris that we were friends. After a bite we turned in.

In the morning we started for the *carrisal*, as the water hole was called because *carriso* grows there, as we were almost out of water. The nearest *carrisal* was five miles away. We each had a rifle, revolver and extra cartridges, besides two five-gallon cans and a canteen with some water in it. Nene, Bob's brother, had been there and knew the trail, so we all followed him. The most traveled trail from any camp always led to water.

After going a couple of miles we entered the mountains, and from there on the trail was stony and later rocky as we entered the canyon. [13] On the way Rafael caught a light gray diamond-back rattler. He held the head with a stick, reached down and grasped it tightly just in back of the mouth. It rattled viciously and twisted itself about his arm, but to no purpose. I took his photo with it coiled about his neck, and the rattle buzzing on his breast. Later he took my photo, I holding the rattler while his tail was coiled around my neck. Later, we killed it and drew the skin off like a kid glove. When we reached camp I filled the skin with sand to cure it, so I could take it home.

[14] There seemed to be several zones of vegetation as we advanced. First came brush, then *pitahalla*, ironwood and various cacti, then *torote*. In the mountains, *mesquite*, *palo blanco*, *"wild fig"* and several varieties of brush. The roots of a certain variety of brush furnished us with tea, as our coffee had disappeared. This washed and boiled, made a very good drink.

At the latter end of our arduous trip we had to climb over boulders, and then we arrived at a few pools of water in the rocks and a bunch of *carrisos* in their midst. Beneath the *carrisos* the creek bed was as dry as a bone. We climbed up higher, looking for tanks in the rocky bed. We found one tank but it was filled with green algea. In some places there were great caves in the cliffs and everywhere the scenery was rugged and fascinating. The main mountain above us seemed to rise five hundred feet, with very sparse vegetation. We climbed up some very steep places, almost perpendicular, but as we found no more water we returned and filled our cans.

I had brought shaving tools with me, except soap. However, one of the men knew of a certain root that would produce a lather. This was handy and I mascerated the root. Bob put it in my bandanna and by manipulation produced a good suds. With this I reduced a week's growth of whiskers.

On the way we passed several places where burro deer horns had been stuck in the trees and well bleached out.

Bob and the one-eyed Mexican, Oliverria, carried the water, two

[123] gunwales, and then in trying to balance, she would dip the other way.

As we got to the point, the swells were larger and the danger so imminent we stopped the boat in lee of the point nearest Sonora, and Bob and I landed.

Old Blanco had paddled his *balsa* with some of the freight to the Sonora side. The boat put off again, and rode the sea better and it landed all right on Sonora side. In the meantime, several of the women and children, with their loads, had reached the Seri point ready to be ferried across. The boat returned with two Seris paddling. We loaded a lot of Indian junk, Bob and I and several children, the Chief and a woman. Nine in all. We reached the Sonora side, all right.

By this time breakfast had been cooked and we sat down to drink black coffee and eat rice and onions. The wild-looking Seris sat around us watching each mouthful, hungrily. When we finished we gave them all that was left and they cleaned it up.

[230] As we left the Seri point, and as their masters left, the dogs trotted to the water's edge and howled. Bob said that when all had crossed, the dogs would plunge in and swim across the swift current. [136] The water was infested with sharks, so it was possible that some of them would not reach shore. At last everybody got across, dogs and all.

[192] The Indians carried their packs; the men with the shoulder sticks and the women balancing their loads with marvelous dexterity on their heads. Two men packed twenty gallons of water in five-gallon cans.

When we had all our things in the boat, Juan Tomas jumped in with his pack. We were well loaded before, but this made us a little too deeply laden. Nevertheless, we pushed off and raised the sail to take advantage of the wind. We sailed parallel to the shore for a few miles until the waves got too overpowering and the boat had a lot of water in her. The mast was unstepped---a very delicate operation---and we made for the shore after shipping some of the waves.

My heart was in my mouth most of the time as each time the boat rolled, one side almost dipped up a wave. It was a matter of personal safety as well as safety of what few things I had already collected. One olla I had bought was smashed. The waves looked like clear green paint.

We finally landed without mishap and pulled the boat up, but it was so rocky we had great difficulty in walking in our bare feet. Our legs and feet were bare when we were in the boat and mine were badly scalded by the sun.

The Seris had made camp one quarter of a mile down the beach from us, and the old Chief shouldered his pack and strode down to them. We were very thankful.

[225] Soon some of the men came back to borrow the boat to hunt for

123 was black. He then ground it in the frying pan by rolling it with a tin can. When made, the coffee was black and bitter, but they were used to it that way.

At three thirty in the morning we were up from our sand beds and drank coffee. At four we pushed off, towing our balsa on which we lashed our turtle shells, antlers and other things. Our boat rode the waves like a duck.

As we glided by the foot of some mountains we could hear the surf break sullenly. We had the sail up but soon had to resort to the oars as the slight wind died out. Day soon began to grow light. The sea was glassy, reflecting the rosy morning tinge. There was a swell on but the waves were smooth.

136 The cormorants, in threes and fives, began flying to their feeding grounds with swift wings and necks outstretched. Then a few Pelicans drifted idly by on lazy wings. A school of sardines fretted the water near us, chased by a hungry fish from its depths. A few porpoises rose and dived, rose and dived, rose and dived, time after time. At one time eight of them came within twenty feet of us and one dived right under our bow, bouncing the boat up and down.

133 123 Soon we were passing some red volcanic hills, with caves and blow holes in the cliff and sea caves below, in which the sea roared. Giant cactus secured a precarious footing in the crannies of the cliffs. Then a long beach, then *Cerro Prieto*, another red cliff descending to the sea, penetrated with numerous caves and roosting places for cormorants.

123 As we neared Alcatraz *(Pelican)* Island, we saw a fishing boat in the distance. The wind had freshened and was ahead and the waves seemed almost to come in board, but the hollowed tree arose and rarely shipped any water. A boat put off from the fishing boat and was rowed to shore, and as we came up we hailed the crew and grounded our own boat. They had seen us from Alcatraz Hill, and seeing the balsa thought the Seri Indians had stolen a fishing boat and were towing their own boat. Each man had a belt of cartridges and if the Seris had been there instead of us they were going to kill them. Bob knew them from Guaymas.

We pushed off from shore again, and after rowing a half or three quarters of a mile further we beached our boats, cooked dinner and waited for our auto truck. Our provisions were almost gone. We had only enough for one meal left. No meat at all. Water was almost gone. None other for miles.

415 244 242 One of the cherished vessels used by the Seris is an agate chamber pot. It is black from much use. When I saw it, it contained a green slimy mess made from meal of seaweed seeds and the green fat or oil of the turtle. The Seris stick their fingers into the pot and then lick them off. If any is left the dog licks out the pot. No vessel is ever washed; it is licked clean.

123 it from shore by a paddle. A little child in the boat sat still as a
484 mouse. No matter how the boat rocked, it never whimpered or cried. All the children stayed perfectly quiet in the frail crafts, in the very positions in which they were placed.

123 Once the boat approached shore to secure a small octopus for fish
484 bait. One was finally located by Stanley, who could see its eyes
136 shining with a baleful purple light under a large boulder in about
220 eighteen inches of water. The Seri got out and pinned it down with an oar, while Roberto pounded it time and time again with another oar. Even then it escaped in a cloud of sepia which it discharged. Its tentacles were easily a foot in length, and its color was the bottom of the sea. If it once gets a grip on a rock it is practically impossible to tear it loose.

Schools of porpoises played close to the boat each day, curving up to breathe and throw spray and then diving lazily below the surface, frequently gliding like a dark shadow below the waves. Sometimes, in the sheer joy of living, they would leap clear of the water and splash back in a spray of foam.

123 We soon reached the extreme point where it juts from the Sonora
484 shore, landed and set a signal smoke to notify other Seris on the
[208] Island. (A dry *pitahalla* cactus was selected for a black smoke.) No answering signal came. We crossed the narrow channel, the Infernillo, a little over a mile wide, the water like a mill pond, and landed on the sheltered side and unloaded on the stony beach. For miles the beach was covered by windrows of round wave-worn rocks and pebbles of all beautiful colors and sizes mingled with strange shells and seaweed. Here we made camp and stayed overnight.

The Indian canoe landed its cargo of women, children and dogs a little later, and established a camp adjoining. Three little boys were commissioned to secure us some clams and they returned in a while with a pail of clams, one crab and some oysters. These were boiled in salt water, the meat extracted and Pancho Oliverria cooked them in rice for supper. The crab was my especial delicacy.

123 Roberto and Stanley walked off after dinner to hunt in the mountains a few miles back from the coast, and they returned long after dark very weary from carrying, for seven miles, a young burro deer which they had shot. The Indians soon gathered around it chattering volubly, as both they and ourselves had eaten no meat for several days. We gave them nearly three-fourths of it, reserving a hind quarter and some ribs for ourselves. Rafael Feliz and Chico, with skill born of long practice, skinned and unjointed the animal in a very short time, and devoured a good part of their share in a cooking pot a little later, although they had eaten only a little while before. The boys cracked the bones and scraped the marrow, eating it like candy.

[484] At six thirty the next morning, we were crowded in the boats again

123 It was March and the night wind was cold, but we did not dare light
223 a fire, so we hugged our blankets close to us for warmth until Santo Blanco judged the Pelicans were sound asleep. We could hear the waters of the Gulf roaring softly as they broke against the cliffs far below us.

At midnight Santo Blanco lighted his torch and the other Indians [29] did likewise. They all wore rawhide sandals to keep their feet from being cut on the sharp rocks. Santo Blanco was agile as a cat, as he jumped from rock to rock on the steep slope holding his torch over head. Part way down the party split, leaving Santo Blanco, Roberto and myself. I had a flashlight which threw a feeble ray on nearby rocks and then shot off into blackness. The rocks were slippery from [134] droppings of thousands of cormorants, gulls, Pelicans and other sea birds and climbing down rocks on the steep slope and that on a dark night, was risky if not dangerous, for if we slipped or missed our footing, we might roll, bump a few times and drop from a high cliff into the sea.

Santo Blanco was far below us and at last we could hear him clubbing Pelicans over the head and by the time we reached him he had several dead Pelicans spread on the rocks and he was bringing in the last of them near where we had stopped.

There lay five of these great silver gray birds, each boasting a wing spread of ten feet, as against seven feet of the golden eagle. The flashlight picked them out, one by one, with their long necks, long bills, and with pouches on the nether mandibles for temporary storage of their catch. They are very awkward and ungainly as they stand in groups on rocks at the edge of the tide, but when their great pinions are spread in flight over the sea, they are the epitome of grace.

That was a heavy load, over one hundred pounds, for one man to pack up those steep slippery rocks. I suggested that we help Santo Blanco to the top, but Roberto said the Pelicans were covered with lice and it was not advisable, but with Santo a few more or less made no difference. So he tied the birds together and swung them over his shoulders leaving his hands free for climbing. His torch had burned out and our only light was my flashlight to pick out hand and foot holds. At times we would reach down and give him a lift where the rocks were steepest, but for the most part he struggled alone. Sometimes he would find a few steps like a stairway and then he would look for an easy way, using both hands to pull himself up, but there was no easy way. It was a herculean task to climb those slippery rocks and one time the load almost pulled him over backward, but he recovered his balance and finally the crest of the hill was reached and the rest was down hill on an easy trail.

The boys already had a camp fire going near the beach and as soon as Santo deposited his load, they all fell to and began skinning the

[text continues on p. 217]

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137 Despite the wealth of place-names and the strongly accentuated configuration which the nomenclature expresses, Seriland is one of the most hopeless deserts of the American hemisphere.

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122 Since most of the field work of the two expeditions lay in the neighboring Republic of Mexico, it became necessary to ask official sanction for the operations from the Mexican government; and it is a pleasure to say that every possible privilege and courtesy were extended by both federal and state officials. Especial acknowledgments are due to 000 the Mexican minister (and afterward ambassador) to the United States, his Excellency Don Mateo Romero (now deceased); to the Ministro de Fomento of the Mexican Republic, Excelencia Don Fernando Leal; and to the governor of the State of Sonora, Señor Don Ramón Corral. Equal acknowledgments are due to various United States officials, notably Honorable W. Woodville Rockhill, First Assistant Secretary of State when the expeditions were planned; and it is a pleasure to advert to the active interest taken in both expeditions by Honorable S. P. Langley, Secretary of the Smithsonian Institution, and to the careful attention given the 1894 expedition by the late Dr G. Brown Goode, Assistant Secretary of the Institution.

114 Mr Willard D. Johnson did invaluable service in connection with the second expedition, particularly in the execution of surveys and the 126 construction of maps in inimitable style. Mr William Dinwiddie is to be credited with the excellent photographs made during the 1894 expedition, with the representation of the devices used in Seri face-painting, and with various other aids to the investigation; while Mr J. W. Mitchell is to be credited with the photographs made on Isla Tiburon, and with other contributions to the success of the 1895 expedition. 000 Acknowledgments are due also to all of the participants in both expeditions, whose names appear in other paragraphs. Their contributions were not primarily intellectual, yet were of a kind and amount to be forever remembered among men who have worked and hungered and thirsted and stood guard together. The deepest debt connected with the field work is to the now venerable but ever vigorous pioneer, Señor Pascual Encinas; and no small part of this debt goes over to his estimable spouse, Señora Anita Encinas, who twice traversed the long road from Hermosillo to Costa Rica in the interest of the 1895 expedition.

The scientific results of the researches have been enriched by invaluable contributions from Director Powell's store of ethnologic knowledge, and by suggestions from Messrs Frank Hamilton Cushing, F. W. Hodge, James Mooney, and other collaborators in the Bureau of American Ethnology. The qualities of the colored illustrations are 114 due largely to the artistic skill of Mr Wells M. Sawyer, by whom they were designed, and of Mr DeLancey Gill, by whom the proofs were revised. The Spanish translations are due chiefly to Colonel F. F.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

ejectamenta, as at Pico Pinacate, in northwestern Sonora. The various rocks are usually bare or meagerly mantled with talus in the mountains; over the greater part of the plains they are commonly veneered with sheetflood deposits, ranging from a few inches to a few yards in thickness; while the central portions of the larger valleys are lined with alluvial accumulations reaching many hundreds of feet in thickness. 133

The clearly interpretable geologic history began with extensive degradation and eventual baseleveling of a granitic terrane in Paleozoic or early Mesozoic time; then followed the deposition of the shales and associated limestones during the later Mesozoic; next came elevation, accompanied or followed by corrugation, chiefly in folds parallel with the present coast, whereby the granite-based sierras were produced, and accompanied also by the earlier vulcanism to which the volcanic sierras owe their existence. A vast period of degradation ensued, during which the land stood so high as to induce greater precipitation than that of today and to permit the streams to carve channels far below the present level of tide, and during which the present general configuration was developed; then came the southwestward tilting and consequent climatal desiccation, the filling of the deeper valleys, the inauguration of sheetflood erosion, some local vulcanism, and the progressive shifting of the divides.

The geologic structure affects the hydrography, especially that factor determined by subterranean circulation, or ground-water; for the superficial sheetflood and alluvial deposits are highly pervious and many of the volcanics hardly less so, while the shales and limestones are but slightly pervious and the granites nearly impervious. The 134
geologic structure also determines the character of the soil with exceptional directness, since the dryness of the air and the dearth of vegetation reduce rock decay to a negligible quantity. The characteristically precipitous sierras and cerros are of naked ledges, save where locally mantled with a mechanical debris of the same rocks (much finer than the frost product of colder and humider regions); the soil of the normal plains is but the little-oxidized upper surface of sheetflood deposits made up of the mechanical debris of local rocks and varying in coarseness with the slope; while the soil of the valleys is detrital sand and silt, derived from tributary slopes, passing into adobe where conditions are fit, and essentially mechanical in texture and structure save where cemented by ground-water solutions at the lower levels.

FLORA

The flora of the Sonoran province affords a striking example of the 137
adjustment of vegetal life to an unfavorable environment. The prevailing vegetation is perennial, of slow growth and of stunted aspect; and it is not distributed uniformly but arranged in separate tufts or clusters, gathering into a nearly continuous mantle in wetter spots, though commonly dotting the plains sparsely, to completely disappear

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

137 in the driest areas. Nearly all of the plants have roots of exceptional length, and are protected from evaporation by a glazed epidermis and from animal enemies by thorns or by offensive odors and flavors; while most of the trees and shrubs are practically leafless except during the humid seasons. Grasses are not characteristic, and there is no sward, even in cases; but certain grasses grow in the shadow of the arborescent tufts and in the fields of the farmer ants, or spring up in scattered blades over the moister portions of the surface. The arborescent vegetation represents two characteristic types, viz, (1) trees and shrubs allied to those of humid lands, but modified to fit arid conditions; and (2) distinctive forms, evidently born of desert conditions and not adapted to a humid habitat, this type comprising the cacti and related forms, as well as forms apparently intermediate between the cacti and normal arborescent type. The various plants of the district, including those of the distinctive types, are communal or commensal, both among themselves and with animals, to a remarkable degree; for their common strife against the hard physical environment has forced them into cooperation for mutual support. The tufts or clusters in which the vegetation is arranged express the solidarity of life in the province; commonly each cluster is a vital colony, made up of plants of various genera and orders, and forming a home for animal life also of different genera and orders; and, although measurably inimical, these various organisms are so far interdependent that none could survive without the cooperation of the others.[1]

In Seriland proper, as in other parts of the Sonoran province, a prevailing tree is the mesquite (*Prosopis juliflora*); on the alluvial fan of Rio Sonora it grows in remarkable luxuriance, forming (with a few other trees) a practically continuous forest 20 to 40 feet in height, the gnarled trunks sometimes reaching a diameter of 2 or 3 feet; over the Rio Bacuache fan and much of the remaining plain surface it forms the dominant tree in the scattered vital colonies; and here and there it pushes well into the canyon gorges. The roots of the mesquite are of great length, and are said to penetrate to water-bearing strata at depths of 50 to 75 feet; its fruit consists of small hard beans embedded in slender woody pods. Associated with the mesquite in most stations are the still more scraggy and thorny cat-claw (*Acacia greggii*) and ironwood (*Olneya tesota*), both also yielding woody beans in limited quantity. Similarly associated, especially in the drier tracts, and characteristically abundant over the plains portions of Isla Tiburon, are the paloverdes (*Parkinsonia torreyana*, etc), forming scraggy, wide-branching, green-bark trees 5 to 15 feet high, and commonly 3 to 10 inches in diameter of trunk. Over the mountain sides, especially of Sierra Seri and Sierra Kunkaak, grow sparsely the only straight-trunk trees of the region, rooted in the rocks to the average number of a few score to the square

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[1] The vital characteristics of the region have been described in some detail in The Beginning of Agriculture, American Anthropologist, vol. VIII, 1895, pp. 350-376; The Beginning of Zoculture, American Anthropologist, vol. X, 1897, pp. 295-308; and Expedition to Seriland, Science, vol. III, 1896, pp. 483-505.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

● 137 mile; this is the paloblanco (*Acacia willardiana*). Associated with it along rocky barrancas of permanent water supply is a fig tree (*Ficus palmeri*), which has a habit of springing from the walls and crests of cliffs, and sending white-bark roots down the cliff-faces to the water 50 or 100 feet below, and which yields a small, insipid, and woody fruit. Interspersed among the larger trees, and spreading over the intervening spaces, particularly in the drier and more saline spots, grow a number of thorny shrubs, much alike in external appearance and habit, though representing half a dozen distinct genera (*Cassia*, *Microrhamnus*, *Celtis*, *Krameria*, *Acacia*, *Randia*, *Stegnosperma*, *Frankenia*, etc), while considerable tracts are sparsely occupied by straggling tufts of the Sonoran

FIG. 4—Beyond Encinas desert—the saguaro.

greasewood, or creosote bush (*Larrea tridentata*), whose minute but bright green leafage relieves that prevailing gray of the landscape in which the lighter greens of the paloverde and cactus stems are lost.

Intermingling with the woody trees and shrubs in most stations, and replacing them in some, are the conspicuous and characteristic cacti in a score of forms. East of Desierto Encinas, and sometimes west of it, these are dominated by the saguaro (*Cereus giganteus*), though throughout most of Seriland the related saguesa (*Cereus pringlei?*) prevails. The saguaro is a fluted and thorn-decked column, 1 foot to 3 feet in diameter and 10 to 60 feet in height, sometimes branching into a candelabrum, while the still more monstrous sagueaa (figure 4) usually consists of from three to ten such columns springing from a

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

137 single root; both are masses of watery pulp, revived and renewed during each humid season, and both flower in a crown of fragrant and brilliant blossoms at or near the top of column or branch, and fruit in fig-like tunas (or prickly pears) during late summer or early autumn. Ordinarily the saguaro, like the sahuaro, is sparsely distributed; but there is an immense tract between Desierto Encinas and the eastern base of Sierra Seri in which it forms a literal forest, the giant trunks close-set as those of trees in normal woodlands. Hardly less imposing than the giant cactus is the wide-branching species known as pitahaya (*Cereus thurberi?*), in which the trunks may be ten to fifty in number, each 4 to 8 inches in diameter and 5 to 40 feet in height; and equally conspicuous, especially in eastern Seriland, is the cina (*Cereus schotti*), which is of corresponding size, and differs chiefly in the simpler fluting of the thorn-protected columns. Both the pitahaya and the cina flower and fruit like the saguaro, the tunas yielded by the former being especially esteemed by Mexicans as well as Indians. Another important cactus is the visnaga (*Echinocactus wislizeni lecontei*), which rises in a single trunk much like the saguaro, save that it is commonly but 3 to 6 feet in height and is protected by a more effective armature of straight and curved thorns; it yields a pleasantly acid, pulpy fruit, which may be extracted from its thorny setting with some difficulty; but its chief value lies in the purity and potability of the water with which the pulpy trunk is stored. The visnaga is widely distributed throughout the Sonoran province and beyond, and extends into eastern Seriland; it is rare west of Desierto Encinas and is practically absent from Isla Tiburon, where it may easily have been exterminated by the improvident Seri during the centuries of their occupancy. Most abundant of all the cacti, and less conspicuous only by reason of comparatively small size, is the cholla (an arborescent *Opuntia*); on many of the sheetflood-carved plains it forms extensive thickets 5 to 8 feet high, the main trunks being 2 to 6 inches in diameter, while dozens or hundreds of gaunt and thorn-covered branches extend 3 to 8 feet in all directions; and it occurs here and there throughout the district from the depths of the valleys and the coast well up to the rocky slope of the sierras. It yields quantities of fruit, somewhat like tunas, but more woody and insipid; this fruit is seldom if ever used for human food, but is freely consumed by herbivores. Much less abundant than the cholla is the nopal, or prickly pear; and there are various other opuntias, often too slender to stand alone and intertwined with stiffer shrubs which lend them support, and many of them yield small berry-like tunas. Another characteristic cactus, widespread as the cholla and abundant in nearly all parts of Seriland save on the rocky slopes, is the okatilla (*Fouquiera splendens*). It consists of half a dozen to a score of slender, woody, and thorn-set branches radiating from a common root, usually at angles of 30° to 45° from the vertical, and ordinarily reaching heights of 10 to 20 feet.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

The pulp masses of the larger cacti, especially the saguaro, sagueso, pitahaya, and cina, are supported by woody skeletons in the form of vertical ribs coincident with the external flutings; within a few years after the death and decay of these desert monsters the skeletons weather out, and the vertical ribs form light and strong and approximately straight bars or shafts, valuable for many industrial purposes; while the slender arms of okatilla are equally valuable, in the fresh condition after removal of the spiny armament, and in the weathered state without special preparation. 137

On many of the higher plain-slopes, especially in eastern Seriland, there are pulpy stemmed shrubs and bushes, sometimes reaching the dignity of trees, which present the normal aspect of exogenous perennials during life, but which are so spongy throughout as to shrink into shreds of bark-like debris shortly after death. These are the torotes of the Sonoran province—common torote (*Jatropha cardiophylla*), torote amarillo (*Jatropha spathulata*), torote blanco (*Bursera microphylla*), torote prieto (*Bursera laxiflora*), torotito (*Jatropha cuneescens*?), etc. These plants grow in the scattered and scraggy tufts characteristic of arid districts (a typical torote tuft appears in left foreground of figure 4); they are protected from evaporation by the usual glazed epidermis, and maintained by the water absorbed during the humid seasons; but they are thornless and are protected from animal enemies by pungent odors, and at least in some cases by toxic juices. Like various plants of the province they are measurably communal—indeed, the torotito appears to be dependent on union with an insect for reproduction, like certain yuccas, and like the cina and (in some degree at least) the saguaro and other cacti.

Along the lower reaches of Rio Bacuache, and in some of the deeper gorges of Sierra Seri and Sierra Kunkaak, grow a few veritable trees of moderately straight trunk and grain and solid wood, such as the guaiacan (*Guaiacum coulteri*) and sanjuanito (*Jacquinia pungens*); both of these fruit, the former in a wahoo like berry of medicinal properties, and the latter in a nut, edible when not quite ripe and forming a favorite rattle-bead when dry. On the flanks of such gorges the slender-branched buraprieta (*Cesalpinia gracilis*) grows up in the shelter of more vigorous shrubs, its branches yielding basketry material, while its fruit is a woody bean much like that of the cat-claw. In like stations there are occasional clumps of yerba mala or yerba de flecha (*Sebastiana bilocularis*), an exceptionally leafy bush growing in straight stems suitable for arrowshafts, and alleged to be poisonous from root to leaf—with inherent probability, since the plant is without the thorny armature normal to the desert. Along the sand-washes, especially about their lower extremities wet only in floods, springs a subannual plant (*Hymenoclea monogyra*) which shrinks to stunted tussocks after a year or more of drought, but flourishes in close set fens after floods; though of acrid flavor and sage-like odor, it is eaten by herbivores in

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

137 time of need, and it yields abundant seeds, consumed by birds, small animals, and men. About all of the permanent waters not invaded by white men and the white man's stock there are brakes of cane or carrizal (*Phragmites communis* ?); the jointed stems are half an inch to an inch in thickness and 8 to 25 feet in height; the seeds are edible, while the stems form the material for balsas and afford shafts for arrows, harpoons, fire-sticks, etc., and the silica-coated joints may be used for incising tough tissues.

The coasts of Seriland, both insular and mainland, are skirted by zones of exceptionally luxuriant shrubbery, maintained chiefly by fog moisture. Along the mountainous parts of the coast the zone is narrow and indefinite, but on the plains portions it extends inland for several miles with gradually fading characters; this is especially true in the southern portion of Desierto Encinas, where the fog effects may be observed in the vegetation 12 or 15 miles from the coast. Most of the fog fed species are identical with those of the interior, though the shrubs are more luxuriant and are otherwise distinctive in habit. On the Tiburon side of gale-swept El Infiernillo, and to some extent along other parts of the coast, some of these shrubs (notably *Maytenus phyllanthroides*) grow in dense hedge-like or mat-like masses, often yards in extent and permanently modeled by the wind in graceful dune-like shapes. Somewhat farther inland the flatter coastwise zones of Tiburon are rather thickly studded with shrubby clumps from 6 inches to 2 feet high, made up of *Frankenia palmeri* with half a dozen minor communals; while still farther inland follows the prevailing Sonoran flora of mesquite, scrubby paloverde, and chaparral (*Celtis pallida*), etc, only a little more luxuriant than the normal.

Throughout Seriland proper, and especially in the interior valleys of Tiburon, grasses are more prevalent than in other portions of the Sonoran province, their abundance doubtless being due to the rarity of graminiverous animals during recent centuries.

FAUNA

136 Considered collectively, the fauna of the Sonoran province is measurably distinctive (though less so than the flora), especially in the habits of the organisms. The prevailing animals, like the plants of extraneous type, evidently represent genera and species developed under more humid conditions and adjusted to the arid province through a long-continued and severe process of adaptation; and no fundamentally distinct orders or types comparable with the cacti and torotes of the vegetal realm are known. The prime requisite of animal life in the province is ability to dispense with drinking, either habitually or for long intervals, and to maintain structure and function in the heated air despite the exceptionally small consumption of water; the second requisite is ability to cooperate in the marvelously complete solidarity of animal and vegetal life characteristic of subdesert regions. No

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

and more than ordinary littoral variety; for the waters of the gulf are warmed by radiation and conduction from its sun-parched basin, while the concentrated tides distribute and stimulate the species and keep the vital streams astir.

Local Features

Considered as a tribal habitat, Seriland comprises four subdivisions of measurably distinct character, viz, (1) the broad desert bounding the territory on the east; (2) the mountainous zone of Sierra Seri; (3) Tiburon island and the neighboring islets; and (4) the navigable straits and bays contiguous to island and mainland.

1. So far as its marginal portions are concerned, Desierto Encinas is a typical valley of the Sonoran province, sparsely dotted with vital colonies of the prevailing type and variegated by the exceptionally luxuriant mesquite forests of the Bacuache and Sonora fans; but the interior of the valley is rendered distinct by the fact that it lies near, if not below, the level of the sea.[1] The central feature is Playa Noriega—a film of brackish water for a few days after each considerable semiannual freshet, a sheet of saline mud for a few weeks later, and for the greater part of the year a salt-crusted aberd 20 square miles in area, level as a floor and unimpressionable as a brick pavement. The playa is rimmed by dunes 10 to 40 feet in height, and about these and along the arroyos which occasionally break into it there is some aggregation of salt-enduring shrubs, evidently sustained in part by the semiannual freshet with its meager vapors and fogs. Outside this rim the surface is exceptionally broken; low dunes and irregularly wandering banks of soft and dust fine sand are interspersed with meandering salt flats much like the central playa, ranging from a few feet in width and a few yards in length up to mappable dimensions, as in the lesser playas lying east of the great one; and many of the dust-banks are honeycombed with squirrel burrows. This annulus of broken surface is narrow on the west, soon passing into okatilla scrub and then

[1] The expedition of 1895, during which Seriland was surveyed, was not provided with apparatus for accurate vertical measurement, and hence altitudes were only approximately determined. The determinations by Mr Johnson, who executed the topographic surveys, indicated that even the lowest part of the valley is somewhat above sea level; but other facts indicate that it actually lies below the level of the waters of the gulf, and forms a miniature homologue of Colorado desert (in southern California): in the first place the central playa, which is undoubtedly flooded occasionally of late semiannually, does not encroach into, and has no channels extending toward, the sea; in the second place it is highly saline; again, the alluvial fans of Rio Bacuache and (especially) of Rio Sonora are so placed as to intercept and dam the trough occupied by Laguna la Cruz in its southern portion and Playa Noriega in its northern portion; concordantly, the detail configuration of the coast indicates marine transgression, apparently due to secular subsidence of the land—though the abundant marine shells of recent species toward the valley-bottom attest recent displacement of the sea. On the whole, the facts seem to indicate that, during recent geologic times, the lower portion of this valley was a shallow gulf extending northward (and probably also southward) from the eastern limit of Bahia Kino; that the importation and deposition of sediment, chiefly by Rio Sonora, outran the secular subsidence of the land so far as to displace the waters of the gulf in its central portion and to separate the northern arm from the sea; and that the waters of this northern arm were subsequently evaporated, disappearing finally in the central playa in which local inflow and evaporation are balanced by the usual mechanism of interior basins.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

into the sagasca forests of the eastern base of Sierra Seri; on the east it is miles in breadth, passing gradually into the normal Sonoran plain; on the south it widens still farther, stretching all the way to Arenales de Gil and Pozo Escalante, and merging into the playa-like mud-flats bordering Laguna la Cruz, into which the gulf waters are sometimes forced by southwesterly gales at high spring tides. Throughout this portion of the desert, marine shells are scattered over the playa-like flats or lodged in the adjacent banks, sometimes in great beds; the vegetation is scantier than usual and largely of salt-loving habit; the mud-flats are usually coated with saline and alkaline crusts, while the dunes are soft and fluffy, and expand into broad belts perforated with the tunnels of the surprisingly abundant rodents. Across this plain of bitter sand-dust lie the two hard land routes to Seriland—the supposed Escalante route of 1700, down the fan of Rio Bacuache and thence by Barranca Salina; and the Encinas route, down the northern border of the Rio Sonora fan and thence by Pozo Escalante to the shores of Bahia Kino.[1]

Desierto Encinas is an impossible human habitat in any proper sense; it is merely a broad and hardly passable boundary between habitats. The hardy stock of the frontier ranchos, pasturing partly on the thorny fruit of the cholla, push far out on the plains, and are sometimes watered for short periods, under strong guards of heavily armed vaqueros, at Barranca Salina; yet the greater part of the expanse is trodden only by the Seri. Two or three ruined frames of Seri jacales and a few graves crown the low knoll near Pozo Escalante, and there are one or two house remnants near Barranca Salina; these are notable not only as the easternmost remaining outposts of Seri occupancy, but because they represent the only known instances in all Seriland of the erection of even temporary houses adjacent to water. Distinct paths, trodden deep by bare Seri feet, radiate from both waters toward the Seriland interior, but no traceable trails extend eastward.

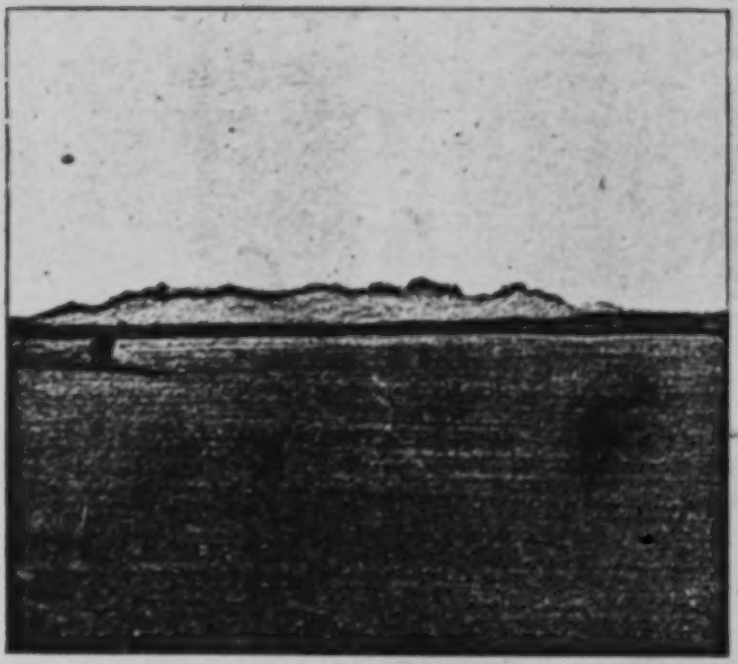
The southern limit of Desierto Encinas is marked either by the broad mud-flats opening into Laguna la Cruz or by the coast of the gulf, the coast cutting the lower portions of the plain being accentuated by a sand-bank 30 or 40 feet high, against which the surf thunders in nearly continuous roar, audible halfway or all the way to Pozo Escalante. A Seri trail skirts the crest of this bank, sending occasional branches into

[1] Both the routes were traversed by the expedition of 1895, the former from the headwaters of Rio Bacuache to the upper portion of its alluvial fan, and thence from the abandoned Rancho Libertad on the lower portion of the fan across Desierto Encinas by way of Barranca Salina. In the northern crossing a light rubble (the first to traverse this portion of the desert), drawn by four horses and aided by several horsemen, was taken from Rancho Libertad across the northern portion of Playa Noriega and thence up Arroyo Mitchell to a point midway between Barranca Salina and Johnson peak, and was brought back over the same route. The Encinas trail from Rancho San Francisco de Costa Rica was traversed four times each way by the same outfit, and once each way by the running gear of a heavy wagon carrying the rude craft (about 1,000 pounds in weight) in which the Seri waters were navigated, this rubble being drawn by 8 to 12 horses, frequently changed. Typical reports of both routes are shown in plate III, the upper figure representing the Encinas trail and the lower a distant view of Sierra Seri, taken from Playa Noriega, in the depths of Desierto Encinas.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

133
137

SERI FRONTIER



SIERRA SERI FROM ENCINAS DESERT

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1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

the interior. At Punta Antigualla the bank expands and rises into a great mammillated shell-mound nearly 100 feet high, with several of the crags occupied by more or less ruined jacales; and occasionally occupied houses occur midway thence to the southernmost point of Sierra Seri, and again at the base of the first spur east of Punta Ygnacio. Beyond Punta Antigualla the sweep of the waves is stronger than in Bahia Kino, and the coastal sand-bank is generally higher. Between the rocky buttresses of Punta Ygnacio and the next spur eastward the sand-ridge rises fully 50 feet above mean low tide, and here, as elsewhere, its verge is protected by a fog-fed chaparral thicket with occasional clumps of okatilla and other cacti. Behind the coast barrier lie lagoon-like basins, generally dry and floored with saline silt-beds, though sometimes occupied by briny pools formed through seepage during southwesterly gales; and there are physiographic indications that the northwestward extension of Laguna la Cruz formerly stretched some miles farther than now and lay in the rear of Punta Antigualla in such wise as to form a source of supply of the clam-shells of which the eminence is built.

2. Sierra Seri is a double range, divided mid-length by a broad saddle barely 2,000 feet in height.[1] Like other Sonoran ranges, the nucleal portions are exceedingly rugged and precipitous—at least two of its pinnacles shoot so boldly that they commonly seem to overhang, and have been called leaning peaks. In large part the precipices rise abruptly from a symmetrical dome molded by sheetflooding, much as the insulated buttes rise from the Bacuache fan in northeastern Seriland; so that the tract lying between Desierto Encinas and El Infiernillo is a composite of exceptionally precipitous and exceptionally smooth mountain slopes. One of the Seri trails radiating from Barranca Salina lies across the mid-sierra saddle; others push into several mountain valleys, and the largest leads to Tinaja Trincheras, at the base of Johnson peak, where there are a few low walls of loose-laid rubble, somewhat like those of the trincheras (entrenched mountains) farther eastward—the only structures of the sort seen in Seriland. Toward the southern end of the range lie various trails, the most conspicuous paralleling the coast, either near the shore or over the steep salients, according to the configuration; while here and there ruinous jacales a few yards from the coast attest sporadic habitation. The eastern shore of Bahia Kunkaak from Punta Ygnacio northward reveals a typical geologic section of the Sonoran province: the transgressing waves have carved in the granitic subterrane a broad shelf lying just below mean low tide, and usually stretching several furlongs offshore; this shelf is relieved here and there by remnantal crags of obdurate rocks, cumbered by bowlders and locally sheeted with sand and arkose derived from mechanically disintegrated granite; while the

[1] The northern portion, as seen from the east, is shown in plate III; the southern portion, as seen from the west, appears in the upper part of plate IV, while the southwesternmost point is shown in the lower part of the same plate.

1: McGee E-S (1894-1895)1898 NU31 Seri NU31

There is no such well-studied and semiceremonial apparatus for tuna gathering as, for example, the Papago device made from the ribs of the dead saguaro in accordance with traditional formula. 222 [412]

Perhaps second in importance among the vegetal constituents of Seri diet is the mesquite bean, which is gathered in random fashion whenever a well-loaded tree is found and other conditions favor. The woody beans and still woodier pods are roughly pulverized by pounding with the hupf on any convenient stone used as an ahst (metate or mortar), or, if suitable stones are not at hand, they are carried in baskets or improvised bags to the nearest shore or other place at which stones may be found. The half-ground grist is winnowed in the ordinary way of tossing in a basket; and the grinding and winnowing continue alternately until a fairly uniform bean meal is obtained. So far as was actually observed this is eaten raw, either dry in small pinches or, more commonly, stirred in water to form a thin atole; but expressions at Costa Rica indicated that the meal is sometimes stirred in boiling water or pot-liquor, and thus partially cooked, in times of rest and plenty. [262] 252

Other vegetal products used as food comprise a variety of seeds collected from sedges and grasses growing about the mud-flats of Laguna La Cruz and other portions of the province, as well as the seeds and nuts of the scant shrubbery of shores and mountains; while a local seaweed or kelp is eaten in small quantity, apparently as a condiment, and is sometimes carried on journeys even as far as Costa Rica, where specimens were obtained in 1894. 262

It is of interest to note that one of the most distinctive constituents of the Sonoran flora, and one intimately connected with human life in the great neighboring province of Papagueria, is of negligible rarity in Seriland; this is the visnaga (*Echinocactus*, probably of two or three species), the thorniest of the cacti and the only one containing consumable pulp and sap. This peculiar plant is of no small interest in itself as a striking example of the inverse relation between protective devices of chemical sort (culminating in acrid, offensive, or toxic juices) and the mechanical armaments so characteristic of desert plants;[1] it is of still deeper interest economically as the sole source of water over broad expanses of the desert, and one to which hundreds of pioneers and travelers have been indebted for their lives; and it is of interest, too, as a factor of Papago faith, in which the visnaga ranks among the richer guerdons of the rain gods. Throughout most of Papagueria this cactus is fairly abundant; usually there are several specimens to the square mile of suitable soil (it is not found in playas or on the ruggedest sierras), so that it is always within reach of the sagacious traveler; but it diminishes in abundance toward the borders of Seriland, and not more than a dozen examples were found in the portions of that province traversed by the 1895 expedition. Its rare occurrence, 137

[1] Cf. The Beginning of Agriculture. The American Anthropologist, vol. VIII, Oct., 1895, pp. 350-376.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

137 chiefly in the form of wounded and dwarfed specimens, seems to indicate that its original range comprised all Seriland; while its dearth suggests destruction nearly to the verge of extinction by improvident generations better armed with their hupfs and harpoons and shell cups than the subhuman beasts against whom the plant is so well protected.

285 415 Aside from the universally used hupf and ahst (which may be regarded as differentiated implements or tools), the only special device used in connection with vegetal food is the basket, or, rather, basketry tray (illustrated in figure 24). This ware is of the widespread coil type so characteristic of southwestern tribes. The coil is a wisp of stems and splints of a fibrous yet spongy shrub, apparently torote; and the woof consists of paloblanco (?) splints deftly intertwined by aid of an awl. The construction is fairly neat and remarkably uniform: the

FIG. 24—Seri basket.

coiled wisps vary somewhat in size, both intentionally and inadvertently, ranging from an average of three eighths of an inch toward the bottoms of the larger specimens to half that diameter in the smaller specimens and toward the margins of the larger. The initial coil starts in an indefinite knot, rather than a button, at the center; and the spiral is continuous throughout, the final coil being quite deftly worked out to a single splint smoothly stitched to the next lower spiral with the woof splints. The ware is practically water-tight, remarkably strong and resilient, and quite durable in the dry climate of Seriland. Ordinarily the basket is abandoned when the bottom decays or breaks, but an ancient specimen obtained on Isla Tiburon was roughly rebottomed with a patch of sealskin attached by means of sinew. The baskets are notably uniform in shape, though the size varies from 8 or 9 inches to fully 17 inches in diameter.

The most striking feature of the Seri basketry, as of the pottery, is

2: Kroeber E-5 (1930) 1931 NU31 Seri NU31

sounds like an expectable enough mythic idea, but seems involved with McGee's dubious conceptions as to totemism, discussed below. 114 193

The two-pointed fish-spear, with serrated points 6 inches long and spreading 5°, seen by Hardy (McGee, p. 193), is interesting because seemingly unreported in or near the area. 114 227

"Fishing" with staked pelicans who are then fed by free birds, is authenticated by the statement of Venegas for lower California, (McGee, p. 193). [226 231]

No fish nets, hooks, or lines were seen by McGee among the abandoned effects on Tiburon (p. 194). This is in accord with my observation. The abundance of sharks may interfere with net or deep water fishing.

The bow (p. 200) is of *palo blanco;* the release (pls. 28, 29), Mediterranean; the archer's position (pl. 29), with elbow above head, suggests a quick downward shot at a target or game lying on the ground not far away. 114 411

Mesquite, according to McGee (p. 207), is ground on the metate. Sr. Thomson told me of its being pounded in a hole in the ground. The Seri gave me the name a'kaʟa for what I understood to be this earth mortar. According to Sr. Thomson's description, the flour from the first beans cakes and lines the cavity firmly, so that the bulk of the material is secured quite cleanly. In general, mesquite is mortar-pounded rather than metate-ground by the tribes from whom we have records, as is expectable from the woody nature of the beans. 114 252

McGee (p. 207) noted the viznaga cactus, Echinocistus, as rare in the Seri habitat, presumably owing to its use for water by the natives. I made the same observation on the mainland, but Sr. Thomson stated that along the roads the plant is being gathered for candying. 114 137

The one basket described by McGee (p. 208, fig. 24) is bundle-coiled and plain. The only one I saw in use among the Seri was ornamented with a plain reddish band. Sr. Thomson presented me with two which bear patterns (fig. 13), and showed me a photograph of a collection made by Mr. Davis for the Museum of the American Indian, Heye Foundation, nearly all of which were decorated, some fairly elaborately. Several of these are shown by courtesy of that institution in figure 12. As McGee observes, there is obvious resemblance to Southwestern baskets; especially of the Papago, Pima, and Apache. Southern California basketry is less similar. That of Baja California is unknown from specimens, though the mention of water-tight vessels used for winnowing and parching suggests a coiled tray of Seri type. The surviving tribes of Sonora other than the Seri use few baskets distinguishable from those of the non-Indian population. 114 285 [171]

3:Davis & Dawson 2-5 (1922-1940) 1943
MU31 Sect MU31

225 through the shell. The foreshaft was jerked out at the first movement of the animal which was held by the fisherman's line until tired, after which it was either driven ashore or lifted onto the balsa.

No sooner was the quarry landed than the soft undershell was crushed and broken loose with a cobblestone "hupf," and then torn off 264 by the tribespeople with the impetuous fury of blood-crazed carnivorous beasts. The entrails and soft, bloody gore were first consumed, followed, depending upon the proximity of the last meal, by the firmer flesh, all but the infants of the household pounding, tearing and chewing their raw, grisly [252] chunks, stopping to singe or half roast larger pieces only if near satiety. If immediate consumption of the prey was not accomplished, the remnants were carried to the rancheria and there lifted to the top of the jacal to soften in the sun. The reeking carapace was often left indefinitely beside the

[197]

Photo by J. B. Harrison

FIG. 9. PITAHAYA AND SAGUERO CACTI PROVIDE A RICH HARVEST OF FRUITS IN SUMMER.

[p. 199(A)]

3: Davis & Dawson E-5 (1922-1940)1945 NU31 Seri NU31

313
482

FIG. 20. SERI WOMEN BEARING FIRE WOOD TO THE CAMP AT KINO

137

FIG. 21. A MEXICAN TOTUAVA CATCH ON THE BEACH AT KINO

[p.267(A)]

P(Malkin E-S (1953-1955)1962 NU31 Seri NU31

I

INTRODUCTION

[31] [12] [361] [221] [464] The territory discussed in this paper is somewhat larger than the historical area occupied by the Seris. While Seri settlements are limited today to a quite narrow range, the Tiburon Island and the coast of Sonora immediately adjacent to it, they are familiar with a far larger region, owing to their periodic trips, either on their own after fish, turtle and game or, occasionally, in the temporary employ of the Mexican fish-traders and even farmers. The further away from Tiburon perimeter, the lesser their familiarity with a locality.

The area is limited by Hermosillo in the east, Punta Penasco and Porto Libertad in the north, and Nogales in the south, and finally it includes also the coast of Baja California which the Seris sometimes visit. It also includes all of the islands within that area, Tiburon, Patos, Rasa, Angel de la Guarda, San Lorenzo and San Esteban.

137 With very minor variations this entire region belongs properly to the Sonoran desert. *Palo Verde, Palo Fierro, Pithaya, Mesquite, Cholla, Sahuaro*, prickly pear, elephant tree and creosote bush are the basic plants. Among the vertebrates, 136 such forms as the Sonoran bighorn, deer, cougar, jumping rat, badger, coyote, skunk, rattlesnake, sidewinder and Gila Monster are most conspicuous and diagnostic. Among the birds are the roadrunner, the raven, as well as many pelagic or littoral birds, the pelican and cormorant among them.

132 The region is one of very low rainfall, limited to the hot summer months, in some places occuring only a few times in a year. Winters are chilly and dry with persistent winds and dust, with the temperature falling down, on rare occasion, to just above the freezing point. Summers are intensely hot, with daily temperatures usually over 100 and the water temperature of the sea along the shore not infrequently as much as 85 degrees. There are great differences between diurnal and nocturnal temperatures, very much influencing the desert life.

134 Within this region there are several different ecological zones or perhaps sub-zones, varying from the alkaline flats like Playa Noriega, and the alkali-and salt-permeated soils of Desemboque to the more bountiful slopes of the mountains and the irrigated mud-flats around Hermosillo.

121 For the sake of distinction, I have selected several of the typical localities or zones as a point of reference either because of their ecological distinctions or because of their significance as a landmark, readily delineating a peculiar habitat. Personally I am familiar only with some of the

9:Malkin E-5 (1953-1958)1982 MUSI Seri MUSI

*825

Daily Rhythm

Here again data are most fragmentary and available only for seven species. But what information the Seris gave overwhelmingly suggests good orientation in such matters. Six of the species were correctly described as diurnal and only one, the barn owl, as nocturnal. This is with a qualification for the brown pelican. Of it Moreno, who provided the bulk of the ornithological information, said "it flies and feeds in daytime, but when it is hungry and when food is short it'll then feed at night as well."

[115]

Moreno's explanation is somewhat difficult to understand. How does he know that the pelican is hungrier at certain times than at others? But it is true that the brown pelicans occasionally float and fish at night.

But one must consider the limitations of the data. Out of numerous species of owls present in the region, we have information only for one. Nor is there any for the nightjars.

The usual explanation for the birds' inactivity at night is sleep. In few instances the place of rest has been specified. Accordingly, the dove sleeps on trees and the duck ashore.

Habitat Ecology

Some of birds' preferences for particular spots have already been indicated in discussing the nesting habits.

Habitat preferences had been indicated for the vast majority of the species under discussion, in connection with various activities. Almost all shore or marine birds were thus indicated. This knowledge included the curlew and the willet and the sand-piper, all of which were described as "walking along the shore," although nothing else had been said about them. The bittern, the ibis and the egret on the other hand, the Seris think, have a distinct liking for muddy locations and the mangroves—all of which the informants pointedly explained. This is why, they said, they favored Estero Sargente, an area of evil smelling muddy mangroves where they find food and nesting grounds

●[137]

[P. 71A]

123 As a concrete result of that first trip to Tiburon, I secured a
115 *balsa* (boat) made of *carrizo* canes lashed together with native fibre,
501 which *balsa* Mr. Heye said it was the finest one in North America.

[226] This *balsa* was given to me without hesitation, although it furnished one or two families with sea food.

115 I wish to pay tribute to Senor Roberto Thomson who has been my constant companion, friend, guide and interpreter during the past twenty years, on all my trips to Tiburon and various parts of Mexico. I found him absolutely dependable, using excellent judgment in critical situations. He was honest, fair, intelligent, looking out constantly for my safety and comfort always, enduring hardships cheerfully. A better all-round out-door man I have never seen equaled. In short, he is a real *hombre*, and *muy simpatico*.

13
181 Tiburon, or *Shark Island*, long noted for its evil reputation as
153 the home of the most savage and treacherous Indians of North America, lies in latitude 29°north and 112°30' west longitude, in the Gulf of California. It is shaped like a parallelogram about thirty-five miles long and eighteen to twenty miles wide, and lies parallel to the coast of Sonora, Mexico, of which, no doubt, at some remote period, it once formed a part.

It is separated from the mainland, for the most part, by a strait
[127] called *El Infernillo*, or The Little Hell, through which the rising tides pour a resistless flood. It is a desert island and supports a desert arboreal vegetation which includes several varieties of the cactus family and the *mesquite, palo verde, palo fierro, torote, palo blanco, ocotillo* and others. The giant *saguaro, zarbueso* and *pitahalla* (*pit-a-haya*) cactus are found here also.

Two desert ranges run lengthwise of the Island, which, on its westward or windward side, terminate in sea-worn cliffs against whose ramparts dash the heavy breakers of the Gulf, and on its eastern side, by long alluvial aprons from the foot of the mountains, sloping gently down to the lovely shell-strewn beaches. From this side the foot of the mountains lies from two to five miles distant. On this, the leeward side of Tiburon, the sea is much calmer, and often, in the early morning, it is as smooth and placid as a lake, reflecting each rosy, lavender and purple tint of the rugged Sierra Seri along the Sonoran coast, as in a mirror. The exquisite loveliness of marvelous sunrises over the pure limpid waters of the *Estrecho Infernillo* is mystical.

134 The soil is loose and sandy, unsuitable for cultivation, and im-
241 possible for producing domestic crops of any
142 kind.

Giant Saguaro

Pitahaia

123 rancheria of about ten or fifteen huts, half tumbled down, all facing
361 the sea and surrounded by turtle shells and deer bones, and sea shells. Things were dropped wherever they ate. This rancheria was deserted also.

We set sail again and landed on a sandy beach near another deserted rancheria called *Palo Fierro*. We hauled the boat way up and took out all our things and carried them up to the huts. In this place there were twenty-one huts---sometimes three built together. Many of them were in a good state of preservation. They were all in a long row with bleaching bones and turtle shells on all sides. From the inside of one hut I counted thirteen turtle shells around the base. There must have been about a hundred turtle shells here, and a few land tortoises.

123 There were two or three fragments of painted parts of a boat---
[648] probably remains of a boat belonging to seven fishermen who got drunk and landed here, and were all killed by the Seris two years ago. Six months ago a single Seri was captured by some Mexican fishermen and killed in reprisal.

As the wind increased it kicked up an ugly sea and we decided to camp over night. As we were reduced to about six gallons of water, Roberto suggested we take two empty five-gallon cans and go for water. I had offered to stay with the boat but was told the Seris would kill me if they found me alone.

[312] A Seri had told Roberto to follow a certain trail from the rancheria and go between the mountains and he would find a *pozo*, or well, not far away. Ricardo left his private sign and the five of us marched away, following a well-worn trail. For the full distance broken shards of ollas lined the trail at short distances, so we knew we were on
• 137 the right trail. Brush began at the sea shore and we passed various
123 kinds of desert vegetation---several kinds of cactus, especially the *sarbueso*. This starts with a single great trunk two or three feet in diameter, and then branches out like a vase, running up fifteen to twenty or more great columns like the *saguaro*. They were thirty or forty feet high. In some of these were piled a great accumulation of sticks and trash ten feet high or more, and on the top where the sea eagle makes its nest. There were a number of these.

Then we came to the *pitahalla, cholla, ocotillo*, and others, and the strange *terote* tree. This tree is the *Bursura Microphylla*, and has an odor like turpentine. It is a fat, dropsical tree like stuffed sausage, with crooked ungainly branches coming out at all angles. There are three varieties---the *terote colorado, blanco*, and *negro*, according to the color of the cut bark. Another strange tree was the *palo blanco*. Then there was the *palo verde, palo fierro* and *mesquite*. The *mesquite* was rare.

123 A number of signs were marked in the sand. We could not translate
[212] them. We walked single file, rifles in hand, and revolvers handy.

[text continues on p. 155]

123 the sail, a very delicate operation in so cranky a boat, and between rowing and sailing, we reached our destination about eight o'clock, all worn out. Before landing, we called and halloed to notify possible strange Seris that we were friends. After a bite we turned in.

In the morning we started for the *carrisal*, as the water hole was called because *carriso* grows there, as we were almost out of water. The nearest *carrisal* was five miles away. We each had a rifle, revolver and extra cartridges, besides two five-gallon cans and a canteen with some water in it. Nene, Bob's brother, had been there and knew the trail, so we all followed him. The most traveled trail from any camp always led to water.

After going a couple of miles we entered the mountains, and from there on the trail was stony and later rocky as we entered the canyon.
[134] On the way Rafael caught a light gray diamond-back rattler. He held the head with a stick, reached down and grasped it tightly just in back of the mouth. It rattled viciously and twisted itself about his arm, but to no purpose. I took his photo with it coiled about his neck, and the rattle buzzing on his breast. Later he took my photo, I holding the rattler while his tail was coiled around my neck. Later, we killed it and drew the skin off like a kid glove. When we reached camp I filled the skin with sand to cure it, so I could take it home.

[133] There seemed to be several zones of vegetation as we advanced. First came brush, then *pitahalla*, ironwood and various cacti, then *torote*. In the mountains, *mesquite, palo blanco, "wild fig"* and several varieties of brush. The roots of a certain variety of brush furnished us with tea, as our coffee had disappeared. This washed and boiled, made a very good drink.

At the latter end of our arduous trip we had to climb over boulders, and then we arrived at a few pools of water in the rocks and a bunch of *carrisos* in their midst. Beneath the *carrisos* the creek bed was as dry as a bone. We climbed up higher, looking for tanks in the rocky bed. We found one tank but it was filled with green algea. In some places there were great caves in the cliffs and everywhere the scenery was rugged and fascinating. The main mountain above us seemed to rise five hundred feet, with very sparse vegetation. We climbed up some very steep places, almost perpendicular, but as we found no more water we returned and filled our cans.

I had brought shaving tools with me, except soap. However, one of the men knew of a certain root that would produce a lather. This was handy and I mascerated the root. Bob put it in my bandanna and by manipulation produced a good suds. With this I reduced a week's growth of whiskers.

On the way we passed several places where burro deer horns had been stuck in the trees and well bleached out.

Bob and the one-eyed Mexican, Oliverria, carried the water, two

123 *Dono*. It has fallen into sad decay---many buildings in ruins, ditches gone, mill and machinery idle; no water, very few people and a general appearance of slow, peaceful and painless disintegration.

The one redeeming feature is the daughters of the *senor*. Two of them were remaining at home, and in all Sonora I do not believe there are two more charming, modest, industrious as well as lovely maidens than are Laura and Clara Feliz. In addition, they are perfectly artless and very unassuming and retiring. I had with me some slight gifts for Laura and her father whom I had met before, but nothing for Clara, a tall handsome girl of sixteen. Laura thanked me with grace and charm.

After a visit of half an hour we continued on our journey, and after we had travelled about twenty miles more, passing the end mountain of *Siete Cerros*, or Seven Mountains, we reached San Carlos Rancho, another of Ysabel's ranches, containing four and a half square leagues or about forty square miles.

Another very sweet daughter of Feliz's---Lupe, or Guadalupe, lived here. She teaches school with twenty-six Mexican children and a night school for older boys. The school building is a low one-story structure of *carriso* reeds and earth roof. Both wind and sun can come through the cracks. The tables are built of rough boards and the benches had no backs. Everything was as neat and clean as conditions would permit.

At a little Mexican house, whose owner was a friend of Roberto, the wife cooked our meat and coffee and dished up the ever-ready beans. We ate outside the house by the light of a camp fire while a crowd of men and children stood gaping at us and drinking in the news that Roberto brought from the great metropolis. The conversation was a rapid-fire Mexican and sounded like machine guns going off, and this kept up long after Stan and I retired. We slept under a shed. Roberto insisted that I sleep on a bed, instead, with rawhide springs.

The Indians curled up around the camp fire, blankets on top, earth below.

In the morning we ate breakfast in the living room of the stick-mud house, which was poor---so poor, but hospitable. Tortillas of flour and corn, beans and meat were our fare.

We bought a sack of beans and one of corn, twenty pounds each, and then we took a photograph of the school. There were a few extra little girls whose fond mothers had decked out for the occasion. The children had swept the grounds clean and pulled outside the tenderly nursed vines in a jar inside the window, so that they also could be taken.

[131] [132] The dry parched desert is unkind to domestic plants and flowers and these are always blooming in jars or ollas or tin cans under ramadas or in other shade. They secure their share of precious water

[text continues on p. 194]

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Giant Zarbueso cactus and Roberto -
Tiburon Island - March 20, 1924

123 the same as do children and dogs, even though it may be hauled for
[132] six or eight miles on mule-back.
• [137] With gifts and hand-shaking all around, we bade goodbye to Lupe and the children and started on our way.

After leaving San Carlos we travelled through a cholla and giant cactus country until we reached Roberto's ranch at Santa Cruz. We had picked up Pancho Oliverria at San Carlos.

Just before leaving the ranch several men lifted a poor woe-begone mare to her feet. She was so poor and weak she could not get up by herself, but once up she managed to stand and finally staggered out into the *mesquital*, the place of mesquite. One eye was missing and watery matter was oozing out and running down her cheek. A night or two before, a lion caught and destroyed her colt, and probably in an effort to protect it the mare came too near the scene and the lion tore out her eye with one sweep of its paw.

Midway to Santa Cruz we stopped a moment at Blevens ranch *Costa Rica*. Blevens is a large, florid white-haired American who has lived in this country for fifteen or twenty years and hasn't much use for the Seris as they have killed so much of his stock.

[241] At one time he noticed a dead cow which was all swelled up and badly spoiled. No white man could stand the smell. He told some Seris about it, and they flocked around it, and when they had finished all that was left were the hoofs and horns.

Nene's wife cooked dinner for us at their house which was composed of *carrisos* and mud roofed with earth, all supported by mesquite logs. Surrounding it was a hog tight mesquite fence, and in this corral was a fifty-foot deep well which furnished the water supply. Half a bull's hide laced on to an iron hoop and holding about fifteen or twenty gallons, was the water bucket. This was hauled up by a long rawhide rope passing through an over-head block drawn by a mule.

After leaving Santa Cruz with none added to our crew, we wended our way through a maze of mesquite, cottonwood and other timber, gradually working out of the timber to more open country where traveling was not so strenuous. The steering gear was worn so that the old truck would often head for a saguaro or mesquite and stop just short of being smashed.

At last we reached a region of flat baked lake-beds, covered in flood times. Sometimes we could travel fast at fifteen miles and then again we would go in the low where it was soft. About three miles from our destination we took off half our load and piled it to one side and jogged along through a wild desert country with no roads or trails, through chollas, desert brush and terote trees.

123 When we neared a hill of dark volcanic rock a number of Seri In-
312 dians darted out, and with their help we reached a camp near the coast
361 where Roberto had recently located a small well of sweet water.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

461 so impressed padres and rancheros; concordantly also, the manifestations of race hate, doubtless culminating among warriors on the warpath, are strongly contrasted with the abject docility of the Seri groups when at peace and in camp near Costa Rica and other ranchos—a docility far exceeding that of the Papago, whose personal dignity is an ever-present possession, or that of Yaqui, whose strong spirit so often breaks the curb of Caucasian control. So the observer of the Seri is impressed by the intensity of functioning along lines defined by their characteristic traits, and equally by the capriciousness of the functioning and the remarkably wide range between activity and inactivity which render them aggregations of extremes—the Seri are at once the swiftest and the laziest, the strongest and the most inert, the most warlike and the most docile of tribesmen; and their transitions from rôle to rôle are singularly capricious and sudden. At the same time the observer is impressed by the relatively long intervals between the periods of activity; true, the intense activity may cover hours, as in the chase of a deer, or days, as in a distant predatory raid, or perhaps even weeks, when the tribe is on the warpath; yet all the known facts indicate that far the greater portion of the time of warriors, women, and children is spent in idle lounging about rancherias and camps, in lolling and slumbering in the sun by day and in huddling under the scanty shelter of jacales or shrubbery by night—i. e., when their activity is measured by hours, their intervals of repose must be measured by days.

000 Summarizing those somatic traits connected with habitual functioning, the Seri may be considered as characterized by (1) distinctive pedestrian habit, (2) conspicuous hand-and-tooth habit correlated with defective tool-sense, and (3) pronounced segregative habit correlated with a highly specialized race-sense; yet they are characterized no less by extreme alternations from the most intense functioning to complete quiescence—the periods of intensity being relatively short, and the intervals of quiescence notably long.

●14 On reviewing the more conspicuous somatic structures and functions jointly, they are found to throw some light on their own development, and hence on the natural history of the Seri tribe.

Certain characteristics of the tribe strongly suggest lowly condition, i. e., a condition approaching that of lower animals, especially of carnivorous type; among these are the specific color, the centripetally developed body, the tardy adolescence, the defective tool-sense, the distinctive food habits (especially the consumption of raw offal and carrion), the independence of fixed habitations, and the extreme alternations between the rage of chase and war and the quiescence of sluggish repose. But these primitive characteristics are opposed or qualified by such features as the noble stature, the capacious and shapely brain-case, the well-developed hands, and the considerable intelligence revealed in native shrewdness as well as in organization and belief. Collectively the characteristics are in some measure incongruous; yet

1: McGee E-5 (1894-1895)1898 MU31 Seri MU31

all are at least fairly compatible with the inference that the tribe is exceptionally (if not incomparably) low in the scale of general human development, yet at the same time highly specialized along certain lines; and the inference in turn is corroborated by the coincidence between the special lines of development and the peculiar conditions of environment characterizing the habitat of the tribe.

A striking correspondence between Seri physique and Seri habitat is revealed in the pedal development, with the attendant development of muscle and bone, lung capacity, and heart power, together with other faculties involved in the pedestrian habit. Seriland is a hard and inhospitable home; sea-food is indeed abundant and easily taken, but water is terribly—often fatally—scarce, and obtainable only by distant journeying from the places of easy food supply; moreover, the monotony of the diet is alleviable only by extensive wandering for the collection of vegetal products or severe chase after land animals; while the warlike spirit, apparently inherited from a still less humane ancestry and fostered by the geographic isolation, combines to keep the tribe afoot, avoiding waters, conducting raids, and moving constantly from place to place in the endless search for safety. There is a widespread Sonoran tradition that the Seri systematically exterminate weaklings and oldsters; and it is beyond doubt that the tradition has a partial foundation in the elimination of the weak and helpless through the literal race for life in which the bands participate on occasion. A parallel eliminative process is common among many American aborigines: the wandering bands frequently undergo hard marches under the leadership of athletic warriors with whom all are expected to keep pace, and this leads both to desertion of the aged and feeble and to increased strength and endurance on the part of the strong and enduring; yet it would appear that this merciless mechanism for improving the fit and eliminating the unfit attains unusual, if not unequaled, perfection among the Seri. Now pedal development is one of the special processes of peripheral (or centrifugal) functioning and growth involved in the general process of *cheirization*, which, coordinately with cephalization, defines human progress;[1] and this developmental process explains the specialization of the Seri along one or more lines, and connects the special development directly with environing conditions.

A notable correspondence between structure and function, of such sort as to reflect the habit and habitat, appears in the conspicuous manual development of the Seri. Enjoying a climate too mild to make houses necessary, finding animal food too plentiful to necessitate elaborate contrivances for the chase or milling or other devices for reducing vegetal food, provided by nature with material (in the form of carrizal) for an ideally suitable water craft, barred by geographic boundaries from neighboring tribes, and having neither material for nor interest in commerce, the denizens of Seriland were never forced into the way of mechanical development; yet their simple industries, involving as they

[1] The Trend of Human Progress, American Anthropologist, new series, vol. 1, 1899, p. 401.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

Seri race-sense and Seri race-type no less delicate than that between the stressful action and the stress-shaped structures of the tribe, and while the inception of both type and feeling may be ascribed to the isolated environment, it seems manifest that both have interacted constructively and in cumulative fashion through a significant process exemplified more clearly by this tribe than by others thus far studied. At the same time, analysis of the harmony between type and sentiment indicates that the lowly Seri are actually, albeit unconsciously, carrying out a meaningful experiment in stirpiculture—an experiment whose methods and results are equally valuable to students. The Seri gymnastic and the Seri stirpiculture are in close accord, in that both are conditioned by initially dilatory yet ultimately intense action; the results are equally accordant in that the one conduces toward individual vigor and the other toward a vigorous and distinctive stirp; while the excellence of the methods (viewed from the somatic standpoint) is attested by the magnificence of the product. Now, comparison of the stirpicultural Seri with contemporary tribes shows that the desert-bound folk have attained unequaled somatic development, and suggests that the intuitive stirpicultural processes have been rendered peculiarly effective through the persistence of that tribal isolation in which the processes apparently took rise; so the race-sense of the Seri may be regarded as the product of long-continued stirpicultural processes, initially shaped by environment, yet developed to unusual degree by somatico-social habits, kept alive largely through continuous environmental interaction.

Summarily, the Seri are characterized by noble physique, by peculiarly swift and lightsome movements, by great endurance coupled with capacity for vigorous action, by animal-like symmetry and slowness of maturation, and by various minor attributes combining with the major features to form a distinctive race-type; and they are still more conspicuously characterized by an acute race-sense which holds them apart from all aliens. At first sight, several of their somatic attributes seem incomparably primitive, yet analysis of the attributes in the light of certain laws which they exemplify better than other peoples thus far studied indicates not so much a lack of development as an excess of growth along purely somatic lines, with a correlative defect of development along demotic lines; and when the lines of growth are traced to the sources and conditions, it becomes fairly clear that the aberrant development of the tribe is merely the reflection of a distinctive environment operating (evidently) throughout a long period. In brief, the somatic interest of the Seri seems to center in the remarkable adjustment of the tribe to a peculiar environment—an adjustment of such delicacy as to imply interaction throughout many generations.

2: Kroeber E-5 (1930) 1931 NU31 Seri NU31

by them at times. This raises the question of whether the Seri may not have reached their habitat from the peninsula, or possibly the reverse. The solution of this problem depends on an analysis of full data on physical type, speech, and culture content, and only a partly conclusive answer, discussed below, can as yet be given. In general behavior and temperament, Seri and peninsular Californians seem to have been strikingly alike; but this fact can not in itself be construed as evidence of common origin, because the similar psychology may be largely determined by similar residence and subsistence habits resting in turn on almost parallel environment; much as pastoral nomads or mariners in whatever part of the world, and with or without historical connections, are likely to exhibit analogous mental attitudes in contrast with rural or urban populations.

In any event, it is wholly unproved that the Seri possess a native endowment which is more animal-like, more dominated by instinctive impulses and less capable of cultural development, than other peoples'. In fact the improbability of such an assumption is indicated by their possession of culture traits, like certain games and their kinship system, which they either share with neighboring tribes or have developed into rather high specialization. The meagernesses of their culture are therefore evidently due to factors in their particular history or geography rather than to congenital deficiencies or abnormalities. This does not mean that it would be easy to convert the Seri to the mode of life of Pima or Mexican. Habits of irresponsibility and unsettlement once established, even through part of childhood only, are notoriously difficult to alter. Witness the Gypsies. However, such practical habit difficulties are of course no evidence as to quality of endowment.

The modern Seri are the amalgamated remnants of some three or four of a half dozen closely related Serian groups formerly recognized. The preponderant one in the fusion of these groups is likely to have been that which held Tiburon and the fronting mainland, on account of better preservation of their numbers and habits in the relatively inaccessible island refuge.

Seri physique is distinctive in physiognomy, expression, and habitus, as would be expectable in a people sharply set off from its neighbors in practises and attitudes. The measurements available show no very marked differences of gross anatomy from neighboring tribes, either in stature, head shape, or nose proportion. The head may be somewhat rounder than among Pima and Yaqui; the difference in body seems more to be one of greater slenderness than of greater height. The Seri abilities to endure hunger and fatigue and to run great distances are faculties possessed by nearly all tribes of the southwest United States and northwest Mexico.

The Seri language is intrinsically and markedly tonal, more given to consonantal accumulations than the neighboring Uto-Aztecan and

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

SOMATIC CHARACTERS

142 Several physical characteristics of the Seri Indians are so conspicuous as to attract attention even at first sight. Perhaps the most striking is the noble stature and erect yet easy carriage; next in prominence is the dark skin-tint; a third is the breadth and depth of chest; another is the slenderness of limbs and disproportionately large size of extremities, especially the feet; still another is length and luxuriance of hair; and an impressive character is a peculiar movement in walking and running.

141 126 128 The mean stature of the adult Seri may be estimated at about 6 feet (1.835 meters) for the males, and 5 feet 8 inches (1.727 meters) or 5 feet 9 inches (1.73 meters) for the females, these estimates resting on visual comparisons between Caucasians of known stature and about forty adult Seri of both sexes at Costa Rica in 1894.[1] In several of the accompanying photomechanical reproductions (e. g., plates XIII, XVI, XIX, XXIII, and XXVIII) a unit figure, introduced partly for the encouragement of the individuals and groups but chiefly to afford a basis for approximate measurement, gives opportunity for test of the estimate, the figure measuring 5 feet 11 inches (1.80 meters) to 5 feet 11½ inches (1.812 meters), and weighing about 215 pounds in the costume shown, including hat and boots.[2] These pictures and some thirty unpublished photographs, like the observations on the ground, indicate that practically all of the fully adult males and several of the females overtop the Caucasian unit. The only definite measurement known is that of the youthful and apparently immature female skeleton examined by Dr Hrdlička, of which the dimensions indicate a stature (estimated by the method of Manouvrier) of about 5 feet 3⅞ inches (1.62 meters),[3] or 3½ inches above the female normal of 5 feet ¼ inch (1.53 meters) given by Topinard; but this considerable stature is, probably on account of the youth of the subject, much below the mean indicated by the ocular and photographic comparisons (it corresponds fairly with that of the Seri maiden represented in plate XXV, whose age was estimated at 18 years). Naturally this striking stature, especially that of the warriors, has been much exaggerated by casual observers; the typical warrior, El Mudo, depicted in plate XIX, is indeed commonly reckoned as a 7-footer, though his actual stature (diminished somewhat in the pictures by fearsome shrinking from the ordeal of photographing) can hardly exceed

[1] The average height and weight of the unit figure (that of the author) are about 5 feet 6½ inches and 200 pounds, respectively.

[2] Or about 1.8178 meters estimated by the method of Rollet (cf. The Races of Man, J. Deniker, London, 1900, p. 32).

[3] 1.620

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1: McGee E-5 (1894-1895)1896 NU31 Seri NU31

6 feet 3 inches (1.90 meters); while for centuries the folk have been reputed a tribe of giants. 141

The estimation of Seri stature is difficilitated by the impossibility of defining maturity; and the effort to determine whether particular individuals were adult brought out clear indications of slowness in reaching complete maturity, i. e., of the continuation of somatic growth throughout an exceptionally long term in proportion to other stages in the life of the individual. Thus, with scarcely an exception, the polypsous matrons were taller than the mean of 5 feet 9 inches, while the apparently adult maidens (with one exception) and the younger wives were below this mean; and in like manner the stature of the warriors varied approximately with appearance of age, all of the younger men falling below the mean, and all of the older (except Mashém) rising above it. The difficulty of estimation is further increased by the absence of age records and the impracticability of ascertaining and standardizing the habitually guarded expressions for relative age implied in the kinship terminology; so that the age determinations were roughly relative merely, and there was no means of fixing the absolute age of maturity, of puberty, of marriage, or of the assumption of manhood and womanhood howsoever defined. 141 145

Under the conditions, the determination of stature-range in the Seri rancheria at Costa Rica in 1894 was not only difficult but uncertain; yet in general terms it may be said that the women having two or more children—about twenty in number—were notably uniform in stature, ranging from about 5 feet 7½ inches (in the case of an aged and shrunken elderwoman) to 5 feet 11 inches; that the younger women were more variable; and that the warriors (seventeen in number), of whom only a part were apparently heads of families, were more variable still, though the variation, apart from that apparently correlated with age, was less than is customarily found among the exceptionally uniform Papago, and decidedly less than that seen among the Yaqui or the local Mexicans. 141

The Seri skin-tint is of the usual Amerindian bronze, save that it is exceptionally dark, with a decided tone of black. Essayed representations of the characteristic color appear in plates XVIII and XXIV; but the essays are little more satisfactory than the innumerable attempts at depicting the skin-color of the American aborigines that have gone before. Experienced observers of the native tribes may form an impression of the Seri color from the explanation that they are as much darker than the neighboring Papago as the Papago are darker than the average tribesmen about the Great lakes; the Papago themselves being as much darker than the southern plains or Pueblo folk as these are darker than those of the Lake region. The range in color seems to be slight; the variation among the 60 individuals of both sexes and all ages seen at Costa Rica was hardly perceptible, being less than that usually observed in a single family of any neighboring tribe; while the 142

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

142 Mashém (aged about 50 years), who had a few gray strands about the
145 temples; but it may be significant that the hair of the tribal outlaw Kolusio, who has lived with white men for full three score years, is iron-gray. Kolusio's pelage is trimmed in Caucasian fashion; that of Mashém
[115] is cut off mid-length in a manner exciting comment, if not derision, on the part of his fellows and others, and resulting in his (Spanish)
[302] sobriquet, Pelado (literally, Peeled, or idiomatically, Shorn); but with few exceptions the hair is kept long as it can be made to grow, and receives careful attention to this end. Naturally the length is somewhat variable; in many cases it depends to or slightly below the waist, while in other cases it merely sweeps the shoulders; and in general it appears to increase in both length and luxuriance not only throughout adolescence, but up to late maturity, for the best pelages are presented by moderately aged persons, while none of the youths are so luxuriantly tressed as their elders. Not the slightest trace of baldness appears. The infantile pelage is short, brownish in color, soft or even silky, and inclined to curl toward the tips. It is not until the age of several months that the hair begins to acquire the adult character, and at least some children retain traces of the infantile pilary character up to 5 or even 10 years; and none of the children display such jet-black shock-heads as are frequently found among other tribes, whose adult pelage may nevertheless be much less luxuriant than that of the Seri. On the whole, it may be said that the Seri hair is luxuriant and vigorous beyond the aboriginal average, and that it, like various other somatic features, indicates a relatively late maturation in the life-history of the individual.

142 Both sexes are beardless. The female faces seen were entirely free of strong pilary growth; one or two of the warrior faces showed scattering hairs, and Mashém sported a feeble and downy but jet-black mustache with an exceptional number of scattered hairs about the chin; while Kolusio shaved regularly, and might, apparently, have grown moderately stiff but straggling mustaches and beard. Axillary hair seems to be wanting; pubic hair is said to be scanty; otherwise the bodies are practically hairless (more nearly so than those of average Caucasians).

The teeth are solid, close-set, and even, and impress the observer as large; they close with the upper incisors projecting slightly beyond the lower denture in the usual manner.

128 The skeletal characteristics of the Seri are known only from a single
14) specimen obtained in the course of the 1895 expedition in such manner as to establish the identification beyond shadow of question. This skeleton was submitted to Dr Aleš Hrdlička for measurement and discussion.[1]

In making his examination, Dr Hrdlička compared the unquestion-

[1] A separate cranium was obtained by the 1895 expedition, having been sought and picked up by a Mexican member of the party in verification of his account of the killing of one of the Seri; but, in view of the possibility of erroneous identification, this skull was not submitted in connection with

1: McGee E-5 (1894-1895):1898 NU31 Seri NU31

ably authentic cranium of the entire skeleton with two skulls preserved in the American Museum of Natural History, viz, No. 99/84, designated as a skull of a Tiburon mound-builder, and No. 99/85, labeled as having

the complete skeleton. Subsequently this specimen also was put in Dr Hrdlička's hands (at his request), and was kindly examined, with the results recorded in the following letter:

MARCH 29, 1898.

Professor W J McGee,
Bureau of American Ethnology, Washington, D. C.

DEAR SIR: The skull which you submitted to me for examination shows the following:

The skull is that of a male between 40 and 50 years of age. The facial parts and a portion of the left temporal bone are wanting; otherwise the specimen shows nothing pathologic. There are signs that the skull belonged to a very muscular individual. The occipital depressions, ridges, and protuberances are very marked, and the temporal ridges approach to within 1.7 cm. on the left and 2.3 cm. on the right of the sagittal suture. The whole skull is rather heavy and massive; thickness of parietal bones 4–6 mm.

The shape of the skull is unusual. The frontal region is rather broad (frontal diameter, minimum, 9.7; frontal diameter, maximum, 12.1 cm.), but quite flat and sloping. Frontal ridges wanting (broken away).

The sagittal region is elevated into a crest which begins 4 cm. posteriorly from the bregma, is most marked at the vertex, and proceeds in two tapering diverging crests to the lambdoid suture. The whole vertex region is considerably elevated and forms a blunt cone, which is particularly noticeable when the skull is viewed from the side.

The temporo-parietal regions are moderately convex and expanded anteriorly, but become flattened and gradually narrow toward the parietal bosses. The parietal bosses measure each 11 cm. along the coronal, but only 8.8 cm. along the lambdoid suture. The gradual tapering of the parietal regions from their middle backward continues on the occipital bone up to the inion, and gives the norma verticalis of the skull a peculiar appearance.

The occipital region as a whole, does not protrude much, as in true dolichocephals, but it shows a prominent broad crest, formed by the two superior semicircular lines and the region between them. The extreme occipital protuberance is pronounced and shows signs of strong muscular attachments. A small distance above the foramen magnum, on each side of the median line, is a very marked depression, surmounted by a small ridge.

Of the mastoids, the right has been broken off and the left is damaged, but they do not seem to have been of extraordinary size.

The base of the skull is fairly well preserved and shows the following characters: The basilar processes and the petrous portions of the temporal bones are more massive than usual. The glenoid fossæ are broad and of fair depth. The styloids are quite massive (right 0.7, left 0.9 cm. long). The foramen magnum is hexagonal in outline; it is 4.4 cm. long, 3.4 cm. wide; its plane is inclined backwards in such a way that its antero-posterior diameter prolonged would touch about the lower borders of the nasal aperture.

The cranial cavity can be well inspected through the opening caused by injury. The internal surface of the frontal bone shows but very few traces of brain impressions. There are several large impressions on each parietal bone, and deep, though rather small, fossæ for the extremities of the occipital lobes on the occipital bone. The superior border of the foramen ostbe shows in the middle a rounded notch about 2 mm. deep.

The serration of the sutures is throughout very simple.

Measures.—The glabello-occipital length and maximum width of the skull can not be accurately determined on account of injuries to the bones. They amount, respectively, to about 18.8 and 14 cm., giving the cephalic index of about 74.4 (moderate dolichocephaly). The basion-bregma height is 14.1 cm.; basion-vertex, 14.8 cm.; basion-obelion, 13.6 cm.; basion-lambda, 12.2 cm. The two more anterior of these measures characterize the skull as a rather high one. The two more posterior measures show the rapid downward slope of the posterior half of the sagittal region. The maximum circumference of the skull (above the ridges) is 52 cm.

The bregma-lambda arc measures 13.3, the lambda-opisthion arc 12.2 cm. Diameter between the asterions = 10.7 cm.

If the skull under examination is considered from a purely evolutionary standpoint, it must be pronounced to be in many points inferior to the average white and even to the majority of Indian crania. An anthropological identification of the specimen is difficult, for the reason that we are still very imperfectly acquainted with the craniology of the people of southwestern United States and northern Mexico. From what we know of the crania of the Pimas, and the extinct Santa Barbara, Santa Catalina, etc, Californians, it is possible to say that the individual whose skull is here reported upon may have belonged to a people physically related to either of these groups. The skull is very distinct from that of an Apache. The female Seri cranium examined by me in fact does not show certain of the peculiarities of this specimen; nevertheless it is very possible that both crania belonged to individuals of the same tribe.

ALES HRDLIČKA.

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1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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141
been found in a shell mound at Tiburon, California; but, in view of the possible error in identification in these cases, the comparisons are omitted. Otherwise, Dr Hrdlička's determinations are as recorded in the following report (and his drawings of the anterior and left lateral aspects of the cranium are reproduced in figure 6):

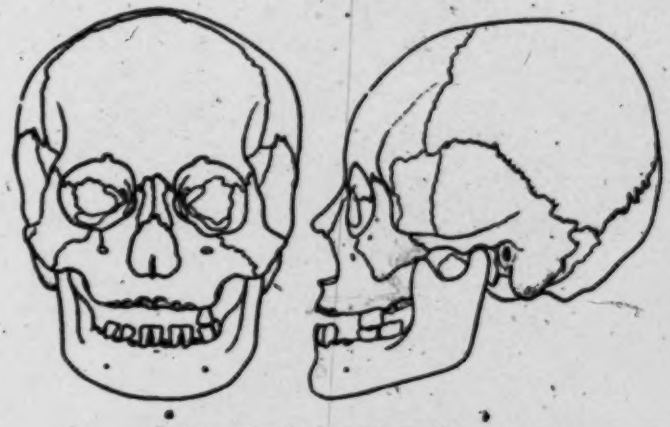

FIG. 6.—Anterior and left lateral aspects of Seri cranium.

REPORT ON AN EXAMINATION OF A SKELETON FROM SERILAND

[By Dr ALEŠ HRDLIČKA, Associate in Anthropology, Pathological Institute, New York]

The Skeleton

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All the bones of the skeleton are present, except the sternum, the coccyx, a few of the teeth, and a few of the small bones of the extremities.

It is a skeleton of a young adult, between 20 and 24 years of age, female. The age of the subject is indicated mainly by the unattached epiphyses of the long and some of the short bones, those epiphyses, namely, which are the last to ossify. The femininity of the subject is indicated by the generally slightly marked ridges, etc, of muscular attachment, and by the decidedly feminine character of the pelvis (light, well-spread ilia, broad subpubic arch) and of the skull (lack of supraorbital ridges, thin dental arches, small mastoids, etc).

There are no wounds or pathological conditions noticeable on the skeleton. Several peculiarities and anomalies are observable. They will be described with the parts they concern.

[128]
The measurements to follow are expressed in centimeters. The French anthropometric methods and nomenclature have been adopted.

The Skull

The skull is of fair size, and is symmetrical throughout, with the exception of a slight irregularity in the occipital region. All the sutures, with the exception of the basilar, open; nerve foramina all large; serrations rather simple; no intercalate bones of any kind.

Norma frontalis—Visage symmetrical. Forehead well arched, medium height.

1: McGee E- 5 (1894-1895):1898 NU31 Ser. NU31

Supraorbital ridges almost absent; glabella convex. Nasion depression medium. Orbits obliquely quadrilateral; their axes (internal inferior corner—internal superior corner) meet at ophryon. Spheno-maxillary fissure, lachrymal canal, and nerve foramina all above average in size. Nasal bones well bridged, very slightly concave; nasal aperture regular; no "gouttières"; turbinated bones well formed; septum wanting; spine 0.65 long, bifid at the end. Zygomæ of medium size and strength. Superior maxilla of medium size, well formed. Dental arches regular; no prognathism. Bone of lower jaw moderately strong; does not protrude anteriorly; conformation normal.

Norma basilis—Contour almost round. Whole base symmetrical, except as noted below; the middle structures appear shortened antero-posteriorly, slightly more on the left than on the right; basilo-vomeric angle rather acute (100°); foramina of the base all spacious; the petrobasilar suture is large (average diameter, 5 mm.) and is throughout pervious. Superior dental arch regular and of medium thickness. Dentition incomplete—right upper wisdom tooth not fully erupted; left lower wisdom tooth wanting entirely. Denture flat and regular; no teeth decayed. Both upper first incisors absent.[1] Teeth set regularly in socket and of medium size. Palatine arch symmetrical. Shape of palate normal. Posterior nasal foramina oblong. Styloids small, shell-like, flattened.

Norma occipitalis—The posterior part of the skull is somewhat flattened. The sides of the surface present a pentagonal outline with rounded corners, the apex corresponding to the sagittal suture, or obelion. There is a slight asymmetry, the right side being somewhat flattened. Exterior occipital protuberance not well marked.

Norma verticalis—Outline an irregular ovoid, wider posteriorly and more prominent on the left and posteriorly. Slight symmetrical depression of the parietals, beginning about 1 cm. and ending 5 or 6 cm. behind the coronal suture and extending laterally from the sagittal suture to the upper temporal ridges.

Norma lateralis—Outline ovoid, larger posteriorly. Pterions en H, of medium breadth. Temporal ridges not very distinct. Parietal bosses prominent.

	cc.
Skull capacity, Broca's method	1,545
Skull capacity, Flower's method	1,490
Antero-posterior diameter, maximum	16.3
Lateral diameter, maximum	14.4
Cephalic index, 88.3 = Brachycephalic.[2]	
Chin-bregma	21.2
Chin-ophryon	13.2
Alveolar point-ophryon	8.6
Bizygomatic breadth, maximum	13.0
Facial index	98.5
Superior facial index (Broca's), 66.1 = Mesomene.	
Height of nose aperture	5.4
Breadth of nose aperture	2.65
Nasal index, 49.0 = Mesorhine.	
Mean height of orbits	3.80
Mean breadth of orbits	3.95

[1] Both these incisors were apparently lost at the same time, not from general laxity, and some years previous to the death of the individual, as the sockets appear exactly alike, bear no signs of violence, and are almost filled up with cancellous tissue (some religious or social rite?).

[2] If allowance is made for the effects of flattening of the occipital on the long diameter, and hence on the index, of a skull, it becomes apparent that the true index of this skull is probably of a low brachycephalic, or, at least, of mesocephalic order. It is very doubtful if the deformity is intentional; its moderate extent and the total lack of signs of counter-compression would indicate with more probability that the deformity might have been produced by the individual lying, when an infant, by compulsion or habit, on something hard, probably a board.

I: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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Orbital index, 88.2—Mesoseme.	cm.
Mean depth of orbits	4.6
Dacryon to dacryon	2.3
Frontal diameter, minimum	9.3
Frontal diameter, maximum (interstephanic)	11.4
Biauricular diameter[1]	12.3
Diameter through parietal bosses	14.3
Mastoid diameter	10.55
Distance from superior alveolar arch to inferior occipital ridge	14.35
Distance between supramastoid eminences	13.9
Length of basilar process (notch of vomer to basion)	2.95
Basion-bregma height	13.45
Basion-obelion height	? (obelion indistinct.)
Basion-ophryon	14.0
Basion-inion	9.1
Circumference, maximum	49.4
Basion-ophryon arc	1.8
Basion-bregma arc	12.3
Basion-inion arc	30.0
Basion-opisthion arc	25.5
Pterion-bregma arc	11.2
Arc external meatuses, over forehead	29.2
Arc external meatuses, over frontal bosses	30.4
Arc external meatuses, over bregma	34.0
Arc external meatuses, maximum	35.7
Arc external meatuses, over inion	23.6
Temporal ridges to sagittal suture (stephanions-bregma), (arc) mean	7.5
Lateral diameter of foramen magnum, maximum	3.75
Antero-posterior diameter of foramen magnum, maximum	3.60
Index of foramen magnum	78.4
Length of hard palate, maximum	4.6
Height of hard palate at first molars	1.55
Breadth of hard palate at first bicuspids	2.9
Breadth of hard palate at first molars	3.55
Breadth of hard palate at third molars	4.1
Height of posterior nares	3.1
Breadth of posterior nares	2.55
Index of posterior nares	82.2
Angle of mandibles	114°
Length of mandibular rami	9.55
Bigonion diameter of mandibles	8.95

The Vertebral Column

Cervical vertebræ—Number complete; characters normal. All cervical spinous processes bifid; vertebræ prominens well defined. All epiphyses absent.

	cm.
Transverse diameter of third cervical vertebra (between posterior tubercles of the pedicles), maximum	5.05
Antero-posterior diameter of third cervical vertebra (body-spinous process), maximum	4.20
Greatest lateral diameter of foramen, same vertebra	2.15

[1] The "biauricular" signifies the distance between points of the skull immediately above the commencement of the superior zygomatic border on the temporal.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

Greatest antero-posterior diameter of foramen, same vertebra	1.45
Height of body in center, same vertebra	.80

1410

Dorsal vertebræ—Number complete; characters absolutely normal. Resemblance to lumbar processes begins with tenth dorsal vertebra; a number of the epiphyses of the various processes either imperfectly united or dislocated; body epiphyses absent.

	mm.
Antero-posterior diameter of body of sixth dorsal vertebra, maximum	2.35
Lateral diameter of body of sixth dorsal vertebra, maximum	2.99
Height of body in center	1.67
Separation of transverse processes	5.45
Edge of upper articular processes-tip of spinous processes	5.50
Breadth of foramen, maximum	1.60
Length of foramen, maximum	1.50

Lumbar vertebræ—Number complete; characters absolutely normal. Only disk epiphyses detached.

	mm.
Antero-posterior diameter of body, maximum	2.12
Antero-posterior diameter of whole vertebra, maximum	7.10
Lateral diameter of body, maximum	4.55
Lateral diameter of transverse processes, maximum	7.10
Height of articular processes, maximum	4.35
Height of body in center, maximum	2.20
Antero-posterior diameter of canal, maximum	1.50
Lateral diameter of canal, maximum	2.10

The Sacrum

Aspect normal with the following exception: There are distinct intervertebral disks between the different segments (5 segments); there are deep lateral incisures in places where the lateral processes unite, and the fourth and fifth segments are entirely separated (in one piece) from the upper three (four small spots of consolidation along the posterior border of the articulation are visible). The articular processes of the first and second sacral segments are similar in form to the lumbar, and form open articulations. There is a large foramen situated below the spinous processes of the first and third segment, and a smaller beneath the second. Coccyx absent. Curvature medium.

	mm.
Breadth of the sacrum, maximum	10.5
Height of the sacrum, maximum	11.2
Index of the sacrum	93.7

The Thoracic Cage

Aspect of ribs normal. Strength medium. Sternum absent.

Length second right rib (arc)	21.6
Long diameter second right rib	12.5
Maximum height of the curve	7.2
Length ninth right rib (arc)	28.6
Long diameter ninth right rib	18.7
Maximum height of curve	8.45

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

Bones of the Upper Limbs

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Clavicles—Form normal, slender; epiphyses united. Length, maximum, 13.5. Muscular attachments of slight prominence.

Scapulæ—Form normal, spine directed somewhat more upward than is usual; whole bone light and slender; acromial epiphysis absent.

Height (middle of glenoid fossa–tip of inferior angle)	12.0
Breadth (middle of glenoid point, maximum)	8.7

Humeri—Form normal; bone slender; head-epiphyses not united; left head perforated by large oval foramen from coronoid to olecranon fossæ (8 mm. by 4½ mm.)

Length of left humerus (with epiphysis)	31.3
Length of right humerus (with epiphysis)	31.0

Ulnæ and radii—Form normal; bones slender; lower epiphyses ununited.

Length of left radius (head and end of styloid)	24.1
Length of left ulna (olecranon-styloid)	25.8

Metacarpus, carpus, and phalanges—Nothing special.

Bones of the Pelvis and Lower Limbs

All the bones of the pelvis and lower limbs of normal shape and medium size. Pelvis apparently that of a female (subpubic angle 109°). Bones well united, all traces of the union in acetabulum effaced. Epiphyses ununited except on the ischiatic protuberances, where bony union just begins. Above the fossæ acetabuli (3 mm. postero-superiorly from the uppermost edge of the fossa) there is in both acetabula an irregularly triangular depression of about 2 water-drops capacity (accessory tendon?).

Anterior to posterior-superior spine	23.7
Point of pubis to posterior-superior spine	15.8
Point of pubis to anterior-superior spine	12.7
Point of pubis to point of ischium	10.8
Bi-iliac diameter of whole bony pelvis (between internal iliac borders), maximum	21.0
Height of coxal bones (tuberosity of ischium to iliac border in this case without its epiphyses), maximum	19.4
Antero-posterior diameter of superior strait	11.8
Lateral diameter of superior strait	11.4
Oblique diameter of superior strait	11.8

Height of subject (determined after Manouvrier's method) about 1.620 m. (above the general average).

Femora—Lower epiphyses ununited. Muscular attachments, including linea aspera, but little prominent.

Length of femora (both condyles applied to base)	42.6
Inclination of neck to shaft	130°

Tibiæ—Both platycnemic. All the epiphyses ununited, especially the upper.

Antero-posterior diameter at center, maximum	2.5
Lateral diameter at center, maximum	1.62
Length (articular surface–tip of styloid)	35.6

$$\text{Femoro-tibial index } \left(\frac{\text{length of tibia} \times 100}{\text{length of femora}}\right) = 83.6$$

This index is 81 in the European, 82 in the negro, and 86 in the Bushman.[1]

Fibulæ—Length, 35.2. Epiphyses not yet united, particularly the upper.

Tarsal, metatarsal, and phalangial bones—Nothing special.

[1] Quain, Anatomy, 1890: Osteology, p. 122.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

Résumé of the Peculiarities of the Skeleton

The nerve and blood-vessel foramina are generally large. This character and the platycnemic tibiæ indicate an ample musculature of the subject. 141

The height is above the general average for a woman, which, according to Topinard, is 1.53.

The petro-basilar fissures are large and visibly pervious. This condition is found occasionally; significance doubtful; it is more frequent in young subjects.

Platycnemic tibiæ—This is considered a simian character.[1] It was found first by Broca in 1868[2] on bones from Eyzies; it is associated with relative strength of the muscles of the leg; is very frequent among the characters found on bones from the epoch of polished stone in Europe.[3] J. Wyman found this character more accentuated than at Cro-Magnon or at Gibraltar on a third of the tibiæ from the mounds of the United States.[4]

Perforated humerus—Noticed first by Desmoulins, 1826, on the humeri of Guanches and Hottentots;[5] occurs with greatest frequency in the following peoples:[6]

	Per cent.
156 neolithic humeri from around Paris	31.6
97 humeri of African negroes	31.7
123 humeri of Guanches	35.6
80 humeri from the mounds of United States (J. Wyman)	31.2
32 humeri of Polynesians	34.3
30 humeri of altaic and American races	36.2

Summarily, Dr Hrdlička's special determinations confirm with the external observations on the Seri body; they indicate an exceptionally large stature, together with a notably well-developed and well-proportioned osseous framework, of the native American type, yet significantly approaching the Caucasian in several respects. It is especially noteworthy that the cranium is well formed and capacious, the precise measurements corroborating the external observation that the Seri head is of good absolute size, though relatively smaller (in comparison with height and weight) than that of some neighboring tribes of less stature—e. g., the Papago. It may be noted, too, that the imperfect ankylosis of the epiphyses, and various other skeletal features, are in accord with the inferences from the living body as to the slowness of attaining maturity. It may be noted further that the extraordinary development of the muscular attachments, especially in the masculine cranium, is quite in harmony with the habits of the tribe. 141 142 [145] [147]

The remaining somatic characteristics of the Seri are for the greater part of such sort as to be described by generalities and negatives. In general they correspond with those of typical American tribesmen and other peoples; and they do not exhibit striking peculiarities in proportion or structure. In the opposability of the thumb, the nonopposability of the hallux, and the independence of fingers and toes, the Seri hands and feet are developed quite up to, if not somewhat beyond, the 142 144

[1] Hervé[illegible] et Hervé, Précis d'Anthropologie, 1897, pp. 127, 2027.
[2] Bulletin de la Société d'Anthropologie, 1868.
[3] Hervé[illegible] et Hervé, op. cit., p. 113.
[4] Histoire Naturelle des Races Humaines, 1878, p. 304.
[5] Hervé[illegible] et Hervé, op. cit., p. 291.

2: Kroeber E-5 (1930)1931 NU31 Seri NU31

PHYSICAL TYPE

123 I had a calipers and rule with me on Tiburon Island, but no
141 stature rod. The Seri proved not to object to being measured, but in order to avoid the possibility of arousing prejudice, I had left the matter to the last; but for this, my series would have been longer. The results are given in the adjoining table. The somewhat unconventional finger and foot mensurements were taken because of the seeming length (more probably only unusual slenderness) of these members, but may give an approximate indication of the bodily height.

114 McGee is undoubtedly in error (p. 136) in estimating the average
141 height of Seri men at 1825 mm., of women between 1727 and 1750. I would deduct 100 mm. from these figures.[17] The Seri impressed me as less tall than the Mohave and Maricopa, who run about 1720 to 1740.[18] Hrdlička[19] found the following for the region: 53 American Pima, 1718; 50 Papago, 1709; 50 Yaqui, 1696; 30 Opata, 1670; 53 Mayo, 1673; 1 Seri, 1707. The Seri look taller than they are on account of their slenderness. This in turn might be due to preponder-
142 ant animal diet, general malnutrition, or congenital type. Certainly their calves, arms, and wrists are notably thin. The forearm bones in particular look long and exceptionally thin. The muscles are generally firm.

Head form, and nose index for adults, run close to those of other Sonoran tribes. Thus:

Cephalic index, 13 Seri men, women, and children, 80.4; Hrdlička,[20] 1 Seri, 81.3; 50 Mayo, 80.3; 31 Opata, 79.3; 49 Yaqui, 78.5. The Pima in the United States are longer headed, 78.1. Eleven Yaqui skulls averaged 75.7, equivalent to 77+ in the head by the usual estimate.

Nasal index, Seri, 4 men of 28 and up, 79.3, 4 women of 20 and up, 74.7, mean of total 8 adults, 77; Hrdlička, 1 Seri, 71.9; 53 Mayo, 80.2; 31 Opata, 81.1; 52 Yaqui, 78.9; 50 Papago, 79.8; 53 American Pima, 78.1; ten Kato, 78 Mohave, 82.

The Seri are slightly broader headed and narrower nosed than the others, but the difference does not seem significant, especially in view of the smallness of the Seri series.

141 Physiognomically the Seri are quite different both from the
142 Yaqui and Mayo and the American Pima and Papago; in fact con-

[Text continues on page 38]

[17] Hrdlička, in McGee, 143-147, gives the following on the skeleton of a Seri woman of age 20-24: Stature (computed by Manouvrier method), about 1420 mm.; indicated musculature, ample; cranial index (occipital deformation, probably unintentional), 88.8; nasal index, 49; skull capacity (Broca) 1545, (Flower) 1490 cc.

[18] Mohave, 1716; Yuma, 1722; Maricopa, 1749 (Hrdlička, in Putnam Anniversary Volume, 405–426, 1909); Maricopa, 1723 (ten Kate, Journ. Am. Ethnol. and Archaeol., 3:117-144, 1902).

[19] Putnam volume, as just cited; the Seri, in AA, 6:88, 1904.

[20] AA, 6:86-88, 1904. The nasal index means are given by Hrdlička. Neither means nor individual measurements are given for cephalic index, but the percentage distribution in index ranges of one point allows the calculation of an approximate mean.

Seri Measurements—1930

Estim. Age	Name	Length Head	Breadth Head	Length Face	Breadth Face	Length Nose	Breadth Nose	Cephalic Index	Nasal Index	Length[1] Middle Finger	Length[2] Foot
	MALES										
55	Santo Blanco	188	154	120	150	53	44	81.3	83.	74	242
42	Urbano Sanchez	156	150	124	145	56	42	89.6	75.	70	244
32	Chico Romero[3]	189	159	131	156	58	46	84.1	79.3	78	260
25	Luis Huicho	189	149	113	143	50	40	78.8	80.	75	240°
16	Pedro Comito	181	144	112	135	53	37	79.6		68	242
13	José Manuel Romero.. (son of Chico)	176	143	107	134	41	29	81.3		63	225
10	Juan Chavin	185	148	103	124	42	37	80.		57	192
	FEMALES										
42	Maria	182	163	124	141	55	43	78.6	78.2	74	225°
36	Loreta	187	147	126	144	61	46	78.6	75.4	76	236°
22	Maria Antonia	188	159	132	147	55	41	84.6	74.6	76	222°
20	Maria Ramona ..... (dtr. of Santo)	183	140	100	126	48	34	76.5	70.8	73	225
18	Martina Sanchez[4] ...	160	152	110	141	52	29	84.4		72	234°
13	Lupe	178	126	107	126	46	35	76.4		63	203
	Mean of 13 individuals							80.4			
	Mean of 5 adults								77.0		
	Mm. less than head breadth:										
	Av. 6 indiv. aet. 25+				4						
	Av. 7 indiv. aet. 22—				10						

[1] With calipers, tip to proximal crease at base of finger.
[2] With calipers, round of heel to round of end of big toe ("second toe longer, measured instead); foot unweighted, hanging free.
[3] Talbot, broadest, and heaviest in the group.
[4] Recorded as "Martin," but entered as female.

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2: Kroeber E-5 (1930)1931 NU31 Seri NU31

141 stitute a distinctive type, as shown by McGee's pictures of them, as well as mine (figs. 1-11). Physiognomic distinctiveness however
142 frequently fails to appear in measurements, at any rate the standard ones, and is often no doubt largely a matter of expression rather than of features. Expression must be determined by habitual feelings and behavior, and these in turn are heavily influenced by culture, which again, through subsistence, is interrelated with geographical environment. It is therefore expectable that a tribe like the Seri would look different from other populations. The one feature of face which impressed me as a Seri anatomical peculiarity was narrowness of lower jaw as compared with breadth in the region of the cheekbones. The reader's verdict from the photographs may or may not coincide with mine.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

THE SERI INDIANS

By W J McGee.

INTRODUCTION

Salient Features

Something has been known of the Seri Indians (Seris, Ceris, Ceres, Heris, Tiburones) since the time of Coronado, yet they remain one of the least-studied tribes of North America. The first systematic investigation of the tribe was made in the course of expeditions by the Bureau of American Ethnology in 1894 and 1895; it was far from complete. 114

The Seri Indians are a distinctive tribe in habits, customs, and language, inhabiting Tiburon island in Gulf of California and a limited adjacent area on the mainland of Sonora (Mexico). They call themselves *Kun-kaak* or *Kmike:* their common appellation is from the Opata, and may be translated "spry". Their habitat is arid and rugged, consisting chiefly of desert sands and naked mountain rocks, with permanent fresh water in only two or three places; it is barred from settled Sonora by a nearly impassable desert. Two centuries ago the population of the tribe was estimated at several thousands, but it has been gradually reduced by almost constant warfare to barely three hundred and fifty, of whom not more than seventy-five are adult males, or warriors. 101 [131] 133 161

The Seri men and women are of splendid physique; they have fine chests, with slender but sinewy limbs, though the hands and especially the feet are large; their heads, while small in relation to stature, approach the average in size; the hair is luxuriant and course, ranging from typical black to tawny in color, and is worn long. They are notably vigorous in movement, erect in carriage, and remarkable for fleetness and endurance. 142 [147]

The Seri subsist chiefly on turtles, fish, mollusks, water-fowl, and other food of the sea; they also take land game, and consume cactus fruits, mesquite beans, and a few other vegetal products of their sterile domain. Most of their food is eaten raw. They neither plant nor cultivate, and are without domestic animals, save dogs which are largely of coyote blood. 105

The habitations of the Seri are flimsy bowers of cactus and shrubbery, sometimes shingled rudely with turtle-shells and sponges; in some

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

SOMATIC CHARACTERS

Several physical characteristics of the Seri Indians are so conspicuous as to attract attention even at first sight. Perhaps the most striking is the noble stature and erect yet easy carriage; next in prominence is the dark skin-tint; a third is the breadth and depth of chest; another is the slenderness of limbs and disproportionately large size of extremities, especially the feet; still another is length and luxuriance of hair; and an impressive character is a peculiar movement in walking and running.

The mean stature of the adult Seri may be estimated at about 6 feet (1.835 meters) for the males, and 5 feet 8 inches (1.727 meters) or 5 feet 9 inches (1.73 meters) for the females, these estimates resting on visual comparisons between Caucasians of known stature and about forty adult Seri of both sexes at Costa Rica in 1894. In several of the accompanying photomechanical reproductions (e. g., plates XIII, XVI, XIX, XXIII, and XXVIII) a unit figure, introduced partly for the encouragement of the individuals and groups but chiefly to afford a basis for approximate measurement, gives opportunity for test of the estimate, the figure measuring 5 feet 11 inches (1.80 meters) to 5 feet 11½ inches (1.812 meters), and weighing about 215 pounds in the costume shown, including hat and boots.[1] These pictures and some thirty unpublished photographs, like the observations on the ground, indicate that practically all of the fully adult males and several of the females overtop the Caucasian unit. The only definite measurement known is that of the youthful and apparently immature female skeleton examined by Dr Hrdlicka, of which the dimensions indicate a stature (estimated by the method of Manouvrier) of about 5 feet 3⅞ inches (1.62 meters),[2] or 3½ inches above the female normal of 5 feet ¼ inch (1.53 meters) given by Topinard; but this considerable stature is, probably on account of the youth of the subject, much below the mean indicated by the ocular and photographic comparisons (it corresponds fairly with that of the Seri maiden represented in plate XXV, whose age was estimated at 18 years). Naturally this striking stature, especially that of the warriors, has been much exaggerated by casual observers; the typical warrior, El Mudo, depicted in plate XIX, is indeed commonly reckoned as a 7-footer, though his actual stature (diminished somewhat in the pictures by fearsome shrinking from the ordeal of photographing) can hardly exceed

[1] The average height and weight of the unit figure (that of the author) are about 5 feet 8½ inches and 200 pounds, respectively.

[2] Or about 1.6078 meters estimated by the method of Rollet (cf. The Races of Man, J. Deniker, London, 1900, p. 33).

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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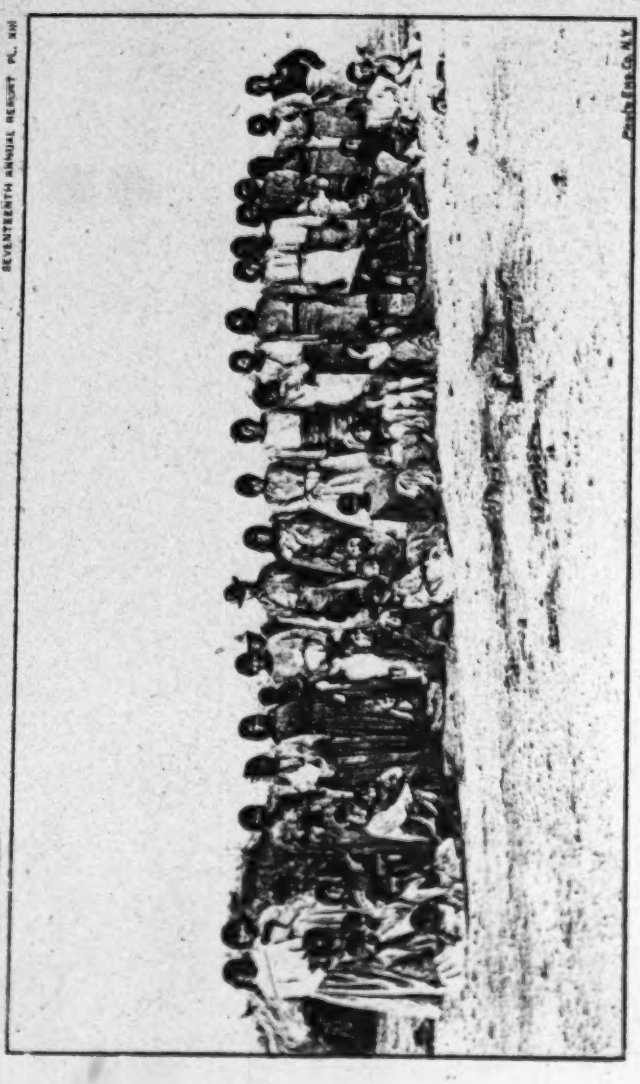

GROUP OF SERI INDIANS ON THE FRONTIER

[FACING p. 137]

1: McGee E-5 (1894-1895)1898 NU31 Ser 2 U31

6 feet 3 inches (1.90 meters); while for centuries the folk have been reputed a tribe of giants. 141

The estimation of Seri stature is difficultated by the impossibility of defining maturity; and the effort to determine whether particular individuals were adult brought out clear indications of slowness in reaching complete maturity, i. e., of the continuation of somatic growth throughout an exceptionally long term in proportion to other stages in the life of the individual. Thus, with scarcely an exception, the polyandrous matrons were taller than the mean of 5 feet 9 inches, while the apparently adult maidens (with one exception) and the younger wives were below this mean; and in like manner the stature of the warriors varied approximately with appearance of age, all of the younger men falling below the mean, and all of the older (except Mashém) rising above it. The difficulty of estimation is further increased by the absence of age records and the impracticability of ascertaining and standardizing the habitually guarded expressions for relative age implied in the kinship terminology; so that the age determinations were roughly relative merely, and there was no means of fixing the absolute age of maturity, of puberty, of marriage, or of the assumption of manhood and womanhood howsoever defined. 141 145

Under the conditions, the determination of stature-range in the Seri rancheria at Costa Rica in 1894 was not only difficult but uncertain; yet in general terms it may be said that the women having two or more children—about twenty in number—were notably uniform in stature, ranging from about 5 feet 7½ inches (in the case of an aged and shrunken elderwoman) to 5 feet 11 inches; that the younger women were more variable; and that the warriors (seventeen in number), of whom only a part were apparently heads of families, were more variable still, though the variation, apart from that apparently correlated with age, was less than is customarily found among the exceptionally uniform Papago, and decidedly less than that seen among the Yaqui or the local Mexicans. 141

The Seri skin-tint is of the usual Amerindian bronze, save that it is exceptionally dark, with a decided tone of black. Essayed representations of the characteristic color appear in plates XVIII and XXIV; but the essays are little more satisfactory than the innumerable attempts at depicting the skin-color of the American aborigines that have gone before. Experienced observers of the native tribes may form an impression of the Seri color from the explanation that they are as much darker than the neighboring Papago as the Papago are darker than the average tribesmen about the Great lakes; the Papago themselves being as much darker than the southern plains or Pueblo folk as these are darker than those of the Lake region. The range in color seems to be slight; the variation among the 60 individuals of both sexes and all ages seen at Costa Rica was hardly perceptible, being less than that usually observed in a single family of any neighboring tribe; while the 142

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

color distinction alone sufficed to distinguish the Seri from any other people at a glance. 142

Foremost among the general somatic distinctions between the Caucasian and the American native is the peripheral development of the former, displayed in better-muscled limbs, more expressive features, etc—i. e., the Caucasian body expresses a readily perceptible but difficultly describable peripherization, in contradistinction from the centralization displayed by the aboriginal body. Save in a single particular (the large feet and hands), the Seri exemplify this distinction in remarkable degree: their chests are strikingly broad, deep, and long, recalling the thoroughbred racer or greyhound; their waists are shortened by the chest development, yet are rather slender; their hips are broad and deep, with a clean-cut yet massive gluteal development; and, in comparison with the robust yet compact bodies, the tapering arms and legs seem incongruously slender.[1] This physical characteristic, like that of color, is insusceptible of quantitative expression, at least without much more refined observations than have been made; but its value may be indicated roughly by the statement that the Seri differs from the average aboriginal American in degree of somatic concentration as much as the average aborigine differs from the average Caucasian—though it is noteworthy that the departure in this direction from the aboriginal mean is in some measure regional (i. e., the Seri differ less in this respect from the Papago and other swift-footed natives than from the average tribesmen of the continent). The Seri robustness of body and slenderness of limb are brought out by the absence (in appearance at least) of adipose; the skin is strikingly firm and hard and evidently thick, yet the play of muscle and tendon beneath indicate a dearth of connective tissue and convey that impression of physical vigor which their familiars so miss in the photographs; and in no case, save perhaps in the young babe, could the slighest trace of obesity be discerned. Thus the Seri, male and female, young and old, may be described as notably deep-chested and clean-limbed quick-steppers, or as human thoroughbreds.

The somatic symmetry of the average Seri, marred somewhat by the slenderness of limb, is still more marred by the large extremities. The hand is broad and long, the fingers are relatively long as those of the Caucasian, the nails are peculiarly thick and strong, and the skin is so thick and calloused as to give a clumsy look to the entire organ; the feet are still larger and thicker-skinned, appearing disproportionately long and broad for even the heroic stature of the tallest warriors. The integument covering the feet, ankles, and lower legs is incredibly firm and hard, more resembling that of horse or camel than the ordinary human type;

[126]

[1] The photo-mechanical reproductions do but meager justice to the splendid chest development of the Seri, young and old; for they were not only at semicommand rest during the better hours at which photography was most feasible, but invariably quailed before the mysterious apparatus and crouched shrinkingly in such wise as to contract their chests and lose their habitually erect and expansive carriage.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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SERI FAMILY GROUP

SEVENTEENTH ANNUAL REPORT PL. XIV

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[FACING P. 139]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

its astounding protective efficiency being attested by the readiness with which the Seri run through cactus thickets so thorny as to stop horses and dogs, or over conglomerated spall-beds so sharp that even the light coyote leaves their trail. In the absence of measurements it may merely be noted that the hands and feet of the Seri are materially larger, not only absolutely but relatively to their stature, than those of neighboring tribesmen or even of Mexican and American workmen. And, on the whole, it may be said that in their proportions, as in their stature and color, the Seri are strikingly uniform, their range being less than that commonly observed in contemporary tribes, and the differences between them and their neighbors much exceeding the range among themselves. 142

Somatically distinctive as is the Seri at rest, he (or she) is much more so in motion—though the characteristics so readily caught by the eye are not easily analyzed and described. Perhaps the most conspicuous element in their walk is a peculiarly quick knee movement, bringing the foot upward and forward at the end of the stride; this merges into an equally quick thrust of the foot forward and downward, with toe well advanced, toward the beginning of the next stride; and these motions combine to produce a singular erectness and steadiness of carriage, the body moving in a nearly direct line with a minimum of lateral swaying or vertical oscillation, while the legs neither drag nor swing, but spurn the ground in successive strokes. Thus the walk seems notably easy and graceful, while the walker carries an air of alertness and reserve power, as if able to stop short at any point of a pace or to bolt forward or backward or sidewise with equal facility; he simulates the "collected" animal whose feet tap the ground lightly and swiftly while his body appears to yield freely to voluntary impulse. In this deer-like or antelope-like movement all the Seri are much alike, and all are decidedly removed from their neighbors, even the light-footed Papago. The component motions are most conspicuous in leisurely walking, though the resultant movement is more striking in rapid walk or the incredibly swift run of youths and adults. The general movement is akin to that shaped by the habit of carrying burdens balanced on the head, as the Seri women actually carry their water ollas for astonishing distances; but the carriage is shared—indeed, best displayed—by the warriors and growing boys, who are not known to carry water in this way. 481 [482]

Among the conspicuous but nondistinctive somatic characters of the Seri is luxuriant straight hair habitually worn long and loose. Commonly the hair is jet-black for most of the length, growing tawny toward the tips; sometimes it is black throughout, while again the tawny tinge, or perhaps a bleached appearance, extends well toward the scalp. Age-grayness seems not to be characteristic; the most aged matrons known have no more than a few inconspicuous and scattered gray hairs, though the pelage of some is slightly bleached or faded. None of the warriors at Costa Rica showed the slightest grayness except 142 [302] 142 145

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

142 Mashém (aged about 50 years), who had a few gray strands about the
145 temples; but it may be significant that the hair of the tribal outlaw Kolusio, who has lived with white men for full three score years, is iron-gray. Kolusio's pelage is trimmed in Caucasian fashion; that of Mashém
[115] is cut off mid-length in a manner exciting comment, if not derision, on the part of his fellows and others, and resulting in his (Spanish)
[302] sobriquet, Pelado (literally, Peeled, or idiomatically, Shorn); but with few exceptions the hair is kept long as it can be made to grow, and receives careful attention to this end. Naturally the length is somewhat variable; in many cases it depends to or slightly below the waist, while in other cases it merely sweeps the shoulders; and in general it appears to increase in both length and luxuriance not only throughout adolescence, but up to late maturity, for the best pelages are presented by moderately aged persons, while none of the youths are so luxuriantly tressed as their elders. Not the slightest trace of baldness appears. The infantile pelage is short, brownish in color, soft or even silky, and inclined to curl toward the tips. It is not until the age of several months that the hair begins to acquire the adult character, and at least some children retain traces of the infantile pilary character up to 5 or even 10 years; and none of the children display such jet-black shock-heads as are frequently found among other tribes, whose adult pelage may nevertheless be much less luxuriant than that of the Seri. On the whole, it may be said that the Seri hair is luxuriant and vigorous beyond the aboriginal average, and that it, like various other somatic features, indicates a relatively late maturation in the life-history of the individual.

Both sexes are beardless. The female faces seen were entirely free of
142 strong pilary growth; one or two of the warrior faces showed scattering hairs, and Mashém sported a feeble and downy but jet-black mustache with an exceptional number of scattered hairs about the chin; while Kolusio shaved regularly, and might, apparently, have grown moderately stiff but straggling mustaches and beard. Axillary hair seems to be wanting; pubic hair is said to be scanty; otherwise the bodies are practically hairless (more nearly so than those of average Caucasians).

The teeth are solid, close-set, and even, and impress the observer as large; they close with the upper incisors projecting slightly beyond the lower denture in the usual manner.

128 The skeletal characteristics of the Seri are known only from a single
141 specimen obtained in the course of the 1895 expedition in such manner as to establish the identification beyond shadow of question. This skeleton was submitted to Dr Aleš Hrdlička for measurement and discussion.[1]

In making his examination, Dr Hrdlička compared the unquestion-

[1] A separate cranium was obtained by the 1895 expedition, having been sought and picked up by a Mexican member of the party in verification of his account of the killing of one of the Seri; but, in view of the possibility of erroneous identification, this skull was not submitted in connection with

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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SERI MOTHER AND CHILD

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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GROUP OF SERI BOYS

[p. 144 A]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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MASHEM, SERI INTERPRETER

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

Résumé of the Peculiarities of the Skeleton

The nerve and blood-vessel foramina are generally large. This character and the platycnemic tibiæ indicate an ample musculature of the subject. 141

The height is above the general average for a woman, which, according to Topinard, is 1.55.

The petro-basilar fissures are large and visibly pervious. This condition is found occasionally; significance doubtful; it is more frequent in young subjects.

Platycnemic tibiæ—This is considered a simian character.[1] It was found first by Broca in 1868[2] on bones from Eyzies; it is associated with relative strength of the muscles of the leg; is very frequent among the characters found on bones from the epoch of polished stone in Europe.[3] J. Wyman found this character more accentuated than at Cro-Magnon or at Gibraltar on a third of the tibiæ from the mounds of the United States.[4]

Perforated humerus—Noticed first by Desmoulins, 1826, on the humeri of Guanches and Hottentots;[5] occurs with greatest frequency in the following peoples:[6]

	Per cent.
156 neolithic humeri from around Paris	21.6
97 humeri of African negroes	21.7
122 humeri of Guanches	25.6
80 humeri from the mounds of United States (J. Wyman)	31.3
32 humeri of Polynesians	34.3
30 humeri of altaic and American races	36.2

Summarily, Dr Hrdlička's special determinations conform with the external observations on the Seri body; they indicate an exceptionally large stature, together with a notably well-developed and well-proportioned osseous framework, of the native American type, yet significantly approaching the Caucasian in several respects. It is especially noteworthy that the cranium is well formed and capacious, the precise measurements corroborating the external observation that the Seri head is of good absolute size, though relatively smaller (in comparison with height and weight) than that of some neighboring tribes of less stature—e. g., the Papago. It may be noted, too, that the imperfect ankylosis of the epiphyses, and various other skeletal features, are in accord with the inferences from the living body as to the slowness of attaining maturity. It may be noted further that the extraordinary development of the muscular attachments, especially in the masculine cranium, is quite in harmony with the habits of the tribe. 141 142 [145] [147]

The remaining somatic characteristics of the Seri are for the greater part of such sort as to be described by generalities and negatives. In general they correspond with those of typical American tribesmen and other peoples; and they do not exhibit striking peculiarities in proportion or structure. In the opposability of the thumb, the nonopposability of the hallux, and the independence of fingers and toes, the Seri hands and feet are developed quite up to, if not somewhat beyond, the 142 144

[1] Hovelacque et Hervé, Précis d'Anthropologie, 1887, pp. 132, 2037.
[2] Bulletin de la Société d'Anthropologie, 1868.
[3] Hovelacque et Hervé, op. cit., p. 113.
[4] Histoire Naturelle des Races Humaines, 1868, p. 304.
[5] Hovelacque et Hervé, op. cit., p. 291.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

142 Amerindian[1] average; the feet are set straight in walking, as befits the
[144] pedestrian habit; the arms are not elongated, and the thighs seem no longer in proportion to other elements of the stature than are those of the highest human types. In like manner the bodies are notably free
[304] from artificial deformation; the skulls are not flattened or otherwise distorted; there is no scarification, or even tattooing; neither ears nor lips are pierced for pendants or labrets; the teeth are not filed or drilled, though in some cases at least the first incisors of females are extracted; and while there are trustworthy records of the piercing of the nasal septum for the insertion of pendants, no examples were found at Costa Rica in 1894. The food habits and other customs of the tribe indicate, or at least suggest, more or less specialized and perhaps distinctive internal characters; but, without actual examination of the organs, these inferred characters demand little more than passing notice.

On reviewing the more prominent somatic characters of the Seri, it is found that the greater number are either functional or presumptively correlated with function, and that only a few—chiefly stature and color—are simply structural; accordingly a comparison of the peculiar somatic features and the peculiar individual habits of the tribe would seem to be instructive in more than ordinary degree.

361 The most striking trait of the Seri is the pedestrian habit. The warriors and women and children alike are habitual rovers; their jacales and even their largest rancherias are only temporary domiciles, evidently vacant oftener than occupied; the principal rancherias are separated by a hard day's journey or more; and none of the known
[312] rancherias or jacales of more persistent use are nearer than 4 to 10 miles from the fresh water by which their occupants are supplied. Probably the most persistently occupied rancherias of the last half century have been those located from time to time near Costa Rica, yet even these were seldom occupied by the same group for more than a fortnight or possibly a month, and were often vacated within a day or two after erection. Still more temporary camps intervene between jacales, and their sites may be seen in numbers in the neighborhood of the better-beaten paths, or along the shores, or even over the trackless spall-strewn plains; they may be merely trampled spots, sparsely strewn with oyster shells and large bones gnawed at the ends, usually in the lea of a shrub or rock; in places of small shrubbery or exceptionally abundant grass there may be two or three or perhaps half a dozen "forms" (suggesting the temporary resting places of rabbits), in which robust bodies nestled and shrugged themselves into the warm earth and under the meager vegetation. Rarely there are ashes and cinders hard by, to mark the site of a tiny fire, and more frequently battered and stained or greasy bowlders record their own use as meat-

[1] The term *Amerind* (with the self-explanatory notations *Amerindian*, *Amerindic*, etc.) has been established by the Anthropological Society of Washington as a convenient collective designation for the aboriginal American tribes (American Anthropologist, new series, vol. 1, 1899, p. 562).

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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TYPICAL SERI WARRIOR

[p. 154 A]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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TYPICAL SERI MATRON

[p. 156 A]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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SERI RUNNER

[p. 156 A]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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SERI MATRON

Cp. 160 A

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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YOUTHFUL SERI WARRIOR

[p. 162 A]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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SERI MAIDEN

Cp. 166 A)

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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SERI ARCHER AT REST

[p. 200 A]

2: Kroeber E-5 (1930)1931 NU31 Seri NU31

PHYSICAL TYPE

123 I had a calipers and rule with me on Tiburon Island, but no
141 stature rod. The Seri proved not to object to being measured, but in order to avoid the possibility of arousing prejudice, I had left the matter to the last; but for this, my series would have been longer. The results are given in the adjoining table. The somewhat unconventional finger and foot measurements were taken because of the seeming length (more probably only unusual slenderness) of these members, but may give an approximate indication of the bodily height.

114 McGee is undoubtedly in error (p. 136) in estimating the average
141 height of Seri men at 1825 mm., of women between 1727 and 1750. I would deduct 100 mm. from these figures.[17] The Seri impressed me as less tall than the Mohave and Maricopa, who run about 1720 to 1740.[18] Hrdlička[19] found the following for the region: 53 American Pima, 1718; 50 Papago, 1709; 50 Yaqui, 1696; 30 Opata, 1670; 53 Mayo, 1673; 1 Seri, 1707. The Seri look taller than they are on account of their slenderness. This in turn might be due to preponderant animal diet, general malnutrition, or congenital type. Certainly their calves, arms, and wrists are notably thin. The forearm bones in particular look long and exceptionally thin. The muscles are generally firm.

142

Head form, and nose index for adults, run close to those of other Sonoran tribes. Thus:

Cephalic index, 13 Seri men, women, and children, 80.4; Hrdlička,[20] 1 Seri, 81.3; 50 Mayo, 80.3; 31 Opata, 79.3; 49 Yaqui, 78.5. The Pima in the United States are longer headed, 78.1. Eleven Yaqui skulls averaged 75.7, equivalent to 77+ in the head by the usual estimate.

Nasal index, Seri, 4 men of 28 and up, 79.3, 4 women of 20 and up, 74.7, mean of total 8 adults, 77; Hrdlička, 1 Seri, 71.9; 53 Mayo, 80.2; 31 Opata, 81.1; 52 Yaqui, 78.9; 50 Papago, 79.8; 53 American Pima, 78.1; ten Kato, 38 Mohave, 82.

The Seri are slightly broader headed and narrower nosed than the others, but the difference does not seem significant, especially in view of the smallness of the Seri series.

141 Physiognomically the Seri are quite different both from the
142 Yaqui and Mayo and the American Pima and Papago; in fact con-

[Text continues on page 38]

[17] Hrdlička, in McGee, 142-147, gives the following on the skeleton of a Seri woman of age 20-24: Stature (computed by Manouvrier method), about 1620 mm.; indicated musculature, ample; cranial index (occipital deformation, probably unintentional), 86.3; nasal index, 49; skull capacity (Broca) 1443, (Flower) 1490 cc.

[18] Mohave, 1714; Yuma, 1722; Maricopa, 1749 (Hrdlička, in Putnam Anniversary Volume, 403-426, 1909); Maricopa, 1722 (ten Kate, Journ. Am. Ethnol. and Archaeol. 3:117-144, 1904).

[19] Putnam volume, as just cited; the Seri, in AA, 6:88, 1904.

[20] AA, 6:86-88, 1904. The nasal index means are given by Hrdlička. Neither means nor individual measurements are given for cephalic index, but the percentage distribution in index ranges of one point allows the calculation of an approximate mean.

2: Kroeber E-5 (1930)1931 NU31 Seri NU31

stitute a distinctive type, as shown by McGee's pictures of them, as well as mine (figs. 1-11). Physiognomic distinctiveness however frequently fails to appear in measurements, at any rate the standard ones, and is often no doubt largely a matter of expression rather than of features. Expression must be determined by habitual feelings and behavior, and these in turn are heavily influenced by culture, which again, through subsistence, is interrelated with geographical environment. It is therefore expectable that a tribe like the Seri would look different from other populations. The one feature of face which impressed me as a Seri anatomical peculiarity was narrowness of lower jaw as compared with breadth in the region of the cheekbones. The reader's verdict from the photographs may or may not coincide with mine.

2: Kroeber E-5 (1930)1931 NU31 Seri NU31

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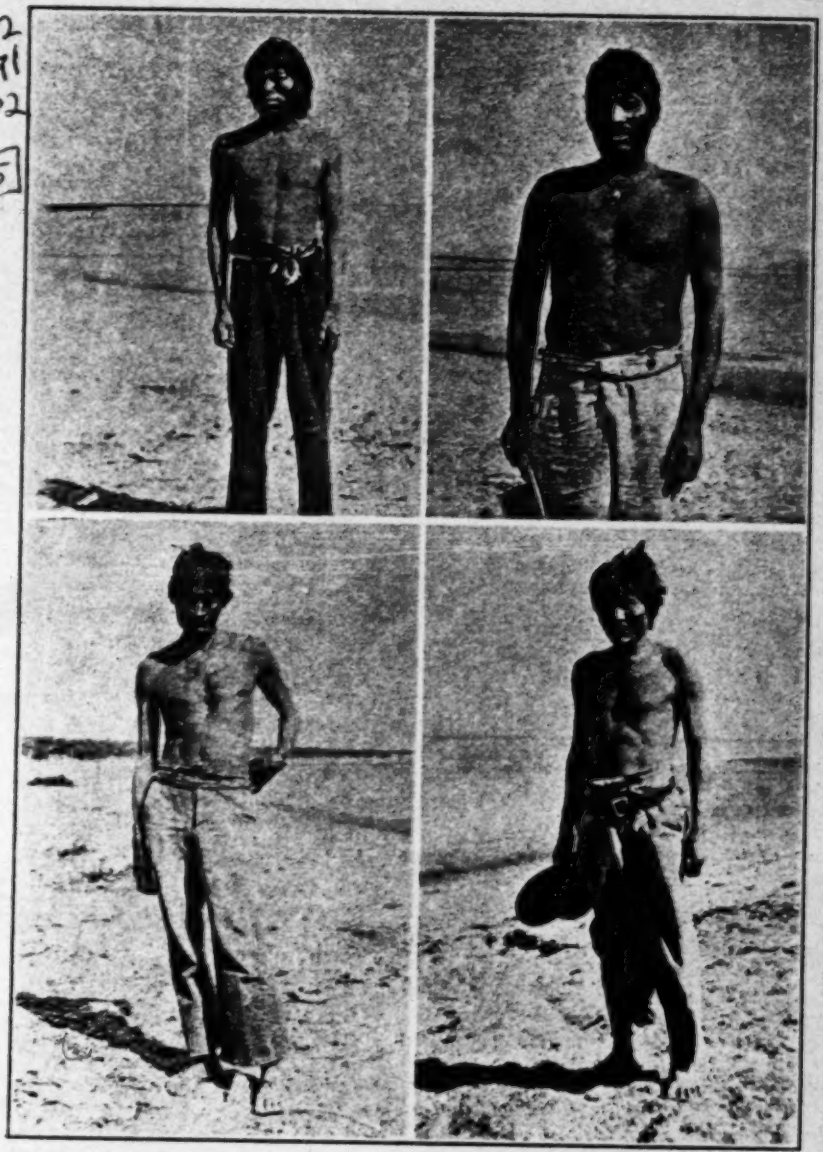

FIG. 1 (upper left). *Young man with long hair.*

FIG. 2 (upper right). *Chico Romero, official Seri chief and principal informant. The largest individual seen.*

FIG. 3 (lower left). *Elderly man of the spare Seri type.*

FIG. 4 (lower right). *Native policeman for the Mexican government.*

2: Kroeber E-5 (1930) 1931 NU31 Seri NU31

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FIG. 5 (upper left). *Maria, wife of Chico, with their baby.*

FIG. 6 (upper right). *Heavier Seri type on beach of Tiburon Island, a bay of El Infernillo in background.*

FIG. 7 (lower left). *Man, youth, and boy.*

FIG. 8 (lower right). *On Punta San Miguel, mainland, mangroves in background.*

2: Kroeber E-5 (1930)1931 NU31 Seri NU31

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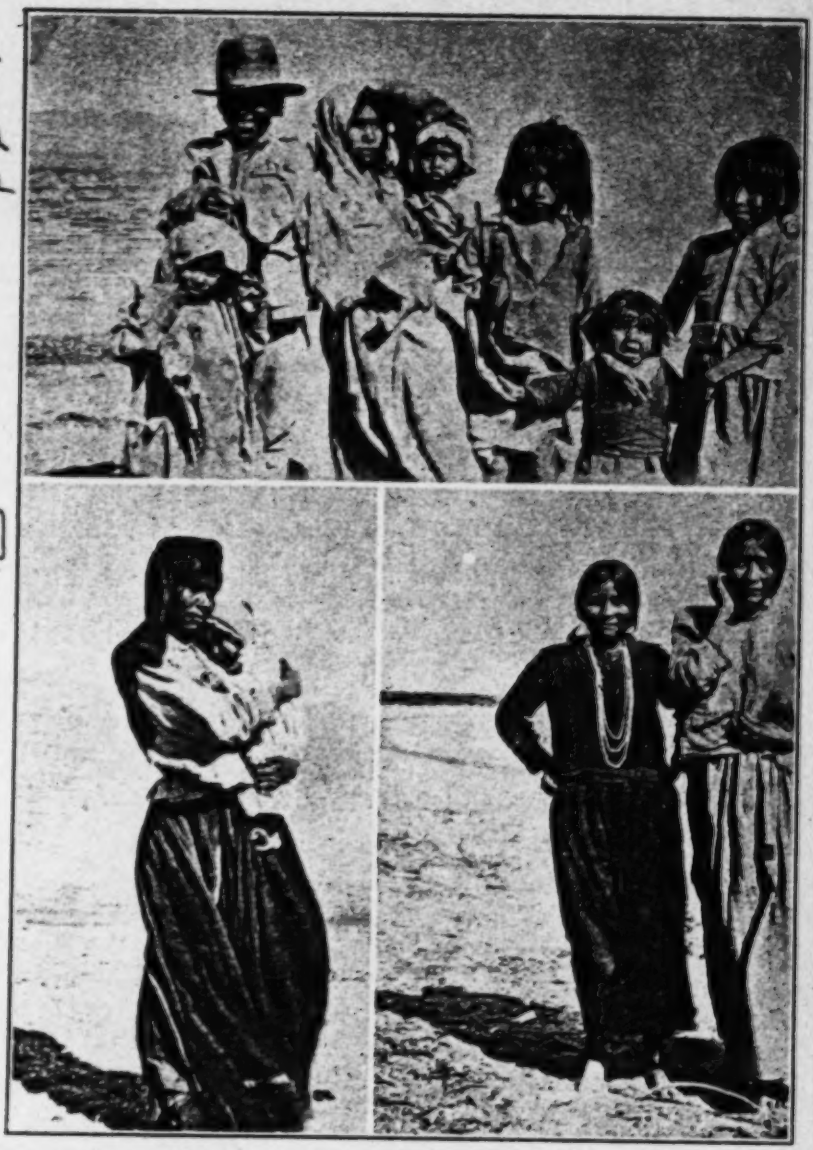

FIG. 9 (upper). *Seri children showing variety of expressions at camera experience.*
FIG. 10 (lower left). *Young woman with sickly baby.*
FIG. 11 (lower right). *Two girls, the shorter unmarried.*

2:Davis & Dawson E-5 (1923-1940) 1945
NUSI Seri NUSI

THE SAVAGE SERIS OF SONORA—I

By EDWARD H. DAVIS AND R. YALE DAWSON

000 us first acquaint ourselves with the life and habits of the Seri before the Spaniard trod upon his thorny land.

131 His homeland speaks first of isolation. Tiburon Island, in the Gulf of California, and the adjacent coast of Sonora are protected on one side by stormy seas and on the other by even more forbidding deserts. The natural isolation of this habitat set its people apart from all other human beings, and the two or three thousand Seris, wandering between their desert island and the mountain-

[142]
[291]
[283]

FIG. 1. CHICO ROMERO, SERI CHIEF
WEARING A KILT OF PELICAN SKINS WHICH USED TO BE THEIR ONLY MATERIAL FOR GARMENTS. NOTE THE CORD MADE OF HUMAN HAIR CARRIED IN THE HAND.

[p.193(B)]

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FIG. 10. SERI BELLE
WEARING A PAINTED DESIGN SUCH AS FORMERLY WAS INDICATIVE OF THE BLOOD LINE OF A GIVEN CLAN.

264 hut, the rotting flesh and cartilage of its noisome interior to be explored and mouthed by the toddling children or gnawed by the cringing coyote-curs attached to the rancheria.

223 At certain seasons or when deemed propitious by the elders of the family, a pelican harvest was planned. Isla Tasne, some fifteen miles from Tiburon Island, is the haunt and breeding ground of the pelican that served not only as a valuable food supply for the Seris, but also as the chief source of apparel. At such seasons temporary rancherias were set up on the shores of Bahia Kino, and when conditions were favorable, or when hunger prompted them, the balsas [502] would be launched in the evening toward Isla Tasne, the women of the party lying prone on the cane bundles and propelling the craft by paddling with their hands or with large hatchet clam shells. Reaching the island after dark, the balsas were left in charge of the women while the men and older boys, armed with clubs, crept up over the slippery, guano-covered rocks to rush on the roosting fowls and slaughter them. The [264]

[p. 179(B)]

3:Davis & Dawson E-5 (1922-1940) 1945
NU31 Seri NU31

[142]
[294]
[482]
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[853]

FIG. 12. SERI MOTHER AND BABE
SERI MOTHERS COMMONLY HAVE TOO MUCH MILK AND FREQUENTLY RELIEVE THEMSELVES BY SUCKLING AN ORPHANED PUPPY OR SOMETIMES EVEN A BABY PIG.

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ing, and were carried in cane tubes. The paints were carefully prepared, applied, and preserved, and, as indispensable feminine accompaniments even on the longest journeys, were among the most highly prized of the people's possessions. The importance of

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the face-painting custom, established in the old tribal life, remained strong even as the slaughter of the warring tribe progressed

[p. 201(B)]

3:Davis & Dawson E-5 (1922-1940) 1945
NU31 Seri NU31

372 it take its two hands, rub them over its head
773 and then rub them together a few times? The Indians noticed this and in this way we were taught by this little fly how to make fire by rubbing a stick back and forth between our two hands."

773 In response to comments about the nocturnal howling of the coyote, Chico told another interesting tribal legend. "A long time ago all Seris were birds or animals. The badger had charge of the saints or gods, which were little images carried in a pouch and hung around his neck by black strings.

[142]
[302]

[643] FIG. 19. CHICO ROMERO
WHO SUCCEEDED OLD JUAN TOMAS AS CHIEF OF SERIS.

Coyote got to quarreling with badger and, watching his chance, grabbed the bag, tore it loose and ran off with it, giving his derisive laugh as he ran, and ever since coyote has been laughing at badger and all others.

[p.266(A)]

7: Marroquin E-5 (1955) 1957 NU31 Seri NU31

In general, the Seris have a healthy appearance; the most frequent complaints are gastro-intestinal and visual defects due to avitaminosis. It is very possible that given the difficult living conditions resulting from the desert environment, a rigorous selective process among the newborn takes place so that only those who possess exceptional physical qualities survive. This explains why the majority of them retain the physical characteristics described by Hardy more than a century ago: "the Indians of Isla Tiburón are tall, healthy and well built".

In spite of attempts at education, the Seris do not practice the elemental rules of hygiene; their way of life, neglecting this aspect, contributes to increase the unhealthy foci which exist in the places where they have established themselves.

Dwellings.—The Seris retain many vestiges of their nomadic life, among them the hut which serves as their living quarters; many of them are simple provisional arrangements for sheltering themselves from wind and sun, and they bear no relationship to the stability and durability of our dwellings. The Seri hut was made to meet the necessities of a nomadic people who had no reason to spend much time nor work on making a dwelling which would only be used for a season (one, two or at the most three months). Nevertheless, some innovations have been introduced in the last 20 years, so that we must distinguish between two types of houses. The primitive model consists of a series of scrub pine arches interwoven with branches from the same shrub almost totally covered by foliage, tortoise shells, *zacate*, etc., with only a small hole in one of its ends as an entrance (this type of hut is the same that McGee saw in 1894 when the Seris still led a nomadic life).

In the new model more resistent woods are used, like *tabueso*, *torote*, etc., and poles, between which is laid a layer mud. The house is rectangular, without windows; with only one entrance, but always larger than the entrance to the brush hut. Other models would have to be added to these two, due to the incorporation and utilization of tents made in the United States which some U. S. tourists or the Society of Friends have given them. The tent is used as permanent living quarters; or sometimes combined with branches to cover the primitive type huts.

Domestic Animals.—The Seris are very fond of domestic animals like the dog, cat, and finally, the chicken. For all practical purposes these animals live together with the family; they rest on the piles of rags and sand which serve the Indians as beds; lick the plates and cooking utensils; dirty the house; increase the household fauna with their fleas and other vermin thus contributing to create and unhealthy atmosphere in the home.

Problems of Intoxication.—Their dealings with the fish buyers, in whose stores are sold beer, mezcal and tequila, has turned them to the consumption of these drinks. The Seri drinks liquor in an uncontrolled

9:Malkin E-5 (1953-1955)1962 MU31 Seri MU31

II

OUTLINE OF SERI CULTURE

161 At the moment their number should have increased again, after a disastrous epidemic in the 164 spring of 1955.

Biological Background

●142 The Seris are somewhat atypical among the peoples of the general area in that they represent a very slender, sinewy, tall type. This is true of both men and women. This physical type in general is apt to be associated with the desert habitat and the Seris answer the requirements very well. As shall be seen, their economy also repre- 433 sents characteristic adaptation to the desert conditions of pre-agricultural people.

Economy

The Seris readily fell into the category of the pre-agricultural hunters and gatherers with one variant, dependence on the produce of the sea, whether marine turtles, fish or littoral invertebrates.

[241] Here the Seri provide another exception for the region. They are the only group that never had any agriculture. McGee has pointed out their lack of agricultural sense and this has also been mentioned by Kroeber and by incidental Mexican visitors. Of late years, some efforts have been made by the Mexican government and the American Friends' Service Committee to persuade them [648] toward agriculture, but to no avail. The Seris [464] occasionally hire out to the surrounding Mexican or American rancher-farmers but grow restless after a few days of cotton picking and retire, with their advanced pay lost to the employer. On the other hand, efforts to teach them related practices, well digging for example, also failed to interest them. To this day they remain much in the original pattern of economy.

262 McGee (1898:214) who had a chance to observe 114 them from the first hand and who also had access to valuable information from the outsiders gives the following figures for their diet:

land game, large and small (incl. stolen stock)	21%
waterfowl and eggs, incl. pelican	13
sea-turtles	25
fish	15
shellfish	10
cactus fruit	9
other plants	6
miscellaneous	2
total animal 84%	marine 65%

Kroeber (1930:20) questions these figures and thinks that shellfish represents greater percentage than McGee indicated. He also thinks the use of turtles had been exaggerated. He figures the dependence on the animal diet as 75% and on marine 60% but he suspects that these figures are too high for a band with ready access to countless cacti and mesquite.

[P.6B]

10: Davis E-5 (1922-ca. 1939) 1965 NU31 Seri NU31

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Seri Indians

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Blind Seri Indian, 1939
Best paddler we had

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Candelario completes his decoration
one of our paddlers - 1936

123 handed to show their friendliness.

142 291 123 [302] [411] One was a young man with rather pleasant features, his braided hair hanging below his shoulders. His name was Antonio Herrera. The other was a wild-looking specimen called Ramon Blanco. His hair was a tangled mat with a short braid behind, suspicious black piercing eyes, long sparse moustache and chin-beard hiding a broad cruel mouth. He wore the remnants of an old sweater, a short dirty kilt, or skirt, nearly to his knees, a belt full of cartridges, mostly empty, and a long knife in a rawhide scabbard.

123 [745] [291] The young man had been baptized and given a name by Roberto, who had acted as godfather or *patrona*, many years ago. He wore a hat, jacket, and pants of blue denim, and *guaraches*, or sandals of rawhide.

We shook hands all around and then they called and halloed in the brush and soon three women and a lot of children, wild and half-clothed, filed into camp. The women were tall, gaunt, unkempt, ragged and barefooted, paying us not the slightest notice. They were bearing on their heads large baskets filled with all their earthly possessions---cooking ollas, scraps of cloth, pieces of turtle meat, bone brads, hair brushes, and odds and ends. They carried, also, an infant or two wrapped in odd bits of rags. Several gaunt dogs followed in their wake.

342 [512] In all, three families came trailing in, removed their household equipment from their heads and resumed their interrupted and primitive housekeeping. Each family occupied its apartment in the row of brush shelters, separated from each other only by brush partitions with a total lack of privacy. These shelters, always open to the sea, serve as shade from the fierce rays of the sun, and also as windbreaks, but [361] are no protection from infrequent rains. They are occupied only for a brief period and then their nomadic tenants move on to fresh *cahuamas*, or sea turtle range.

123 [142] Soon, a third man arrived while we were near the huts, Manuel Encina. He was a man of sixty-five, gray hair and mustache, seamed features, and not evil looking. He was out of breath. He had gone for water to the same water hole where we had been yesterday, struck our tracks, had left his water cans and hurried back to warn his people. He was greatly relieved to find friends.

Since he had gone for water, inquiry revealed there had been no water in camp for two days, and six adults and one girl of thirteen and six children were thirsty. We gladly gave them one of our five-gallon cans of water and they were very grateful. They had caught a [225] [262] sea turtle the day before and gave us some turtle steaks which looked like beef or mutton.

312 482 123 As the camp was without water and we were running short, the young man and Encina offered to get some. Each took a *palanca*, or short shoulder pole with knotched ends, fitted empty five-gallon cans in

Seri - wild boy - 1926

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[291]

Seri child

261 will exist on very small rations, bear burdens, and walk long dis-
262 tances. Their food is anything that walks, flies, crawls or swims,
[252] and they eat it raw with the same relish that we eat it cooked. There is but one thing they will not eat; they draw the line on the Gila monster. They are the most perfect type of human being adapted to desert conditions that exists today. Convey them blindfolded many miles into the heart of the desert, empty-handed, remove their blinders, and they will find both food and water where others would perish. The Papagos and Yaquis do almost as well."

302 We gave the women a small bag of flour and three or four cubes of
[123] sugar around, and the men three packets of tobacco each and two boxes of matches. Matches with them are very precious and are rarely used. Rather than use a match a woman came over to our fire and borrowed some coals to rebuild her fire. From this point the nearest matches are a good deal over one hundred and twenty miles distant, so they have to economize in every thing.

422 Each rag is valuable, and flour, sugar, coffee and rifle shells
[434] are absolutely priceless. While they know money, it has no value here.
[437] Only commodities go here. The most highly prized things are boards to
[389] make boats and rifle shells to get game and protect themselves. All empty shells are saved, the primer punched out, straightened, a match head put in, a little pinch of powder on top, the shell filled up, a long bullet inserted, the shell pinched tight, and a fresh set of ammunition is made.

142 The women and children certainly did look wild. Their hair was
291 frowsy and unkempt, their skirts and waists a patchwork of dirty rags
302 coming just below the knees; their features seamed and hard and cruel. Their complexion was very dark. They had no under garments. The children wore only a dirty shirt coming a little below their thighs, and even that is ragged. One or two of the women had a dirty bandanna over their heads. How I wished I could have seen them in their ancient, picturesque pelican-skin kilts!

302 I happened to witness the operation of a Seri beauty parlor. A
[924] mother brushed the hair of her thirteen-year-old daughter with a brush
[293] made from the fibrous roots of a certain grass tied together with
[515] sinew. During the operation if she came across a *piojo*, and she found several, she plucked him away from his feeding ground and dropped him in the fire.

The hair neatly brushed, the mother then mixed paint in a small vessel and with a tiny stick painted a bright blue design under the eyes and across the cheeks and nose, and then she added narrow white stripes, which, contrasting with the blue and the dark skin, produced a very striking effect. This paint is easily removed and the women often paint and remove three different face designs in one day.

304 I did not see tattoo work on either men or women, nor did they
301 wear ceremonial feathers as did our western Indians.

000 wear ceremonial feathers as did our western Indians. I saw no skin or
164 cutaneous disease, or evidence of tuberculosis or of trachoma---the curse of our Indians.

• 142 One boy-child of five years was a handsome child---fat, round,
302 sturdy, with roving great black eyes, large thick lips, a picture of
[241] perfect health. He was almost naked. His hair was done in a pigtail
[657] with a red string braided into it. His face like all the others was dirty, but he waded into the shallow water with a short spear and I saw him catch two crabs with his little harpoon. The water did not bother his face.

415 They had no plates or eating tools, except large deep clam shells,
412 cast up by the sea, which served as cups and dippers. Their long, keen
264 belt knives were used for cutting, carving or skinning, and always the
[258] fingers for eating. They gathered in a circle around an olla of seeds of long grass growing on the sea bottom prepared by winnowing, parching and grinding, and then cooked with turtle oil. Each one dipped his or her fingers into the olla and conveyed them to the mouth without losing a drop, and licked them off with great relish.

231 The dogs eat with the family. There were six or seven half-starved
264 ones. If someone picked up a piece of turtle flipper the dog often took the first lick at it, bit off a piece or licked it before it reached the owner's mouth. The dogs were not punished. They were just slapped to keep them out of the pots.

123 We had a great time that evening in Seriland. The young man played
534 his violin. This consisted of a hollow box cut out of a *palo verde*
[824] tree, and a piece of pine about sixteen inches long; terminating in a
[288] hollow where a single peg was fitted. The one string was twisted deer
[237] sinew, and the bridge was a small round clam shell at the far end. The
[533] bow was a small bent stick and some black horsehair. On the handle was a wad of rosin fastened underneath. By fingering this string a few weak squeaky notes were made, and this was the classical music of the Seris.

Manuel Encina seized his gourd rattle and began chanting. Herrera tapped a tin can and I beat on an inverted basket and the orchestra
535 was in full swing. A young girl, Rosa, dragged out a turtle shell and
123 standing on it began to dance. This dance consisted of stepping up and down quickly with each foot alternately, and this stamping, barefooted, emitted a hollow sound. Every once in a while I let out an
[126] Indian yell which pleased the Seris very much. For two hours they had a real swell time. We took one flashlight of the proceeding.

[342] Each family was in their hut, which afforded very slight shelter
[362] as they were only partially roofed over and the sides were broken
[354] down in places. The huts were all adjoining and each had a little
[361] campfire, which did not give much illumination, so the dancing was in semi-darkness.

[text continues on p. 163]

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Carrying firewood

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Seri basket maker - 1934

10: Davis E-5 (1922-ca. 1939) 1965 NU31 Seri NU31

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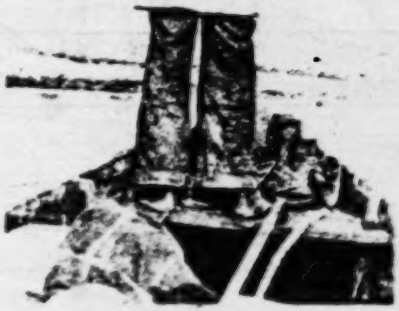
Poised for harpooning sea turtles off Tiburon Island - 1936



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The catch

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10: Davis E-5 (1922-ca. 1939) 1965 NU31 Seri NU31

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Seri faces

10: Davis E-5 (1922-ca. 1939) 1965 NU31 Seri NU31

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Seri young man

Seri Indian

123 It was a beautiful morning in early May, and the water was still
[202] as a pond, reflecting all the sunrise tints like a mirror. After a breakfast of clams and broth, bread and sand and bronco tea, we made a big smoke and were answered by a similar smoke two miles off, so we knew our friends were on the way.

123 In one hour they began trailing in, the women each with a load on
482 her head, walking graceful and erect. On one head was an inverted
[415] turtle shell containing nearly all the family belongings done up in rags. On the top was the most precious belonging of all---the rifle. The man carried two or three ollas and other things on a shoulder stick. Everything necessary for their home was carried on their heads.

123 Soon the Indian Blanco was seen paddling in his *balsa;* he also had a load and had paddled all the way from Ironwood camp against wind and sometimes tide. As they were all very thirsty we gave them water around. They immediately went to the shore as it was low tide, and began gathering small oysters from the rocks. Soon each woman returned with a half bushel of them on her head.

About three o'clock and for an hour or so thereafter, Antonio Herrera, the Chief's son Chico, the old Chief Juan Tomas, two other men and one woman, came drifting into camp with their dogs. Each one was loaded with things. They were a pretty wild looking bunch. There was very little food and little water for so many.

648 The Chief said that a day or two before, some of his men had a
731 fight with some sailors (Mexicans) on the Island of San Estevan four or five miles off the south west corner of Tiburon. Nobody was killed, but the two boats, the wealth of the Island, had drifted away and were lost, leaving eight men marooned on the Island. They had gone there to gather *aescal* to make drink to celebrate a wedding to come off soon. Three men were five days without water. They sent up frantic smoke signals every day. At last they were seen, and help went for them in the only remaining boat on the Island. They were rescued.

648 The Chief and his men and women, with us, are going to Hermosillo
484 ninety miles afoot with all their belongings to ask the Government
123 for food and help.

142 The Chief looks to be seventy years old, a grim dark-skinned in-
[422] dividual with a thin fringe of hair on his upper lip, broad nose, wide nostrils, small black eyes. He is well-built and erect. None of those that I have seen so far have any fat. They are lean and sinewy.
[302] The young men are of large build, high cheek bones, some with hair on
[291] their lips, their long black hair braided; sometimes with a strand of red worsted. All were either barefooted or wore sandals. I saw one pair of sandals made out of turtle hide; another of burro hide.

648 When the Chief arrived, the sail of a vessel was seen over the
423 beach. Bob recognized it as belonging to a launch of a Yaqui Indian

[text continues on p 180]

10: Davis E-5 (1922-ca. 1939) 1965 NU31 Seri NU31

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Seri Indians at home

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Seri Indians preparing their meal

123 484 Then Chico Romero and his load of children and dogs arrived and he unloaded his impedimenta on the beach, and soon the women came walking along the beach and joined the party. The boats carrying the heavy things and children; the women, with their babies and a few light things on their heads, walk along the beach when possible and follow the boats, which hug the shore to avoid the strong currents and tide. The boats are propelled by paddles mostly, though some of the Indians use oars. The women are slightly built, slender and inclined to be gaunt, owing to the hard life and lack of food. Their cheek bones are quite prominent and their profiles present protruding lips.

501 142

422 [364] Having no permanent homes, moving hither and thither for their various food supply, household things are not accumulated and life is reduced to its very simplest elements and absolute necessities.

Crude baskets made from shoots of the torote tree, vessels in which to cook, and some patched rags in place of Pelican skins to serve as blankets to the fortunate few, constitute the family possessions. Strange to relate, many of the women have an over-supply of milk, and according to Roberto have puppies nurse what the babies cannot take. One woman was known to nurse a baby pig on one side and a puppy on the other.

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[264] [854] Family dogs lick all cooking vessels which is unnecessary as they are thoroughly clean when the Seris are through with them, and also lick the infants clean after performing their natural functions, so they are quite indispensable. I saw a Seri girl place on the sand a small can of water for a dog and then saw her drink some of the remainder and pour the rest back in a five-gallon can. Dogs frequently swim across the Infernillo to join their masters.

732 Asked about cripples and incompetents, Roberto said they probably did not exist. The conditions of survival were too precarious to admit of anyone living who was unable, by physical disability, to hunt or fish. There are two or three men who are nearly blind or so. The wives of these men eke an uncertain living for them by the hardest struggle. The sea turtle is the staple; one man and one good boat can secure a living for five families. There are now nine boats, but one boat to a family would practically free them from continual want. With the exception of four bones in the flippers and the bones of the head, all the sea turtle is used---the meat, blood, entrails, shell which furnishes food and oil, skin of flippers which furnishes sandals, sinew for strings. Nothing is wasted except contents of the entrails.

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123 Again, we laid our blankets on the clean white sand of the shore and were lulled to rest by the murmuring sea.

123 484 Daylight found us up the next morning, and we breakfasted, rolled up our blankets, pushed the boats into the sea and were off by the time the sun rose over the mountains and shone over a glassy sea. Two Seris towed their boat by a tump line, while a boy of twelve steered

177 been fastened with a string---each child eager for a safety pin. A
123 little child two and a half years old was shoved forward for a pin, its round black eyes dancing with anticipation, but its dress had no opening in front, so I laughed and shook my head and everyone appreciated the joke. But, not to be defeated, a little girl untied the child's waist from behind and spread it open, exposing its little brown body from head to feet, and called my earnest attention to it. I then pinned up the dress. Then the older ones crowded around me, but I had used up a whole paper of pins, so I shook my head. I gave the empty paper to an eager child, although a dozen hands were outstretched for it. By making the children happy I pleased the parents.

123 By this time the flour soup was thick and ready, and Roberto baled it out with a cup into the various vessels eagerly outstretched to receive it. As the cup would drip, little hands caught the priceless drops before they reached the sand. As each got his proportion he began sticking his fingers into the mess and licking them off. Many took their *pinole* to camp and the others secured a taste also. A small piece of bread dropped into the sand was snatched up, by a child, from under the nose of a dog. She rubbed off the sand and devoured it.

When all had vanished to their various camps I opened the box of candies---small round drops of green, red and yellow. I filled our coffee pot and went to each camp and gave each man, woman and child about ten candies.

439 Since I wanted shell necklaces, the women had combed the beaches
123 and gathered plenty of shells, and strung them while resting. This evening they were draped about their necks, and they wished to trade, so I traded for about a dozen---one small round mirror for one, five needles for another, five safety pins for another, blue face paint for another. Mirrors were most in favor.

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Seri outside beauty parlor

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Maria Jesusa - Great grand-daughter of Lola Casanova and Coyote Iguana. She is self-conscious and embarrassed to face the white man's magic box for the first time. Her face is decorated in blue, in a typical Seri design. Her features are more regular and attractive than the pure Seri and her clothing shows more taste and pride than her half sisters. Taken at La Cruz, island of Tiburon---E.H.D.

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[301]

Seri beauties

10: Davis E-5 (1922-ca. 1939) 1965 NU31 Seri NU31

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Juan Tomas - Chief of Seris, 1922

622 Thus passed a very striking character among the primitive races of Sonora, Mexico. He was brave and fearless in battle; crafty, cautious, and cunning in attack; cruel and merciless to his enemies. He was rarely caught off his guard, and always managed to extricate himself and his men from difficult situations. He was quick to think and act, and was wise with the wisdom learned at first hand on desert and sea from a rugged nature, reluctant to give up her secrets. He was a master hand at *balsa* building, a good hunter, fisherman, harpooner of *cahuama* (sea turtle), a good surfman, a good gambler, and an expert tracker. It was not unusual to possess two or three wives, but the old Chief, while married three times, had only one wife at a time. He was quite fond of the writer, and used to greet him with the true Mexican *abrazo*.

[123] It was in 1922 that I first met the grim old warrior on the shores of Tiburon, whither I had gone on a quest for the Museum of the American Indian, Heye Foundation, New York.

[142] He was very dark, of medium height, thick set, with a broad, deep chest, very muscular, with shaggy brows and deep set eyes which, even at that age, ninety years, burned like coals of fire, and were suspicious and wary. He wore a braided pigtail down his back which contained a few gray hairs. For clothing, he wore a ragged shirt and an old pair of overalls, with a short kilt hanging from a belt, through which stuck a long naked knife of hoop iron, ground on abrasive rocks and keen as a razor.

[291] From infancy to the grave, the freedom of his feet was never hampered by shoes. Even at that advanced age, and until his last illness, he was perfectly able to care for himself, and follow his nomadic tribe on its devious trails along the coast and far in the interior. A walk of a hundred miles was not unusual. For ten rifle cartridges a Seri Indian once walked forty or fifty miles to deliver my message to Juan Tomas. From the time we first met, our friendship was never broken.

10: Davis E-5 (1922-ca.1939) 1965 NU31 Seri NU31

Chico Romero - Seri dressed in Pelican skins - 1924

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Seri Concha in Pelican skin robe or shirt - 1924

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

147 do swift stroke and strong grasp and dexterous digitation, are mainly
182 such as urge manual development more strenuously than would be normal among tribesmen connected with their environment through the medium of tools. The demand for manual strength and skill is intensified among the Seri by both natural and domestic conditions; the ever-ready (and almost the sole) material suitable for simple adjuncts to the hand abounds in the form of wave-worn cobbles; these cobbles are easily usable in such wise as to serve all ordinary purposes, and their abundance discourages the production of more highly differentiated tools; while their habitual use promotes manual strength and deftness, coupled with that digital freedom (required, for example, in grasping a ball) which most clearly distinguishes the human hand from the subhuman paw. Conjoined with these natural conditions are domestic demands tending to cultivate manual fitness and eliminate the manually unfit; for, in addition to the direct industrial premium on dexterity, through which the dexterous survive while the clumsy starve, there is a special premium growing out of the marriage custom, through which
● [143] only the manually efficient (and at the same time morally acceptable) are put in the way of leaving lines of descendants.[1] Naturally, in view of the combination of factors, all traceable directly or indirectly to environmental conditions, the Seri afford a peculiarly striking example of cheirization extended to an entire tribe (if not to a genetic stock of people)—indeed the remarkably developed Seri hands and feet first suggested the importance of this process of human development and led to its formal characterization.

Accordingly, the robust-bodied and slender-limbed yet big-fisted and
143 big-footed Seri seem to be adjusted, so far as several of their more
182 striking somatic characters are concerned, to distinctive habits themselves reflecting a distinctive habitat; and the coincidences appear to reveal and establish the law of interaction between the human organism and its environment—an interaction effected through the habits and hence through the normal functioning of the individual organisms as constrained through their collective relations. And recognition of the
147 law of interaction opens the way to consideration of other correspond-
143 ences between structures and functions and environing conditions.
182 Conspicuous among the more strictly functional traits of the Seri is
312 the intensity of action characteristic especially of the warriors, though in less degree of the entire tribe—an intensity made all the more striking by contrast with the extreme inertness between stresses. Manifestly the capacity for concentrated effort is in harmony with the tribal habits, themselves reflecting habitat. The resource of prime importance in Seriland—that which directly and constantly conditions the very existence of human inhabitants—is potable water. This prime source of life is too heavy to be transported and too unstable to be stored with the facilities of primitive culture, yet it is always within reach of an organism strong enough to journey ten or twenty or fifty

[1] The marital customs of the tribe are described postea, pp. 179-187.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

miles in search of it, and acute enough to follow trails and indications. Naturally the meager water-supply serves as a mechanism for sorting out and preserving the strong and the acute, and for eliminating the weakly and the dull; and hence the tribe have developed a faculty, or perhaps a potentiality, of distinctive sort—the potentiality of providing against thirst-death by a reserve power in the organism itself rather than in the form of mechanical devices such as characterize higher culture. Quite similar are the relations to the resource of second importance, i. e., ordinary food. Habituated to dispensing with storage and transportation of their primary resource, and accustomed to finding food whenever forced to sufficiently active effort to obtain it, the Seri have never grasped that first principle of thrift expressed in the accumulation of food supplies; and accordingly they intuitively rely on successful fishing or chase or search of vegetal edibles for sustenance, and habitually delay effort until they are stirred into activity by the pangs of hunger. Naturally this improvidence serves as another mechanism for perpetuating families of stored vitality, and especially those able to prevail over swift or strong or cunning quarry by sustained vigor and alertness after prolonged deprivation; and the effect of this mechanism, too, is to develop a reserve power in the organism itself, in lieu of the material reserve made through thrift in higher culture. Similar in their consequences are the relations of the individual organisms to the third industry of Seriland, i. e., navigation of the gale-swept and tide-troubled waters. Even the buoyant balsa can not weather the williwaws or ride the tiderips of El Infiernillo without exercise of the utmost strength and skill on the part of the navigators; while the often persistent storms may delay for days embarkation on voyages in quest of fresh water or food. Naturally, the frequent delays and not infrequent perils of such navigation constitute a mechanism for selecting navigators possessed of reserve powers adequate to meet desperate emergencies with vigor and judgment even after enervating waits for wind and tide, while those not so well endowed are either brought up to standard in their hard training school or expelled from their class by drowning or dashing on the rocks, as may happen; so that the effect of this mechanism also is to preserve individuals and perpetuate generations characterized by reserve power, and hence to develop latent potentiality in the tribe. Now, the normal product of these and other natural mechanisms immediately reflecting environmental conditions is capacity for sports, or for intense functioning under severe stress, despite accentuation of the stress by thirst or hunger or exhaustion, or by all combined—i. e., the effect of habitat and habit is to produce precisely such a somatic regimen as that so conspicuously displayed by the Seri folk. So the intensified activity with long intervals of inertness, simulating the habits of carnivorous and some other lower animals, and hence suggesting primitive condition, would appear to be largely a phylogenetically acquired character expressing specific adjustment to environment.

L McGee E-5 (1894-1895)1898 NU31 Seri NU31

race-sense dominates the race-type—that the Seri are farther away from neighboring tribes in feeling than in features, in function than in structure, in mind than in body. Now, in seeking the sources of this distinctive (not to say specific) race-sense, several suggestions arise. Naturally the first suggestion is that of simple sexual selection, the (assumptive) analogue of an important factor in biotic evolution; but the suggestion is at once apparently negatived by the fact that all the mature men and women are married and have families of children proportionate to their ages. True, undesirable spouses may be expelled from the tribe, or even executed (as intimated by neighboring Sonoreuses); yet there is little evidence that either method of selection is employed among the Seri more largely than among other peoples; and, as all recent researches indicate, the higher peoples at least have risen above the plane of sexual selection per se as an effective factor in somatic development. A second suggestion arises in the axiom (vivified by realization of the connection between Seri movements and Seri structures) that perfected organs are the product of stressful functioning—indeed, the suggestion is but the extension of the axiom from the individual to the stirp and the group. In developing the suggestion it is convenient to divide the career of the stirp into periods defined by the successive wax and wane of vitality in its most significant manifestations; and this may be done in terms of successive individual lifetimes in their three successive aspects of (1) youth, (2) maturity, and (3) senility, in which the dominant constructive functions are respectively (1) somatic growth, (2) collective growth (comprising both procreation and the accumulation of artificial possessions), and (3) dissipation of somatic vitality and distribution of extrasomatic accumulations (generational as well as material and intellectual). Now, it is a commonplace in every stage of culture that vital capacity, and also the inherent sense of kind manifested in pairing, culminate in the medial portion, or prime, of individual life; and if this universal recognition is valid, it is just to hold that the career of the stirp is defined by the successive vital climaxes expressing the primes of the series of generations pertaining to the stirp. It follows that each generation must represent, not the average qualities of the entire generation past, but the qualities of the most virile and maliebrile fraction of that generation; whence it follows in turn that in general the generations must develop along the lines most prominent in the lives of each people in their prime. The process may be formulated as the *law of periodic conjugation*, under which successive generations are initiated, not at random, but at periods of culminant effectiveness in shaping the course of the stirp. The immediate application of this law to the Seri tribe is manifest, for it explains (the initial condition of isolation and the consequent incipient segregative habit being given) how and why the tribal standards have grown more definite from generation to generation, and have intersected cumulatively with the distinctive environment in such manner as continually to widen the chasm between the desert-

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143 bound tribe and their alien neighbors. Yet the general application of the law leads only to a more specific application; for, just as the career of the stirp is made up of a succession of vital maxima and minima, so the lifetime of the individual, even in the median stage, is made up of a series of vital climaxes separated by relatively inert intervals; and, as recognized by every naturalist and romancist, every philosopher and poet, in every stage of culture, it is during the periods of conative domination by the master passion that the career of the individual is shaped and that the stirp-sentiment (or susceptibility to kind) culminates in intensity. It follows that the progeny of successive generations represent not merely the optimum median stage of life in which vitality and virility and muliebrity are at flood, but the very climaxes of this stage in which manhood and womanhood attain their ideals, and in which the ideals react on the physical system with unequaled intensity; it follows in turn that each generation must (in so far as intellectual tension can control long series of metabolic interactions after the manner in which short series are controlled by direct volitional exercise) incarnate the ideals of the preceding generation; whence it follows still further that in general isolated race-types tend constantly and cumulatively to increase in definiteness—at least until the somatic factors are counterbalanced by demotic relationships arising with considerable increase in population. It is true that the extent to which the incarnation of ideals is effective or even possible has not been measured; it is also true that the naturalists of the higher culture-stages commonly neglect the process; yet the occasional recognition of its positive aspects, as in Goethe's "elective affinities" and in Jacob's getting of "ring-straked, speckled, and spotted" stock (Genesis XXX, 37–41), and the practically universal recognition—more especially among primitive peoples—of its negative aspect in adverse prenatal influences, clearly indicates its importance; the fact that the ancient Greeks at once idealized in unparalleled degree, and produced unexcelled perfection in, the human form being of no small significance. Even if the measure of the incarnation of ideals be reduced to the lowest minimum consistent with common knowledge, it remains true that the progeny of successive generations are not the offspring of average parents, but of pairs at the perfection and conjugal culmination of their virile and muliebrile excellencies; so that the generations must run in courses of cumulatively increasing racial (or human) perfection, under a general *law of conjugal conation*.

143 182 186 In extending the general law of conjugal conation to the Seri, it is found peculiarly applicable, in view of their distinctive marriage custom, the effect of which is to intensify conjugal sentiments, with the attendant magnification, and potential if not actual incarnation, of ideals.[1] Accordingly there would appear to be a harmony between

[1] The law of conjugal conation was indeed suggested by observations on the peculiar marriage customs and peculiarly developed race-sense of the Seri tribe, and it has already been applied in certain of its aspects as an explanation of the initial humanization of mankind (The Trend of Human Progress, American Anthropologist, new series, vol. I, 1899, pp. 625–655).

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Seri race-sense and Seri race-type no less delicate than that between the stressful action and the stress-shaped structures of the tribe, and while the inception of both type and feeling may be ascribed to the isolated environment, it seems manifest that both have interacted constructively and in cumulative fashion through a significant process exemplified more clearly by this tribe than by others thus far studied. At the same time, analysis of the harmony between type and sentiment indicates that the lowly Seri are actually, albeit unconsciously, carrying out a meaningful experiment in stirpiculture—an experiment whose methods and results are equally valuable to students. The Seri gymnastic and the Seri stirpiculture are in close accord, in that both are conditioned by initially dilatory yet ultimately intense action; the results are equally accordant in that the one conduces toward individual vigor and the other toward a vigorous and distinctive stirp; while the excellence of the methods (viewed from the somatic standpoint) is attested by the magnificence of the product. Now, comparison of the stirpicultural Seri with contemporary tribes shows that the desert-bound folk have attained unequaled somatic development, and suggests that the intuitive stirpicultural processes have been rendered peculiarly effective through the persistence of that tribal isolation in which the processes apparently took rise; so the race-sense of the Seri may be regarded as the product of long-continued stirpicultural processes, initially shaped by environment, yet developed to unusual degree by somatico-social habits, kept alive largely through continuous environmental interaction.

Summarily, the Seri are characterized by noble physique, by peculiarly swift and lightsome movements, by great endurance coupled with capacity for vigorous action, by animal-like symmetry and slowness of maturation, and by various minor attributes combining with the major features to form a distinctive race-type; and they are still more conspicuously characterized by an acute race-sense which holds them apart from all aliens. At first sight, several of their somatic attributes seem incomparably primitive, yet analysis of the attributes in the light of certain laws which they exemplify better than other peoples thus far studied indicates not so much a lack of development as an excess of growth along purely somatic lines, with a correlative defect of development along demotic lines; and when the lines of growth are traced to the sources and conditions, it becomes fairly clear that the aberrant development of the tribe is merely the reflection of a distinctive environment operating (evidently) throughout a long period. In brief, the somatic interest of the Seri seems to center in the remarkable adjustment of the tribe to a peculiar environment—an adjustment of such delicacy as to imply interaction throughout many generations.

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impaired than their fear-born veneration evaporated, and their native antipathy reappeared in original virulence. The 1894 party was fortunate in successfully treating a sick wife of sub-chief Mashém, and subsequently spent days in the rancheria, distributing gifts to old and young in a manner unprecedented in their experience and making liberal exchanges for such small possessions as they wished to spare; yet, with a single possible exception, they succeeded in bringing no more human expression to any Seri face or eye than curiosity, avidity for food, studied indifference, and shrouded or snarling disgust. Among themselves they were fairly cheerful, and the families were unobtrusively affectionate; yet the cheerfulness was always chilled and often banished by the approach of an alien. The Sonorenses generally hold the Seri in indescribably deep dread as uncanny and savage monsters lying beyond the human pale; while the reciprocal feeling on the part of the Seri toward Caucasians, and still more toward Indian aliens, seems akin to that of the average man toward the rattlesnake, which he flees or slays without pause for thought—it seems nothing less than intuitive and involuntary loathing. The Seri antipathy is at once deepened into an obsession and crystallized into a cult; the highest virtue in their calendar is the shedding of alien blood; and their normal impulse on meeting an alien is to kill unless deterred by fear, to flee if the way is clear, and to fawn treacherously for better opportunity if neither natural course lies open.

Concordantly with their primary characteristic, the Seri have avoided ethnic and demotic union beyond the narrow limits of their own kindred; and even of these they seem to have cast out parts, annihilating the Guayma and Upanguayma, displacing and nearly destroying the Tepoka, and outlawing individuals and (apparently) small groups. The earlier chronicles indicate that the Jesuit missionaries, and after them the Franciscan friars and the secular officials, sought to scatter the tribe by both cajolery and coercion, and endeavored to divide families by restraint of women and children and by banishment of wives; there are loose traditions, too, of the capture and enslavement of Indian and Caucasian women in Seriland; yet the great fact remains that not a single mixed-blood Seri is known to exist, and that no more than two of the blood (Kolusio and perhaps one other) now live voluntarily beyond the territorial and consanguineal confines of the tribe. The romantic story of a white slave and ancestress of a Seri clan, sometimes diffused through pernicious reportorial activity, is without shadow of proof or probability; the tradition of the captivity of a Papago belle was corroborated, albeit indefinitely, by Mashém's naive admission that an alien women was once kept as a slave to a childless death due to her inaptitude for long wanderings; and there is not a single known fact indicating even so much as miscibility of the Seri blood with that of other varieties of the genus *Homo*. Naturally the presumption of miscibility holds in the absence of direct evidence; yet the presumption

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is at least partially countervailed by conspicuous biotic characters, such as color, stature, etc., so distinctive as almost to seem specific: the Seri are distinctively dark-skinned, their extreme color-range (so far as known) being less than their nearest approach to any neighboring tribe; they are nearly as distinctive in stature, the difference between their tallest and shortest normal adults being apparently less than that between their shortest and the tallest of the neighboring Papago—though they are not so far from the more variable and often tall Yaqui; and they appear to be no less distinctive in such physiologic processes as those connected with their extraordinary food habits. Still more distinctive are the demotic characters connected with their habits of life and modes of thought; and when the sum of biotic and demotic characters is taken, the Seri are found to be set apart from all neighboring Sonoran tribes by differences much more striking than the individual range among themselves.[1]

It is especially noteworthy that the Seri have held aloof from that communality of the deserts which has brought so many tribes into union with each other and with their animal and vegetal neighbors through common strife against the common enemies of sun and sand—the communality expressed in the distribution of vital colonies over arid plains, in the toleration and domestication of animals, in the development of agriculture, and eventually in the shaping of a comprehensive solidarity, with the intelligence of the highest organism as the controlling factor.[2] Dwelling on a singularly prolific shore, the Seri never learned the hard lesson of desert solidarity, but looked on the land merely as a place of lodgment or concealment, or as a source of luxuries such as cactus tunas, mesquite beans, and tasty game; they never formed the first idea of planting or cultivating, and their only notion of harvesting and storing against time of need was the intolerably filthy one of nature's simplest teaching; they apparently never grasped the concept of cooperation with animals, and came to tolerate the parasitical coyote only in that its persistence was greater than their own, and in so far as it was stealthy enough to hide its travail and the suckling of its young against their ravening maws; and they apparently never rose to real recognition of their own kind in alien forms, but set their hands against agricultural and zoöcultural humans as peculiarly potent and hence especially obnoxious animals. Naturally their racial intolerance was seed of battle and blood-feud; and they would doubtless have melted away under the general antagonism but for the natural barriers and unlimited food of their restricted domain.

At present, as for the later and best-known decades of their history,

[1] It seems probable that the Seri were nearer to tribes of southern Baja California than to those of Sonora at the time of the earliest explorations, yet that the distinction was sufficiently strong to warrant the extension of the proposition to these tribes also.

[2] The Beginning of Agriculture, American Anthropologist, vol. VIII, 1895, p. 350. The Beginning of Zoöculture, ibid., vol. X, 1897, p. 295.

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ably authentic cranium of the entire skeleton with two skulls preserved in the American Museum of Natural History, viz, No. 99/84, designated as a skull of a Tiburon mound-builder, and No. 99/85, labeled as having

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the complete skeleton. Subsequently this specimen also was put in Dr Rollfink's hands (at his request), and was kindly examined, with the results recorded in the following letter:

MARCH 29, 1895.

Professor W J McGee,
Bureau of American Ethnology, Washington, D. C.

DEAR SIR: The skull which you submitted to me for examination shows the following:

The skull is that of a male between 40 and 50 years of age. The facial parts and a portion of the left temporal bone are wanting; otherwise the specimen shows nothing pathologic. There are signs that the skull belonged to a very muscular individual. The occipital depressions, ridges, and protuberances are very marked, and the temporal ridges approach to within 1.7 cm. on the left and 2.3 cm. on the right of the sagittal suture. The whole skull is rather heavy and massive; thickness of parietal bones 4-5 mm.

The shape of the skull is unusual. The frontal region is rather broad (frontal diameter, minimum, 9.7; frontal diameter, maximum, 12.1 cm.), but quite flat and sloping. Frontal ridges wanting (broken away).

The sagittal region is elevated into a crest which begins 4 cm. posteriorly from the bregma, is most marked at the vertex, and proceeds in two tapering diverging crests to the lambdoid suture. The whole vertex region is considerably elevated and forms a blunt cone, which is particularly noticeable when the skull is viewed from the side.

The temporo-parietal regions are moderately convex and expanded anteriorly, but become flattened and gradually narrow toward the parietal bosses. The parietal bones measure each 11 cm. along the coronal, but only 8.0 cm. along the lambdoid suture. The gradual tapering of the parietal regions from their middle backward continues on the occipital bone up to the inion, and gives the norma verticalis of the skull a peculiar appearance.

The occipital region, as a whole, does not protrude much, as in true dolichocephals, but it shows a prominent broad crest, formed by the two superior semicircular lines and the region between them. The extreme occipital protuberance is pronounced and shows signs of strong nuchæ attachments. A small distance above the foramen magnum, on each side of the median line, is a very marked depression, surmounted by a small ridge.

Of the mastoids, the right has been broken off and the left is damaged, but they do not seem to have been of extraordinary size.

The base of the skull is fairly well preserved and shows the following characters: The basilar process and the petrous portions of the temporal bones are more massive than usual. The glenoid fossæ are broad and of fair depth. The styloids are quite ~~No~~ rudimentary (right 0.7, left 0.8 cm. long). The foramen magnum is hexagonal in outline; it is 4.4 cm. long, 3.4 cm. wide; its plane is inclined backwards in such a way that its antero-posterior diameter prolonged would touch about the lower borders of the nasal aperture.

The cranial cavity can be well inspected through the opening caused by injury. The internal surface of the frontal bone shows but very few traces of brain impressions. There are several large impressions on each parietal bone, and deep, though rather small, fossæ for the extremities of the occipital lobes on the occipital bone. The superior border of the foramen ovale shows in the middle a rounded notch about 3 mm. deep.

The dentition of the anterior is throughout very simple.

Measures.—The glabello-occipital length and maximum width of the skull can not be accurately determined on account of injuries to the bones. They amount, respectively, to about 18.8 and 14 cm., giving the cephalic index of about 74.4 (moderate dolichocephaly). The basion-bregma height is 14.1 cm.; basion-vertex, 14.6 cm.; basion-obelion, 13.9 cm.; basion-lambda, 12.5 cm. The two more anterior of these measures characterize the skull as a rather high one. The two more posterior measures show the rapid downward slope of the posterior half of the sagittal region. The maximum circumference of the skull (above the ridges) is 51 cm.

The bregma-lambda arc measures 13.3, the lambda-opisthion arc 11.2 cm. Plan view between the asterions = 10.7 cm.

If the skull under examination is considered from a purely evolutionary standpoint, it must be pronounced to be in many points inferior to the average white and even to the majority of Indian crania. An anthropological identification of the specimen is difficult, for the reason that we are still very imperfectly acquainted with the craniology of the peoples of southwestern United States and northern Mexico. From what we know of the crania of the Pima, and the extinct Santa Barbara, Santa Catalina, etc, Californians, it is possible to say that the individual whose skull is here reported upon may have belonged to a people physically related to either of these groups. The skull is very distinct from that of an Apache. The female Seri cranium examined by me is here shown and shows certain of the peculiarities of this specimen; nevertheless it is very possible that both crania belonged to individuals of the same tribe.

ALES HRDLIČKA.

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Manual of the Peculiarities of the Skeleton

The nerve and blood-vessel foramina are generally large. This character and the platycnemic tibiæ indicate an ample musculature of the subject.

The height is above the general average for a woman, which, according to Topinard, is 1.53.

The extra-basilar foramen are large and visibly pervious. This condition is found occasionally; significance doubtful; it is more frequent in young subjects.

Platycnemic tibiæ—This is considered a simian character.[1] It was found first by Broca in 1868[2] on bones from Eyzies; it is associated with relative strength of the muscles of the leg; is very frequent among the characters found on bones from the epoch of polished stone in Europe.[3] J. Wyman found this character more accentuated than at Cro-Magnon or at Gibraltar on a third of the tibiæ from the mounds of the United States.[4]

Perforated humerus—Noticed first by Demoulins, 1828, on the humeri of Guanches and Hottentots;[5] occurs with greatest frequency in the following peoples:[6]

	Per cent.
156 neolithic humeri from around Paris	21.6
97 humeri of African negroes	21.7
122 humeri of Guanches	25.4
80 humeri from the mounds of United States (J. Wyman)	31.2
32 humeri of Polynesians	34.3
30 humeri of altaic and American races	36.7

Summarily, Dr Hrdlička's special determinations conform with the external observations on the Seri body; they indicate an exceptionally large stature, together with a notably well-developed and well-proportioned osseous framework, of the native American type, yet significantly approaching the Caucasian in several respects. It is especially noteworthy that the cranium is well formed and capacious, the precise measurements corroborating the external observation that the Seri head is of good absolute size, though relatively smaller (in comparison with height and weight) than that of some neighboring tribes of less stature—e. g., the Papago. It may be noted, too, that the imperfect ankylosis of the epiphyses, and various other skeletal features, are in accord with the inferences from the living body as to the slowness of attaining maturity. It may be noted further that the extraordinary development of the muscular attachments, especially in the masculine cranium, is quite in harmony with the habits of the tribe.

The remaining somatic characteristics of the Seri are for the greater part of such sort as to be described by generalities and negatives. In general they correspond with those of typical American tribesmen and other peoples; and they do not exhibit striking peculiarities in proportion or structure. In the opposability of the thumb, the nonopposability of the hallux, and the independence of fingers and toes, the Seri hands and feet are developed quite up to, if not somewhat beyond, the

[1] Hervé-Lequeu et Hervé, Précis d'Anthropologie, 1897, pp. 112, 2027.
[2] Bulletin de la Société d'Anthropologie, 1868.
[3] Hervé-Lequeu et Hervé, op. cit., p. 112.
[4] Histoire Naturelle des Races Humaines, 1869, p. 264.
[5] Hervé-Lequeu et Hervé, op. cit., p. 292.

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142 Amerindian[1] average; the feet are set straight in walking, as befits the pedestrian habit; the arms are not elongated, and the thighs seem no
●[144] longer in proportion to other elements of the stature than are those of the highest human types. In like manner the bodies are notably free from artificial deformation; the skulls are not flattened or otherwise
[304] distorted; there is no scarification, or even tattooing; neither ears nor lips are pierced for pendants or labrets; the teeth are not filed or drilled, though in some cases at least the first incisors of females are extracted; and while there are trustworthy records of the piercing of the nasal septum for the insertion of pendants, no examples were found at Costa Rica in 1894. The food habits and other customs of the tribe indicate, or at least suggest, more or less specialized and perhaps distinctive internal characters; but, without actual examination of the organs, these inferred characters demand little more than passing notice.

On reviewing the more prominent somatic characters of the Seri, it is found that the greater number are either functional or presumptively correlated with function, and that only a few—chiefly stature and color—are simply structural; accordingly a comparison of the peculiar somatic features and the peculiar individual habits of the tribe would seem to be instructive in more than ordinary degree.

The most striking trait of the Seri is the pedestrian habit. The
361 warriors and women and children alike are habitual rovers; their jacales and even their largest rancherias are only temporary domiciles, evidently vacant oftener than occupied; the principal rancherias are separated by a hard day's journey or more; and none of the known
[312] rancherias or jacales of more persistent use are nearer than 4 to 10 miles from the fresh water by which their occupants are supplied. Probably the most persistently occupied rancherias of the last half century have been those located from time to time near Costa Rica, yet even these were seldom occupied by the same group for more than a fortnight or possibly a month, and were often vacated within a day or two after erection. Still more temporary camps intervene between jacales, and their sites may be seen in numbers in the neighborhood of the better-beaten paths, or along the shores, or even over the trackless spall-strewn plains; they may be merely trampled spots, sparsely strewn with oyster shells and large bones gnawed at the ends, usually in the lee of a shrub or rock; in places of small shrubbery or exceptionally abundant grass there may be two or three or perhaps half a dozen "forms" (suggesting the temporary resting places of rabbits), in which robust bodies nestled and shrugged themselves into the warm earth and under the meager vegetation. Rarely there are ashes and cinders hard by, to mark the site of a tiny fire, and more frequently battered and stained or greasy bowlders record their own use as meat-

[1] The term *Amerind* (with the self-explanatory variations *Amerindian*, *Amerindic*, etc.) has been established by the Anthropological Society of Washington as a convenient collective designation for the aboriginal American tribes (American Anthropologist, new series, vol. I, 1899, p. 562).

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147 182 To the actual observer of the Seri in his prime there is an indefinable but none the less impressive harmony between the intense regimen and the trenchant structural development characteristic of the tribe—a harmony like unto that felt by naturalist and artist alike in viewing at once the clean-cut form and vigorously easy mobility of tiger or thoroughbred horse; and simple inspection of the lithe limbs and body-muscles stirs into living realization a half-felt inference from many facts—the obvious and indubitable inference that they are stress-shaped structures. Accordingly, the concentrated and robust bodies, the shapely jaws, the well-chiseled arms, and the statuesque legs of the Seri, no less than their powerful hands and bulky feet, direct special attention to the axiom that somatic structures are the product of exercise, and indicate with convincing clearness that the structures are trenchantly developed because of the supreme intensity of the creative exercise. It may be impracticable to outline in terms of metabolism the precise processes of waste and repair in organs and organisms, or to define the relative periods of action and assimilation (or of catabolism and anabolism) best adapted to the development of motile tissue; yet the external facts of all bodily growth demonstrate the efficiency of alternating effort and repose, while the characteristics of highly developed animal bodies (including those of the Seri) demonstrate that the most beneficial exercise is that of relatively brief but intense stresses alternating with relatively long intervals of sluggish movement or complete repose. Moreover, the facile metabolism involved in the widely alternating regimen implies exceptional somatic plasticity of the sort normally accompanying youth and attending tissue growth; and this persistent bodily plasticity is in harmony with the peculiarly dilatory maturation characteristic of the Seri tribe. So the animal-like bodies of the Seri, no less than their animal-like movements, which at first sight suggest primitive condition, may safely be held in large measure to reflect specific habits of life, themselves reflecting a distinctive habitat.

144 186 Still more suggestive to the observer than the well-molded structures and the intense functioning with which they are conjoined are those elusive yet persistent characteristics of the Seri comprised in their distinctive race sense—characteristics ranging from overweening intratribal pride to overpowering extratribal hatred. Even at first blush it would seem obvious that the tribal isolation, itself the reflection of environment, would necessarily tend toward a segregative habit with concomitant hostility toward aliens; yet the race-sense of the Seri so far transcends that of other segregated tribes as to suggest the existence of a specific cause. So, too, it would seem obvious that the race feeling gathers about a corporeal nucleus in the form of the race-type exemplified in the heroic stature, the shapely face, the mighty chest, the luxuriant hair, the well-modeled muscles, the powerful feet and hands, the "collected" carriage, and the stored vitality, which (as already indicated) synthesize the environmental interactions of generations; yet the actual student can not avoid the impression that the

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

race-sense dominates the race-type—that the Seri are farther away from neighboring tribes in feeling than in features, in function than in structure, in mind than in body. Now, in seeking the sources of this distinctive (not to say specific) race-sense, several suggestions arise. Naturally the first suggestion is that of simple sexual selection, the (assumptive) analogue of an important factor in biotic evolution; but the suggestion is at once apparently negatived by the fact that all the mature men and women are married and have families of children proportionate to their ages. True, undesirable fiancés may be expelled from the tribe, or even executed (as intimated by neighboring Sonorenses); yet there is little evidence that either method of selection is employed among the Seri more largely than among other peoples; and, as all recent researches indicate, the higher peoples at least have risen above the plane of sexual selection per se as an effective factor in somatic development. A second suggestion arises in the axiom (vivified by realization of the connection between Seri movements and Seri structures) that perfected organs are the product of stressful functioning—indeed, the suggestion is but the extension of the axiom from the individual to the stirp and the group. In developing the suggestion it is convenient to divide the career of the stirp into periods defined by the successive wax and wane of vitality in its most significant manifestations; and this may be done in terms of successive individual lifetimes in their three successive aspects of (1) youth, (2) maturity, and (3) senility, in which the dominant constructive functions are respectively (1) somatic growth, (2) collective growth (comprising both procreation and the accumulation of artificial possessions), and (3) dissipation of somatic vitality and distribution of extrasomatic accumulations (generational as well as material and intellectual). Now, it is a commonplace in every stage of culture that vital capacity, and also the inherent sense of kind manifested in pairing, culminate in the medial portion, or prime, of individual life; and if this universal recognition is valid, it is just to hold that the career of the stirp is defined by the successive vital climaxes expressing the primes of the series of generations pertaining to the stirp. It follows that each generation must represent, not the average qualities of the entire generation past, but the qualities of the most virile and muliebrile fraction of that generation; whence it follows in turn that in general the generations must develop along the lines most prominent in the lives of each people in their prime. The process may be formulated as the *law of periodic conjugation*, under which successive generations are initiated, not at random, but at periods of culminant effectiveness in shaping the course of the stirp. The immediate application of this law to the Seri tribe is manifest, for it explains (the initial condition of isolation and the consequent incipient segregative habit being given) how and why the tribal standards have grown more definite from generation to generation, and have interacted cumulatively with the distinctive environment in such manner as continually to widen the chasm between the desert-

2: Kroeber E-5 (1930)1931 NU31 Seri NU31

Society

583 Marriage is monogamous. The wife is bought, in spite of the
[595] poverty of the Seri. Santa Blanco paid 150 pesos in property for his wife. Chico Romero, a widower, paid more for his, a widow, "because she had three daughters, and a family with daughters is rich" (in expectation of bride prices).

591 The wife goes to live with the husband. A young couple lives
562 with the young man's parents, perhaps in an annex to the house. "The man commands." Chico was emphatic on this point, and repeated that when his son married he would live with him, not with the girl's relatives. Both he and Santo have step-sons-in-law as well as daughters-in-law living with them, but this is because they are chief and boat-owner respectively; (and the sons-in-law are young).

833 Copulation was said to take place immediately on marriage.
McGee's statement of a period of continence being cited as the custom of a foreign tribe, the informant obviously wondered and laughed.
[843] Intercourse goes on during pregnancy; but not for some months after birth, for fear of a new pregnancy, which would be injurious to the child. A good man respects his wife at all times and does not constantly pursue her.

144 No half-breeds were seen, and the Seri declare they are free of
164 venereal disease.

551 Nothing could be elicited from the informant as to anything like
614 the group-inherited names of lineages, or clans, of the Yuman tribes.

768 When a woman dies, the widower may give the children to his dead wife's parents to raise. This is the only item learned that might point to McGee's "matriarchate"; but the informant may have been thinking of particular cases. His son lives with him, though he lost the boy's mother.

582 Cross-cousin marriage is as prohibited as that of parallel cousins. This is in accord with the sibling terminology for all cousins; but in view of the present small number of the tribe, the rule must work difficulty.

[587] A man does not marry his dead wife's sister. Apparently he may not. Nor is there levirate. The informant volunteered the question if marriage with step-daughters was permitted by other peoples. Being told of the Navaho custom, he seemed shocked.

606 Neither husband nor wife looks at or addresses either parent-
183 in-law. In the isolated, small-group life of the Seri, this rule can hardly be adhered to with complete rigor, and its conspicuous carrying out was not observed; but then everything in their behavior is casual, informal, and slovenly.

607 The kinship system as recorded contains a note as to a woman not addressing her younger sister's husband by kinship term except

I: McGee E-5 (1894-1895)1898 NU31 Seri NU31

6 feet 3 inches (1.90 meters); while for centuries the Seri have been reputed a tribe of giants. 141

The estimation of Seri stature is difficultated by the impossibility of defining maturity; and the effort to determine whether particular individuals were adult brought out clear indications of slowness in reaching complete maturity, i. e., of the continuation of somatic growth throughout an exceptionally long term in proportion to other stages in the life of the individual. Thus, with scarcely an exception, the polygynous matrons were taller than the mean of 5 feet 9 inches, while the apparently adult maidens (with one exception) and the younger wives were below this mean; and in like manner the stature of the warriors varied approximately with appearance of age, all of the younger men falling below the mean, and all of the older (except Machim) rising above it. The difficulty of estimation is further increased by the absence of age records and the impracticability of ascertaining and standardizing the habitually guarded expressions for relative age implied in the kinship terminology; so that the age determinations were roughly relative merely, and there was no means of fixing the absolute age of maturity, of puberty, of marriage, or of the assumption of manhood and womanhood howsoever defined. 141 145

Under the conditions, the determination of stature-range in the Seri rancheria at Costa Rica in 1894 was not only difficult but uncertain; yet in general terms it may be said that the women having two or more children—about twenty in number—were notably uniform in stature, ranging from about 5 feet 7½ inches (in the case of an aged and shrunken elderwoman) to 5 feet 11 inches; that the younger women were more variable; and that the warriors (seventeen in number), of whom only a part were apparently heads of families, were more variable still, though the variation, apart from that apparently correlated with age, was less than is customarily found among the exceptionally uniform Papago, and decidedly less than that seen among the Yaqui or the local Mexicans. 141

The Seri skin-tint is of the usual Amerindian bronze, save that it is exceptionally dark, with a decided tone of black. Essayed representations of the characteristic color appear in plates XVIII and XXIV; but the essays are little more satisfactory than the innumerable attempts at depicting the skin-color of the American aborigines that have gone before. Experienced observers of the native tribes may form an impression of the Seri color from the explanation that they are as much darker than the neighboring Papago as the Papago are darker than the average tribesmen about the Great lakes; the Papago themselves being as much darker than the southern plains or Pueblo folk as these are darker than those of the Lake region. The range in color seems to be slight; the variation among the 60 individuals of both sexes and all ages seen at Costa Rica was hardly perceptible, being less than that usually observed in a single family of any neighboring tribe; while the 142

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

its astounding protective efficiency being attested by the readiness with which the Seri run through cactus thickets so thorny as to stop horses and dogs, or over conglomerated spall-beds so sharp that even the light coyote leaves their trail. In the absence of measurements it may merely be noted that the hands and feet of the Seri are materially larger, not only absolutely but relatively to their stature, than those of neighboring tribesmen or even of Mexican and American workmen. And, on the whole, it may be said that in their proportions, as in their stature and color, the Seri are strikingly uniform, their range being less than that commonly observed in contemporary tribes, and the differences between them and their neighbors much exceeding the range among themselves. 142

Somatically distinctive as is the Seri at rest, he (or she) is much more so in motion—though the characteristics so readily caught by the eye are not easily analyzed and described. Perhaps the most conspicuous element in their walk is a peculiarly quick knee movement, bringing the foot upward and forward at the end of the stride; this merges into an equally quick thrust of the foot forward and downward, with toe well advanced, toward the beginning of the next stride; and these motions combine to produce a singular erectness and steadiness of carriage, the body moving in a nearly direct line with a minimum of lateral swaying or vertical oscillation, while the legs neither drag nor swing, but spurn the ground in successive strokes. Thus the walk seems notably easy and graceful, while the walker carries an air of alertness and reserve power, as if able to stop short at any point of a pace or to bolt forward or backward or sidewise with equal facility; he simulates the "collected" animal whose feet tap the ground lightly and swiftly while his body appears to yield freely to voluntary impulse. In this deer-like or antelope-like movement all the Seri are much alike, and all are decidedly removed from their neighbors, even the light-footed Papago. The component motions are most conspicuous in leisurely walking, though the resultant movement is more striking in rapid walk or the incredibly swift run of youths and adults. The general movement is akin to that shaped by the habit of carrying burdens balanced on the head, as the Seri women actually carry their water ollas for astonishing distances; but the carriage is shared—indeed, best displayed—by the warriors and growing boys, who are not known to carry water in this way. 481 [482]

Among the conspicuous but nondistinctive somatic characters of the Seri is luxuriant straight hair habitually worn long and loose. Commonly the hair is jet-black for most of the length, growing tawny toward the tips; sometimes it is black throughout, while again the tawny tinge, or perhaps a bleached appearance, extends well toward the scalp. Age-grayness seems not to be characteristic; the most aged matrons known have no more than a few inconspicuous and scattered gray hairs, though the pelage of some is slightly bleached or faded. None of the warriors at Costa Rica showed the slightest grayness except 142 [302] 142 145

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

142 Mashém (aged about 50 years), who had a few gray strands about the
145 temples; but it may be significant that the hair of the tribal outlaw Kolusio, who has lived with white men for full three score years, is iron-gray. Kolusio's pelage is trimmed in Caucasian fashion; that of Mashém
[115] is cut off mid-length in a manner exciting comment, if not derision, on the part of his fellows and others, and resulting in his (Spanish)
[301] sobriquet, Pelado (literally, Peeled, or idiomatically, Shorn); but with few exceptions the hair is kept long as it can be made to grow, and receives careful attention to this end. Naturally the length is somewhat variable; in many cases it depends to or slightly below the waist, while in other cases it merely sweeps the shoulders; and in general it appears to increase in both length and luxuriance not only throughout adolescence, but up to late maturity, for the best pelages are presented by moderately aged persons, while none of the youths are so luxuriantly tressed as their elders. Not the slightest trace of baldness appears. The infantile pelage is short, brownish in color, soft or even silky, and inclined to curl toward the tips. It is not until the age of several months that the hair begins to acquire the adult character, and at least some children retain traces of the infantile pilary character up to 5 or even 10 years; and none of the children display such jet-black shock-heads as are frequently found among other tribes, whose adult pelage may nevertheless be much less luxuriant than that of the Seri. On the whole, it may be said that the Seri hair is luxuriant and vigorous beyond the aboriginal average, and that it, like various other somatic features, indicates a relatively late maturation in the life-history of the individual.

Both sexes are beardless. The female faces seen were entirely free of
142 strong pilary growth; one or two of the warrior faces showed scattering hairs, and Mashém sported a feeble and downy but jet-black mustache with an exceptional number of scattered hairs about the chin; while Kolusio shaved regularly, and might, apparently, have grown moderately stiff but straggling mustaches and beard. Axillary hair seems to be wanting; pubic hair is said to be scanty; otherwise the bodies are practically hairless (more nearly so than those of average Caucasians).

The teeth are solid, close-set, and even, and impress the observer as large; they close with the upper incisors projecting slightly beyond the lower denture in the usual manner.

128 The skeletal characteristics of the Seri are known only from a single
141 specimen obtained in the course of the 1895 expedition in such manner as to establish the identification beyond shadow of question. This skeleton was submitted to Dr Aleš Hrdlička for measurement and discussion.[1]

In making his examination, Dr Hrdlička compared the unquestion-

[1] A separate cranium was obtained by the 1895 expedition, having been sought and picked up by a Mexican member of the party in vindication of his account of the killing of one of the Seri; but, in view of the possibility of erroneous identification, this skull was not submitted in connection with

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

Résumé of the Peculiarities of the Skeleton

The nerve and blood-vessel foramina are generally large. This character and the platycnemic tibiæ indicate an ample musculature of the subject. 141

The height is above the general average for a woman, which, according to Topinard, is 1.55.

The petro-basilar fissures are large and visibly pervious. This condition is found occasionally; significance doubtful; it is more frequent in young subjects.

Platycnemic tibiæ—This is considered a simian character.[1] It was found first by Broca in 1868[2] on bones from Eyzies; it is associated with relative strength of the muscles of the leg; is very frequent among the characters found on bones from the epoch of polished stone in Europe.[3] J. Wyman found this character more accentuated than at Cro-Magnon or at Gibraltar on a third of the tibiæ from the mounds of the United States.[4]

Perforated humerus—Noticed first by Dumoulins, 1826, on the humeri of Guanches and Hottentots;[5] occurs with greatest frequency in the following peoples:[6]

	Per cent.
156 neolithic humeri from around Paris	21.8
97 humeri of African negroes	21.7
122 humeri of Guanches	25.6
80 humeri from the mounds of United States (J. Wyman)	31.2
32 humeri of Polynesians	34.3
30 humeri of altaic and American races	36.2

Summarily, Dr Hrdlička's special determinations conform with the external observations on the Seri body; they indicate an exceptionally large stature, together with a notably well-developed and well-proportioned osseous framework, of the native American type, yet significantly approaching the Caucasian in several respects. It is especially noteworthy that the cranium is well formed and capacious, the precise measurements corroborating the external observation that the Seri head is of good absolute size, though relatively smaller (in comparison with height and weight) than that of some neighboring tribes of less stature—e. g., the Papago. It may be noted, too, that the imperfect ankylosis of the epiphyses, and various other skeletal features, are in accord with the inferences from the living body as to the slowness of attaining maturity. It may be noted further that the extraordinary development of the muscular attachments, especially in the masculine cranium, is quite in harmony with the habits of the tribe. 141 142 [145] [147]

The remaining somatic characteristics of the Seri are for the greater part of such sort as to be described by generalities and negatives. In general they correspond with those of typical American tribesmen and other peoples; and they do not exhibit striking peculiarities in proportion or structure. In the opposability of the thumb, the nonopposability of the hallux, and the independence of fingers and toes, the Seri hands and feet are developed quite up to, if not somewhat beyond, the 142 144

[1] Hovelacque et Hervé, Précis d'Anthropologie, 1907, pp. 112, 2027.
[2] Bulletin de la Société d'Anthropologie, 1868.
[3] Hovelacque et Hervé, op. cit., p. 112.
[4] Histoire Naturelle des Races Humaines, 1870, p. 304.
[5] Hovelacque et Hervé, op. cit., p. 291.

157 The women are virtuous and faithful and perform all the duties of
152 wife and mother and bear their share of hardships. The hard life,
[145] exposure and struggle for existence soon causes hard features, wrinkles
[165] and ugliness. Many babies die young and the tribe probably numbers
[167] only about two hundred.

The dancing by the driftwood fires continued as we turned in to
123 rest, our eyes constantly drawn to the flame and the glittering eyes in the wild dark faces, while the waves of the sea accompanied the chanting in that mysterious isle of Seriland.

225
133

Seris - off to the fishing grounds - December 1934.
Alcatraz Island in distance.

222 In Seriland most of the food comes from the sea. During April and May, at the time of my first visit, a green grass growing on the sea bottom was detached and washed ashore. The women dragged it up on the bank near camp and spread it out to dry. Some of the stalks contained about seven fine green seeds the size of a pin head. When dry, the
[285] women threshed them out with sticks on a piece of canvas. These are cleaned by the deft use of the *batea*, or winnowing basket, of which these people are pastmasters.

252 A pint of these fine seeds were parched in an olla over coals of driftwood and constantly stirred to prevent burning. It was then ground
262 on a flat rock like a *metate*---any flat rock---into a green meal which was very nourishing. This was cooked in an olla with turtle oil, making a porridge like thick green paint. It was then drunk or eaten with the fingers. If there is plenty, two fingers are used; if not, only one finger.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

THE SERI INDIANS

By W J McGee.

INTRODUCTION

Salient Features

Something has been known of the Seri Indians (Seris, Ceris, Ceres, Heris, Tiburones) since the time of Coronado, yet they remain one of the least-studied tribes of North America. The first systematic investigation of the tribe was made in the course of expeditions by the Bureau of American Ethnology in 1894 and 1895; it was far from complete. 114

The Seri Indians are a distinctive tribe in habits, customs, and language, inhabiting Tiburon island in Gulf of California and a limited adjacent area on the mainland of Sonora (Mexico). They call themselves *Kwe-hask* or *Knihx:* their common appellation is from the Opata, and may be translated "spry". Their habitat is arid and rugged, consisting chiefly of desert sands and naked mountain rocks, with permanent fresh water in only two or three places; it is barred from settled Sonora by a nearly impassable desert. Two centuries ago the population of the tribe was estimated at several thousands, but it has been gradually reduced by almost constant warfare to barely three hundred and fifty, of whom not more than seventy-five are adult males, or warriors. 101 [131] 133 161

The Seri men and women are of splendid physique; they have fine chests, with slender but sinewy limbs, though the hands and especially the feet are large; their heads, while small in relation to stature, approach the average in size; the hair is luxuriant and coarse, ranging from typical black to tawny in color, and is worn long. They are notably vigorous in movement, erect in carriage, and remarkable for fleetness and endurance. 142 [147]

The Seri subsist chiefly on turtles, fish, mollusks, water-fowl, and other food of the sea; they also take land game, and consume cactus fruits, mesquite beans, and a few other vegetal products of their sterile domain. Most of their food is eaten raw. They neither plant nor cultivate, and are without domestic animals, save dogs which are largely of coyote blood. 105

The habitations of the Seri are flimsy bowers of cactus and shrubbery, sometimes shingled rudely with turtle-shells and sponges; in some

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[3] Hovelacque et Hervé, op. cit., p. 113.
[4] Histoire Naturelle des Races Humaines, 1878, p. 396.
[5] Hovelacque et Hervé, op. cit., p. 281.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

all are at least fairly compatible with the inference that the tribe is exceptionally (if not incomparably) low in the scale of general human development, yet at the same time highly specialized along certain lines; and the inference in turn is corroborated by the coincidence between the special lines of development and the peculiar conditions of environment characterizing the habitat of the tribe.

A striking correspondence between Seri physique and Seri habitat is revealed in the pedal development, with the attendant development of muscle and bone, lung capacity, and heart power, together with other faculties involved in the pedestrian habit. Seriland is a hard and inhospitable home; sea-food is indeed abundant and easily taken, but water is terribly—often fatally—scarce, and obtainable only by distant journeying from the places of easy food supply; moreover, the monotony of the diet is alleviable only by extensive wandering for the collection of vegetal products or severe chase after land animals; while the warlike spirit, apparently inherited from a still less humane ancestry and fostered by the geographic isolation, combines to keep the tribe afoot, avoiding waters, conducting raids, and moving constantly from place to place in the endless search for safety. There is a widespread Sonoran tradition that the Seri systematically exterminate weaklings and oldsters; and it is beyond doubt that the tradition has a partial foundation in the elimination of the weak and helpless through the literal race for life in which the bands participate on occasion. A parallel eliminative process is common among many American aborigines; the wandering bands frequently undergo hard marches under the leadership of athletic warriors with whom all are expected to keep pace, and this leads both to desertion of the aged and feeble and to increased strength and endurance on the part of the strong and enduring; yet it would appear that this merciless mechanism for improving the fit and eliminating the unfit attains unusual, if not unequaled, perfection among the Seri. Now pedal development is one of the special processes of peripheral (or centrifugal) functioning and growth involved in the general process of *cheirization*, which, coordinately with cephalization, defines human progress;[1] and this developmental process explains the specialization of the Seri along one or more lines, and connects the special development directly with environing conditions.

A notable correspondence between structure and function, of such sort as to reflect the habit and habitat, appears in the conspicuous manual development of the Seri. Enjoying a climate too mild to make houses necessary, finding animal food too plentiful to necessitate elaborate contrivances for the chase or milling or other devices for reducing vegetal food, provided by nature with material (in the form of carrizal) for an ideally suitable water craft, barred by geographic boundaries from neighboring tribes, and having neither material for nor interest in commerce, the denizens of Seriland were never forced into the way of mechanical development; yet their simple industries, involving as they

[1] The Trend of Human Progress, American Anthropologist, new series, vol. I, 1899, p. 401.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

147 182 do swift stroke and strong grasp and dexterous digitation, are mainly such as urge manual development more strenuously than would be normal among tribesmen connected with their environment through the medium of tools. The demand for manual strength and skill is intensified among the Seri by both natural and domestic conditions; the ever-ready (and almost the sole) material suitable for simple adjunct to the hand abounds in the form of wave-worn cobbles; these cobbles are easily usable in such wise as to serve all ordinary purposes, and their abundance discourages the production of more highly differentiated tools; while their habitual use promotes manual strength and deftness, coupled with that digital freedom (required, for example, in grasping a ball) which most clearly distinguishes the human hand from the subhuman paw. Conjoined with these natural conditions are domestic demands tending to cultivate manual fitness and eliminate the manually unfit; for, in addition to the direct industrial premium on dexterity, through which the dexterous survive while the clumsy starve, there is a special premium growing out of the marriage custom, through which only the manually efficient (and at the same time morally acceptable) [143] are put in the way of leaving lines of descendants.[1] Naturally, in view of the combination of factors, all traceable directly or indirectly to environmental conditions, the Seri afford a peculiarly striking example of cheirization extended to an entire tribe (if not to a genetic stock of people)—indeed the remarkably developed Seri hands and feet first suggested the importance of this process of human development and led to its formal characterization.

143 182 Accordingly, the robust-bodied and slender-limbed yet big-fisted and big-footed Seri seem to be adjusted, so far as several of their more striking somatic characters are concerned, to distinctive habits themselves reflecting a distinctive habitat; and the coincidences appear to reveal and establish the law of interaction between the human organism and its environment—an interaction effected through the habits and hence through the normal functioning of the individual organisms as constrained through their collective relations. And recognition of the 147 law of interaction opens the way to consideration of other correspond- 143 ences between structures and functions and environing conditions.

182 312 Conspicuous among the more strictly functional traits of the Seri is the intensity of action characteristic especially of the warriors, though in less degree of the entire tribe—an intensity made all the more striking by contrast with the extreme inertness between stresses. Manifestly the capacity for concentrated effort is in harmony with the tribal habits, themselves reflecting habitat. The resource of prime importance in Seriland—that which directly and constantly conditions the very existence of human inhabitants—is potable water. This prime source of life is too heavy to be transported and too unstable to be stored with the facilities of primitive culture, yet it is always within reach of an organism strong enough to journey ten or twenty or fifty

[1] The mental traits of the tribe are described further, pp. 170-227.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

miles in search of it, and acute enough to follow trails and indications. Naturally the meager water-supply serves as a mechanism for sorting out and preserving the strong and the acute, and for eliminating the weakly and the dull; and hence the tribe have developed a faculty, or perhaps a potentiality, of distinctive sort—the potentiality of providing against thirst-death by a reserve power in the organism itself rather than in the form of mechanical devices such as characterize higher culture. Quite similar are the relations to the resource of second importance, i. e., ordinary food. Habituated to dispensing with storage and transportation of their primary resource, and accustomed to finding food whenever forced to sufficiently active effort to obtain it, the Seri have never grasped that first principle of thrift expressed in the accumulation of food supplies; and accordingly they intuitively rely on successful fishing or chase or search of vegetal edibles for sustenance, and habitually delay effort until they are stirred into activity by the pangs of hunger. Naturally this improvidence serves as another mechanism for perpetuating families of stored vitality, and especially those able to prevail over swift or strong or cunning quarry by sustained vigor and alertness after prolonged deprivation; and the effect of this mechanism, too, is to develop a reserve power in the organism itself, in lieu of the material reserve made through thrift in higher culture. Similar in their consequences are the relations of the individual organisms to the third industry of Seriland, i. e., navigation of the gale-swept and tide-troubled waters. Even the buoyant balsa can not weather the williwaws or ride the tideripa of El Infiernillo without exercise of the utmost strength and skill on the part of the navigators; while the often persistent storms may delay for days embarkation on voyages in quest of fresh water or food. Naturally, the frequent delays and not infrequent perils of such navigation constitute a mechanism for selecting navigators possessed of reserve powers adequate to meet desperate emergencies with vigor and judgment even after enervating waits for wind and tide, while those not so well endowed are either brought up to standard in their hard training school or expelled from their class by drowning or dashing on the rocks, as may happen; so that the effect of this mechanism also is to preserve individuals and perpetuate generations characterized by reserve power, and hence to develop latent potentiality in the tribe. Now, the normal product of these and other natural mechanisms immediately reflecting environmental conditions is capacity for spurts, or for intense functioning under severe stress, despite accentuation of the stress by thirst or hunger or exhaustion, or by all combined—i. e., the effect of habitat and habit is to produce precisely such a somatic regimen as that so conspicuously displayed by the Seri folk. So the intensified activity with long intervals of inertness, simulating the habits of carnivorous and some other lower animals, and hence suggesting primitive condition, would appear to be largely a phylogenetically acquired character expressing specific adjustment to environment.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

147 182 To the actual observer of the Seri in his prime there is an indefinable but none the less impressive harmony between the intense regimen and the trenchant structural development characteristic of the tribe—a harmony like unto that felt by naturalist and artist alike in viewing at once the clean-cut form and vigorously easy mobility of tiger or thoroughbred horse; and simple inspection of the lithe limbs and body-muscles stirs into living realization a half-felt inference from many facts—the obvious and indubitable inference that they are stress-shaped structures. Accordingly, the concentrated and robust bodies, the shapely jaws, the well-chiseled arms, and the statuesque legs of the Seri, no less than their powerful hands and bulky feet, direct special attention to the axiom that somatic structures are the product of exercise, and indicate with convincing clearness that the structures are trenchantly developed because of the supreme intensity of the creative exercise. It may be impracticable to outline in terms of metabolism the precise processes of waste and repair in organs and organisms, or to define the relative periods of action and assimilation (or of catabolism and anabolism) best adapted to the development of motile tissue; yet the external facts of all bodily growth demonstrate the efficiency of alternating effort and repose, while the characteristics of highly developed animal bodies (including those of the Seri) demonstrate that the most beneficial exercise is that of relatively brief but intense stresses alternating with relatively long intervals of sluggish movement or complete repose. Moreover, the facile metabolism involved in the widely alternating regimen implies exceptional somatic plasticity of the sort normally accompanying youth and attending tissue growth; and this persistent bodily plasticity is in harmony with the peculiarly dilatory maturation characteristic of the Seri tribe. So the animal-like bodies of the Seri, no less than their animal-like movements, which at first sight suggest primitive condition, may safely be held in large measure to reflect specific habits of life, themselves reflecting a distinctive habitat.

144 186 Still more suggestive to the observer than the well-molded structures and the intense functioning with which they are conjoined are those elusive yet persistent characteristics of the Seri comprised in their distinctive race sense—characteristics ranging from overweening intratribal pride to overpowering extratribal hatred. Even at first blush it would seem obvious that the tribal isolation, itself the reflection of environment, would necessarily tend toward a segregative habit with concomitant hostility toward aliens; yet the race-sense of the Seri so far transcends that of other segregated tribes as to suggest the existence of a specific cause. So, too, it would seem obvious that the race feeling gathers about a corporeal nucleus in the form of the race-type exemplified in the heroic stature, the shapely face, the mighty chest, the luxuriant hair, the well-modeled muscles, the powerful feet and hands, the "collected" carriage, and the stored vitality, which (as already indicated) synthesize the environmental interactions of generations; yet the actual student can not avoid the impression that the

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

extensive rancherias near Punta Narragansett measure 10 miles by trail from the same aguaje; the half dozen jacales about Campo Navidad are separated by some 15 miles of stony and hilly pathway from the alternative watering places of Tinaja Anita and Arroyo Carrizal;[1] and the huts crowning the great shell-heap of Punta Antigualla—one of the most striking records of immemorial occupancy in America—are nearly or quite 10 miles by trail from Pozo Escalante, and still further from Aguaje Parilla, the nearest sources of potable water. These are but typical instances; and while there are ruined huts (evidently regarded as temporales) near the dead waters of Barranca Salina and Pozo Escalante, they tell the tribal policy of locating habitations in places surprisingly remote from running water. Like other desert folk, the Seri have learned to economize in water-carrying by swigging incredible quantities on their occasional visits to the aguajes; it is probable, too, that their systems are inured, somewhat as are those of the desert animals that survive deprivation of water for days or months, to prolonged abstinence from liquid food; yet it seems safe to assume that at least half of the water required in their vital economy (say 2 or 3 pounds apiece daily, on an average) is consumed after transportation over distances ordinarily ranging from 4 to 12 miles. Under these conditions the Seri have naturally produced a highly developed water industry; they are essentially and primarily water-carriers, and all their other industries are subordinated to this function.

Concordantly with their customs, the Seri have a highly differentiated aquarian device in the form of a distinctive type of olla, which is remarkable for the thinness and fragility of the ware, i. e., for largeness of capacity in proportion to weight. Representative specimens are illustrated in plates XXXII and XXXIII (the former painted, as already described). The dimensions of the two vessels are as follows: painted olla, height 34 cm. (13⅜ inches), mean diameter 32.5 cm. (12⅞ inches); plain olla, height 32 cm. (12⅝ inches), mean diameter 32 cm. In both specimens the walls are slightly thickened at the brim, those of the painted vessel measuring about 4 mm. and those of the plain vessel about 4.5 to 5 mm. in thickness. Below the brim the walls are thinned to about 3 mm., as is shown in the fractured neck of the painted specimen. The capacity of these Seri vessels in proportion to their weight, compared with that of typical examples of ware produced by other desert peoples, is shown in the accompanying table.

Comparison of the mean ratios indicates that the Seri ware is almost exactly twice as economical as that of the Pueblos—i. e., that its capacity is twice as great in proportion to the weight of the vessel; and that

[1] The preciousness of water in this hard province was impressed in the 1895 expedition, during which the cost of the commodity, reckoned on the basis of the time and labor involved in obtaining it, was estimated at $10 or $12 per gallon, or about the wholesale price of the finest champagnes.

283 from coarse, wiry grass stems, and saved all
302 the brushings to be used in the making of strong threads and cords.

The fleetness of foot and remarkable physi-
●147 cal endurance of these people attest to the
481 rigorous and difficult life in Seriland where the ability of an individual to survive a season of want depended upon the reserve energy of his own body by which he could carry himself long distances in search of food and yet have strength to return to a waterhole, left miles behind. The slender, sinewy limbs and capacious chests of the Seris, in whom no trace of obesity has ever been observed, show clearly the result of untold centuries of selection of the strong by the severity of the environment, where water,
[312] too heavy for transport, too difficult of storage, is yet always within reach of an organism strong enough to journey ten, twenty, or even fifty miles in search of it.

Perhaps the most severe physical exercise
224 practiced by the Seris was the chase of animal game, particularly since it was often resorted to only after a period of weakening hunger which prompted the all-out effort to obtain adequate food supply. Days of wandering over the deserts in search of vegetable food were sometimes unrewarded, and although rabbits were to be had for the chase, they were too small to be of much consequence in the feeding of a family. The deer were fairly plentiful and provided excellently for a lasting feast.

The deer hunt was conducted by several tribesmen without weapons. When an animal was sighted it was followed by one and circled by others of the party, chased until frantic and exhausted, whereupon one of the men rushed upon it, threw it to the ground and caved in its skull with a stone.

The most avidly sought prey in the Seri chase were the helpless young and heavily pregnant does which were pursued and rent to fragments with a horrible fury, particularly with intent upon the succulent tidbits afforded by the fetal flesh.

222 A time of ease and plenty came each summer, for usually in late May or June the cactus plants with which Seriland abounds begin to mature their fruits. In the foothills of Sierra Seri on the mainland, great

5:Dawson N-5 (1940) 1944 NU31 Seri NU31

an important handicraft among these Indians. They made a shallow, coil type basket such as is characteristic of many southwestern tribes. The Seri basket, however, was remarkable for its extreme lightness in proportion to capacity, a quality due to the spongy character of the coil made of a whisp of splints of the torote. Several torotes are found in the region, the commonest species being *Jatropha cardiophylla*. Also used were the torote amarillo, *Jatropha spatulata*, torote blanco, *Bursera microphylla*, and torote prieto, *Bursera laxiflora*. The woof consisted of splints of palo blanco, *Acacia Willardiana*, or of baraprieta, *Caesalpinia gracilis*, deftly interlaced by means of a bone awl to form a smooth, practically waterproof utensil.

In pre-Columbian times the Seris commonly sought wild game, mostly deer, without the aid of weapons, using only their tremendous physical endurance against their prey, chasing the animal until it was exhausted and could be thrown to the ground. With the introduction of iron, however, the development of the bow and arrow achieved prominence, for the shaping and fastening of points had long retarded the exploitation of these implements. Few straight stemmed or straight grained plants grow in Seriland suitable for making arrow shafts, but on the flanks of the deeper gorges of Sierra Seri and Sierra Kunkaak on Tiburon Island, the Indians found one leafy shrub that filled the need, *Sapium biloculare*. The juice of this plant is also said to have been used for arrow poison. The bow was preferably of palo blanco, wrapped and strung with mesquite fiber cord.

The modern Seri tribe consists of barely more than 100 souls, with early extinction threatening from imported diseases. Their natural habits are now vastly modified and they live a comparatively sedentary life near the village of Kino, scavengering for fish heads and other refuse discarded by the fishermen, now and then fishing for themselves when in need. Every year, however, they trek off to the cactus forest for the annual feast, and in late summer many may be seen camping among the mesquite groves near the Kino well where an abundance of both mesquite beans and water makes for easy living.

7: Marroquin E-5 (1955) 1957 NU31 Seri NU31

In general, the Seris have a healthy appearance; the most frequent complaints are gastro-intestinal and visual defects due to avitaminosis. It is very possible that given the difficult living conditions resulting from the desert environment, a rigorous selective process among the newborn takes place so that only those who possess exceptional physical qualities survive. This explains why the majority of them retain the physical characteristics described by Hardy more than a century ago: "the Indians of Isla Tiburón are tall, healthy and well built".

In spite of attempts at education, the Seris do not practice the elemental rules of hygiene; their way of life, neglecting this aspect, contributes to increase the unhealthy foci which exist in the places where they have established themselves.

Dwellings.—The Seris retain many vestiges of their nomadic life, among them the hut which serves as their living quarters; many of them are simple provisional arrangements for sheltering themselves from wind and sun, and they bear no relationship to the stability and durability of our dwellings. The Seri hut was made to meet the necessities of a nomadic people who had no reason to spend much time nor work on making a dwelling which would only be used for a season (one, two or at the most three months). Nevertheless, some innovations have been introduced in the last 20 years, so that we must distinguish between two types of houses. The primitive model consists of a series of scrub pine arches interwoven with branches from the same shrub almost totally covered by foliage, tortoise shells, *zacate*, etc., with only a small hole in one of its ends as an entrance (this type of hut is the same that McGee saw in 1894 when the Seris still led a nomadic life).

In the new model more resistent woods are used, like *sabueso*, *torote*, etc., and poles, between which is laid a layer mud. The house is rectangular, without windows; with only one entrance, but always larger than the entrance to the brush hut. Other models would have to be added to these two, due to the incorporation and utilization of tents made in the United States which some U. S. tourists or the Society of Friends have given them. The tent is used as permanent living quarters; or sometimes combined with branches to cover the primitive type huts.

Domestic Animals.—The Seris are very fond of domestic animals like the dog, cat, and finally, the chicken. For all practical purposes these animals live together with the family; they rest on the piles of rags and sand which serve the Indians as beds; lick the plates and cooking utensils; dirty the house; increase the household fauna with their fleas and other vermin thus contributing to create and unhealthy atmosphere in the home.

Problems of Intoxication.—Their dealings with the fish buyers, in whose stores are sold beer, mezcal and tequila, has turned them to the consumption of these drinks. The Seri drinks liquor in an uncontrolled

123 312 [492] nets of twisted fiber, hooked the nets in the ends of the notched stick and started off nine or ten miles to the water hole in the heart of the mountains.

Water carried so far over loose, sandy soil, dodging cactus, threading a devious way among the *talus* thrown off the cliffs and slopes of canyon walls, with the water-bearer barefoot, acquires a value absolutely unknown to the man who draws an unlimited supply from a faucet.

The two men were gone six hours and when they returned they were almost staggering under the heavy loads of water, each man carrying at least one hundred and ten pounds of water, as the cans were full. In addition, one man had a canteen full.

The thirsty people drank sparingly, and a little Seri maid poured some of the precious liquid into a cooking olla for a thirsty dog. After the dog had lapped sufficient to allay his thirst, she carefully poured the residue back into the can, never losing a drop. One drop of water could not be spared after that arduous trip.

484 147 648 Bob says a man goes to Hermosillo occasionally and returns to the coast, ninety miles, with two to five cans of *sescal*. It takes probably four days to do it, but it is a wonderful feat of endurance. He said about thirty years ago a woman walked the ninety miles during one night, afoot, and reported to the Government House when it was opened at nine in the morning that about fifty of her people had been shot by Roberto's uncle at various times. This uncle was a very hard rough man and the Seris were fond of his mares and steers for meat, and used to steal, so he began shooting a goodly number. Fearing a man messenger would be shot, as men were frequently shot while going along the road, they sent a woman.

Ysabel was Governor at the time. Judgment was rendered against the uncle, and it is probable that a hanging squad would have been sent out to execute him. The Governor, a great friend of the family, sent for him, and he rode ninety miles at night on horseback and was saved with the Governor's help.

Roberto saw twelve Seris pack meat from two mares, two steers and two yearling heifers, for four or five miles to their boats. Their endurance and strength is phenomenal. The question naturally arises, "Why are not burros used by the Seris on the Island to ride and pack, as they are by their Mexican neighbors on the mainland?" It has been [492] tried, but things were reversed; the Seris packed the burros around in their stomachs.

261 262 Roberto said: "These people, living on the verge of starvation, never having a continuous food supply, would kill and eat every burro, and it is a common thing on the mainland, if a cow or horse dies, and Seris are in the neighborhood, they will try to beat the buzzards to it. They will gorge in times of plenty, and when food is scarce they

[text continues on p. 160]

2:Kroeber E-5 (1930)1931 NU31 Seri NU31

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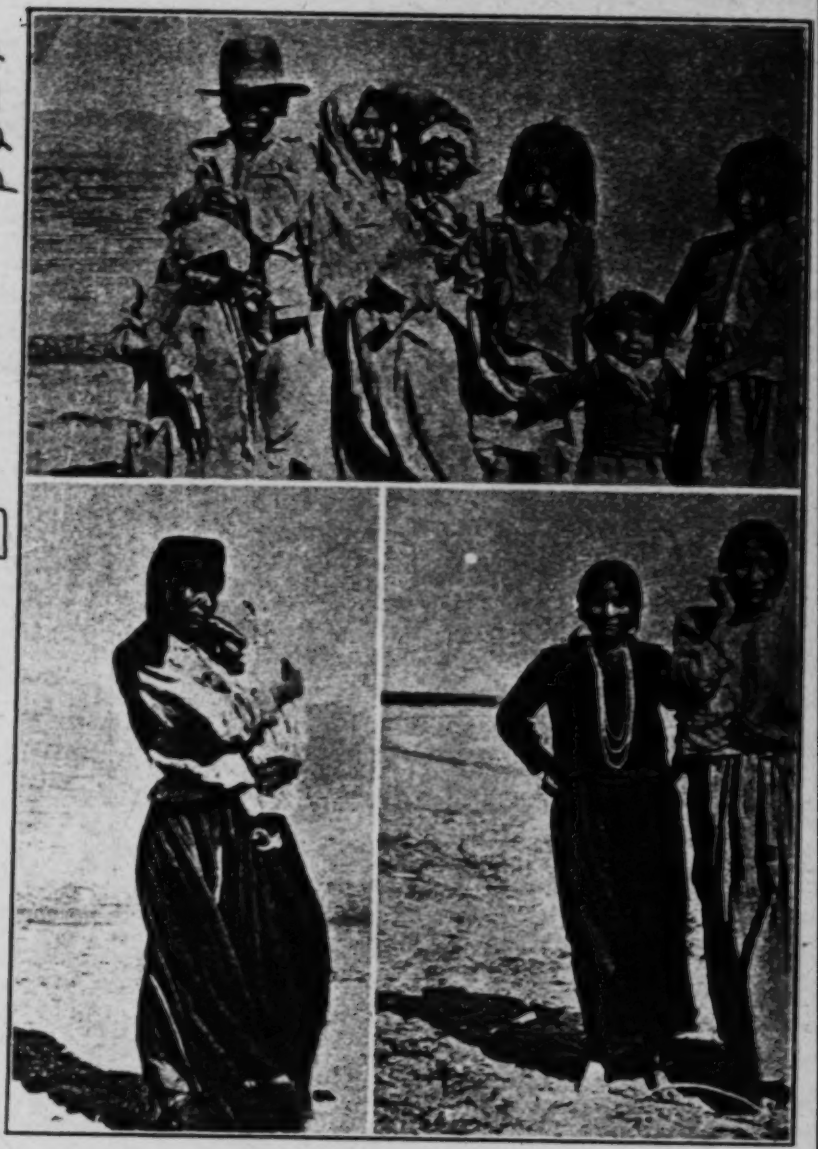

FIG. 9 (upper). *Seri children showing variety of expressions at camera experience.*
FIG. 10 (lower left). *Young woman with sickly baby.*
FIG. 11 (lower right). *Two girls, the shorter unmarried.*

157 The women are virtuous and faithful and perform all the duties of
152 wife and mother and bear their share of hardships. The hard life,
[145] exposure and struggle for existence soon causes hard features, wrinkles
[165] and ugliness. Many babies die young and the tribe probably numbers
[167] only about two hundred.

123 The dancing by the driftwood fires continued as we turned in to rest, our eyes constantly drawn to the flame and the glittering eyes in the wild dark faces, while the waves of the sea accompanied the chanting in that mysterious isle of Seriland.

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Seris - off to the fishing grounds - December 1934. Alcatraz Island in distance.

222 In Seriland most of the food comes from the sea. During April and May, at the time of my first visit, a green grass growing on the sea bottom was detached and washed ashore. The women dragged it up on the bank near camp and spread it out to dry. Some of the stalks contained about seven fine green seeds the size of a pin head. When dry, the
[285] women threshed them out with sticks on a piece of canvas. These are cleaned by the deft use of the *batea*, or winnowing basket, of which these people are pastmasters.

252 A pint of these fine seeds were parched in an olla over coals of driftwood and constantly stirred to prevent burning. It was then ground
262 on a flat rock like a *metate*---any flat rock---into a green meal which was very nourishing. This was cooked in an olla with turtle oil, making a porridge like thick green paint. It was then drunk or eaten with the fingers. If there is plenty, two fingers are used; if not, only one finger.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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sida. The Seri mind is (1) local, (2) chance-dominated, (3) exceeding lowly, and especially (4) autochthonal in its content and workings.

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There is an aspect of the inference as to the local and autochthonal character of the Seri mind which is of wide-reaching application. As indicated by many tribes, though most clearly by the Seri, there is a definite relation between the somatic characteristics of primitive folk and their environment; the indications are that the relation is inversely proportionate to development, the lowliest tribes reflecting environment most closely, and the higher peoples responding less delicately to the environmental pressure in the ratio of their increased power of nature-conquest; and the relation is essentially phylogenetic, in that it sums and integrates the innumerable interactions between organic kind and environment during generations or ages. It is to be realized that the relation is not simple and direct or physiologic merely (e. g., like that between climate and the pelage of an animal), but that it is linked through the human activities; for, as is conspicuously the case in Seri-land, the environment prompts exercises of particular kinds, and it is these exercises that shape the somatic features, such as strength of lung, length of limb, and the soundness of constitution displayed in physical endurance; yet the relation is none the less real, in that it operates through the activities rather than directly. The relation may be characterized with respect to mechanism as bodily responsion, or with respect to capacity as *responsivity of body*. Now, as is well illustrated by the provincial ideation of the Seri, the relation between environment and physique is accompanied by a corresponding relation between environment and thought. This relation, too, varies inversely with development, the connection being closest among the most primitive tribes, and growing less and less close with maturing mentality and proportionately increasing power of nature-contest; and the relation is still less direct (or physiologic merely) than that between the human body and its environment, in that not only the bodily activities but the instinctive and nascently ratiocinative processes are interposed. This relation between mind and environment may be characterized as mental responsion in its mechanical aspect, or as *responsivity of mind* when regarded as a psychic property.[1] Accordingly, the relation between the tribal mind and its environment, as illumined by the peculiarly delicate interactions observed among the Seri, seem to indicate the genesis and earlier developmental stages of mentality in its multifarious aspects.

The specially significant feature of the relation between environment on the one hand and body + mind on the other is its diminishing value with general intellectual advancement. Viewed serially, the

[1] The responsivity of mind has been defined elsewhere as the basis of knowledge, and as one of five fundamental principles of science (The Cardinal Principles of Science, Proceedings of the Washington Academy of Sciences, vol. ii, 1900, pp. 1-12).

[91 cont.]

582 promiscuity of gatherers corroborative of the ideas of Morgan, is very far from being simple, tending more to confirm the ideas of Kirchoff regarding the greater restriction and regulation of marital relations in societies having a rudimentary economy. In all Seri marriages close consanguineous relatives seem to be avoided. More precisely, a classification of relatives is estab-
582 lished, from which only one group can provide a spouse. To
621 differentiate the Seri system from clan systems and marital
601 classes, in which each member belongs to a fixed class in relation to all the other members, in this system the classification varies with respect to the position of each person, that is to say, it is a true system of kinship. The factors of sex, polarity, generation, relative age, affinity, and consanguinity are involved in it, acting to deny or permit the possibility of marriage. Perhaps because of the small size of the Seri group, only within which are marriages concluded, the kinship system results in a clear identification of all persons by terms that are functions of marital relationships: approximately 50 per cent are excluded for being of the [92] same sex; 30 per cent for being of a distinct generation (very few aged or very young); the consanguineous relatives close to the affinal relatives and married persons are also excluded, leaving only so many persons as possible mates, a situation that is reflected in the kinship terminology.

582 It is not that sexual relations may be prohibited, for
[837] there is relative freedom in extramarital, including prenuptial,
[836] sexual relations, but the "marriage" association, sanctioned by the society and for which there is strong community pressure, has the limitations mentioned. And it tends to be realized, in spite of the disadvantages of the disappearance of sexual liberty, avoidance of near affinal relatives, and the economic obligations that begin upon the conclusion of the marriage.

156 With regard to individual development, this social struc-
155 ture is of such nature that it has well integrated cultural elements that create a very special personality, characterized by improvidence, emotional instability, inconstancy, and feelings of security, dispossession, and dependence.

[92 cont.]

156 854 ●155 They are principally the result of influences that act during the first years of life: constant contact of the skin with that of adults; immobilization of the extremities by cloth wrappings; provision of a permanent support in the form of a cradle to which the child is fastened; constant attention to his alimentary needs, and continuous supervision of his actions.

155 156 "Give me bread," "give me coffee," "you have food, I am hungry," "why do you keep food?" "that's the way things are," etc., are very common expressions that manifest the Seri personality.

000 On the other hand, from the practical point of view (3),

> 226 439 [276] 3. For the present fishing promoters, the Seri personality is a serious obstacle: because of the wealth of marine fauna, the competent Seri obtain a good catch in a few hours, and their earnings permit them to live several days, which would be multiplied if the yori would not resort to the sale of marijuana at excessive prices to obligate them to work.

it has to be greatly altered, above all in so far as it influences the personality, in order to raise the Seri standard of living, changing their habits, ideas,and values.

[91 cont.]

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commercial origin are their main instruments of fishing. To this they added dynamite, sometimes with disastrous results to themselves, mostly as a way of securing bait. Single-pointed fish-spears which loomed so importantly in McGee's account have gone the way of the Dodo for its original purpose and transformed into iron bar lances, now used largely as weapons against rattlesnakes that men encounter in their desert roamings. However, in the forties, when the Seris spent a great deal of time getting sharks and huge rays, they killed them with these weapons.

What retain some importance are the harpoon and the two-pronged spear called "puiero." The two-pronged spear is one of their oldest weapons. The construction is much the same as when McGee visited them. The spear is used mainly to stab large-size fish, the giant *bais* or *mero* for example, after it has been brought up on the line. The harpoon is now exclusively a weapon for the turtle hunt.

An interesting fate met an effort to teach these Indians net fishing in 1947. They tried, ruined the nets and never took it up since. The instigators were Mexicans, the fish traders. I suspect that Seri individualism had a great deal to do with their lack of interest in net fishing which after all demands a certain amount of cooperation. With the hook and line fishing, men can have much more their own way.

An added "tool" of the Seris is the plank boat. The balsa which McGee still observed during his visit, had already vanished by the time Kroeber came to the Seriland and had been replaced by these boats. The boats are flat bottomed but good sized. The material was provided by the Mexican government. Boats are usually propelled by 5 hp. motors leased from the Mexicans (no Seri is rich enough to purchase one) who also sell them gasoline and oil at exorbitant prices and in return buy Seris' catch of fish and sea turtle for low prices. At the time of my visits these amounted roughly to less than a peso per kilo of the flayed, degutted and cleaned fish (less than 8 cents) with fluctuation up and down the scale depending on the kind of the fish, and to about 30-50 pesos for medium to large size "cahuama," the live marine turtle.

The Seri boats are also propelled by paddles and sail—this is always the case with the families who wish to stay away on Tiburon for some time. The Mexicans will not lease them their motors for such trips even if the Seri, some of them at least, have enough knowledge of the motors to repair minor stoppages—a demonstration of the fallacy of McGee's idea that they are genetically unable to handle tools. In this respect, Kroeber's (1930: 25) estimate of them is closer to the truth.

Sexual division of labor in procuring food goes on, much the same as it had 70 and 30 years ago, with the sole exception of the imported goods. Here purchases are made either by men or women or by children, depending on who at the time has the cash and what one wishes to buy.

Fishing is still done by men and so is hunting. Women still concentrate on gathering, whether of

[P.7 B]

quite possible but I couldn't substantiate the story from contemporary evidence. Perhaps during the height of the shark hunting for the liver oil, the Seris used the oil also for wood polish, although it isn't very clear just what sort of artifact they make would require such treatment. The wooden tools or artifacts among them are in short supply at all times. Finally, the huge horned manta was supposedly hunted also for its hide but just in what circumstances it was not explained. It is the only fish which the Seri ever mentioned as having been put to such use.

Fishing

As already mentioned, fishing nowadays is largely accompanied from flat-bottomed boats with hook and line. The old ways of getting fish by spearing are almost gone for good. Recently, an attempt has been made to teach the Seris siene fishing, but 10 years of these endeavors accomplished only ruination of a number of expensive nets and of much fishing gear and the desertion of the project by the Indians. It may be that their individualistic and almost anarchistic attitudes preclude cooperation, essential in this type of fishing.

The bait is obtained in any one of the three ways: by dynamiting fish in tide pools or along the shore, or by catching small fry with small hook and line, or finally by collecting small fishlets in the tide pools, prying them out from under rocks or simply—and here the Seri boys excel—by shooting them in the tide pools with tiny toy arrows or simply spearing them with a stick. The dynamiting is done with the purchased sticks of dynamite which the Seris obtain in the tiendas. The procedure is often risky and down right dangerous. Some of the Seris have blown themselves up with dynamite. I have seen one of them, who lost both arms and had a jaw broken during a dynamiting trial. He went about with a dirty rag tied up over his head to support the wrecked jaw-bone. He was carried off by measles two years later in the 1955 epidemic.

The Seris' commercial fishing is pretty much controlled and exploited by the two or three Mexican fish traders from Nogales and Hermosillo. These have their tiendas in Desemboque, which at set price sell things to the villagers. They also provide the Indians with the five horse-power motors for fishing trips and pleasure cruises and with the oil and gasoline essential to run these—also at set price. They finally purchase the fish—at a set price—and from the proceeds the Seris purchase goods at the tiendas, completing the cycle. Not all Seris are compelled to work for the Mexicans, and, in fact, they do not always do so. Some families stay away from Desemboque and depend on the sail and oars for propulsion. They come to the village only once every few months to obtain supplies. Even when in the village, the Seris make little effort to fish for more than they wish to get in order to satisfy their immediate needs.

Fishing expeditions usually take place in the morning. Most Seris will set off before daybreak and will return with the catch by 11 a.m. or noon.

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McMillin F-5 (1953-1958)1963 MIXII Seri MIXII

XI

SUMMARY

224 Hunting is very decidedly secondary to fishing, although it is still much practiced by certain individuals and in a desultory way probably by all.

462 There is a clean cut division of labor in all these occupations. Fishing and hunting are men's occupations, gathering of the desert animals and beachcombing for the intertidal animals is largely the job of women and children. Boys get broken [868] into men's occupations in adolescence, girls into women's jobs very much earlier.

224 Avoidance of fishing or hunting certain creatures appears much more a matter of custom than of well defined and socially rationalized attitude. Frequently an animal is not hunted simply because the Seri feel it is too big and too strong for them to tackle.

• 157 Through all these activities, Seri individualism is curiously woven and accounts for the failure of anything that might resemble a collective effort.

Food Preferences and Preparation

252 Seri food is prepared in a simplest sort of way. [263] Boiling in water is usual with salt and sometimes a few other spices added. While most food is prepared that way, snakes and fishes are usually fried, without any ingredients. There has been a [178] notable shift toward greater fanciness in the ingredients, as they have become more readily available.

262 There are many preferences. Animals are scaled in desirability. Some fishes, marine turtles, chuckawalla, deer and peccary and duck are at the top of the list; lower animals, smaller fishes including puerco in the middle, while the sea gull and the pelican are probably at the very bottom of the pit. This again reflects temporal changes in tastes [178] although not necessarily a direct influence from the Mexicans.

Pets

231 Few pets are kept, other than dogs. Such animals as come are those captured accidentally. In most cases they are bird nestlings.

Taxonomy

* 825 Differential criteria are applied in the classification of different groups. There is less tendency to group birds than to group different mammals and classificatory ideas break down almost completely in smaller animals, especially insects and molluscs. Considering the economic importance of the molluscs, poor ability to distinguish the Gastropods from the Pelecypods is striking.

The classificatory criteria differ for different groups. Mammals are generally recognized by the furiness, birds by the ability to fly and the pres-

[D·54 B]

157 The women are virtuous and faithful and perform all the duties of 152 wife and mother and bear their share of hardships. The hard life, [145] exposure and struggle for existence soon causes hard features, wrinkles [165] and ugliness. Many babies die young and the tribe probably numbers [167] only about two hundred.

123 The dancing by the driftwood fires continued as we turned in to rest, our eyes constantly drawn to the flame and the glittering eyes in the wild dark faces, while the waves of the sea accompanied the chanting in that mysterious isle of Seriland.

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Seris - off to the fishing grounds - December 1934.
Alcatraz Island in distance.

222 In Seriland most of the food comes from the sea. During April and May, at the time of my first visit, a green grass growing on the sea bottom was detached and washed ashore. The women dragged it up on the bank near camp and spread it out to dry. Some of the stalks contained about seven fine green seeds the size of a pin head. When dry, the women threshed them out with sticks on a piece of canvas. These are [285] cleaned by the deft use of the *batea*, or winnowing basket, of which these people are pastmasters.

252 A pint of these fine seeds were parched in an olla over coals of driftwood and constantly stirred to prevent burning. It was then ground 262 on a flat rock like a *metate*---any flat rock---into a green meal which was very nourishing. This was cooked in an olla with turtle oil, making a porridge like thick green paint. It was then drunk or eaten with the fingers. If there is plenty, two fingers are used; if not, only one finger.

BAND V

642 These people were apparently hunters, gatherers, and fishermen. It is said that they speared fish from the shore since they did not use *balsas*. They too apparently raided the ranches. Their warring nature has already been discussed; it resulted in the acquisition of few friends. However, several marriages between members of this band and members of subdivision 2 of Band III are said to have occurred.

BAND VI

The members of Band VI lived on San Esteban Island and were the most primitive of the tribe. They lived in huts made of driftwood and in caves and made extensive use of the *balsa*. Although they did not have the bow and arrow, they did become expert in the use of the spear. The people depended mainly on a seafood, iguana, and maguey diet.

621 Perhaps it was due to the confined living space on the small island with the accompanying lack of fresh water that relations between the four subdivisions were precarious and fights broke out frequently. The Seri today stress the fact that the members of this band were impetuous and unpredictable.

642 Their relations with the other bands were generally good however. Seri from Band III were free to visit San Esteban where they were well treated.

The San Esteban people seldom traveled to the mainland, and, since they spoke no Spanish, it is probable that they made no peaceful contact with non-Seri groups.

642 COLLAPSE OF THE BAND SYSTEM

Internal strife in the Seri tribe was probably a major factor in the establishment of the band system. External strife was a major factor in its downfall.

Reference has been made to the plundering, killings and rustling of cattle to which certain of the bands were dedicated. The concern of the Sonora government was aroused, and steps were taken to crush the rebellious groups. According to the present-day Seri, military action by army units and rancher outfits against the various bands resulted in the near-destruction of the whole tribe.[11]

* 825 to the belief that the spider stings with the rear of the body) may cause death in 2-3 hours. It may [753] also kill chicks and one of the informants, Jose Juan Moreno, claimed to have been paralized by the sting of the Black Widow for eight days . . . . [158] However, Juan is a good hypochondriac, and even when not apt to exaggerate, he may have suffered a genuine trauma owing to an encounter with this spider. While smaller spiders are not considered too dangerous, the *Tarantula* is. It can both bite with its jaws and sting with the rear end of the [753] body and it is said to be more dangerous to children—it may cause their death at times. The adults will weather its attack but will become quite ill. [752] As remedy for its bite, a plant *quivira* is used as a hot extract taken in a small glass for 2-3 days.

Almost all of the animals closely related to the Arachnoids, the scorpion, the Sun spider, *Scolopendra* and the tick, are also venomous in the Seri view. Of these, the scorpion is most feared, and in adults it will cause illness lasting up to a week while to very small children it may be fatal. As a proof the informants mentioned a six months old [165] girl recently stung by a scorpion who died in less than six hours—the fact confirmed by the Mexicans in the village. Remedy for this is similar to [762] others—a plant called *amxzuháy* is drank with hot water for three days, a glass per day.

The Sun spider, also armed supposedly with a sting at its rear, is said to be fatal to horses for whom there is no remedy. This is a pure fiction. [177] but the belief is common among the Mexicans and the Seris certainly took it up from them. But no one suggested that the Sun spiders are in any way harmful to men although they are avoided, just in case.

The *Scolopendra* is considered very dangerous, much like a viper. It bites badly but is not fatal. Actually, the story probably concerns another species, for *Scolopendra malkini* has only recently been described and is rare in Desemboque.

The tick's unpleasant traits had already been discussed under another heading. All that is essential to add is a belief that in addition to other ex- [753] ploits it can enter a person's ear causing much pain and that for this reason it is particularly bad for the children, as there is no remedy.

There remain three more species of various degree of toxicity. Of these, the *Triatoma* is most conspicuous both for its effects and factual observation. This blood sucker bites with its mouth parts [753] and introduces illness called by the Seri *syexhis. ?e . kemep* which may end fatally. People of all sexes and ages are subject to it equally, and the illness may last three months, and there is no

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1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

THE SERI INDIANS

By W J McGee.

INTRODUCTION

Salient Features

Something has been known of the Seri Indians (Seris, Ceris, Ceres, Heris, Tiburones) since the time of Coronado, yet they remain one of the least-studied tribes of North America. The first systematic investigation of the tribe was made in the course of expeditions by the Bureau of American Ethnology in 1894 and 1895; it was far from complete. 114

The Seri Indians are a distinctive tribe in habits, customs, and language, inhabiting Tiburon island in Gulf of California and a limited adjacent area on the mainland of Sonora (Mexico). They call themselves *Kwe-kwak* or *Kwike:* their common appellation is from the Opata, and may be translated "spry". Their habitat is arid and rugged, consisting chiefly of desert sands and naked mountain rocks, with permanent fresh water in only two or three places; it is barred from settled Sonora by a nearly impassable desert. Two centuries ago the population of the tribe was estimated at several thousands, but it has been gradually reduced by almost constant warfare to barely three hundred and fifty, of whom not more than seventy-five are adult males, or warriors. 101 [131] 133 161

The Seri men and women are of splendid physique; they have fine chests, with slender but sinewy limbs, though the hands and especially the feet are large; their heads, while small in relation to stature, approach the average in size; the hair is luxuriant and coarse, ranging from typical black to tawny in color, and is worn long. They are notably vigorous in movement, erect in carriage, and remarkable for fleetness and endurance. 142 [147]

The Seri subsist chiefly on turtles, fish, mollusks, water-fowl, and other food of the sea; they also take land game, and consume cactus fruits, mesquite beans, and a few other vegetal products of their sterile domain. Most of their food is eaten raw. They neither plant nor cultivate, and are without domestic animals, save dogs which are largely of coyote blood. 105

The habitations of the Seri are flimsy bowers of cactus and shrubbery, sometimes shingled rudely with turtle-shells and sponges; in some

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

the upper end of the staff was suspended by a cord 12 or 14 inches long a round stone ball, and to this ball was fastened another string furnished with bits of cork, surrounded with small feathers stuck into them at the distance of about 3 inches apart; the only use of the stone ball being to prevent the wind from blowing out horizontally the string which was furnished with feathers. . . .'. Upon examining the bunky pile, I discovered a wooden figure with a carved hat, and others of different shapes and sizes, as well also as leathern bags, the contents of which I was not permitted to explore.[1]

He also mentions that "in their festivities the Indians wear the head (with the horns on)" of the buru or mule deer. He adds:

It is believed that the Córoa Indians have discovered a method of poisoning their arrows, and that they do it in this way: They kill a cow and take from it its liver. They then collect a number of rattlesnakes, scorpions, centipedes, and tarantulas, which they confine in a hole with the liver. The next process is to beat them with sticks in order to enrage them, and being thus infuriated, they fasten their fangs and exhaust their venom upon each other and upon the liver. When the whole mass is in a high state of corruption the old women take the arrows and pass their points through it. They are then allowed to dry in the shade, and it is said that a wound inflicted by them will prove fatal. Others again say that the poison is obtained from the juice of the yerba de la flécha (arrow weed).[2]

He purchased some of the arrows, which were stone-tipped, and had "certainly had an unguent applied to them".

He was impressed by indications of family affection, and noted the custom of having two wives. Concerning tribal relations he says:

These people have been always considered extremely ferocious, and there is little doubt, from their brave and warlike character, that they may formerly have devastated a great part of the country; but in modern days their feuds are nearly confined to a neighboring tribe of the same name as themselves (Córoa), who speak the same language and in all probability originally descended from the same stock. They are said to be inferior to those of this island both in courage and stature, and they are never suffered to cross the channel. From what I was told . . . the Tiburon Córoa have lately returned from a sanguinary war with the Tépoca Córoa, in which the former were victorious.[3]

Later in his itinerary Hardy noted a typical Yaqui revolution, with a characteristic effort to secure the cooperation of the Seri.[4] He defined the Seri habitat as "the island of Tiburon, the coast of Tepoca, and the pueblo of Los Córoa, near Pitic";[5] and he estimated the population at "3,000 or 4,000 at the very utmost",[6] and quoted the estimate of Don José María Redin, viz, that the Seri population of Tiburon was 1,000 to 1,500.[7]

Like most of those visitors to the Seri who have returned to tell their tale, Hardy "praised the bridge that carried him over" and gave the tribe passable character—worse, of course, than that of any other, yet hardly so bad as painted at Pitic.

A noteworthy traveler in western America during 1840–1842 was M. Duflot de Mofras, an attaché of the French legation in Mexico. He

[1] Op. cit., pp. 190–200.
[2] Ibid. pp. 200, 201.
[3] Ibid., pp. 201, 202.
[4] Ibid., p. 205 et seq.
[5] Ibid., p. 427.
[6] Ibid., p. 428.
[7] Ibid., pp. 205, 206.

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1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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1775 reached; they endure a thousand miseries on the island, yet the love they have for it is incredible. They are always accompanied by innumerable dogs, . . . which they have domesticated.[1]

Velasco adds:

The Curis subsist on fish, the seeds of grass, and countless shrubs, as well as on the flesh of horses and deer, which they kill. There is no better proof of this fact than this—on approaching the said Curis, one instantly perceives that their bodies exhale an intolerable stench, like that of a corpse of eight or more days, totally rotten, so that it is necessary to withdraw far as possible from them.[2]

Of all the Indian tribes known in Sonora, none are more barbarous and uncivilized than the Curis. They are perverse to the limit, vicious beyond compare in drunkenness, infinitely filthy, the bitterest enemies of the whites, like the worst of the Indians.[3]

He adds also that the men wear a pelican-skin robe and a breechclout of cotton cloth, with most of the body uncovered; "they have their faces painted or barred with prominent black lines. They use no foot-gear of any kind, and many have the nasal septum pierced and adorned with pieces of greenstone or ordinary glass." "They are robust in stature, tall and straight, generally with bright black eyes. The women are not uncomely, and of bronzy color [de color abronzado]. Their clothing is made of pelican skins fastened together, retaining the feathers; with this they are covered from the waist downward", the remainder of the body being bare. The women of Hermosillo provide them with cast off garments when they approach the city, and these they wear, unwashed, until they fall to pieces. "The said tribe, in addition to being the vilest and most brutal known in the country, are preeminently treacherous and traitorous, so that forty of their outbreaks may be counted during the efforts to reduce them to civilized life." At the time of the Cimarrones outbreak, the Seri of Tiburon and Tepoka numbered 2,000; [161] "to day [about 1846 or 1847], counting the 250, which are all that inhabit Tiburon and the most that can be presented, including the Tepoka Seri [los Curis Tepocas], who have always been much fewer, their whole number will not amount to 500 persons of all sexes and ages, and the warriors can not exceed 60 or 80 at the most." The Seri are not polygamous, though apparently promiscuous ("se nota en sus matrimonios mucha tolerancia mútamente"). They "adore the moon, which they venerate and respect as a deity; when they see the new moon, they kneel and make obeisance; they kiss the earth and make a thousand genuflections, beating their breasts."[4]

1775 The remarkably vigorous expedition of Andrade and Espence occurred within the memory of men still active, and naturally it lives in tradition at Hermosillo and Bacuache, and among the ranchos lying toward the border of Seriland; indeed, one of the two Mexicans accompanying the 1895 expedition, Don Ygnacio Lozania, retained shadowy impressions of participating in an invasion of the island, which could have been none other than that planned by Governor De

[1] Velasco, Noticias Estadísticas, pp. 169–171.
[2] Ibid., p. 172.
[3] Ibid., pp. 127–128.
[4] Ibid., pp. 131–132.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

the Seri are absolutely without extratribal affiliations, or even sympathy. When the chronicles of three centuries are scanned in the light of recent knowledge, it seems practically certain that they have been equally isolated since the dawn of Caucasian history in Mexico; and both recent data and the chronicles combine with the principles of demotic development to indicate that the Seri have stood alone from the beginning of their tribal career, and have never foregathered with the neighboring tribes of distinct blood, distinct arts and industries, distinct organization, distinct language, and distinct thought and feeling.

The present isolation of the Seri throws light on their early history and reveals the extent of the misapprehension of the pioneer missionaries, who half deluded themselves and wholly deluded distant readers into the notion that the Seri were really proselyted and actually collected in the mission adjuncts of military posts established to protect settlers against forays of the tribe; for, as illumined by later and fuller knowledge of the tribal characteristics, the chronicles are seen to indicate merely that a few captives, malingerers, cripples, spies, and tribal outcasts were harbored at the missions until death and occasional escapes brought the colonies to a natural end, with no real assimilation of blood or culture on either side. So, too, the persistent tribal antipathy reveals the error of confounding the independent or even inimically related outbreaks of the Seri and of the Pima or Apache with the concerted action of confederated tribes. Doubtless the ever-watchful spies from Tiburon habitually gave notice of the disturbance due to outbreaks of contemporary tribes, just as they do today when the local soldiery are withdrawn for duty on the Yaqui frontier; naturally the civil and military authorities were thereby led to provide for protection against the Seri and Piato, against the Seri and Pima, or against the Seri and Apache at each period of disturbance, just as they provided against the Seri between periods; and it would appear that this association in thought and speech led to the unconscious magnification, in the minds of the chroniclers, of a supposed alliance.

In brief, the tribal relations of the Seri seem always to have been antipathetic, especially toward the aboriginal tribes of alien blood, in somewhat less measure toward Caucasians, and in least—yet still considerable—degree toward their own collinguals and (presumptive) consanguineals.

POPULATION

So far as could be ascertained by inquiries of and through Masbém in 1894, the Seri tribe then comprised about 60 or 70 warriors, with between three and four times as many women and children—i. e., the population was apparently between 270 and 350. The group of about 60 (including 17 warriors) seen at Costa Rica was evidently growing rapidly, to judge from the proportion of youths of both sexes, infants in arms, and pregnant women; and there are other indications that

I: McGee Z-3 (1894-1895)1895 NU31 Seri NO31

the tribe is prolific and well-fitted to survive unless cut off in consequence of the hereditary antipathy toward alien blood and culture. 161

The population estimates of the past are naturally vague. In 1645 Ribas spoke of the tribe as "a great people"; and a century later Villa-Señor expressed himself in somewhat similar terms, and described their range in such manner as to indicate a population running into thousands. A few years after Villa-Señor (in 1750), Partilla claimed to have annihilated the entire tribe, with the exception of 28 captives; but according to Velasco's estimates, the people numbered fully 2,000 some thirty years later, when the tribe was, however, once more nominally annihilated. In 1824 Troncoso estimated the Seri at over 1,000, and two years later Ortiz reckoned the population of Isla Tiburon alone at 1,000 or 1,500, while Hardy thought the entire tribe might number 3,000 or 4,000 at the utmost. About 1841 De Mofras put the aggregate population at 1,500; and at the time of the vigorous invasion by Andrade and Espence (1844), when a considerable number of the tribe were captured and a few slain, the total population was estimated at about 550—though it is probable that a good many tribesmen were left out of the reckoning. According to the chroniclers, a number of the Seri were slain after, as well as before, this invasion; and in 1846 Velasco estimated the tribe at less than 500, including 60 or 80 warriors. This estimate was in harmony with that made by Señor Encinas, who reckoned the tribe at 500 or 600 at the beginning of his war, in which half the tribe lost their lives. The figures of Velasco and Encinas correspond fairly with the reckoning by Mashbn in 1891, due allowance being made for natural increase and for the losses through occasional skirmishes; and Mashém's count is shown not to be excessive by the considerable number of jacales and rancherias and well-trodden pathways found throughout Seriland in 1895.

On the whole it seems probable that the Seri population extended well into the thousands at the time of the Caucasian invasion; it seems probable, also, that the body was then too large for stability under its feeble institutional bonds, and hence threw off by fission the Tiburon and Upanguayma fractions, and the Angeles, Populo, and Pueblo Seri fragments. Furthermore, it seems probable that the prolific group fairly held its own against these normal losses and repeated decimations by battle up to the Miguelefes-Cimarrones war of 1780, despite the vauntel annihilation in 1750; but that thenceforward the death-rate due to increasingly frequent encounters with incoming settlers exceeded the birth-rate, gradually reducing the tribe from some 2,000 to the 250 or 300 surviving the Encinas conflict. Finally, it seems probable that the tribe has again held its own and perhaps increased slowly under the renewal isolation of the last decade or two.

2: Kroeber E-5 (1930)1931 NU31 Seri NU31

stonization. The Pima are so uniform in speech from the Gila to the Mayo that their territory must be assumed to have been continuous at no remote date.

Seri Population Estimates
After McGee, page 135

1730,	Velasco	2,000
1824,	Tremenno	1,000+
1826,	Ratin, Tiburon only	1,000-1,500
1826,	Hardy	3,000-4,000
1841,	de Mofras	1,500
1844,		150
1848,	Velasco	500—
c. 1855,	Encinas	500-600
c. 1868,	Encinas	250-300
1894,	Mashdm, native	250-350
1930,	Thomson	175

&Davis & Downs S-5 (1922-1960) 1945
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222 forests of giant cacti (Fig. 9) provide during this season an unlimited supply of "pitahayas" toward which the tribespeople customarily moved to accomplish the annual harvest. The fruits were readily knocked down by means of long poles and, when ripe, the spines were easily brushed off, leaving a luscious pulp as big as a fig. During the height of the season all the clans withdrew from the coast and gave their undivided attention to the collection and consumption of the cactus fruit, gorging tremendous quantities for weeks until waning supply and cloying appetite drove them back to the more severe hunt for turtle and pelican.

252 262 514 Perhaps the only germ of thriftiness in the Seris is shown by a peculiar custom with respect to the pitahayas. The fruits, eaten in such enormous quantity, were imperfectly digested, the hard-coated seeds particularly passing through the body unchanged. Using [415] [251] large seashells, the feces containing these seeds were collected and preserved with some care. Thus, when the harvest of fresh fruits was over, there remained a hoard of these dry, nutritious discharges which were ground on the stone abst, winnowed in a shallow basket and made into a meal to be eaten, either dry, as a watery atole, or mixed with turtle grease to form a thick paste.

614 Although the Seri's omnipresent problems of food-getting and of personal subsistence have been of particular interest, the lost social customs of the tribe deserve a moment's attention. Before the death of all [161] but a few of the 2,000–3,000 Seris at the hands of invading Spaniard and Mexican, the tribe consisted of a number of conspicuous maternal clans, each of which was presided over by a zoic tutelary such as the Pelican, the Turtle, the Rattlesnake, or the Badger. The totemic symbols denoting the 302 386 614 various beast-gods and incidentally indicating the blood-carriers of clans dedicated to them, consisted of elaborate designs painted upon the face (Fig. 10). In accord with their savagery in which the social organization was based on blood kinship reckoned in the female line, under ordinary circumstances, the faces only of the females were painted. Colored minerals pounded to powder afforded the pigments for the paint-

[p. 201(A)]

648 726 [161] The Encinas war reduced the tribe to some 250 people, and temporarily discouraged their bloodthirsty raids. By 1893, however, new killings were being reported. In one instance the Seri Chief, Juan Tomas (Fig. 14), watched as the men of a large rancho left for a rodeo and then, worming up through the brush, led his warriors into the buildings and with clubs and arrows massacred every woman and child within. Two Yaqui women who had managed to escape into the brush watched as the warriors seized [727] the infants by their feet and dashed their brains out against a large rock near the corral.

In 1904 a number of wilder Seri, led by several Yaquis, went on the warpath and killed every soul in a Papago village. The war with the Papagos that ensued aroused the Governor of Sonora into action. Nearly 250 armed men were sent out to kill or capture the Yaqui leaders and to administer a severe lesson to the Seris. The desert water holes were all placed under guard until the Seri chief, Juan Tomas, was forced to surrender for his thirsting tribesmen. Peace was conditional on the delivery of the Yaqui leaders with their hands tied together. Two days later a couple of gaunt, wild-looking Seri women, clothed in rags and with painted faces, walked into the camp to keep the conditions of the peace as they had understood them. They carried a palanca between them from which were suspended bundles of severed hands of the Yaquis who had been clubbed to death as they slept.

114 648 Twenty years after the delivery of the Yaqui hands (1922) the senior author, under arrangement with the Museum of the American Indian in New York, carried out his first expedition into the heart of Seriland. Although still intolerant of aliens and at times dangerous if aggravated, their depredations had been reduced to the occasional killing of a stray cow. The Seris had come to live a comparatively peaceful life under the supervision of Roberto Thomson of Hermosillo. It was through his efforts that the Seris were saved from complete extermination by the vaqueros of Sonora, and after having treated them for many years as a friend and adviser, he had made it feasible for a visitor to enter

[p.263(A)]

3:Davis & Dawson E-S (1922-1940) 1945
NU3I Seri NU3I

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their midst and to live among them without undue fear of losing his life. Through the kindness of Señor Thomson the senior author succeeded in making himself a friend of the Seri and, enlarging upon this friendship through long periods of living and traveling among them, has acquired an intimate knowledge of these strange people.

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In 1922 the fishing industry of the Gulf of California was not yet well developed, and it was to be ten years before the village of Kino should appear on the maps of the Sonora coast. The Seris were still isolated in their desert domain and their numbers, then about 250, were maintaining themselves out of reach of the infectious diseases of the white man. The clan life had disappeared, and the people lived as a single tribe with their old chief, Juan Tomas, 90 years old at that time

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FIG. 15. MOVING DAY AMONG THE SERIS
THESE BURDENS, BORNE FOR MANY MILES OVER ROCKS, THROUGH CACTUS AND DEEP SAND, CONTAIN UTENSILS FOR HOUSEKEEPING WHEREVER THE SERIS MAY STOP.

[p.263(B)]

S:Davis & Dawson E-5 (1922-1940) 1945
MUSI Seri MUSI

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Sea turtle was still the staple meat, and with better boats and improved tools and tackle borrowed from the Mexicans, the living was becoming considerably less harsh along the shores. They then had nine boats for some two hundred people. One good boat could secure a living for five families, and they had well improved this minimum standard of living.

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The origin of the use of fire among the Seri's is unknown, but they have their own story of it. One day Chico Romero, present chief of the Seris (Fig. 19), made a fire drill out of a piece of dry driftwood and showed how to make a fire by turning the stick between the hands. In three or four minutes the fine dust became a glowing punk which, with the aid of some dry grass and the wind, was quickly fanned into a flame. He was then induced to tell the legend. He looked about and pointed to a little green and blue-bodied fly and said: "The gods sent this fly down from the sky to show us how to make fire. Notice when it lands. Did you not see

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FIG. 19. THE NATIVE DANCE
IS DONE ON TOP OF A TURTLE SHELL TO THE BEAT OF A BOW STRING BEING STRUCK WHILE THE BOW IS HELD AGAINST TWO INVERTED BASKETS OF SAND.

[p. 265 (B)]

3:Davis & Dawson E-5 (1922-1940) 1944
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They are mostly of ocotillo sticks and mesquite branches stood up in the sand, lashed together, and plastered with mud for protection from the wind, but not from the rain (Fig. 22). When the fishing season ends about Holy Week, they all move away to the turtle grounds on Tiburon Island, where they also hunt deer. Then in June and July they go into the desert hills to reap the harvest of cactus fruit, retiring to the lowlands thereafter to harvest the mesquite beans and to await the recurrence of the big fish. In and about Kino they are reasonably well fed and clothed, and were it not for their susceptibility to disease they would be as well-off as many of the Mexicans. Influenza strikes them heavily, however, and pneumonia is common, usually fatal. Their numbers dwindle and their extinction is in sight, yet for a little while these strange people will continue to tread the rocks and thorns of their desert land, a handful of Nature's primitive creatures, through whose veins flows the blood of thoroughbred American aborigines.

[p.268(C)]

[89 cont.]

000 abundant flying and, especially, marine fauna.

For a modern technology, their region has great resources,
511 but for the culture of the Seri it is frankly inhospitable. The standard of living is exceedingly low, as is proclaimed by natives and foreigners and as is demonstrated by the illnesses and hunger that weaken the population.

[90] The Seri truly form part of our Western society, in
226 so far as they catch fish, with fishhooks and motorboats, to sell
439 in the markets of Hermosillo, Nogales, and Tucson, and they
[179] obtain payments in national specie and coin. The part that
182 they form, however, has its own internal structure, which regulates the relations with the environment and among its mem-
[161] bers, even though a group of 218 persons, which suffers severe alterations in percentages from disasters like the sinking of a boat or strokes of good luck like the establishment of a prosperous fishing camp, is almost insignificant for the nation.

Most probably they have never been much more numerous, and they must not have had great cohesion in the past, a situation explicable in view of their nomadic gathering economy.
621 Toward the close of the 18th century they were divided into bands, of which it is known that the most important were the Guaymas, Upanguaymas, Tepocas, Tiburones, and Salineros.
[648] They banded together at various times in order to defend themselves and to attack the nuclei of Mexicans of the zone, achieving combined action, but without effective political unity.

619 At present they seem to form a single group without marked subdivisions, although they recognize affiliations like that of "Tiburones," "half-Papago," etc., which appear to have little real classificatory significance.

184 There is great uniformity: they speak a single language
619 incomprehensible to the rest of humanity; they have a relatively uniform culture, and there is tribal unification for matters involving sexual exchange.

361 The most obvious relations are spatial; they have important settlements that sprung up around the fishing establishments and are more or less permanently occupied. Of these, "El Desemboque," close to the mouth of a river from which they have been displaced, is the most important, with 80 per cent of the Seri

8: Ascher E-5 (1960) 1962 NU31 Seri NU31

Elsewhere (Ascher 1961) I have disputed this portrayal of the potential of existing ethnography, citing examples where qualitative and quantitative models have been constructed from ethnography and suggesting that one task for archeology is to codify the literature in a manner useful to itself. Regardless of doubts about existing ethnographies for archeological purposes, the worth of future ethnography for archeology will depend on the acquisition of the relevant kinds of information. Although discussion on the subject has been recorded (Tax *et al.* 1953: 229-232), no specific guides have been produced. This paper provides and discusses an example, which can be used as a paradigm, model, or guide of the kind of information to be collected from ongoing communities which would be of general value for archeology. The subject culture is that of the Seri Indians of Sonora, Mexico; the example describes a persistent trait complex associated with fishing for the Pacific green turtle, with particular emphasis on one trait in the complex, the harpoon foreshaft.

Example from the Seri Indians

The Seri, who numbered approximately 200 individuals in 1960, occupy a band of coastal desert about four miles wide and seventy miles long in the state of Sonora in western Mexico. The band extends along the Gulf of California from Kino Bay in the south to Desemboque in the north, opposite the largest island in the Gulf, Tiburon. Although the region is desert, with an estimated average rainfall of less than eight inches per year, falling mostly in July and August, it is comparatively rich in succulents and small land mammals. The Gulf forms a natural trap for large fish and marine mammals and is a breeding ground for the Pacific green turtle. The scantiness of fresh water has constituted, in the past and present alike, the single crucial limiting factor to agriculture and human occupancy.

In the past the Seri may have comprised from four to six tribal groups, and they were certainly numerically larger, with a maximum estimated population of 2,000 (Kroeber 1931: 53, 30). Until very recently they also occupied Tiburon Island, and at some more remote period they extended south, north, and east over a territory whose bounds are uncertain (Kroeber 1931: 5). On the basis of linguistic change, Kroeber (1931: 54) calculated that the Seri could have inhabited this general region for 1,000 years. It is uncertain whether the original occupation stemmed from Baja California via the Gulf of California or from the north and west via an overland route or routes (Kroeber 1931: 39-51). The first contact with Europeans occurred as early as 1540 (McGee 1898: 51).

In culture content the Seri are most closely affiliated with the Pima (Kroeber 1931: 51), but they do not share the practice of agriculture with them or with their western neighbors. The Seri are primarily fishermen; secondarily they gather the fruits of succulents; and to a still lesser extent they hunt game. McGee (1898: 214)

9:Malkin F-5 (1953-1955)1962 MUSI Seri MUSI

II

[P6A]

OUTLINE OF SERI CULTURE

Territory

131 Historically the Seri territory at its greatest expansion extended from the coast of Mar del Cortez to Hermosillo and from Porto Libertad to Guaymas and included also the Tiburon Island. 101 Ethnically, the Seris represented a collection of [197] dialectically distinct tribes, the Guyma, Tepoca, etc., perpetually at war with each other, whose common characteristic was their culture, and who were framed in to the north by the Pima Alto and Papago, to the west by the now extinct Cochimi, to the east by the Onata and Pima Bajo and to the south by the Cahita, Mayo and the Yaqui.

648 But their area had fluctuated much. After the 131 bitter and disastrous wars against the Mexicans from the late 18th century through most of the 19th, the Seris lost out and were forced by the Mexican government to settle on Tiburon. This incarceration did not last long. McGee had already in 1894 found them on the mainland and Kroeber found them equally divided between Tiburon and Kino. In 1930 when he visited, evidently they lived largely in Kino Bay. As the Mexicans pressed on Kino moving in, in ever greater numbers, and as Japanese fisheries worked the Gulf out of Desemboque attracting the fish-loving Seris, their main settlement has moved once more. About 1940 most of the Seris moved into Desemboque and at the time of my visit, almost all of them lived [361] there while only two families made Tiburon their "permanent" camp. School and availability of the medical facilities as well as the location of the Mexican traders in Desemboque, part of whose scheme the Indians have become, attracted the Seris. Only occasionally today they roam inland or visit other areas, either owing to the hunting or fishing expeditions.

Numbers

●161 Seri numbers fluctuated as much as their territory and had suffered immense diminution. I shall list the estimates below, indicating the source of the information:

	Authority		Source
1780	Velasco	2,000	McGee
1824	Troncoso	1,000+	"
1826	Ratio (Tiburon only)	1,000-1,500	"
1826	Hardy	3,000-4,000	"
1841	de Mofras	1,500	"
1844	...	550	"
1846	Velasco	500	"
c.1855	Encinas	500-600	"
c.1865	"	250-300	"
1894	Mathews, native	250-350	"
1930	Thomson	175	Kroeber
1934	Mex. En. Cifras	160	Ethn. Synth. Mex.
1953	Smith, Jr.	248	MS. Univ. of Ariz.
1955	Malkin	236	Malkin

Malkin E-6 (1953-1956)1962 MUII Seri MUII

II

OUTLINE OF SERI CULTURE

161 164 At the moment their number should have increased again, after a disastrous epidemic in the spring of 1965.

Biological Background

142 The Seris are somewhat atypical among the peoples of the general area in that they represent a very slender, sinewy, tall type. This is true of both men and women. This physical type in general is apt to be associated with the desert habitat and the Seris answer the requirements very well. As shall be seen, their economy also represents characteristic adaptation to the desert conditions of pre-agricultural people. 433

Economy

The Seris readily fell into the category of the pre-agricultural hunters and gatherers with one variant, dependence on the produce of the sea, whether marine turtles, fish or littoral invertebrates.

[241] Here the Seri provide another exception for the region. They are the only group that never had any agriculture. McGee has pointed out their lack of agricultural sense and this has also been mentioned by Kroeber and by incidental Mexican visitors. Of late years, some efforts have been made by the Mexican government and the American Friends' Service Committee to persuade them [648] toward agriculture, but to no avail. The Seris [464] occasionally hire out to the surrounding Mexican or American rancher-farmers but grow restless after a few days of cotton picking and retire, with their advanced pay lost to the employer. On the other hand, efforts to teach them related practices, well digging for example, also failed to interest them. To this day they remain much in the original pattern of economy.

262 114 McGee (1898:214) who had a chance to observe them from the first hand and who also had access to valuable information from the outsiders gives the following figures for their diet:

land game, large and small (incl. stolen stock)	21%
waterfowl and eggs, incl. pelican	13
sea-turtles	25
fish	15
shellfish	10
cactus fruit	9
other plants	5
miscellaneous	2
total animal 84%	marine 65%

Kroeber (1930:20) questions these figures and thinks that shellfish represents greater percentage than McGee indicated. He also thinks the use of turtles had been exaggerated. He figures the dependence on the animal diet as 75% and on marine 60% but he suspects that these figures are too high for a band with ready access to countless cacti and mesquite.

[P.6B]

11: Moser L-5 (1956-1961) 1963
NU31 Seri NU31

SERI BANDS

EDWARD MOSER

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Mr. Moser, of the Summer Institute of Linguistics, holds a Master's degree in Linguistics from the University of Pennsylvania. He has been doing research on the Seri language during trips to Sonora since 1952.

ABSTRACT

105 621 642 614 [178] In previous publications on the Seri, frequent reference to distinct Seri groups points to historical tribal divisions at some level. Recent research among the Seri has determined the former existence of six bands which included three dialect groups. Three of the bands were subdivided into clans. These six bands, whose formation may have been caused largely by internal struggles, were eventually crushed and reduced to a single group by the devastation brought about by external conflict.

INTRODUCTION

101 13 [61] 178 621 642 121 621 642 The Seri tribe is located in Mexico along the coast of Sonora between Bahía Kino and Puerto Libertad, and on Tiburon Island (Fig. 1). Today it consists of approximately two hundred and eighty persons who call themselves *kongkaak*[1] "the people." Although at one time it was comprised of six distinct bands (Fig. 2), the tribe has now lost its band organization. However, much of the late history of these now-defunct tribal units remains vivid in the minds of the Seri. The purpose of this paper is to present some of the salient features of these former bands, to discuss certain interrelations between them, and to recount the Seri version of the disintegration of the band system.[2]

114 Three published studies on the Seri should be mentioned.[3] Of these, the reports by Kroeber and by Griffen are the more reliable. All three investigators mention tribal divisions which Griffen rightly designates as bands.

BANDS

642 101 131 BAND I *xika ʔai kkoii* "they who live toward the true wind"

This group is commonly referred to in the literature as the Tepoca or Salinero. As shown on Fig. 1, they inhabited an area which extended from a point slightly north of Puerto Lobos to Punta Tepopa on the south. The territory extended inland, encompassing the general area delimited by the San Ignacio River.

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the vessel to Guaymas. With the aid of a group of Yaqui, some of these women were said to have been permitted to go to Hermosillo and eventually to return to their home on Tiburon. Others of their group are said to have remained near Guaymas. The women who returned to Tiburon reported that the San Esteban women and children were put aboard another ship which sailed southward.

BANDS I, III, AND IV

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As opposition from the Papago and government forces increased, the members of Band I were forced to seek refuge on Tiburon Island. The mainland members of Band III (subdivisions 11 and 12) were also forced, especially during the Encinas Wars, to flee to Tiburon. There the combined forces of Bands I, III, and IV sought to cope with the military expeditions sent out through the years to exterminate them. Tiburon Island is an adverse battlefield for the uninitiated; some expeditions were turned back due to lack of potable water or because of failure to make contact with the enemy in the mountainous terrain. Some expeditions did encounter the Seri, however, and many natives were either killed or captured.

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Through the years, then, these military encounters, along with smallpox and measles epidemics, were responsible for reducing the Seri tribe to a small remnant. The band and clan systems lost their functional relevance as the people continued to live together for mutual protection. Shortly after the turn of the century, the expeditions and raids had practically ceased.

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SIGNIFICANCE OF BANDS TODAY

With the dissolution of the band system, the rule of descent shifted from patrilineal to bilateral, and the rule of residence shifted from patrilocal to neolocal.

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Although the substance of the band system is no longer a reality, the concept of land ownership still remains. A young Seri of today may choose to be associated with either the i?iriiting of his father or that of his mother. He is said to inherit part ownership of the area. It is recalled by one informant that in former times ownership of a mountain was especially important. Sometimes ownership of a mountain was included as part payment for a bride. Thus a person might 'own' a mountain in a subdivision other than his own.

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A custom exists even today whereby a person names his dog after a mountain or other geographical point located in his subdivision. Although the person may re-use the name, each dog so named must be of the same sex as the first.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

262 pounds (about 455 kilograms) yearly. The aggregate diet of the tribe may be estimated also by assuming the population to comprise 300 full eaters, besides, say, 50 nurslings negligible in the computation; so that the annual consumption of the tribe may be reckoned at 300,000 pounds (136,000 kilograms), or 150 tons, of solid food. Accordingly the several constituents may be estimated, as shown in the accompanying table, in percentages of the total, in pounds aggregate and apiece for the eaters, and (so far as practicable) in units both aggregate and apiece; the weights of units being roughly averaged at 100 pounds (45 kilograms) for turtles, 12½ pounds (5.6 kilograms) for large land game, 450 pounds (about 200 kilograms) for stock, and 2 ounces (56.7 grams) for tunas.

[162]

Estimated annual dietary of the Seri tribe

Constituents	Per cent	Quantity		Units	
		Aggregate	Apiece	Aggregate	Apiece
		Pounds	*Pounds*		
Turtles	25	75,000	250	750	2½
Pelicans	5	15,000	50	1,200	4
Other water-fowl and eggs	8	24,000	80	.....	.....
Fish	15	45,000	150	.....	.....
Shellfish (except turtles)	10	30,000	100	.....	.....
Large land game	7	21,000	70	200	⅓
Other land game	8	24,000	80	.....	.....
Stock	6	18,000	60	40	⅛
Tunas	9	27,000	90	216,000	720
Other vegetals	5	15,000	50	.....	.....
Miscellaneous	2	6,000	20	.....	.....
Total	100	300,000	1,000	.....	.....

Of course the constituents vary with temporary conditions; during "The Time of the Big Fish", practically all other sources of food were neglected until the providential supply was exhausted; during the decades of main subsistence on stolen stock it is probable that the consumption of other constituents, perhaps excepting the tunas, was proportionately reduced; and it is not improbable that during the warfare between Seri and Tepoka, described by Hardy, the consumption of turtles was materially diminished. Judging from the direct and indirect data and from general analogies, the least variable constituent is the cactus fruit, which probably fails but rarely and is so easily harvested as practically to supplant all other supplies during its season of a month or more. At the best, too, the quantitative estimates are nothing more than necessarily arbitrary approximations, based on incomplete inquiries and observations;[1] yet they are better than no estimates at all, and

[1] About 200 turtle-shells were noticed about the rancherias at Punta Tiburones and Isla Tiburon alone in 1895, all being less than two years old, as judged from the degree of weathering.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

462 ing field; though by far the greater part of their time is spent in listless lounging or heedless slumber under the incidental guard of roaming youths and toiling women. The matrons are the real workers in the tribal hive; they are normally alert and active, passing from one simple task to another, gathering flotsam food along the beach or preparing edibles in the shadow of the jacal, with an eye ever on material possessions and children; they frequently join in hunting excursions of considerable extent; they are the chief manufacturers of apparel, utensils, and tools; and the scions of Castilian caballeros are not infrequently staggered at the sight of half a dozen Seri women "milling" a band of horses, and at intervals leaping on one to kill it with their hupfs. The masculine drones are the more petted and courted by reason of their fewness, for during a century or two, at least, the women [162] [562] have far outnumbered their consorts—a disproportion doubtless tending in some respects toward the disintegration of the clan system and, reciprocally, toward the firmer union of the tribe.

[756] One of the most noteworthy extensions of feminine functions among the Seri is toward shamanism. So far as could be ascertained from Mashém and the associated matrons at Costa Rica, it is such beldams as Juana María who concoct the arrow "poison", compound both necromantic medicines and curative simples, cast spells on men and things, and even fabricate the stone arrowpoints and counterfeit cartridges; though unhappily the data are neither so full nor so decisive as desirable.[1]

562 623 Conformably with their prominence in proprietary affairs, the Seri matrons seem to exercise formal legislative and judicative functions; for not only do they hold their own councils for the arrangement of the domestic business of the rancherías, but they also participate prominently in the tribal councils (as explained by Mashém), and play important rôles in carrying out the decisions of such councils—as when they cooperate with war parties as decoys, or journey across their bounding desert to spy out the land of the enemy.

64 On the whole, it would appear that the clan organization of the Seri conforms closely with that characteristic of savagery elsewhere, especially among the American aborigines. The social unit is the maternal clan, organized in theory and faith in homage of a beast-god, though defined practically by the ocular consanguinity of birth from a common line of mothers; yet the several units are pretty definitely welded into [619] a tribal aggregate by common feelings, identical interests, and conjugal ties. The most distinctive features brought out by the incomplete 562 investigation are the somewhat exceptional manifestation of property-right in the females, the singularly strong sense of maternal relation, and the apparent prominence of females in shamanistic practices as well as in the tribal councils.

[1] The agency of the women in applying the arrow "poison" was noted by Hardy; cf. p. 256.

7: Marroquin E-5 (1955) 1957 NU31 Seri NU31

Geographical Distribution

The Seri Indians live in two small Indian villages on the coast of the Gulf of California, State of Sonora, Desemboque and Punta Chueca. From there they frequently go to Isla Tiburón in the Gulf of California. 131 [484]

Approximately 35 Seri families live in Desemboque and 16 in Punta Chueca. Only in the first of these two places are there five "yori" (mestizo) families. 162 [563]

Sanitary Problems

The Seris have no defense against certain diseases which, like measles and flu, they acquire in their relations with the "yoris"; these diseases cause many deaths among the Indians. According to the an- 164 731 [751]

[291] [854] [302]

Seri Indian woman of Desemboque, Sonora. *Photo Henriette Yurchenco.*

cient Seri Chico Romero, last Seri Governor, there was a great smallpox epidemic there about 1897 which caused the death of a third of the tribe which was living in Costa Rica, a small ranch on the coast of Sonora.

In 1955 measles appeared among the Seris, with a great number of victims, children and adults; the actions of the rural teacher Leo Sandoval, the Linguistic Eduardo Mosser and of the sanitation authorities of Hermosillo, succeeded in keeping the mortality rate down; nevertheless, the number of deaths reached 5% of the total native population. [165] [744]

7: Marroquin E-5 (1955) 1957 NU31 Seri NU31

way. Since the preparation of the drinks served to them is not very hygienic, they often produce severe gastro-intestinal upsets and even affect their vision.

Demographic Data

The following chart shows the population distribution by age groups:

SERI POPULATION BY AGE GROUPS AND SEXES
(as of December 31, 1955)

	Men	*Women*
Less than 1 year	4	3
From 1 to 5 years	10	11
From 6 to 10 years	15	12
From 11 to 15 years	15	16
From 16 to 20 years	13	14
From 21 to 25 years	4	1
From 26 to 30 years	7	15
From 31 to 35 years	16	13
From 36 to 40 years	5	2
From 41 to 45 years	2	2
From 46 to 50 years	3	6
From 51 to 55 years	5	5
From 56 to 60 years	—	—
From 61 to 65 years	4	2
From 66 to 70 years	1	2
From 71 to 75 years	—	3
From 76 to 80 years	—	1
From 81 to 85 years	2	—
From 86 to 90 years	—	—
From 91 to 95 years	1	—
Total	107	108

The pyramid of ages formed by the data of the above chart does not present the usual characteristics of a young community in full growth, as is common in the Indian villages; rather it is closer to the old communities, with predomination of the working age groups over the infant and old age groups.

Work

The population able to work can be calculated as that between 11 and 65 years of age; because even though they begin to work very early, the cycle of economic productivity is very long. Calculation of that population gives us the following figures:

POPULATION ABLE TO WORK
(between 11 and 65 years)

Men, 71 or 69%, of the masculine population.
Women, 76 or 70% of the feminine population.

We can add that, at least as far as the male population is concerned, the figure of 69% with a potential work capacity is equivalent, in general terms, to the percentage of the population economically active, since one of the singular characteristics of the Seri population is the fact that they constitute a community fully occupied: all the men of working age have a place set aside in the fishing activities; this is an advantageous position for increasing economic development of the tribe. With relation to the women the situation is not the same, since the majority of girls of marriageable age carry on very few productive activities; it could be said that economic responsibility begins with matrimony.

If it is true that all the Seri men are fishermen, it is also true that there is the beginning of some specialization of jobs, which are carried on complementing or as an accessory to the principal occupation. Thus we have among the men:

Carpenters, constructors of *piraguas* (a kind of canoe)	6
Medicine men	14
Farmers	2

And among the women:

Seamstresses	4
Farmers	1
Midwives	22

The relatively high number of medicine men and midwives should not be surprising; Seri popular medicine is very well known and depends principally on magical propitiation and since the magic powers are acquired in a variety of ways, including dreams, and the healing rites are, on the other hand, very simple, it is not strange that medicine men should abound. As for the midwives, it can be said that every woman who has undergone the experience of childbirth feels herself able to help at a birth; nevertheless, it is said that the more experienced women are those best able to take care of those giving birth.

Problems which should be attended to

In addition to the sanitary problem mentioned above, mention should also be made of the problem of agriculture, linked with the necessity for supplying food to an Indian population which since economically it depends principally on fishing, needs to complement its diet with agricultural products to achieve a better one. In close relation

2: Kroeber E-5 (1930)1931 NU31 Seri NU31

Society

583 Marriage is monogamous. The wife is bought, in spite of the [595] poverty of the Seri. Santa Blanco paid 150 pesos in property for his wife. Chico Romero, a widower, paid more for his; a widow, "because she had three daughters, and a family with daughters is rich" (in expectation of bride prices).

591 The wife goes to live with the husband. A young couple lives 562 with the young man's parents, perhaps in an annex to the house. "The man commands." Chico was emphatic on this point, and repeated that when his son married he would live with him, not with the girl's relatives. Both he and Santo have step-sons-in-law as well as daughters-in-law living with them, but this is because they are chief and boat-owner respectively; (and the sons-in-law are young).

833 Copulation was said to take place immediately on marriage. McGee's statement of a period of continence being cited as the custom of a foreign tribe, the informant obviously wondered and laughed. [843] Intercourse goes on during pregnancy; but not for some months after birth, for fear of a new pregnancy, which would be injurious to the child. A good man respects his wife at all times and does not constantly pursue her.

144 No half-breeds were seen, and the Seri declare they are free of 164 venereal disease.

551 Nothing could be elicited from the informant as to anything like 14 the group-inherited names of lineages, or clans, of the Yuman tribes.

When a woman dies, the widower may give the children to his dead wife's parents to raise. This is the only item learned that might point to McGee's "matriarchate"; but the informant may have been thinking of particular cases. His son lives with him, though he lost the boy's mother.

582 Cross-cousin marriage is as prohibited as that of parallel cousins. This is in accord with the sibling terminology for all cousins; but in view of the present small number of the tribe, the rule must work difficulty.

A man does not marry his dead wife's sister. Apparently he [587] may not. Nor is there levirate. The informant volunteered the question if marriage with step-daughters was permitted by other peoples. Being told of the Navaho custom, he seemed shocked.

606 Neither husband nor wife looks at or addresses either parent-183 in-law. In the isolated, small-group life of the Seri, this rule can hardly be adhered to with complete rigor, and its conspicuous carrying out was not observed; but then everything in their behavior is casual, informal, and slovenly.

607 The kinship system as recorded contains a note as to a woman not addressing her younger sister's husband by kinship term except

3:Davis & Dawson E-5 (1922-1940) 1945
NUXI 5-ari NU31

342 They are mostly of ocotillo sticks and mesquite branches stood up in the sand, lashed together, and plastered with mud for protection from the wind, but not from the rain (Fig. 22). When the fishing season ends
221 about Holy Week, they all move away to the turtle grounds on Tiburon Island, where they also hunt deer. Then in June and July they go into the desert hills to reap the harvest of cactus fruit, retiring to the lowlands thereafter to harvest the mesquite beans and to await the recurrence of the big fish. In and about Kino they are reasonably well fed and clothed, and were it not for their susceptibility to disease they would be as well-
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[p.268(c)]

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7: Marroquin E-5 (1955) 1957 NU31 Seri NU31

In general, the Seris have a healthy appearance; the most frequent complaints are gastro-intestinal and visual defects due to avitaminosis. It is very possible that given the difficult living conditions resulting from the desert environment, a rigorous selective process among the newborn takes place so that only those who possess exceptional physical qualities survive. This explains why the majority of them retain the physical characteristics described by Hardy more than a century ago: "the Indians of Isla Tiburón are tall, healthy and well built".

In spite of attempts at education, the Seris do not practice the elemental rules of hygiene; their way of life, neglecting this aspect, contributes to increase the unhealthy foci which exist in the places where they have established themselves.

Dwellings.—The Seris retain many vestiges of their nomadic life, among them the hut which serves as their living quarters; many of them are simple provisional arrangements for sheltering themselves from wind and sun, and they bear no relationship to the stability and durability of our dwellings. The Seri hut was made to meet the necessities of a nomadic people who had no reason to spend much time nor work on making a dwelling which would only be used for a season (one, two or at the most three months). Nevertheless, some innovations have been introduced in the last 20 years, so that we must distinguish between two types of houses. The primitive model consists of a series of scrub pine arches interwoven with branches from the same shrub almost totally covered by foliage, tortoise shells, *zacate*, etc., with only a small hole in one of its ends as an entrance (this type of hut is the same that McGee saw in 1894 when the Seris still led a nomadic life).

In the new model more resistent woods are used, like *sahueso*, *torote*, etc., and poles, between which is laid a layer mud. The house is rectangular, without windows; with only one entrance, but always larger than the entrance to the brush hut. Other models would have to be added to these two, due to the incorporation and utilization of tents made in the United States which some U. S. tourists or the Society of Friends have given them. The tent is used as permanent living quarters; or sometimes combined with branches to cover the primitive type huts.

Domestic Animals.—The Seris are very fond of domestic animals like the dog, cat, and finally, the chicken. For all practical purposes these animals live together with the family; they rest on the piles of rags and sand which serve the Indians as beds; lick the plates and cooking utensils; dirty the house; increase the household fauna with their fleas and other vermin thus contributing to create and unhealthy atmosphere in the home.

Problems of Intoxication.—Their dealings with the fish buyers, in whose stores are sold beer, mezcal and tequila, has turned them to the consumption of these drinks. The Seri drinks liquor in an uncontrolled

7: Marroquin E-5 (1955) 1957 NU31 Seri NU31

way. Since the preparation of the drinks served to them is not very hygienic, they often produce severe gastro-intestinal upsets and even affect their vision.

Demographic Data

The following chart shows the population distribution by age groups:

SERI POPULATION BY AGE GROUPS AND SEXES
(as of December 31, 1955)

	Men	*Women*
Less than 1 year	4	3
From 1 to 5 years	10	11
From 6 to 10 years	15	12
From 11 to 15 years	15	16
From 16 to 20 years	13	14
From 21 to 25 years	4	1
From 26 to 30 years	7	15
From 31 to 35 years	16	13
From 36 to 40 years	5	2
From 41 to 45 years	2	2
From 46 to 50 years	3	6
From 51 to 55 years	5	5
From 56 to 60 years	—	—
From 61 to 65 years	4	2
From 66 to 70 years	1	2
From 71 to 75 years	—	3
From 76 to 80 years	—	1
From 81 to 85 years	2	—
From 86 to 90 years	—	—
From 91 to 95 years	1	—
Total	107	108

The pyramid of ages formed by the data of the above chart does not present the usual characteristics of a young community in full growth, as is common in the Indian villages; rather it is closer to the old communities, with predomination of the working age groups over the infant and old age groups.

Work

The population able to work can be calculated as that between 11 and 65 years of age; because even though they begin to work very early, the cycle of economic productivity is very long. Calculation of that population gives us the following figures:

121 documentary data and second, also the archaeological data. The subject matter unfortunately [172] is absent from the first. As for the archaeological data, there is none as yet to date for the area [114] except Giffor's unpublished manuscript. Nor have we the kind of ethnography that would be of help—not until ethnographers will pay greater attention to the naturalistic knowledge of the people. Nor can the matter of the Seris' cultural connections be undertaken with the present material with any degree of reliability, simply because no such material exists for the neighboring group.

However, few suggestions outside the limitations and the main object of the present analysis can be made. From the fragmentary data available I shall try to show the change in utilization of animals by the Seris. I think I can also indicate a few points in support or denial of this or that idea of the Seris' cultural connections. I can also suggest the direction of the attitudes toward animals in the Seri culture, in a sphere which normally we assign variously within the domain of religion or world view. I can also indicate some of the major changes in the Seris' exploitation of general environment. All these can be suggested only fragmentarily, as only small bricks toward a generalized structure of our knowledge of the Seri culture. To this extent the present analysis should be helpful to the future student of the Seri culture and to our general understanding of it.

Procedure

114 The field work on which this material is based has been done during the summer of 1953, June-September and again for one week in May, 1955. [164] The second visit took place at a most inopportune [166] time, amidst bad measles, dysentery and a flu epidemic which completely disorganized the tribe and persuaded most of them to flee Desemboque into the coastal desert.

The work was accomplished mostly in Desemboque, the Seris' largest and most permanent settlement after 1940 where most of them lived. Occasional side trips were undertaken later to Hermosillo, Estero Sargente, Campo Vivora, Tiburon and some of the other places mostly with the view of evaluating their ecological nature and for the observation and acquisition of the zoological materials not available in Desemboque. These trips had been undertaken in the company of the Seris who then also doubled up as informants.

124 During the first two weeks of my stay in Des-[126] emboque, I did no interviewing but concentrated on the collections of zoological material, occasionally and informally asking for the name of this or that animal. After two weeks regular interviewing work was commenced, first with an aid of Mr. Leo Sandoval, Mexican, U.S.—educated school teacher, but later on entirely without an interpreter. There are sound reasons for this practice. Direct questioning allows the interrogator to evaluate the replies in their less obvious nuances, the reactions of the informant to the question, his hesitations, uncertainties and the like.

In the event of well-known animals with those colloquial Spanish name everybody, Mexican and

[P.4A]

9:Malkin E-5 (1953-1955)1962 NU31 Seri NU31

II

OUTLINE OF SERI CULTURE

161 At the moment their number should have increased again, after a disastrous epidemic in the 164 spring of 1955.

Biological Background

142 The Seris are somewhat atypical among the peoples of the general area in that they represent a very slender, sinewy, tall type. This is true of both men and women. This physical type in general is apt to be associated with the desert habitat and the Seris answer the requirements very well. As shall be seen, their economy also repre- 433 sents characteristic adaptation to the desert conditions of pre-agricultural people.

Economy

The Seris readily fell into the category of the pre-agricultural hunters and gatherers with one variant, dependence on the produce of the sea, whether marine turtles, fish or littoral invertebrates.

[241] Here the Seri provide another exception for the region. They are the only group that never had any agriculture. McGee has pointed out their lack of agricultural sense and this has also been mentioned by Kroeber and by incidental Mexican visitors. Of late years, some efforts have been made by the Mexican government and the American Friends' Service Committee to persuade them [648] toward agriculture, but to no avail. The Seris [464] occasionally hire out to the surrounding Mexican or American rancher-farmers but grow restless after a few days of cotton picking and retire, with their advanced pay lost to the employer. On the other hand, efforts to teach them related practices, well digging for example, also failed to interest them. To this day they remain much in the original pattern of economy.

262 McGee (1898:214) who had a chance to observe 114 them from the first hand and who also had access to valuable information from the outsiders gives the following figures for their diet:

land game, large and small (incl. stolen stock)	21%
waterfowl and eggs, incl. pelican	13
sea-turtles	25
fish	15
shellfish	10
cactus fruit	9
other plants	6
miscellaneous	2
total animal 84%	marine 65%

Kroeber (1930:20) questions these figures and thinks that shellfish represents greater percentage than McGee indicated. He also thinks the use of turtles had been exaggerated. He figures the dependence on the animal diet as 75% and on marine 60% but he suspects that these figures are too high for a band with ready access to countless cacti and mesquite.

[P.68]

quite possible but I couldn't substantiate the story from contemporary evidence. Perhaps during the height of the shark hunting for the liver oil, the Seris used the oil also for wood polish, although it isn't very clear just what sort of artifact they make would require such treatment. The wooden tools or artifacts among them are in short supply at all times. Finally, the huge horned manta was supposedly hunted also for its hide but just in what circumstances it was not explained. It is the only fish which the Seri ever mentioned as having been put to such use.

Fishing

As already mentioned, fishing nowadays is largely accompanied from flat-bottomed boats with hook and line. The old ways of getting fish by spearing are almost gone for good. Recently, an attempt has been made to teach the Seris siene fishing, but 10 years of these endeavors accomplished only ruination of a number of expensive nets and of much fishing gear and the desertion of the project by the Indians. It may be that their individualistic and almost anarchistic attitudes preclude cooperation, essential in this type of fishing.

The bait is obtained in any one of the three ways: by dynamiting fish in tide pools or along the shore, or by catching small fry with small hook and line, or finally by collecting small fishlets in the tide pools, prying them out from under rocks or simply—and here the Seri boys excel—by shooting them in the tide pools with tiny toy arrows or simply spearing them with a stick. The dynamiting is done with the purchased sticks of dynamite which the Seris obtain in the tiendas. The procedure is often risky and down right dangerous. Some of the Seris have blown themselves up with dynamite. I have seen one of them, who lost both arms and had a jaw broken during a dynamiting trial. He went about with a dirty rag tied up over his head to support the wrecked jaw-bone. He was carried off by measles two years later in the 1955 epidemic.

The Seris' commercial fishing is pretty much controlled and exploited by the two or three Mexican fish traders from Nogales and Hermosillo. These have their tiendas in Desemboque, which at set price sell things to the villagers. They also provide the Indians with the five horse-power motors for fishing trips and pleasure cruises and with the oil and gasoline essential to run these—also at set price. They finally purchase the fish—at a set price—and from the proceeds the Seris purchase goods at the tiendas, completing the cycle. Not all Seris are compelled to work for the Mexicans, and, in fact, they do not always do so. Some families stay away from Desemboque and depend on the sail and oars for propulsion. They come to the village only once every few months to obtain supplies. Even when in the village, the Seris make little effort to fish for more than they wish to get in order to satisfy their immediate needs.

Fishing expeditions usually take place in the morning. Most Seris will set off before daybreak and will return with the catch by 11 a.m. or noon.

[P.33 A]

known remedy. This bug is actually a vector of the Chagas disease. Its repeated bites may cause allergic sensitization. For lack of clinical observation it is impossible to determine the exact nature of its effects, as the Seris describe them.

The remaining two creatures are both beetles. *Calosoma* is thought a nuisance rather than a danger. Its disagreeable habit is spitting out poison through the rear end of the body which may cause headache for a brief while. To this I may readily attest having on more than one occasion be subjected to *Calosoma's* bombardment. However, at worst it is a mere irritant. Finally *Hippomelas*, sometimes confused with the *Steriphanus* and *Dermestes* are supposedly evil smelling but not harmful.

Finally the male *Arenivaga*, considered separate from the female, the Seris claim also bites with the mouth but it is not dangerous.

What is little surprising is that the Seris did not include in their list a few other insects that could have readily found their way into the "dangerous" gallery. The huge water bug *Lептocerus* of course bites, although the Seris claim it does not. An aquatic insect par excellence, it simply never had a chance to prove to them what it can do. The Pentatomid bug *Rhytidolomia* at least may be included among the stinging variety, although it is perfectly harmless. Finally there are various Reduviid bugs, notorious carnivores, which when disturbed and offered an opportunity will sting painfully. But here again, the Seris may not have played enough with them to find out.

On the whole, the Seris are well informed concerning possible dangers from various insects. As a matter of practical application, they do in this regard far better than the Mexicans.[12]

278

[12] The Seris may have used a concoction of insects in arrow poisoning. McGee quotes Hardy who had visited them in 1825 as follows:

> "It is believed that the Ceres Indians have discovered a method of poisoning their arrows and that they do in that way: They kill a cow and take from it its liver. They then collect a number of rattlesnakes, scorpions, centipedes and tarantulas, which they confine in a hole with the liver. The next process is then to beat them with the sticks in order to enrage them, and being thus infuriated, they fasten their fangs and exhaust their venom upon each other and upon the liver. When the whole mass is in high state of corruption, the old women take the arrows and pass the point through it. They are then allowed to dry in the shade and it is said that the wound inflicted by them will prove fatal. Others again say that the poison is obtained from the juice of the yerba de fle'cha (arrow wort)."

[P. 53 B]

000 wear ceremonial feathers as did our western Indians. I saw no skin or
164 cutaneous disease, or evidence of tuberculosis or of trachoma---the curse of our Indians.

142 One boy-child of five years was a handsome child---fat, round,
202 sturdy, with roving great black eyes, large thick lips, a picture of
[241] perfect health. He was almost naked. His hair was done in a pigtail
[857] with a red string braided into it. His face like all the others was dirty, but he waded into the shallow water with a short spear and I saw him catch two crabs with his little harpoon. The water did not bother his face.

415 They had no plates or eating tools, except large deep clam shells,
412 cast up by the sea, which served as cups and dippers. Their long, keen
264 belt knives were used for cutting, carving or skinning, and always the
[257] fingers for eating. They gathered in a circle around an olla of seeds of long grass growing on the sea bottom prepared by winnowing, parching and grinding, and then cooked with turtle oil. Each one dipped his or her fingers into the olla and conveyed them to the mouth without losing a drop, and licked them off with great relish.

231 The dogs eat with the family. There were six or seven half-starved
264 ones. If someone picked up a piece of turtle flipper the dog often took the first lick at it, bit off a piece or licked it before it reached the owner's mouth. The dogs were not punished. They were just slapped to keep them out of the pots.

123 We had a great time that evening in Seriland. The young man played
534 his violin. This consisted of a hollow box cut out of a *palo verde*
[824] tree, and a piece of pine about sixteen inches long; terminating in a
[283] hollow where a single peg was fitted. The one string was twisted deer
[237] sinew, and the bridge was a small round clam shell at the far end. The
[533] bow was a small bent stick and some black horsehair. On the handle was a wad of rosin fastened underneath. By fingering this string a few weak squeaky notes were made, and this was the classical music of the Seris.

Manuel Encina seized his gourd rattle and began chanting. Herrera tapped a tin can and I beat on an inverted basket and the orchestra
535 was in full swing. A young girl, Rosa, dragged out a turtle shell and
123 standing on it began to dance. This dance consisted of stepping up and down quickly with each foot alternately, and this stamping, barefooted, emitted a hollow sound. Every once in a while I let out an
[126] Indian yell which pleased the Seris very much. For two hours they had a real swell time. We took one flashlight of the proceeding.

[342] Each family was in their hut, which afforded very slight shelter
[362] as they were only partially roofed over and the sides were broken
[354] down in places. The huts were all adjoining and each had a little
[361] campfire, which did not give much illumination, so the dancing was in semi-darkness.

(text contineus on p. 163)

War Chief of the Seris

622 765 There is sorrow and mourning on that little known island in the Gulf of California, Tiburon.

[164] During the last few years, many of the Seri tribesmen have succumbed to influenza and pneumonia, and many a night has the weird and melancholy wailing for the dead mingled with the soft lapping of the waters of the Gulf on the shores of that lovely desert isle.

But now a universal grief has overtaken the remnants of a once powerful and warlike tribe---Juan Tomas (*Pik-tom-aohe*, "Very Brave" in his own language)---the old War Chief of the Seris, is no more. He has fought a last and losing battle. For a month, maybe for several months, the women will wail and lament, and around the tribal camp fires, for many a night, the Seris will tell of his exploits and miraculous escapes, as they told Roberto Thomson, their friend and advisor.

[164] The old Chief died on the shores of Kino Bay opposite Alcatraz Island, probably of pneumonia.

There was no soft mattress to lie upon, no pillow to rest his head, and no roof to shelter him from sun or storm. His bed was the sand of the sea shore; his canopy, the blue heavens above, and his [163] requiem, the solemn beating of the surf on the shore. His last words were to his grand-nephews to inherit the *Sierra de las Tinajas*, and he asked the Indians and his *Yori* (Mexican) friends to protect his nephews and the mountains.

622 764 His body was wrapped in an old *serape*, fastened around by rope of native fibre. His grave was dug with paddles from the canoes, four and one-half feet deep in the sand hills near the sea. He was placed in the grave with his head to the north, face up, with the carapace of a sea turtle covering his head. Amid much lamentation and mourning, the grave was partially filled, and then a heavy layer of *cholla* cactus spread over. The grave was then filled and mounded up and covered with *chollas*, *mesquite*, shells, and thorny growths, and also a five-gallon can. The cactus spines were to discourage coyotes.

7: Marroquin E-5 (1955) 1957 NU31 Seri NU31

Geographical Distribution

The Seri Indians live in two small Indian villages on the coast of the Gulf of California, State of Sonora, Desemboque and Punta Chueca. From there they frequently go to Isla Tiburón in the Gulf of California. 131 [484]

Approximately 35 Seri families live in Desemboque and 16 in Punta Chueca. Only in the first of these two places are there five "yori" (mestizo) families. 162 [563]

Sanitary Problems

The Seris have no defense against certain diseases which, like measles and flu, they acquire in their relations with the "yoris"; these diseases cause many deaths among the Indians. According to the an- 164 731 [751]

[291] [854] [302]

Seri Indian woman of Desemboque, Sonora. *Photo Henriette Yurchenco.*

cient Seri Chico Romero, last Seri Governor, there was a great smallpox epidemic there about 1897 which caused the death of a third of the tribe which was living in Costa Rica, a small ranch on the coast of Sonora.

In 1955 measles appeared among the Seris, with a great number of victims, children and adults; the actions of the rural teacher Leo Sandoval, the Linguistic Eduardo Mosser and of the sanitation authorities of Hermosillo, succeeded in keeping the mortality rate down; nevertheless, the number of deaths reached 5% of the total native population. [165] [744]

124 Seri alike, is acquainted (Cougar, Jaguar, Whale, etc.) questioning had been done by referring to such and such beast without the use of pictures or actual specimens. This procedure had been followed for the majority of mammals, which are well enough known in the area. But otherwise, questioning had been done with actual specimens in hand, alive where possible. This was owing to [825] the fact that response may be different to the dead specimens than to the live ones and grew out of a conviction (entirely substantiated in the course of work) that many animals, of a small variety especially, are recognized more by their distinctive behaviour pattern, flight, selection of habitat, voice, running posture, etc., than by the shape and form alone. All invertebrates, all reptiles and all but the best known and largest fish had produced the data from actual specimens, dead or alive. Finally, where neither common colloquial name nor specimens were available, I resorted to pictures. That way I obtained data for a small number of animals and for a good many birds. This method has its weakness. The line drawings in the excellent guide to the *Birds of Mexico* by Blake I used are somewhat on the "dead" side and may be good aid in bird identification to someone who also will read the text, but they often fail to be of much use to someone who rarely has seen the drawings in any book, let alone a bird guide. From the replies it was obvious that a certain amount of misidentification took place in the naming of the birds or mammals from the sketches. I took account of this and eliminated from consideration all those forms where misidentification on the part of the informant was obvious. This in itself may be a worthwhile object of study but it was not my concern at the moment.

In working with the informants I studiously avoided giving them any suggestion that I already knew what the animal was or that I had a fair idea about the general features of its natural history. This is especially important in considering the Seris' knowledge of the animal distribution, ecology and other salient features. When available, I often brought along specimens of species I knew did not occur in Desemboque which had been captured elsewhere, in the absence of the Seris. This was in order to test better their recognition of animal forms.

115 Altogether 10 informants had been used. Of these the bulk were questioned in 1953, some again in 1955 and that year Chico Romero, now an old man of over 70, had been also added to the roster. Chico was Kroeber's star informant in 1930 and from him came the bulk of Kroeber's original information.

The two main informants were Miguel Barnett, then aged about 45 and one of the Seris' best hunters, and Jose Juan Moreno, a fellow about 25, recognized as their best fisherman. As expected, their preoccupations and interests slanted their replies. Accordingly, Jose Juan had the best knowledge of the marine animals and Miguel of the terrestrial animals. Jose Juan aided me again with some information in 1955.

● [165] Other informants were as follows: Juan Torres, aged 40 or so; Ramon Montayo, one of the

[P. 4B]

115 oldest Seris then alive of over 70; Ramon Cor-
[165] rales, claiming to be 37 and on the dim-witted side; Jesus Montanyo, a quiet, cooperative man of 21; Natcheo Molina, aged 35 or so, whose interest in the protestant hymnals was unfortunately far greater than in giving me the information I wanted; Jose Manuel Romero, about 37 years old on his own claim; and Jose Barnett, Miguel's son, aged 14. Inclusion of young Barnett was a lucky
825 strike because it indicated clearly differences in the natural history knowledge between the older men and the young men, later confirmed also in the incidental questioning of several young boys.
[868] Young men start out with general interest in animals of all sorts, including the small invertebrates, but as they grow up they end up with solid knowledge of economically important species and slim, forgotten knowledge of the insignficant invertebrates.

124 I made an endeavor to obtain the same sort of information from several informants in order to eliminate as far as possible aberrant answers or peculiarities. The most solid information is available for the mammals, which are, of course, well-known. Here in some cases the same kind of information had been obtained from five individuals. In other instances only two to three were available and sometimes only one. What was surprising about the information given were not the differences, which I often indicated in the text, but the amount if identical agreement on almost every single item of data between different individuals.

Since it was impossible to obtain information on all animals from the same individuals, the questioning proceeded in "blocks." By this I mean, I would question for example two individuals about the entire order of mammals (every species of them) and another two on the birds. Two other individuals then would be questioned on half of the birds and half of the mammals, while the other two on half of the reptiles and half of the fishes; still another two on half of the insects and half of the marine invertebrates, while others would yet cover all of the insects or reptiles or fishes independently. This I believe is a useful procedure. It allows to test generalized concepts of natural history for several individuals for diverse groups. It is motivated by the question of no little importance. What does so-and-so know about mammals and what does he know about birds?
[825] What are his generalized ideas of each group? It had been soon discovered that when it concerns special points, the informants were apt to have standardized notions of what the animals did, regardless of the actual situation. The less actual observational knowledge they actually had, the more frequent were pat replies. Obvious demonstration of this helped a great deal to eliminate such pat answers or to recognize them for what they were and to account for them in the final analysis.

000 Another point in the procedure is of par-
[P.5A]

*825 ster is really a curious case. The Seris deny that it is venomous or that it bites. Reasons why this really venomous beast is considered harmless by the Seri is probably twofold. First, it is quite rare in their territory; the area of Kino and Desemboque is near the southern-most boundary of its distribution. Second, it is sluggish and slow moving and quite unaggressive, and, as the Seri know it, it probably never has bitten any of them within their memory.

To break them down by the groupings, the toxic species are six species of snakes, four of lizards and the toad, and the non-toxic, all of the turtles, 10 species of lizards and one snake. It is clear then that almost all snakes are considered toxic, although in one instance, the red racer, there seems to be disagreement on the subject. But when the figures are broken down to the fatalities, this pattern disappears. For here, only both rattler, *Xanthusia*, *Coelonyx* and *Crotaphytus* are considered potentially fatal to the Seris, and the sixth, the coral snake, is supposedly fatal to the Mexicans but not to the Seris. There are good grounds for believing that, under certain circumstances, the bite of both rattlers, especially of the diamondback, can be fatal and there are cases on record [165] when a young child (Seri) from Desemboque and a young man were killed by the large rattler—within the past few years (1950-1954). The sidewinder is slightly less feared, no doubt because it is smaller, but they think it does always cause illness. Both rattlers inflict the toxic bite with the two large teeth in the front, where the venom is stored. They both have venom also stored in the head and in the rear section of the body two inches or so from the anus. So, at least, the Seri think; and when they deliver the rattlers to the frying pans, they always are careful to cut off the head and the tail and throw them away. This belief in the location of snakes' venom in the head 171 and the tail, in a variety of species and generally *825 of snakes (whether actually toxic or not), seems widespread in a good many parts of the world in areas where snakes, especially the large ones, make up a favorite dish of the aborigines.[12] Of course, this belief in the location of the venom in the head and tail of the rattlers is also shared by the Mestizos of their area.

*825 The coral snake represents somewhat a special case and is a good indication that many such ideas may owe their origin to the actual observation. This snake is greatly feared by the local Mestizos and is considered by them to be at last as deadly as the ratttlers, if not more. The Seris also think that it is venomous; they believe that it harbors venom in the head and tail and also that it inflicts venom with the fangs. But they also say that it does not bite as readily as the viper and that it is fatal to the Mexicans but not to the Seris. It is not hard to guess that the basis for this difference in the toxicity is the fact that the snake probably never has bitten any of the Indians. But the Seris

[12] I have observed this, by the way, among peoples of Victoria and Duala in the Cameroons—except that the belief there was associated with the large African rock python.

[P. 29 B]

* 825 to the belief that the spider stings with the rear of the body) may cause death in 2-3 hours. It may [753] also kill chicks and one of the informants, Jose Juan Moreno, claimed to have been paralized by the sting of the Black Widow for eight days . . . . [158] However, Juan is a good hypochondriac, and even when not apt to exaggerate, he may have suffered a genuine trauma owing to an encounter with this spider. While smaller spiders are not considered too dangerous, the *Tarantula* is. It can both bite with its jaws and sting with the rear end of the [753] body and it is said to be more dangerous to children—it may cause their death at times. The adults will weather its attack but will become quite ill. [752] As remedy for its bite, a plant *quivira* is used as a hot extract taken in a small glass for 2-3 days.

Almost all of the animals closely related to the Arachnoids, the scorpion, the Sun spider, *Scolopendra* and the tick, are also venomous in the Seri view. Of these, the scorpion is most feared, and in adults it will cause illness lasting up to a week while to very small children it may be fatal. As a proof the informants mentioned a six months old ● [165] girl recently stung by a scorpion who died in less than six hours—the fact confirmed by the Mexicans in the village. Remedy for this is similar to [752] others—a plant called *amx.xuháy* is drank with hot water for three days, a glass per day.

The Sun spider, also armed supposedly with a sting at its rear, is said to be fatal to horses for whom there is no remedy. This is a pure fiction, [177] but the belief is common among the Mexicans and the Seris certainly took it up from them. But no one suggested that the Sun spiders are in any way harmful to men although they are avoided, just in case.

The *Scolopendra* is considered very dangerous, much like a viper. It bites badly but is not fatal. Actually, the story probably concerns another species, for *Scolopendra malkini* has only recently been described and is rare in Desemboque.

The tick's unpleasant traits had already been discussed under another heading. All that is essen- [753] tial to add is a belief that in addition to other exploits it can enter a person's ear causing much pain and that for this reason it is particularly bad for the children, as there is no remedy.

There remain three more species of various degree of toxicity. Of these, the *Triatoma* is most conspicuous both for its effects and factual observation. This blood sucker bites with its mouth parts [753] and introduces illness called by the Seri *syexhis. ?e . kemep* which may end fatally. People of all sexes and ages are subject to it equally, and the illness may last three months, and there is no

[P. 53 A]

157 The women are virtuous and faithful and perform all the duties of
152 wife and mother and bear their share of hardships. The hard life,
[145] exposure and struggle for existence soon causes hard features, wrinkles
[165] and ugliness. Many babies die young and the tribe probably numbers
[167] only about two hundred.

123 The dancing by the driftwood fires continued as we turned in to rest, our eyes constantly drawn to the flame and the glittering eyes in the wild dark faces, while the waves of the sea accompanied the chanting in that mysterious isle of Seriland.

225
133

Seris - off to the fishing grounds - December 1934. Alcatraz Island in distance.

222 In Seriland most of the food comes from the sea. During April and May, at the time of my first visit, a green grass growing on the sea bottom was detached and washed ashore. The women dragged it up on the bank near camp and spread it out to dry. Some of the stalks contained about seven fine green seeds the size of a pin head. When dry, the
[285] women threshed them out with sticks on a piece of canvas. These are cleaned by the deft use of the *batea*, or winnowing basket, of which these people are pastmasters.

252 A pint of these fine seeds were parched in an olla over coals of
262 driftwood and constantly stirred to prevent burning. It was then ground on a flat rock like a *metate*---any flat rock---into a green meal which was very nourishing. This was cooked in an olla with turtle oil, making a porridge like thick green paint. It was then drunk or eaten with the fingers. If there is plenty, two fingers are used; if not, only one finger.

361 13 [491] [166] capital by paved road. Formerly, in the twenties and early thirties, Seris' chief mainland settlement. Now with the influx of the Mexicans, the Seris deserted the place completely as a camp site, although they still visit it occasionally. Distinct in the extensive sand beaches and sand marine flats which harbor peculiar bird, fish and insect fauna.

7. **Guaymas**—southernmost point considered here and probably also of the Seris' historical extension. Nowadays very rarely visited by them and probably only while cruising with the Mexicans. Large settlement, many tourists. Backlands; rocky desert.

8. **Tepopa**—spectacular rocky head just south of Desemboque, opposite to Tiburon. Caves, usual mountainous vegetation, *Sahuaro*. Many Seri hunting encampments and one of the places where the Sonoran bighorn is still hunted.

9. **Coast of Baja California**—very rocky area across the bay—almost never visited by the Indians.

13 10. **Tiburon**—island in the Gulf of California separated from the mainland by a narrow channel called "Infernillo," only a mile wide. Rugged, mountainous. By **Tiburon** is meant an overall island area in distinction from **Tecomate** or the mountains.

[361] [221] 11. **Tecomate**—a water-hole and Seri campsite on the northern shore of Tiburon. Today this is the only permanent site on the island where these Indians, actually only a few families among them, still go to live for part of the year.

12. **Mountains of Tiburon**—rugged interior of the island, reaching up to almost 4000 feet. Usual vegetation cover with *Sahuaro* and other typically Sonoran floral components, fauna much as on the mainland except lacking cougar, bighorn and some other larger forms. The interior does have some "tenajas," that is water-holes and there is said to be a rivulet up in the mountains.

13. **Infernillo**—narrow channel between Tiburon and the mainland, often called locally "canal." For the terrestrial fauna and for birds reference is made to the mainland shores of Infernillo. For the marine fauna is meant either the open water in this channel or to the littoral off the mainland. The opposite shores and littorals are covered as "Tiburon." Maximum depth is said to be up to 25 fathoms.

14. **Isla Patos**—small island north of Tiburon and directly due west of Estero Sargente and halfway between Tiburon and Punto Tepopa. Visited [223] by the Indians only occasionally, mostly in connection with the duck hunt.

15. **Isla Raza**—a small island between Angel de la Guarda and San Lorenzo.

16. **San Esteban Island**—a round island between Tiburon and San Lorenzo, up to 1700 feet elevation. Visited occasionally during fishing or turtle [221] hunt trips or in search of a chuckawalla.

[P. 2 A]

9:Malkin E-5 (1953-1955)1962 NU31 Seri NU31

documentary data and second, also the archaeological data. The subject matter unfortunately is absent from the first. As for the archaeological data, there is none as yet to date for the area except Giffor's unpublished manuscript. Nor have we the kind of ethnography that would be of help—not until ethnographers will pay greater attention to the naturalistic knowledge of the people. Nor can the matter of the Seris' cultural connections be undertaken with the present material with any degree of reliability, simply because no such material exists for the neighboring group.

However, few suggestions outside the limitations and the main object of the present analysis can be made. From the fragmentary data available I shall try to show the change in utilization of animals by the Seris. I think I can also indicate a few points in support or denial of this or that idea of the Seris' cultural connections. I can also suggest the direction of the attitudes toward animals in the Seri culture, in a sphere which normally we assign variously within the domain of religion or world view. I can also indicate some of the major changes in the Seris' exploitation of general environment. All these can be suggested only fragmentarily, as only small bricks toward a generalized structure of our knowledge of the Seri culture. To this extent the present analysis should be helpful to the future student of the Seri culture and to our general understanding of it.

Procedure

The field work on which this material is based has been done during the summer of 1953, June-September and again for one week in May, 1955. The second visit took place at a most inopportune time, amidst bad measles, dysentery and a flu epidemic which completely disorganized the tribe and persuaded most of them to flee Desemboque into the coastal desert.

The work was accomplished mostly in Desemboque, the Seris' largest and most permanent settlement after 1940 where most of them lived. Occasional side trips were undertaken later to Hermosillo, Estero Sargente, Campo Vivora, Tiburon and some of the other places mostly with the view of evaluating their ecological nature and for the observation and acquisition of the zoological materials not available in Desemboque. These trips had been undertaken in the company of the Seris who then also doubled up as informants.

During the first two weeks of my stay in Desemboque, I did no interviewing but concentrated on the collections of zoological material, occasionally and informally asking for the name of this or that animal. After two weeks regular interviewing work was commenced, first with an aid of Mr. Leo Sandoval, Mexican, U.S.—educated school teacher, but later on entirely without an interpreter. There are sound reasons for this practice. Direct questioning allows the interrogator to evaluate the replies in their less obvious nuances, the reactions of the informant to the question, his hesitations, uncertainties and the like.

In the event of well-known animals with those colloquial Spanish name everybody, Mexican and

[P.4A]

157 The women are virtuous and faithful and perform all the duties of
152 wife and mother and bear their share of hardships. The hard life,
[145] exposure and struggle for existence soon causes hard features, wrinkles
[165] and ugliness. Many babies die young and the tribe probably numbers
[167] only about two hundred.

123 The dancing by the driftwood fires continued as we turned in to rest, our eyes constantly drawn to the flame and the glittering eyes in the wild dark faces, while the waves of the sea accompanied the chanting in that mysterious isle of Seriland.

225
133

Seris - off to the fishing grounds - December 1934. Alcatraz Island in distance.

222 In Seriland most of the food comes from the sea. During April and May, at the time of my first visit, a green grass growing on the sea bottom was detached and washed ashore. The women dragged it up on the bank near camp and spread it out to dry. Some of the stalks contained about seven fine green seeds the size of a pin head. When dry, the women threshed them out with sticks on a piece of canvas. These are [285] cleaned by the deft use of the *batea*, or winnowing basket, of which these people are pastmasters.

252 A pint of these fine seeds were parched in an olla over coals of driftwood and constantly stirred to prevent burning. It was then ground 262 on a flat rock like a *metate*---any flat rock---into a green meal which was very nourishing. This was cooked in an olla with turtle oil, making a porridge like thick green paint. It was then drunk or eaten with the fingers. If there is plenty, two fingers are used; if not, only one finger.

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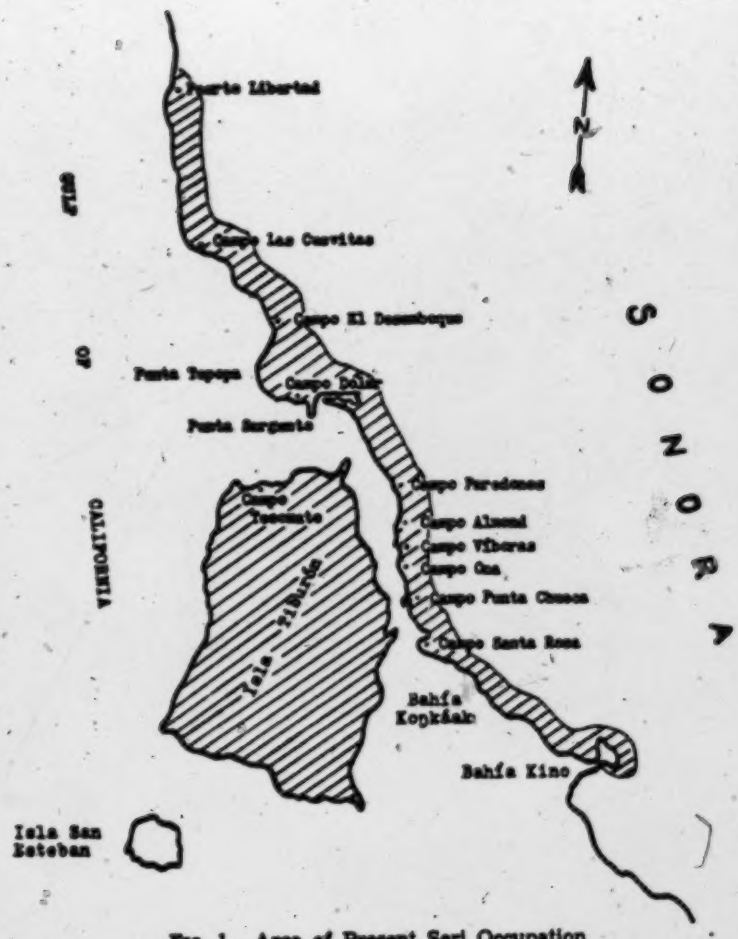

Fig. 1. Area of Present Seri Occupation

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One descendant of this band states that long ago his ancestors wandered north from the region of Guaymas. Eventually, they established land rights to the coastal area extending from Campo Ona on the south to Puerto Lobos on the north. Before long, however, they relinquished claim to the area between Campo Ona and Punta Tepopa. [173] [167] [425]

It is to be understood, of course, that groups from this band, as well as groups from other bands, at times ranged far afield from their respective territories. Band I, for instance, had campsites as far north as the mouth of the Colorado River. [484]

642
621 Little information could be elicited about subdivisions 7, 8, 9, and 10. The reason for this might be that Band VI was slow in
[169] abandoning those coastal areas (if it actually did inhabit them)
[628] as it was being displaced by Bands III and IV.

621 The Seri say that long ago several men, called *?ant i?akimhoh*
642 "they who explain the land," came to Tiburon Island and told the
173 people along the eastern shore that they owned also a corre-
425 sponding strip of land on the mainland. Thus the inhabitants of
167 subdivisions 2, 3, 4, 5, and 6 laid claim to the coastal areas directly across the channel from them as shown by the dotted lines on Fig. 4. They assumed that their new territories extended inland
[222] to include as much terrain as they chose to claim. At first the people went to their mainland areas primarily to gather cactus fruit. Eventually some of them remained on the mainland and established subdivisions 11 and 12. This establishment superseded the claims of the five Tiburon Island subdivisions to their main-
[101] land territories. Although the mainland subdivisions 11 and 12 formed, in some respects, a separate band in their own right, they retained their name, *ta?eowkw kongkaak* "the people of Tiburon Island." Eventually this group returned to Tiburon.

621 Of subdivisions 13 and 14 which are shown on Fig. 4, very
642 little is known. The people of subdivision 13 inhabited an area
131 encompassing the northern end of the dry lake, La Playa Noriega
[829] (San Bartolo). Some of the Seri believe that these people were
[172] giants. Although in this area I have found clay figurines and other
[173] artifacts common to abandoned camps elsewhere, the Seri do not know the names of the camps of this subdivision. Subdivision 14 occupied the area surrounding the southern end of the same dry lake.

Subdivision 15 occupied the general area which is now Villa de Seris, a settlement on the southern edge of Hermosillo. As
[167] Hermosillo grew, it became increasingly difficult for these Seri to maintain their customary way of life, and they eventually returned to Tiburon Island.

642 BAND VI
621 Band VI became divided into four subdivisions, the names of
101 which are:

xnitom	"_____"
pahii	"flint"
kofte oki ifa	"large iguana peninsula"
koiih	"tubular"

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

subsequent episode in their history or century in time. The description of the effect of the poison is especially suggestive of the Seri; as pointed out on a later page, the Seri arrow-venom is magical in motive, but actually consists of decomposing and ptomaine-filled organic matter, so that it is sometimes septic in fact, while the arrow-poison of the neighboring Opata, Jova, and other Piman tribes was (so far as can be ascertained) vegetal; and these accounts seem to attest septic poisoning rather than the effects of any known vegetal toxic.[1]

Such (assuming the validity of the several identifications) are the earliest records concerning the truculent tribesmen and the desolate district known centuries later as the Seri and Seriland.

About 1545 began the Dark Ages in the history of northwestern Mexico; the excursion of Guzman, and the journeys of Cabeza de Vaca and Friar Marcos and of Coronado himself, died out of the memory of the solitary adventurers and scattering settlers who slowly infused Spanish culture and a strain of Caucasian blood into the Sonoran province; even the route taken by Coronado's imposing cavalcade was lost for centuries, to be retraced only during the present generation, largely through the determinations of Simpson, Bandelier, Winship, and Hodge.[2] It is true that Don Francisco de Ibarra penetrated the territory in 1563, and remained until rumors of gold in other districts drew him elsewhere; it is also true that Captain Diego Martinez de Hurdaide pushed into the province in 1584, and entered on a career of subjugation, waging persistent war with the Yaqui, which resulted in the acquisition of the territory of Sonora by treaty April 15, 1610;[3] yet few records of exploration or settlement were written before the advent of the Jesuit missionaries, toward the end of the seventeenth century.

Still more astounding was the eclipse of knowledge of the gulf. Despite Ulloa's survey of the entire coast, recorded in an itinerary so detailed that every day's sailing may readily be retraced, and despite Alarcon's repetition of the surveys and extension of the discoveries far up Rio Colorado (where his work was verified by that of Melchior Diaz), a mythic cartography arose to shadow knowledge and delude exploration for a century and a half; for "upon the authority of a Spanish chart, found accidently by the Dutch, and of the authenticity of which there never were, or indeed could be, any proofs obtained, an opinion prevailed that California was an island, and the contrary assertion was treated even by the ablest geographers as a vulgar error";[4] and a mythic strait formed by cartographic extension of the Gulf of California indefinitely northward haunted the maps of the seventeenth century. This error was adopted by various geographers, including Fredericus

[1] It should be noted that Mr. F. W. Hodge, whose large acquaintance with the Southwest and its literature gives his opinion great weight, is inclined to class the Indians in question as Opata.

[2] Op. cit., pp. 29-72.

[3] Bosquejo Histórico y Descriptivo, por F. T. Dávila, 1894, p. 8.

[4] A Natural and Civil History of California; translated from the original Spanish of Miguel Venegas; London, 1758, vol. i, preface.

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F. E. Grossmann defines the term "*se*, very, adj. (prefix)", and over a hundred and fifty of his terms illustrate the use of this adjectival or adverbial prefix as an undifferentiated yet vigorous intensive (*e. g.*, *af*, female or woman, *se-af*, a lady—great or grand woman; *ōk*, high or height, *se-ōk*, highmost); and in the Pimentel vocabulary this signification is attested by several other terms (*e. g.*, "*Serrrui*, puno menudo y bueno"). Finally, the intervalated consonant *r* is a common participial element in the Piman, while the suffix *ai* is a habitual assertive termination, as shown by various terms in the Pimentel and other vocabularies. Dropping this termination, the expression becomes *se-errr*, or—without the nonessential participial element—*se err*, signifying (so far as can be ascertained from the construction of the language) "moving", or "mover", qualified by a vigorous intensive.[1] To one familiar with the strikingly light movement characteristic of the Seri—a movement far lighter than that of the professional sprinter or of the thoroughbred "collected" by a skilful equestrian, and recalling that of the antelope skimming the plain in recurrent impulses of unseen hoof-touches, or that of the alert coyote seemingly floating eerily about the slumbering camp—this appellation appears peculiarly fit; for it is the habit of the errant Seri to roam apryly and swiftly on soundless tiptoes, to come and go like fleeting shadows of passing cloudlets, and on detection to slip behind shrub or rock and into the distance so lightly as to make no audible sign or visible trail, yet so fleetly withal as to evade the hard-riding horseman. The Seri range over a region of runners: the Opata themselves are no mean racers, since, according to Velasco and Bartlett, "In twenty-four hours they have been known to run from 40 to 50 leagues";[2] and, according to Lumholtz, their collinguals, the Tarahumari, or "Counting-Runners", are named from their custom of racing,[3] and display almost incredible endurance:

> An Indian has been known to carry a letter from Guazapares to Chihuahua and back again in five days, the distance being nearly 800 miles. In some parts where the Tarahumaris serve the Mexicans they are used to run in the wild horses, driving them into the corral. It may take them two or three days to do it, sleeping at night and living on a little pinole. They bring in the horses thoroughly exhausted, while they themselves are still fresh. They will outrun any horse if you give them time enough. They will pursue deer in the snow or with dogs in the rain for days and days, until at last the animal is cornered and shot with arrows or falls an easy prey from sheer exhaustion, its hoofs dropping off.[4]

[1] The latter form (*se-errr*) corresponds precisely with the current Papago pronunciation of the term, though none of the various Papago informants consulted were able to interpret the expression; indeed, they simply relegated it to the category of "old names" which they deemed it needless to discuss. An archaic term of orthography, noted in the synonymy (pp. 129-130), is *Sêrri*, which suggests the same sounding of the initial sibilant.

[2] From 105 to 130 miles: Bartlett, Personal Narrative, vol. i, p. 443.

[3] Memoirs of the International Congress of Anthropology, Chicago, 1894, p. 186. In a letter to Mr F. W. Hodge, under date of September 11, 1897, Dr Lumholtz says: "After renewed investigation I have come to another opinion regarding the meaning of the tribal name *Tarahumare*. This word is a Spanish corruption of the native name 'Rahuri'. Though the meaning of this word is not clear, that much is certain that *rahu* or *tara* means 'foot', and I therefore take it that we must be at least approximately correct when we say that the word signifies 'foot-runner'."

[4] American Anthropologist, vol. viii, 1895, p. 92.

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171 481 The Papago, of the same region and linguistic stock, have a racing game in which a ball of wood or stone caught on the foot is thrown, followed, and thrown again until the two or more rival racers have covered 20 to 40 miles in the course of a few hours; and their feats as couriers and trailers are quite up to those of the Opata. Yet among all these tribes, and among the Mexicans as well, the Seri are known as *the* runners par excellence of the Sonoran province; and it is but natural that their astounding swiftness and lightness of foot should have brought them an appellation among contemporaries to whom these qualities peculiarly appeal.

101 Accordingly, both derivation and connotation give meaning to the name, and warrant the rendering (much weakened by linguistic infelicities) of "spry" or "spry-moving", used in substantive sense and with an intensive implication.

101 114 175 197 The chronicles of the tribe, especially those written during the seventeenth and eighteenth centuries, indicate that the alien designation was applied loosely and with little appreciation of the tribal organization, just as was the case elsewhere throughout the continent. Gradually the chroniclers took cognizance of intertribal and intratribal relations, and introduced various distinctions in nomenclature expressing tribal or subtribal distinctions of greater or less importance. One of the earliest distinctions was that between the Seri and the Tepoka, and this distinction has been consistently maintained by nearly all later authorities, despite the commonly accepted fact (brought out most authoritatively by Hardy) that the tongues of the tribes are substantially alike. Another early distinction was that made between the Seri and the Guayma; it was based primarily on diversity of habitat and persistent enmity, though all the earlier authorities agreed, as well shown by Ramirez, that the tongues were essentially identical. The distinction has been maintained by most authorities and strongly emphasized by one (Pinart, as quoted by Bandelier), and since the Guayma are extinct, and hence beyond reach of direct inquiry, the early interpretation of tribal relation must be perpetuated.[1] Still another distinction was that made between the Upanguaymis and the Guayma, and inferentially the Seri also; although the grounds for this distinction were not specifically stated, it seems to have grown out of diversity in habitat merely; but there were clear implications that the tribe or subtribe was affiliated linguistically with the Guayma, and hence with the Seri, and this assignment has been adopted by leading authorities, including Pimentel and Orozco. Among the earlier distinctions based on indus-

101 114 175

[1] In view of the clear indications, both a priori and a posteriori, that the latest Guayma survivors must have taken the language of the Pimas (Yaqui) tribesmen with whom they found refuge, and in view of his failure thus far to present his data for public consideration, M Pinart's inference that the Guayma belonged linguistically to the Piman stock can hardly be admitted to hold against the specific statements of the Jesuit missionaries and such accomplished inquirers as Ramirez and Pimentel.

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is at least partially countervailed by conspicuous biotic characters, such as color, stature, etc., so distinctive as almost to seem specific: the Seri are distinctively dark-skinned, their extreme color-range (so far as known) being less than their nearest approach to any neighboring tribe; they are nearly as distinctive in stature, the difference between their tallest and shortest normal adults being apparently less than that between their shortest and the tallest of the neighboring Papago—though they are not so far from the more variable and often tall Yaqui; and they appear to be no less distinctive in such physiologic processes as those connected with their extraordinary food habits. Still more distinctive are the demotic characters connected with their habits of life and modes of thought; and when the sum of biotic and demotic characters is taken, the Seri are found to be set apart from all neighboring Sonoran tribes by differences much more striking than the individual range among themselves.[1]

It is especially noteworthy that the Seri have held aloof from that communality of the deserts which has brought so many tribes into union with each other and with their animal and vegetal neighbors through common strife against the common enemies of sun and sand—the communality expressed in the distribution of vital colonies over arid plains, in the toleration and domestication of animals, in the development of agriculture, and eventually in the shaping of a comprehensive solidarity, with the intelligence of the highest organism as the controlling factor.[2] Dwelling on a singularly prolific shore, the Seri never learned the hard lesson of desert solidarity, but looked on the land merely as a place of lodgment or concealment, or as a source of luxuries such as cactus tunas, mesquite beans, and tasty game; they never formed the first idea of planting or cultivating, and their only notion of harvesting and storing against time of need was the intolerably filthy one of nature's simplest teaching; they apparently never grasped the concept of cooperation with animals, and came to tolerate the parasitical coyote only in that its persistence was greater than their own, and in so far as it was stealthy enough to hide its travail and the suckling of its young against their ravening maws; and they apparently never rose to real recognition of their own kind in alien forms, but set their hands against agricultural and zoocultural humans as peculiarly potent and hence especially obnoxious animals. Naturally their racial intolerance was seed of battle and blood-feud; and they would doubtless have melted away under the general antagonism but for the natural barriers and unlimited food of their restricted domain.

At present, as for the later and best-known decades of their history,

[1] It seems probable that the Seri were nearer to tribes of southern Baja California than to those of Sonora at the time of the earliest explorations, yet that the distinction was sufficiently strong to warrant the extension of the proposition to those tribes also.

[2] The Beginning of Agriculture, American Anthropologist, vol. VIII, 1895, p. 350. The Beginning of Zoöculture, ibid., vol. X, 1897, p. 295.

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and the shell-strata are so like and so different from any other fictile ware as to be distinguished at a glance. Hence it would seem manifest that the Seri olla must constitute a normal nucleus for the Seri esthetic; yet even here the field is practically barren, as is shown by the study of a score of usable and mortuary specimens and of thousands of sherds. The most ornate specimen seen is that depicted in plate XXXII. Its form, like that of the balsa, is a mechanical equation of forces and materials; its body-color is that of the clay, blotched and blackened irregularly by the smoke of the firing; and its decoration is limited to 17 faint lines or bands radiating downward from the ill-shaped neck. The radial bands were evidently drawn by a finger dipped in clayey water after the vessel was otherwise finished for the firing; they are irregular in placement, width, length, and direction; they generally run in pairs, two straight lines alternating with two zigzag lines, though the circuit is completed by two zigzags drawn wide apart and separated by a single straight line. The meaning of the device (if meaning there be) was not directly ascertained; but it is suggestive that its maker and owner was the mother of the youthful warrior from whom the rattlesnake necklace was obtained (her face-symbol is that shown in the lower left figure of plate XXVI), and that the vessel was surrendered more reluctantly than any other article obtained from the tribe.

Another utensil of some importance to the tribe is a basket of the type illustrated in figure 24. It is manufactured with much skill and is used for various domestic purposes, being practically water-tight and unbreakable, and materially lighter than even the unparalleledly light fictile ware of the Seri. In form and size and weave the half dozen examples seen correspond with widespread southwestern types; yet it is noteworthy that while otherwise similar baskets are habitually decorated by other basket-making tribes, the Seri specimens were absolutely devoid of decorative devices.

Practically the only remaining artifacts available for decoration are those connected with archery; and it suffices to say that while the bows are skilfully made and the arrows constructed with exceeding pains, not a single specimen seen showed the slightest trace of symbolism or of nonutilitarian motive.

Summarily, the Seri are characterized by extreme esthetic poverty. This has been noted by the early missionaries and by the few other travelers who have approached their haunts, as well as by the vaqueros on the Encinas and Serna and other ranches bordering their range, who know them as "los pobrecitos". All observers have been struck with their destitution and squalor; yet when the impressions are particularized they are seen to denote absence of the poor luxuries, rather than the bare necessities, of primitive life. The people are pathetically poor in the industrial sense; their equipment in artifacts—implements, weapons, utensils, habitations, apparel—is meager almost, if not quite, beyond parallel in America; yet their esthetic equipment, practically

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517 limited as it is to a single line of symbolic portrayal, is still more abjectly meagre.

[111] Any comparison of the Seri esthetic with that of other Amerind tribes serves only to emphasize its paucity: the tribes of the plains, with their eagle-feather headdresses, elaborately arranged scalp-locks, widely varied face-painting, and ritualistic camp circles; the Pueblo peoples, with their ornate masks, elaborate altars, figured stuffs, and painted pottery; the denizens of the eastern woods, with their feather-decked peace-pipes, divinatory games, fringe-bordered garments, and prayer-inscribed arrows; the coastwise peoples of the upper Pacific, with their labrets and tattoo-marks, totem-poles and carved house-fronts, painted canoes and prodigal potlatches; the neighboring desert tribes, with their festal footraces, decorated pottery and basketry, pendent scarfs and garters, and well-wrought caskets for family fetishes; even the timid acorn-eaters of California, with their sacramental baskets, artistically befringed kilts, bead-strings of far-traveled nacre, and patiently wrought fabrics of rare feathers—all of these seem rich in esthetic motives when contrasted with "los pobrecitos" of arid Seriland.

[105] And the contrast is only intensified when the economic motives of the various tribes are compared: the industrial motives of the Seri are fairly numerous and diverse; they are skilful huntsmen, successful fishermen, capable navigators, and competent warriors (as attested by the protection of their principality for centuries), so that despite the absence of agriculture and the avoidance of commerce, their industrial range is not very far below the aboriginal average; and while they are deficient in thrift, this shortcoming is balanced by a peculiarly developed vital economy whereby they are delicately adjusted to their environment, as has been already shown. On the whole, it would appear that the Seri are not only lower in esthetic development than the contemporary tribes thus far studied, but also that they stand at the bottom of the scale in the ratio of esthetic to industrial motives.

THE SIGNIFICANCE OF DECORATION

000 Largely through recent researches among the American aborigines, it has been shown that decorative and many if not all other esthetic concepts normally arise in symbolism, gradually expand in conventionism, and eventually mature in a realism which is itself the source of ever-extending esthetic motives; and the observations on the lowly Seri afford opportunity for somewhat extending the generalizations based on higher tribes.

When peoples of unequal cultural development are compared, it is commonly found that the higher are the more independent in action and thought: thus, advanced peoples make conquest of nature for their own behoof, while primitive peoples are largely creatures of environment; Caucasian citizens are self-conscious lawmakers, while Amerind tribesmen are semiconsciously dominated by mysteries fearsomely

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extensive rancherias near Punta Narragansett measure 10 miles by trail from the same aguaje; the half dozen jacales about Campo Navidad are separated by some 15 miles of stony and hilly pathway from the alternative watering places of Tinaja Anita and Arroyo Carrizal;[1] and the huts crowning the great shell-heap of Punta Antigualla—one of the most striking records of immemorial occupancy in America—are nearly or quite 10 miles by trail from Pozo Escalante, and still further from Aguaje Parilla, the nearest source of potable water. These are but typical instances; and while there are ruined huts (evidently regarded as temporales) near the dead waters of Barranca Salina and Pozo Escalante, they tell the tribal policy of locating habitations in places surprisingly remote from running water. Like other desert folk, the Seri have learned to economize in water-carrying by swigging incredible quantities on their occasional visits to the aguajes; it is probable, too, that their systems are inured, somewhat as are those of the desert animals that survive deprivation of water for days or months, to prolonged abstinence from liquid food; yet it seems safe to assume that at least half of the water required in their vital economy (say 2 or 3 pounds apiece daily, on an average) is consumed after transportation over distances ordinarily ranging from 4 to 12 miles. Under these conditions the Seri have naturally produced a highly developed water industry; they are essentially and primarily water-carriers, and all their other industries are subordinated to this function.

Concordantly with their customs, the Seri have a highly differentiated aquarian device in the form of a distinctive type of olla, which is remarkable for the thinness and fragility of the ware, i. e., for largeness of capacity in proportion to weight. Representative specimens are illustrated in plates XXXII and XXXIII (the former painted, as already described). The dimensions of the two vessels are as follows: painted olla, height 34 cm. (13½ inches), mean diameter 32.5 cm. (12¾ inches); plain olla, height 32 cm. (12½ inches), mean diameter 32 cm. In both specimens the walls are slightly thickened at the brim, those of the painted vessel measuring about 4 mm. and those of the plain vessel about 4.5 to 5 mm. in thickness. Below the brim the walls are thinned to about 3 mm., as is shown in the fractured neck of the painted specimen. The capacity of these Seri vessels in proportion to their weight, compared with that of typical examples of ware produced by other desert peoples, is shown in the accompanying table.

Comparison of the mean ratios indicates that the Seri ware is almost exactly twice as economical as that of the Pueblos—i. e., that its capacity is twice as great in proportion to the weight of the vessel; and that

[1] The preciousness of water in this hard province was impressed in the 1895 expedition, during which the cost of the commodity, reckoned on the basis of the time and labor involved in obtaining it, was estimated at $10 or $12 per gallon, or about the wholesale price of the finest champagnes.

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even the ware of the wide-wandering Papago is more extravagant than that of the Seri in the ratio of 100 to 54. It is noteworthy, too, that the typical Seri ware is much more uniform than that of the other tribes; the various specimens seen in use at Costa Rica, and nearly entire in various parts of Seriland, were closely similar in form and nearly alike in dimensions; while the innumerable smaller fragments scattered over Seriland and the neighboring "despoblado" or buried amid the shells of Punta Antigualla correspond precisely in thickness, in curvature, in material, and in finish with the ware observed in use.

Neither the manufacture of the ware nor the sources of material have been observed by Caucasians. Examination of the specimens indicates that the material is a fine and somewhat micaceous clay, apparently an adobe derived from granitoid rocks; and such material might be

Ratio of capacity to weight among Indian ollas[1]

	Capacity	Weight	Ratio	Mean ratio
Seri:	*Liters*	*Kilograms*		
Plain	15.14	1.91	0.126	0.137
Painted	15.61	2.30	.147	
Papago:				
No. 1	17.05	4.08	.239	.253
No. 2	8.51	2.28	.279	
Sia	15.14	3.82	.252	.271
Zuñi	12.30	3.16	.258	
Acoma	15.61	4.31	.276	
Hopi	13.72	4.06	.295	

obtained in various parts of Seriland. The structure of the ware reveals no trace of coiling or other building process, nor does the texture clearly attest the beating process employed by the Papago potters; but there is a well-defined lamellar structure, and the surfaces (especially inner) are striated circumferentially or spirally in such manner as to suggest a process of rubbing under considerable pressure. All the specimens are so asymmetric as to indicate the absence of mechanical devices approaching the potter's wheel, while the necks are of such size as to admit the hand and forearm of an adult female but not of a warrior. Some suggestion of the manufacturing process is afforded by miniature fetishistic and mortuary specimens, such as those depicted in figures 17 and 18, and the larger specimens shown in figure 39, which were evidently shaped from lumps of suitable clay first hollowed and then gradually expanded by manipulation with the fingers, with little if any aid from implements of any sort. On putting the various indi-

[1] In this table the ratio is expressed by the weight in kilograms for each liter in capacity. The Papago and Pueblo specimens were selected from typical material in the National Museum and at random, save that in the Pueblo ollas choice was made of specimens corresponding approximately in size with those of the Seri.

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dishes, or even as kettles, in the rare culinary operations of the tribe (as shown in plate X); but the entire vessels appear to be religiously devoted to their primary purpose. 415

While some three-fourths of the observed fictile ware of the Seri and a still larger proportion of the scattered sherds represent conventional ollas, there are a few erratic forms. The most conspicuous of these is a smaller, thicker-walled, and larger-necked type, of which three or four examples were observed; two of these were in use (one is represented lying at the left of the jacal in plate X), and another was found cracked and abandoned on the desert east of Playa Noriega. The vessels of this type are used primarily as kettles and only incidentally as canteens. In both form and function they suggest aecultural origin; but the ware is much like that of the conventional type. Another erratic type takes the form of a deep dish or shallow bowl, of rather thick walls and clumsy form, which may be aecultural; a single example was observed in use (it is shown in plate XIV). There are also mortuary forms, including a miniature olla (figure 39) and bowl (figure 41), and such still smaller examples as those illustrated in figures 17 and 18. In addition to the utensils a few fictile figurines were found. Most of these were crude or distorted animal effigies, and one (broken) was a rudely shaped and strongly caricatured female figure some 2 inches high, with exaggerated breasts and pudenda. Analogy with neighboring tribes suggests that the very small vessels and the figurines are fetishistic appurtenances to the manufacture of the pottery; e. g., that the fetish is molded at the same time and from the same material as the olla, and is then burned with it, theoretically as an invocation against cracking or other injury, but practically as a "draw-piece" for testing the progress of the firing. 323 532 [171] [415]

FIG. 17.—Symbolic mortuary olla.

FIG. 18.—Symbolic mortuary dish.

By far the most numerous of the utensils connected with potable water are drinking-cups and small bowls or dishes; but these are merely molluscan shells of convenient size, picked up alongshore, used once or oftener, and either discarded or carried habitually without other treatment than the natural wear of use (an example is illustrated in figure 19). Larger bowls or trays are improvised from entire carapaces of the tortoise (probably *Gopherus agassizii*), which are carried considerable distances; and still larger emergency water-vessels consist of carapaces of the green turtle (*Chelonia agas-* 237 415

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young or crippled fowl was roped to a shrub or stone, to be fed by his fellows; when at intervals a youth stole out to rob the captive's pouch. At first blush this device would seem to rise above the normal industrial plane of the Seri and to lie within the lower stages of zoöculture, like the cormorant fishing of China if not the hawking of medieval Europe; yet on the whole it may be deemed fairly consistent with that cruel yet mutually beneficial toleration between tribesmen and pelicans attested by the preservation of the avian communal, as already noted. Moreover, Don Andrés observations are in accord with early notes of the exceedingly primitive aborigines of California, from whom the Seri have undoubtedly borrowed various cultural suggestions; thus Venegas quotes Padre Torquemada as saying:

> I accidentally found a gull tied with a string and one of his wings broke. Around this maimed bird lay heaps of excellent pilchards, brought thither by its companions; and this, I found, was a stratagem practiced by the Indians to procure themselves a dish of fish; for they lie concealed while the gulls bring these charitable supplies, and when they think that little more is to be expected they seize upon the contributions.

The padre says also of these gulls that "they have a vast craw, which in some hangs down like the leather bottles used in Peru for carrying water, and in it they put their captures to carry them to their young ones"—from which it is evident that he refers to the pelican. Venegas adds, "Such are the mysterious ways of Providence for the support of his creatures!"[1] And in the margin of his accompanying "Mapa de la California", he introduces a vigorous picture of a captive fowl, its free fellow, and the mess of fish, the cut being headed "Alcatraces" (pelicans).

Despite these devices, the dearth of fishing-tackle among the Seri is evidently extreme. Save in the single specimen figured, no placatorial apparatus of any sort was found among the squalid but protean possessions at the Costa Rica rancheria; neither nets nor hooks nor reels nor lines nor any other device suitable for taking the finny game were found in the scores of jacales containing other artifacts on Tiburon; while Señor Encinas was conversant only with the simple method of taking fish by hand from the pools and shallows left by receding breakers or ebbing tides. This dearth of devices is significantly harmonious with other Seri characteristics: it accords with the leading place assigned the turtle in their industry and their lore; it is in harmony with that primitive and nonmechanical instinct which leads them to rely on bodily strength and skill and swiftness rather than on extracorporeal artifacts in their crude and incomplete conquest of nature; and it is a manifest expression of relation with their distinctive physical environment—for the ever-thundering breakers of their gale-swept coast are abundant, albeit capricious, bringers of living grist, while the offshore gales at low tide lay bare hundreds of acres of shoaler

[1] History of California, 1759, vol. i, p. 61.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

ally shattered, and no prints are known to have been made from it; but the fragments were carefully joined, and were kindly transferred to the Bureau by Mr Von Bayer in 1897, and from them plate XXIX was carefully drawn. The posture (partly concealed by the drapery) is extraordinary, being quite beyond the reach of the average human, and impossible of maintenance for any considerable interval even by the well-wonted Seri. The posture itself partly explains the difficulty of inducing the warriors at Costa Rica to assume it, since it is essentially a fleeting one, and indeed but a part of a continuous and stressful action—it is no less difficult to assume, or to catch in the camera, than the typical attitude of a baseball pitcher in action. The posture thus fortunately caught is quite in accord with the accounts of Seri archery from the esoteric side given by Mashém, and with the exoteric observations of Señor Encinas, Don Andrés, and others; for all accounts agree in indicating that the archer commonly rests inert and moveless as the watching feline up to a critical instant, then springs into movement as swiftly as the leaping jaguar, and hurls, rather than shoots, one, two, or three arrows before rushing in to the death or skulking to cover as the issue may require.

The Seri archery habit is in every way consistent with the general habits of the tribe, alike in the chase and in warfare, in which the tribesmen, actuated by the fierce blood-craze common to carnivores, either leap on their prey with purpling eyes and gnashing teeth, or beat quick and stealthy retreat; and it is especially significant in the light thrown on the bow as a device for swift and vigorous rather than accurate offense, an apparatus for lengthening the arm still more than does the harpoon, and at the same time strengthening and intensifying its stroke. The quick-changing attitudes of half hurling are equally suggestive of the use of the atlatl, and support Cushing's hypothesis[1] that the bow was derived from the corded throwing-stick. While the critical posture of Seri archery is unique in degree if not in kind in the western hemisphere, so far as is known, an approximation to it (illustrated in fig. 22) has been observed in Central Africa.[2] On the whole the Seri mode of using the bow, like its crude form and rude finish, indicates that it is a relatively new and ill-developed artifact, possibly acculturral though more probably joined indigenously with the archaic arrow to beget a highly effective device for food-getting as well as for warfare; while the genetic stages are still displayed not only in the homologies between arrow and harpoon, but by the common functions of both arrow and bow with the fire-sticks.

Concordantly, as indicated by the use of the archery apparatus, the individual taking of large game is effected either by stealthy stalking or by patient ambuscade ended by a sudden rush; when, if the chase is successful, the quarry is rent and consumed as at the finish of the

[1] The Arrow: Proceedings Am. Ass. Adv. Sci., vol. XLIV, 1895, pp. 272-280.

[2] Glave's Journey to the Livingston Tree, The Century Magazine, vol. LX, 1900, p. 766.

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extreme lightness in proportion to capacity, a quality due to the spongy character of the torote coil and to the thinness of the splints used in the woof. The inside dimensions, weight, and dry-measure capacity (filled to the level of the brim with rice) of two typical specimens approaching extremes in size are indicated in the accompanying table. As noted elsewhere, the ware is absolutely without decorative devices in weave, paint, or form; it is baldly utilitarian, a model of economy in material and in the balance between structure and function, approaching in this respect the thin-walled canteen-olla, the graceful balsa, and the light but effective harpoon. The structural correspondence of the ware to a widespread type and its limited use among the tribe suggest an acculturaf origin for the Seri basketry; but the delicate adjustment of means to ends in the manufacture and the strictly local character of the material quite as strongly suggest an indigenous development.

Museum No.	Diameter	Depth	Weight	Capacity
171379.....	26 cm. (15 in.)	9.5 cm. (3¾ in.)	482 g. (17 oz.)	6.25 l. (6.6 qt.)
171380a ...	23 cm. (9 in.)	5.0 cm. (2 in.)	142 g. (5 oz.)	1 l. (1.06 qt.)

It is impossible to portray justly the food habits of the Seri without some reference to a systematic scatophagy, which seems to possess fiducial as well as economic features. In its simplest aspect this custom is connected with the tuna harvests; the fruits are eaten in enormous quantity, and are imperfectly digested, the hard-coated seeds especially passing through the system unchanged; the feces containing these seeds are preserved with some care, and after the harvest is passed the hoard (desiccated, of course, in the dry climate) is ground between hupf and abet, and winnowed in baskets precisely as are the mesquite beans; and the product is then eaten either dry or in the form of atole like the mesquite meal. In superficial view this food factor is the precise homologue of the "second harvest" of the California Indians as described by Clavigero, Baegert,[1] and others; but it gains importance, among

[1] An Account of the Aboriginal Inhabitants of the Californian Peninsula, as given by Jacob Baegert, a German Jesuit missionary. . . . Translated and arranged for the Smithsonian Institution by Charles Rau; Ann. Rep. Smithsonian Inst. for 1863, pp. 352-399. Baegert's account of foods (pp. 393-397) is so apposite as to be worthy of quotation nearly entire:

"Notwithstanding the barrenness of the country, a Californian hardly ever dies of hunger, except, perhaps, now and then an individual that falls sick in the wilderness and at a great distance from the mission, for those who are in good health trouble themselves very little about such patients, even if these should happen to be their husbands, wives, or other relations; and a little child that has lost its mother or both parents is also occasionally in danger of starving to death, because in some instances no one will take charge of it, the father being sometimes inhuman enough to abandon his offspring to its fate.

"The food of the Californians, as will be seen, is certainly of a mean quality, yet it keeps them in a healthy condition, and they become strong and grow old in spite of their poor diet. The only period of the year during which the Californians can satisfy their appetite without restraint is the season of the pitahayas, which ripen in the middle of June and abound for more than eight weeks. The gathering of this fruit may be considered as the harvest of the native inhabitants. They can eat as much of it as they please, and with some this food agrees so well that they become corpulent during that period; and for this reason I was sometimes unable to recognize at first sight individuals, otherwise perfectly

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262 514 the Seri at least, as the sole method of storing or preserving food-supplies, and hence as the germ of industrial economy out of which a

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familiar to us, who visited me after having fed for three or four weeks on these pitahayas. They do not, however, preserve them, and when the season is over they are put again on short rations. Among the roots eaten by the Californians may be mentioned the yuka, which constitutes an important article of food in many parts of America, as, for instance, in the island of Cuba, but is not very abundant in California. In some provinces it is made into a kind of bread or cake, while the Californians, who would find this process too tedious, simply roast the yukas in a fire like potatoes. Another root eaten by the natives is that of the shell plant, of which there are many kinds in this country. These species of this vegetable, however, which afford nourishment—for not all of them are edible—do not grow as plentifully as the Californians might wish, and very seldom in the neighborhood of water; the preparations, moreover, which are necessary to render this plant eatable, require much time and labor. . . . I saw the natives also frequently eat the roots of the common reed, just as they were taken out of the water. Certain seeds, some of them not larger than those of the mustard, and different sorts in pods that grow on shrubs and little trees, and of which there are, according to Father Piccolo, more than sixteen kinds, are likewise diligently sought; yet they furnish only a small quantity of grain, and all that a person can collect with much toil during a whole year may scarcely amount to 12 bushels.

"It can be said that the Californians eat, without exception, all animals they can obtain. Besides the different kinds of larger indigenous quadrupeds and birds, they live nowadays on dogs and colts; horses, asses, and mules; fowls, as cocks, hens, and rats; lizards and snakes; bats, grasshoppers, and crickets; a kind of green caterpillar without hair, about a finger long, and an abominable white worm of the length and thickness of the thumb, which they find occasionally in old rotten wood, and consider as a particular delicacy. The chase of game, such as deer and rabbits, furnishes only a small portion of a Californian's provisions. Supposing that for 100 families 200 deer are killed in the course of a year, which is a very favorable estimate, they would supply each family only with three meals in three hundred and sixty-five days, and these relishes but in a very small degree the hunger and the poverty of these people. The hunting for snakes, lizards, mice, and field-rats, which they practice with great diligence, is by far more profitable and supplies them with a much greater quantity of articles for consumption. Snakes, especially, are a favorite sort of small game, and thousands of them find annually their way into the stomachs of the Californians.

"In catching fish, particularly in the Pacific, which is much richer in that respect than the Gulf of California, the natives use neither nets nor hooks, but a kind of lance—that is, a long, slender, pointed piece of hard wood—which they handle very dexterously in spearing and killing their prey. Sea-turtles are caught in the same manner.

"I have now mentioned the different articles forming the ordinary food of the Californians; but, besides these, they reject nothing that their teeth can chew or their stomachs are capable of digesting, however tasteless or unclean and disgusting it may be. Thus they will eat the leaves of the Indian fig-tree, the tender shoots of certain shrubs, tanned or untanned leather, old straps of rawhide, with which a fence was tied together for years; lice, the bones of poultry, sheep, goats, and calves; putrid meat or fish swarming with worms, damaged wheat or Indian corn, and many other things of that sort which may serve to appease the hunger they are almost constantly suffering. Anything that is thrown to the dogs will be also accepted by a Californian, and he takes it without feeling offended, or thinking for a moment that he is treated below his dignity. For this reason no one took the trouble to clean the wheat or maize, which was cooked for them in a large kettle, of the black worms and little bugs, even if the numbers of these vermin had been equal to that of the grains. By a daily distribution of about 150 bushels of bran (which they are in the habit of eating without any preparation) I could have induced all my parishioners to remain permanently in the mission, excepting during the time when the pitahayas are gathered.

"I saw one day a blind man, 70 years of age, who was busily engaged in pounding between two stones an old shoe made of raw deerskin, and whenever he had detached a piece he transferred it promptly to his mouth and swallowed it; and yet this man had a daughter and grown grandchildren. As soon as any of the cattle are killed and the hide is spread out on the ground to dry, half a dozen boys or men will instantly rush upon it and commence to work with knives, flints, and their teeth, tearing and scratching off pieces, which they eat immediately, till the hide is full of holes or scattered in all directions. In the mission of St. Ignatius and in others further toward the north there are persons who will attach a piece of meat to a string and swallow it and pull it out again a dozen times in succession, for the sake of prolonging the enjoyment of its taste.

171 262 514 252 "I must here ask permission of the kind reader to mention something of an exceedingly disgusting and almost inhuman nature, the like of which probably never has been recorded of any people in the world, but which demonstrates better than anything else the whole extent of the poverty, uncleanness, and voracity of these wretched beings. In describing the pitahayas I have already stated that they contain a great many small seeds resembling grains of powder. For some reason unknown to me these seeds are not consumed in the stomach, but pass off in an undigested state, and in order to save them the natives collect during the season of the pitahayas that which is discharged from the

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fable thrift-cause may be regarded as emerging. And the rise of thrift in Scotland, like esthetic and industrial beginnings generally, is shaped

human body, separate the seeds from it, and roast, grind, and eat them, making merry over their bounteous meals, which the Spaniards then see all the second harvest of the Californians. [This statement is corroborated in all particulars by Choris in his Viaje alla California, Venice, 1820, vol. 1, p. 22.] When I first heard that such a filthy habit existed among them I was disinclined to believe the report, but to my utter regret I became afterwards reluctantly a witness to the proceeding, which they are unwilling to abandon, like many other bad practices (probably because of the filthy character of the custom.—W J M.). Yet I must say in their favor that they have always abandoned from human flesh, contrary to the horrible usage of so many other Americans nations who can obtain their daily food much easier than these poor Californians.

"They have no other drink but the water, and heaven be praised that they are unacquainted with such strong beverages as are distilled in many American provinces from bother corn, the aloë, and other plants, and which the Americans in those parts merely drink for the purpose of intoxicating themselves. When a Californian sometimes during his wanderings a pond or pool, and feels a desire to quench his thirst, he lies flat on the ground and applies his mouth directly to the water. Sometimes the horns of cattle are used as drinking vessels.

"Having thus far given an account of the different articles used as aliment by the aborigines of the peninsula, I will now proceed to describe in what manner they prepare their victuals. They do not cook, boil, or roast like people in civilized countries, because they are neither acquainted with these methods nor possessed of vessels and utensils to employ for such purposes; and, besides, their privation would be found beyond endurance if they had to wait till a piece of meat is well cooked or thoroughly roasted. Their whole process simply consists in burning, singeing, or roasting in an open fire all such victuals as are not eaten in a raw state. Without any formalities, the piece of meat, the fish, bird, snake, field mouse, bat, or whatever it may be is thrown into the flames or on the glowing embers, and left there to smoke and to sweat for about a quarter of an hour; after which the article is withdrawn, in most cases only burned or charred on the outside, but still raw and bloody within. As soon as it has become sufficiently cool, they shake it a little in order to remove the adhering dust or sand, and eat it with great relish. Yet I must add here, that they do not positively take the trouble to skin the mice or disembowel the rats, nor deem it necessary to clean the half-emptied entrails and maws of larger animals, which they have to eat in pieces before they can roast them. Snails, locusts, grasshoppers, green caterpillars, the white worms already mentioned, and similar things that would be lost, on account of their smallness, in the embers and flames of an open fire, are parched on hot coals, which they constantly throw up and shake in a tortilla shell or a basket of frying pan woven out of a certain plant. What they have parched or roasted in this manner in ground to powder between two stones, and eaten in a dry state. Bones are treated in the manner.

"They eat everything unsalted, though they might obtain plenty of salt; but when they cannot dine every day on meat and constantly change their quarters, they would find it too cumbersome to carry always a supply of salt with them.

"The preparation of the *chia*, also called *semola* or *sagamy* by the Spaniards, requires more time and labor. The seeds, after being properly separated from the plants, are roasted for some hours in a strong fire, and then bottled, twelve or twenty together, in the ground, and well covered with hot stones, hot ashes, and earth. In this state they have to remain for twelve or fourteen hours, and when dug out again they are of a fine yellow color, and perfectly healthy, making a very palatable dish, which has served me frequently as food when I had nothing else to eat, or as dessert after dinner in lieu of fruit. But they are at first as a purgative on persons who are not accustomed to them, and leave the finest somersault rough for a few hours afterwards.

"To light a fire the Californians make no use of steel and flint, but obtain it by the friction of two pieces of wood. One of these is cylindrical, and pointed on one end, which fits into a round cavity in the other, and by turning the cylindrical piece with great rapidity between their hands, like a twirling stick, they succeed in igniting the lower piece if they continue the process for a sufficient length of time.

"The Californians have no fixed time for any sort of business, and are, consequently, whenever they have anything, or find inclined to do so, which is nearly always the case. I never asked one of them whether he was hungry who failed to answer in the affirmative, even if his appearance indicated the contrary. A meal in the middle of the day is the least he ever enjoys there, because they all set out early in the morning for their foraging expeditions, and return only in the evening to the place from which they started, if they do not choose some other locality for their night quarters. The day being thus spent in roaming about and assembling her food, they have no time left for preparing a dinner at noon. They start always empty-handed; for if perchance something remains from their evening repasts they certainly eat it during the night in walking moments or on the following morning before leaving. The Californians can endure hunger easier and much longer than other people; whereas they will eat enormously if a chance is given. I often tried to buy a piece of venison from those who the skin had but lately been stripped off the deer, but regularly received the answer that nothing was left; and I knew well enough that the hunter who killed the animal needed no assistance

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262 by faith and attendant ceremony; for the doubly consumed food is
514 credited with intensified powers and virtues, and held to be specially potent in the relief of hunger and in giving endurance for the hard warpath or prolonged chase; it is—and makes—very strong ("mucho fuerte"), in the laconic and confident explanation of Mashóm. Incongruous as the custom is to higher culture, it finds natural suggestion in the everyday habits of the tribe, who are wonted not only to the eating of animal entrails in raw and uncleaned condition, but especially to the relief of the sharpest pangs of hunger by means of the soft structures and their semiassimilated contents—an association of much influence in primitive thought. Concordantly with the custom and the faith grown out of it, the excreta in general take a prominent place in the Seri mind; the use of urine in ablution, etc, is little understood and may be passed over; but all bony feces—and it may be noted that the "sign" of the Seri more resembles that of wolves or snake-eating swine than that of men—following gorges of large quarry are customarily located and kept in mind for recourse in time of ensuing shortage, when the mass is ground on the adst and reconsumed; and even the ordinary discharge is preserved during the seasons of less reliable
514 food-supply.
764 There is an obscure connection between this curious and repulsive food custom of the Seri and the mortuary customs of the tribe, which

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800 to finish it. Twenty-four pounds of meat in twenty-four hours is not deemed an extraordinary ration for a single person, and to see anything eatable before him is a temptation for a Californian which he cannot resist; and not to make away with it before night would be a victory he is very seldom capable of gaining over himself."

Clavigero's account of the food-habits of the California Indians is similar, though generally less explicit. According to him the seeds forming the "second harvest of pitahayas" are extracted carefully while fresh, and are afterward roasted, ground, and preserved in the form of meal against the ensuing winter. Of the rewallowing habit, he says:

"The savages living in the northern part of the peninsula have found the secret, unknown to martial-s in general, to eat and re-eat the same meal repeatedly. They tie a string around a mouthful of meat dried and hardened in the sun. After chewing it for a while they swallow it, leaving the string hanging from the mouth. After two or three minutes, by means of the string they draw the meat up again to be rechewed, and this they repeat as many times as may be necessary until the morsel is consumed or so softened that the string will not hold it any longer. In extracting it from the throat they make such a noise that to one who has not before heard it it appears that they are choking themselves.

"When many individuals are gathered together to eat in this manner it is practised with more merriment. They seat themselves on the ground, forming a circle of eight or ten persons. One of them takes the mouthful and swallows it, and afterwards draws it up again and passes it to the next one, and this one to another, proceeding thus around the circle with much enjoyment until the morsel is consumed. This has astonished the Spaniards who have seen it, and indeed it would not be credible if it had not been unanimously testified to by all who have been in that country. Several Jesuits who did not believe this, notwithstanding that sincere and prominent persons confirmed it, having afterwards gone to California saw it with their own eyes. Among those Indians who have embraced Christianity this loathsome and dangerous method of eating has been abandoned in consequence of the continual reproofs of the missionaries." (Historia de la Antigua ó Baja California, obra postuma del Padre Francisco Javier Clavijero. Mexico, 1852, p. 34.)

171 The records of Clavigero and Baegert indicate fair correspondence in the food habits of the Califor-
262 nia Indians and the Seri, though there are certain noteworthy differences, e. g., the tabu of the badger among the former and of the ground-squirrel among the latter; it would also appear that the Californians were the more largely vegetarian and the better advanced in culinary processes. The customs of the Seri throw light on the genesis of "re-eating", for the process would appear to be but an extension of the repeated mouthing and swallowing of tendinous strings still attached to the bones of large animals.

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22 502 Despite their poverty in propelling devices, the Seri navigate their waters successfully and extensively. Perhaps the commonest function of the craft is that exercised in connection with the turtle fishery, though its chief office as a factor of general industrial economy is that of bridging El Infernillo at the will of the roving clans. It is by means of this craft, also, that the semiceremonial pelican feasts on Tiburon are consummated; it is by the same means that Isla Patos, Isla Turner, Roca Foca, and other insulated sources of food-supply are habitually reached; and both Mashem's accounts and the Jesuits' records indicate that occasional voyages are pushed to San Esteban, San Lorenzo, Angel de la Guarda, and even to the Baja California coast.

Concordantly with the tribal customs, little freight is carried. The traveling family transport their poor possessions to the shore, bring out the balsa from its hiding place in the thick and thorny fog-shrubbery, launch it, lade it with a filled olla and the weapons of a man and implements of a woman, besides any chance food and clothing, and embark lightly to enjoy the semirepose of drifting before the breeze—until the rising gale brings labor still more arduous than that of scouring the spall-strewn slopes or sandy stretches of their hard motherland. Commonly the terminus of the trip is fixed largely by the chance of wind and tide; and when it is reached the party carry the craft inshore, conceal it shrewdly, and then take up their birdskin bed and walk forth in search of fresh water and meat. The successful fishing trips of course end in orgies of gorging, and when the voyage is the climax of a foray to the mainland frontier for stock-stealing, the quarters and paunches and heads hastily thrown aboard at the mainland side of the strait are carried to the rancherias for consumption at leisure; and this has happened so often that equine hoofs and bovine bones are common constituents of the middens on Tiburon.

171 501 Although measurably similar to Central American and South American types of water-craft, the Seri balsa is a notably distinct type for its region. The California natives, as well as those of the mainland of Mexico south of Rio Yaqui, used rafts made either of palm trunks or of other logs lashed alongside rather than balsas; while the far-traveling tribes used either sails or well-differentiated paddles for propulsion.

501 Briefly, the Seri balsa is remarkable for perfect adaptation to those needs of its makers shaped by their distinctive environment. It seems to approach the ideal of industrial economy—the acme of practicality—in the adjustment of materials and forces to the ends of a lowly culture; and, like the olla and harpoon and arrow, it affords an impressive example of the adjustment of artifacts to environment through the intervention of budding intelligence. Yet the chief significance of the craft would seem to reside in its vestigial character as a survival of that crarian stage in the course of human development

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and XIX; the birdskin kilt (put on for the purpose) is illustrated in plate XVIII, while the aboriginal fabric is fairly represented in plate XXIX. Although ordinarily worn as a kilt, the same article (temporarily replaced by an improvised substitute) serves other purposes at the convenience of the wearer; in the chase for tunas and for moving game it becomes a bag or pack-sheet; in case of cold rain it is shifted to the shoulders or the exposed side; during the siesta it is elevated on an shrub and a stick to serve as a canopy; at sleeping time generally it forms (especially when of birdskin) a bed, i. e., a combined mattress and coverlet; and in attack or defense the pelican skin is at once standard, buckler, and waving capa to confuse quarry or enemy after the manner of the toreador's cloak.

An almost equally distinctive garment is a short shirt or wammus, with long sleeves, worn by men and women but not by children; ordinarily it covers the thorax, missing connection with the kilt by a few inches, and so affording ventilation and space for suckling the teeming offspring. Unlike the kilt, it is an actual garment, fitted with sleeves and fastened in front with hair-cord strings. Although the Seri wammus corresponds fairly with a Yaqui garment, it seems practically certain that it is of local aboriginal design, and that it was made primitively of haircloth or native textiles (as illustrated in plate XXIX) and worn rather ceremoniously; but latterly it is made of manta and is worn habitually (at least by the women and on the frontier), though cast aside in preparation for any special task or effort—i. e., it is not connected with pudency-sense, save to a slight degree in the younger women. The form, function, and prevalence of the wammus are illustrated by the group shown in plate XIII, in which nearly all of the thirty-odd adults wear the garment.

These two articles constitute the ordinary wearing apparel of the Seri, though they are commonly supplemented (especially when both are of manta) by a pelican-skin robe, which is habitually carried to serve as bed or mackintosh, according to the chance of journey and weather, or as a shield in sudden warfare. No head-covering is used, save in the ceremonial masquerade, when the heads of animals are worn as masks,[1] or in aping Caucasian customs, especially on expeditions for barter (as illustrated in plate XII). Loose trousers of Mexican pattern are sometimes put on at frontier points, but are discarded in Seriland proper, save by Mashém, who maintains prestige partly by this borrowed badge of Caucasian superiority. Leggings and moccasins are eschewed, naturally enough, since they would afford little protection from the sharp spalls and savage thorns of the district, and would give lodgment for the barbed spines inevitably gathered in rapid chase or flight over cactus-dotted stretches; and the only foot-covering seen (save Mashém's boots) was a single sandal made from the rough skin of a turtle-flipper, apparently for ceremonial rather than practical use.

[1] Hardy (Travels, p. 236) describes the ceremonial wearing of the heads of deer with horns attached.

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smaller implement is *hupf* or *hupf* (the initial sound explosive, combining the phonetic values of *h* and *k*; the vowel nearly as in "put", or like "oo" in "took"); the term is clearly an onomatope, imitating the sound of the blow delivered on flesh, on a mass of partially crushed mesquite beans, etc—indeed, both the word and the sound of the blow seem to connote food or eating, while regular pounding with the implement (either in ordinary use or by special design) is a gathering signal. So far as ascertained, the term is not extended to other objects save potential implements in the form of suitable pebbles; but it is significant that there is no distinction in speech—nor in thought, so far as could be ascertained—between the natural pebble and the wear-shaped implement.[1] The local terms ahst and hupf are explicit and specific, and without precise equivalents in other known tongues; moreover, the objects designated are too inchoate in development and hence too protean in function to be appropriately denoted by the designations of implements pertaining to more differentiated culture (mortar, metate, pestle, muller, mano, etc). Accordingly it seems desirable to retain the Seri designations.[2]

A typical specimen of intermediate size, used commonly as an ahst, but susceptible of employment as a hupf, is illustrated (natural size) in plates XXXV and XXXVI.[3] It is a hard, tough, hornblende-granite or greenstone, with a few structure-lines brought out by weathering and wave-wearing. Its weight is 4 pounds 10 ounces (2.10 kilograms); its form and surface are entirely natural, save for slight battering shown on the two principal faces and still less conspicuous bruises along one edge (as imperfectly shown toward the left of plate XXXV). The specimen was found in a jacal (illustrated in plate VI) on Rada Ballena, within a few hours after abandonment, in the position in which it was hastily left by the last users; it was smeared with blood and fat (which still remain, as is shown in plate XXXV) and bits of flesh, and bore bloody finger prints of two sizes—those of a man and those of a woman or large child; beside it lay the hupf depicted in plate XLII. In its last use the unwieldly cobble served as an ahst, but the markings on the edge record use also as a hand implement.

A functionally similar implement is illustrated in plate XXXVII (on reduced scale; maximum length 8¼ inches = 210 cm.). It is of tough

[1] The failure to discriminate natural objects from artificialized implements produced from such objects by wear of use is a noteworthy trait of primitive folk. It is conspicuous among the acorn Indians of California, who fail to appreciate the manufacture of their own mills and who conceive that their bowlder mortars and creek pebble pestles, even when completely artificialized by a generation's use, are merely found and appropriated; and a similar state of mind persists among the well-advanced Papago, who have no conception of making their well-finished mortars and pestles, or even the stone tomahawks occasionally surviving, but regard the implements as fruits of discovery or treasure-trove only.

[2] It should be noted that the terms used in the titles of the accompanying plates are not denotive, but merely descriptive.

[3] This, like the other illustrations of the series (except plate LVI, which is a lithograph, partly process and partly handwork), are photo-mechanical reproductions made directly from the objects; all are natural size unless otherwise specified.

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is an infallible remedy. On the whole it seems probable that the yerba mala (*Sebastiana bilocularis?*), or yerba de flécha, or mago, or magot, yielded or formed the standard arrow-poison of the Opata and perhaps of other Indians, and that the ill-repute of the shrub survived and spread throughout Mexicanized Sonora in such frequent repetition and common belief as to affect the ideas of residents and travelers alike; but it seems equally probable that the magic-inspired brew of the Seri is entirely distinct.[1]

As suggested by widespread primitive customs, and as illustrated specifically by the arrow-charming, the warfare of the Seri is largely sortilegic, this feature being but an extension and magnification of a corresponding feature of their hunting customs. The economic object of the chase is, of course, the flesh of the quarry; but the hunt normally begins with invocatory or other fiducial ceremonies, culminates in a feast opened with oblations, and ends in the use of horns or hoofs, teeth or bones, mane or tail, as talisman-trophies—primarily pledges of fealty to the favorable potencies, only secondarily symbols of success. The observances illumine the ever-present esoteric object of the chase, which is to gain the favor or overcome the power of the beast-god represented by the animal hunted; in general, this is sought to be effected through mimetic movements, or symbolic objects, associated with that animal-kind, and the retained charm-trophy is valued as a symbol of the placation or outwitting of a particular deity. Similarly, the Seri warrior strives for the supposed deific symbols of the enemy—the scalp or headdress or arrow of the alien tribesman, the fire-breathing and echo-waking (as well as death-dealing) wand of the Caucasian; and the Papago arrows, Yaqui scalps, and white man's firearms are sought avidly, treasured as fetishes, and often carried conspicuously as badges of borrowed prowess.[2] So the Seri are never without alien insignia in the form of weapons. The day before the 1895 expedition entered their stronghold, a band of warriors and women were frightened from a freshly slaughtered cow by a party of vaqueros so suddenly that their arms were left behind—and these

[1] It should be noted that the actuality of the poisonous property ascribed to the yerba mala is in some degree questionable; the plant is the only one of southern Papagueria yielding suitable material for arrow-shafts, and it is possible (if not probable) that it was consecrated to this purpose by the aboriginal Opata and protected by taba in such wise as to become a sacred and fearsome thing. It is accordingly by no means improbable that the reputed poisonous property is but the product of generations of association, and that the plant is really harmless—an inference supported by experiments on the part of the leader of the 1895 expedition, who swallowed the juice of stem and leaves in two or three minute but increasing doses without perceptible effect. On the other hand, it should be observed that the region is one abounding in toxic juices, and that this shrub is so luxuriant and so free from thorny armament and other protective devices of a mechanical sort as to raise the presumption that it must be protected against herbivorous animals, at least, by chemical constituents of some kind (cf. ante, p. 38).

[2] These motives on the part of the Seri were reciprocated by their tribal enemies: a Papago fetish in the form of an Apache arrowpoint, long worn by an aged warrior as a protection from Apache arrows, was among the spoil of the 1894 expedition; and a "poisoned" Seri arrowhead and foreshaft, worn by a superannuated Papago "doctor" as a badge of invulnerability to similar missiles, was confidently shown to the 1895 expedition, but was held above price by its wearer—and this despite the fact that he had been christianized for decades, and retained no other pagan symbols.

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Sonoran belief that the similarity extends one step farther, and that the human victims are rent and consumed, like the beasts. There is a lamentable lack of data concerning the alleged anthropophagy of the Seri; on the one hand there is the deep-seated local opinion, generally growing stronger as the tribal territory is approached, and agreeing so well with the hunting customs, the thaumaturgic arrow-poisoning, the zoomimic handicraft, and zootheistic faith, and especially with the pervading fetish-piracy of the folk, that its validity would seem inherently probable; on the other hand, there is not only a dearth of specific positive testimony, but haciendero Encinas (best informed among Caucasians concerning Seri customs) and several of his yeomen reject the prevailing belief, while Mashem consistently repudiated the custom, both in general and in particular, and in ceremonial as well as in economic aspects, whenever and in whatever way the subject was approached during his intercourse with the 1894 expedition. On the whole, the much-mooted question of Seri cannibalism must be left open pending further inquiry, with some preponderance of evidence against the existence of the custom.

The war-frenzy of the Seri fighters is significant in its parallelism with the blood-craze of the chase, and even more so in its analogy with the warpath customs and ceremonies of most Amerind tribes and many other primitive peoples. In typical tribes the warpath custom is a most distinctive one, standing for an abnormal state of mind and an unaccustomed habit of body, perhaps to the extent of an extreme exaltation or obsession akin to intoxication, in which the ordinary ideas of justice and humanity are inhibited; among most tribes the condition is sought voluntarily and deliberately when occasion is thought to demand, and is superinduced by fasts and vigils, exciting songs and ceremonies, and related means; while among certain tribes the aid of symbolic "medicines", which may be actual intoxicants, is invoked. Thus the savage on the warpath is a different being from the same man in times of peace; viewed from his own standpoint, he is possessed of an alien and violent demon, usually that of a fantastic and furious beast-god whose rage he must symbolize and enact; viewed from the standpoint of higher culture, he is a raving and ruthless maniac whose craze is none the less complete by reason of its voluntary origin. The warpath frenzy is one of the fundamental, even if little understood, facts of primitive life, and the character of the savage tribe can not properly be weighed without appreciation of it. Now, the Seri blood-craze seems measurably distinct in two ways: in the first place, it expresses a more profound and bitter enmity toward aliens than is found among most savage tribes—i. e., it is instinctive and persistent in exceptional degree; in the second place, it is more spontaneous and explosive in its culmination when conditions favor than among tribesmen who induce the condition by elaborate preparation—i. e., it is dependent on the swift-changing hazard of warfare in exceptional

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171 726 measure; so that the Seri frenzy is at once more instinctive and more fortuitous, or in general terms more inchoate, than the corresponding condition among most of their contemporaries. Accordingly the war customs, like several other features of the tribe, seem to afford a connecting link between the habits normal to carnivorous beasts and the well-organized war customs of somewhat higher culture-grades; and thus they contribute toward outlining the course of human development through some of its darker stages.

712 Conformably with their poverty in offensive devices, the Seri are exceedingly poor in devices for defense. It is an impressive fact that a restricted motherland which has been successfully protected against invasion for nearly four centuries of history should be destitute of earthworks, fortifications, barricades, palisades, or other protective structures; yet no such structures exist on any of the natural lines of approach, and none are known anywhere in Seriland save in a single spot—Tinaja Trinchera—where there are a few walls of loose-laid stone, so unlike anything else in Seriland and so like the structures characteristic of Papagueria as to strongly indicate (if not to demonstrate) invasion and temporary occupancy by aliens. The jacales are not fortified in the slightest degree, unless the turtle-shells with which they are sometimes shingled be regarded as armor; even the most ancient rancherias are absolutely devoid of contravallations of earth, stone, or other material; and both the structures themselves and the expressions of the folk concerning them indicate that the jacales are not regarded as fortresses or places of refuge against enemies, but only as comfortable lodges for use in times of peace. Nor are walls like those of the borderland Tinaja Trinchera known in the interior of the tribal territory—e. g., the similarly conditioned Tinaja Anita, which differs only in the greater abundance and permanence of the water-supply, is entirely devoid of artificial structures, not even a pebble or bowlder being artificially placed save perchance by the casual trampling of the pathways. As already noted, the Seri seem to be practically devoid of knife-sense; they are still more completely devoid of fort-sense, although (and evidently because) they rely so fully on natural things, including tutelaries and their own fleetness, for safety.

713 Although devoid of even the germ of fortification-sense, so far as can be discovered, the Seri are not without a sort of shield-sense, which is of much significance partly by reason of its inchoate character. The ordinary shield is a pelican pelt, or a robe or kilt comprising several skins; it is employed either for confusing the enemy by swift brandishing, something after the fashion of the capa of the banderillero in the bull ring, or for actual protection of the body against arrows and other missiles or weapons. So far as known it is not backed or otherwise strengthened, the user relying solely on the stout integument and [825] thick feathers—or rather on the mystical properties imputed to the pelt as the mystery-tinged investiture of their chief creative tutelary.

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the character of the man; in very fact, it at the same time both measures and makes the character of the woman. Among other privileges bestowed on the bride during the probationary period are those of receiving the most intimate attentions from the chanfellows of the groom; and these are noteworthy as suggestions of a vestigial polyandry or adelphogamy. At the close of the year the probation ends in a feast provided by the probationer, who thereupon enters the bride's jacal as a perpetual guest of unlimited personal privileges (subject to tribal custom); while the bride passes from a half-wanton heyday into the duller routine of matronly existence.

These details were elicited at Costa Rica in 1894 through methodical inquiries made in connection with the linguistic collection. This collection was made with the cooperation of Señor Alvemar-Leon as Spanish-English interpreter, together with Mashém and (commonly) the clanmother known as Juana Maria. Usually quite a group of Seri matrons with two or three warriors were gathered about, and to these Mashém frequently appealed for advice and verification, while they constantly expressed approval or disapproval of questions and replies, as gathered through Mashém's words and mien, in such manner as to afford a fair index of their habitual thought—e. g., when the Seri vernacular for "twins" was obtained and the inquiry was extended (by normal association of ideas) to the term for "triplets", Mashém collapsed into moody silence while the rest of the group decamped incontinently with horror-stricken countenances—thereby suggesting cautious subsequent inquiry, and the discovery that triplets are deemed evil monsters and their production a capital crime. It was in one of the earlier conferences that the first intimations concerning the unusual marital customs were incidentally brought out; the Caucasian interpreter and bystanders were diverted by the naive reference to the moral test, but their expressions were hastily checked lest the native informants might be startled and rendered secretive; then, during two later conferences, when Mashém and several matrons were freely participating in the proceedings, the line of inquiry was so turned as to touch on various aspects of the marriage custom and bring out all essential features; so that much confidence is reposed in the accuracy of the details.[1] The confidence in the verity of the customs was such as not to be impaired seriously by the fact that no records of coincident moral tests were known in the voluminous literature of marriage and its concomitants; nor was it shaken by the still weightier fact that none of the experienced ethnologists to whom inquiries were addressed during ensuing months were acquainted with parallel customs—indeed the only shadow of corroboration thus obtained came in the form of references to the widespread requirement of continence in war and ceremonies.

[1] It may be observed that Kolonia, when visited in January, 1895, failed to corroborate the descriptions of Mashém and the matrons; but his failure occasioned little surprise for the reason that he has not lived with his tribe since early boyhood, and is legally uninformed (or unrecommunicative) concerning the myths, ceremonies, and even the taboos of the tribe.

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and to an affectation of self-restraint for a moon on the part of Zuñi grooms noted by Frank Hamilton Cushing. Accordingly the facts were announced in a preliminary paper,[1] and were shown to stand in such relation to the marital customs of other aboriginal tribes as practically to demonstrate their validity, and at the same time to locate the Seri customs on a lower plane of cultural development than any hitherto definitely recognized.

Happily, subsequent researches have resulted in the discovery of records corroborative of the primitive customs observed by the Seri, and also of the assignment of serial place to these customs. The most specific record is that of John Giles (or Gyles), who spent his youth as a captive among the northeastern Algonquian Indians (probably the Malisect or some closely related Abnaki tribe), from August 2, 1689, to June 24, 1698. Referring to the marital customs of the tribe, he observed:

> If parents have a daughter marriageable, they seek a husband for her who is a good hunter. If she has been educated to make moccodah (Indian bags), birch dishes, to lace snowshoes, make Indian shoes, string wampum belts, sew birch canoes, and boil the kettle, she is esteemed a lady of fine accomplishments. If the man sought out for her husband have a gun and ammunition, a canoe, a spear, a hatchet, a mummodah, a crooked knife, looking-glass and paint, a pipe, tobacco, and knot-bowl to toss a kind of dice in, he is accounted a gentleman of a plentiful fortune. Whatever the new married man procures the first year belongs to his wife's parents. If the young pair have a child within a year and nine months, they are thought to be very forward and libidinous persons.[2]

This record is of peculiar interest in that it definitely specifies a custom corresponding with the material test of the Seri, and unmistakably implies the existence, at least in vestigial or sentimental form, of a custom corresponding with the moral test of Seriland; and it is particularly noteworthy as coming from a remote tribe occupying a distant part of the continent.

A somewhat less specific corroboration is found in Lawson's account of the Carolina tribes. He observes:

> When any young Indian has a mind for such a girl to his wife, he, or some one for him, goes to the young woman's parents, if living; if not, to her nearest relations, where they make offers of the match betwixt the couple. The relations reply, they will consider of it; which serves for a sufficient answer, till there be a second meeting about the marriage, which is generally brought into debate before all the relations, that are old people, on both sides, and sometimes the king, with all his great men, give their opinions therein. If it be agreed on, and the young woman approve thereof, for these savages never give their children in marriage without their own consent, the man pays so much for his wife; and the handsomer she is the greater price she bears. Now, it often happens that the man has not so much of their money ready as he is to pay for his wife; but if they know him to be a good hunter, and that he can raise the sum agreed for, in some few moons, or any little

[1] The Beginning of Marriage, American Anthropologist, vol. 11, 1898, pp. 375–389.

[2] Memoirs | of | Odd Adventures, | Strange Deliverances, etc. | in the | Captivity of John Giles, Esq., | Commander of the Garrison on Saint George river, in the | District of Maine. | Written by Himself. | Originally published at Boston, 1736. | Printed for William Dodge. | Cincinnati: | Spiller & Gates, printers, 180 Vine street. | 1869.—P. 45.

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times they agree, she shall go along with him as betrothed, but he is not to have any knowledge of her till the utmost payment is discharged; all which is punctually observed. Thus they lie together under one covering for several months, and the woman remains the same as she was when she first came to him.[1]

This record also is peculiarly pertinent, partly in that it practically corroborates the Seri testimony, but chiefly in that it indicates definite transition toward a higher culture-plane in which the primitive material test is at least partially replaced by a commutation in goods or their equivalents.

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On reducing the marital customs of the Seri to conventional terms, the more prominent features are found to be (1) strict clan exogamy and (2) absolute tribal endogamy, together with (3) theoretical or constructive monogamy, coupled with (4) vague traces of polyandry, and (5) an apparently superficial polygyny, as well as (6) total absence of purchase or capture of either spouse.

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On reviewing the customs in the light of their influence on the everyday life of the tribe, certain features stand out conspicuously: (1) Perhaps the most striking feature is the collective character of the function; for while the movement originates in personal inclination on the part of the suitor and is shaped by personal inclination on the part of the maiden, all manifestations of inclination are open and public (at least to the elders of the two clans involved), while the personal sentiments on both sides are completely subordinated to the public interests of clans and tribe as weighed and decided by the matronly lawgivers and adelphiarchal administratives. Thus neither man nor maid mates for themself, but both love and move in the tribal interests and along the lines laid down by the tribal leaders. (2) As a corollary or a complement (according to the viewpoint) to the collectivity of the mating, the next most striking feature is the formal or legal aspect of the union; for the entire affair, from inception to consummation, is rigorously regulated by precedents and usages handed down from an immemorial past. Thus the roots of young affection are not destroyed but rather cultivated, though the burgeoning vine and the outreaching tendrils are trained to a social structure shaped in ages gone and kept in the olden form by unbroken tradition. (3) A collateral feature of the customs is the necessary reaction of the requirements on individual character of both groom and bride; for the would-be warrior-spouse is compelled to display high qualities of physical and moral manhood on pain of ostracism and outlawry, so that his passions of ambition and affection are at once stimulated to the highest degree, while the maiden's pride of blood and possession and her sense of regnant responsibility are fostered to the utmost. The brief preliminary courtship and the long probationary mating mark an era of intensification in two lives at their most impressionable stage; and if there be

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[1] The History of Carolina, etc, by John Lawson (1714), reprint of 1860, pp. 362-363. Attention was called to this passage by Mr James Mooney.

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condition characterized by absence of property and thrift-sense; while its most essential concomitant is extratribal antipathy too bitter to permit toleration of alien blood, or even of alien presence save under the constraint of superior force.

MORTUARY CUSTOMS

The prevailing opinion among the better informed Caucasian neighbors of the Seri is that the tribesmen display an inhuman indifference to their dead; and this opinion is one of the factors—combining with current notions as to cannibalism and arrow-poisoning and beastlike toothing in battle—involved in the widespread feeling that the tribesmen are to be accounted as mongrel and uncanny monsters rather than human beings.

The opinion that the Seri neglect their dead on occasion would seem to rest on a considerable body of evidence; Mendoza's record of the numberless neglected corpses of warriors polluting the air and poisoning the streams of Cerro Prieto in 1757 would seem to be unusual only in its fulness; and Señor Encinas, albeit so conservative as to repudiate the reputed anthropophagy and to recognize better qualities among the folk than any contemporary, declares that they are utterly negligent of their dead, save that when the bodies lie near rancherías heaps of brambles are thrown over them to bar—and thus to lessen the disturbance from—prowling coyotes. Quite indubitable, too, is the specific testimony of vaqueros to the effect that Seri raiders overtaken by the Draconian penalty of the frontier merely lie where they fall, even when this is well within reach of the tribesmen, Don Andrés Noriega's verification of his boast (ante, p. 113) being an instance in point. On the other hand stands the conspicuous fact (unknown to the frontiersman) that well-marked cemeteries adjoin some of the rancherías of interior Seriland. The sum of the somewhat discrepant evidence accords with a characteristically unsatisfactory statement by Mashém, to the effect that the mourning ceremonies are important only in connection with women—i. e., matrons—because "the woman is just like the family" ("la muger es como la familia"); and this intimation, in turn, is corroborated by the single known instance of inhumation in Seriland, as well as by certain indirect indications connected with the scatophagic customs (ante, p. 213). On the whole it seems certain that the mortuary ceremonies attain their highest development in connection with females, the recognized blood-bearers and legislators of the tribe.

The special dignification of females in respect to funerary rites is without precise parallel among other American aborigines, so far as is known, but is not without analogues in the shape of (presumptive) vestiges of a former magnification of matrons in the mortuary customs of certain tribes. The vestiges are especially clear among the Iroquoian Indians, whose aboriginal society coincided with that of the

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Seri at various points; witness the following passage from the Onondaga mourning ritual, as collected and translated by Hewitt:

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Now, moreover, again, another thing, indeed, our voices come forth to utter; and is it not that that we say, that far yonder the Hoyaner [chief of highest grade] who labored for us so well is falling away as falls a tree? So, moreover, it is those things that he bears away with him—this file of mat-carriers, warriors all, visible and present here; also this file of those who customarily dance the corn-dances [the women]—they go prosperously. And alas! How utterly calamitous is that thing that occurs when the body of this woman falls! For, verily, far yonder in the length of the file will the file of our grandchildren be removed! These our grandchildren who run hither and thither in sport, these our grandchildren who by creeping drag themselves about in the dust, these our grandchildren whose bodies are slung to cradle-boards, and even those of them whose faces are looking hitherward as they come under the ground.[1]

764 The identifiable cemeteries of Seriland are few and small—much less populous than might be expected of a tribe numbering several hundreds for centuries, and able to maintain well-worn trails threading all parts of their rugged domain. Three graves were noted near the abandoned rancheria at Pozo Escalante; one was observed near a jacal skeleton at Barranca Salina; five or six were made out doubtfully on a low spur adjacent to Punta Antigualla; another was found near the rancheria midway thence to Punta Ygnacio; still another was doubtfully identified hard by a ruinous jacal just where the foothills of Sierra Seri descend to the plain stretching toward Punta Miguel; and this distribution may be deemed representative. A scant half-dozen perceptible graves were observed near the considerable rancheria of Punta Narragansett, which was numerously inhabited during the Dewey surveys of 1873; one was found adjoining the old jacal near Campo Navidad; but none were discovered in connection with the extensive rancheria on Rada Ballena. The largest known cemetery occupies the triangular point of shrub-dotted plain pushing out toward the site of the old rancheria at the base of Punta Tormenta; it comprises perhaps a score of evidently ancient graves, while two newer ones were found on the pebble bar beyond the jacales. When near the pebbly beaches the graves are marked by heaps of pebbles and small cobbles, commonly about the size of those used as hupfa, these cairns being 3 or 4 feet long, two-thirds as wide, and seldom over 12 or 15 inches in height; and most of the cairns are accompanied and enlarged by piles (ranging from a peck to a bushel) of the scatophagic shells already noted. The graves remote from pebbly beaches are marked by heaps of cholla stems and branches, rudely thatched with miscellaneous brambles roughly pinned

[1] MS in the archives of the Bureau of American Ethnology. A somewhat more obscure version was recorded by Hale in "The Iroquois Book Rites": "Now, there is another thing we say, we younger brothers. He who has worked for us has gone afar off; and he also will in time take with him all those—the whole body of warriors and also the whole body of women—they will go with him. But it is still harder when the women shall die, because with her the line is lost. And also the grandchildren and the little ones who are running around—these he will take away; and also those that are creeping on the ground, and also those that are on the cradle-boards; all these he will take away with him." (Brinton's Library of Aboriginal American Literature, number vi, 1883, pp. 141-142.)

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but as the vicarious and visible exponent of an ever-immanent beast-god—the clan tutelary; her appeals to her brothers for administrative aid are precisely parallel to her intuitive passage from zoomimicry into the field of mechanical chance defined by protolithic implements; and the appeal, like the execution of the law either by herself or by her brothers, is controlled and regulated in absolute deference to the zoic pantheon. Thus, the inchoate tribal laws, expressed in habitual lines of action and modes of thought, are by no means conscious products of human wisdom, but are confidently imputed to a superhuman wisdom on the part of myth-magnified beasts of a mystical olden time; and, similarly, the power of executing these laws is by no means cognized as conscious human faculty, but is faithfully imputed to supernal potencies of mythical monsters. Essentially, therefore, the tribal law is putatively *zoocratic;* and the social organization may justly be classed as a putative *zoocracy.*

To prevent possible confusion, it may be desirable to note specifically that the Seri government is not matriarchal in any proper sense. As pointed out elsewhere, matriarchy is not (at least among the American aborigines) an antecedent of patriarchy, but a correlative of that form of government; and it would be especially erroneous and misleading to designate as matriarchal a tribe like the Seri, whose chiefs and subchiefs (i. e., appellate clan-administratives) are invariably masculine. Neither would it be just, despite the dominance of matrons in legislative and judicative matters, to regard the tribal government as a gynecocracy, such as have been noted in various parts of North America—e. g., in Sonora, according to a current tradition as to the origin of the name of the province, and among the Pomo Indians of California, according to Cronise as interpreted by Powers;[1] for the actual control is exercised by the warrior brothers, while the ideal control is vested in that zoic pantheon of which the matrons are putative mouthpieces. Physically and practically the Seri government is an adelphiarchy, as already indicated; but in the minds of the tribesmen themselves it is an inchoate theocracy putatively headed by a pantheon of animate monsters, whose prelates are personified in the painted clan-mothers.

Summarily, then, the Seri are zoosomatic in esthetic, zoömimic in technic, zootheistic in faith, and putatively zoocratic in government, while even the Seri tongue is so largely mimetic or onomatopoetic in form as to accord with the industries and institutions; and in view of the intimate interrelations between the several lines of activity, it would seem preferable to determine the culture-status from the coincident testimony of all the lines, but feasible to measure it in terms of any one or more of these activital lines.

Now, on comparing the characteristics of the Seri with those of other known tribes of North America, many resemblances and a few differ-

[1] Tribes of California, pp. 180-181.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

ences are found; and practically all of the more conspicuous differences extend in the same direction—i. e., they combine to indicate an exceptionally primitive, or lowly, or zoic, plane for the simple savages of Seri-land. Thus, few tribes are so poor in esthetic as the Seri, and in none other are the esthetic devices so clearly and so exclusively zoic; few if any other known tribes so clearly exemplify zoomimic culture; none other so well represents protolithic culture, and no other known tribe is so completely devoid of mechanical devices reflecting higher culture; in general socialry no other known tribe better, or indeed so well, exemplifies zoocracy, while in such special features as those of ethnogamic mating, ceremonial scatophagy, and mortuary magnification of the blood-carriers, the folk mark the most primitive known phase of cultural advancement; and although language and faith yield less definite measure, their testimony is coincident with that of the other lines of activity. Accordingly the Seri must be assigned to the initial place in the scale of cultural development represented by the American aborigines, and hence to the lowest recognized phase of savagery.

Two or three corollaries of this placement are noteworthy: (1) In most of the researches concerning human development conducted by the anthropologists of the world, attention has been given chiefly or wholly to the somatic or biotic characters of *Homo sapiens;* but while various physical features of the Seri suggest bestial affinities (as has been pointed out in an earlier chapter), it is especially significant that the nearest and clearest indications of bestial relationship are found in the psychical features of the lowly folk—for zoic faith in its multifarious manifestations is but a reflection of burgeoning yet still bestial mind.

(2) While human independence of environment culminates in socialry, the interdependence of activital lines so well revealed in lowest savagery demonstrates that institutions and all government necessarily reflect environment; and, at the same time, that the progressive emancipation from environment signalized in the higher culture-grades measures the conquest of Nature through industrial activity—for both the productive work and the attendant exercise cumulatively elevate sapient Man above mindless Nature.

(3) An adjunct of progress in every stage of development, as indicated with especial clearness in the earliest stages, is the annulment or curtailment of both physical and formal law, and the substitution of cumulatively growing volition: the development of the esthetic passes from the intuitive toward the ratiocinative, that of the industrial from the instinctive toward the inventive, and that of the social from the merely reflective to the vigorously constructive; with every pulse of progress the subservience to blind chance and imaginative figment diminishes; and with each increment of sound confidence the ability to surmount physical obstruction and to dispense with primitive formality is cumulatively augmented.

2: Kroeber E-5 (1930) 1931 NU31 Seri NU31

to Ures is good farming country, and why the only non-agricultural people in Sonora should have held this stretch, is hard to see. Moreover, Orozco's bringing the Serian tribes so far inland as to abut on the Opata, severs the continuity of the American Pima Alto and Papago with the Mexican Pima Bajo, whose speech is almost identical. This identity is best understood as the reflection of a continuous occupation by the Pima of the whole foothill country from the Gila to the Mayo, between the Serian desert lowlanders and the Opata in their mountain valleys, with the Yaqui, Mayo, and other Cahita peoples replacing the Serians south of Guaymas where heavier rainfall and large flowing rivers made the lowlands attractive to farming peoples. The natural inland frontier of the Seri along the Sonora River would have been at the Siete Cerros, a low range some 25 miles, more or less, west of Hermosillo, where grass ends and creosote bush and giant sahuaro cactus soon become dominant beside mesquite. This boundary would have put the farmers on farm land, the roving gatherers into the succulently overgrown desert and along the food-stocked coast.

The Seri, then, in the wider sense, including the Guaymas, Tepocas, etc., were anomalous among the native peoples of Sonora in habitat as well as in culture. Now a similar country, almost waterless and cactus dominated, is the central segment of Mexican California. Here lived the Cochimi, dialectically the most divergent of the Yuman peoples, and with a culture similar to that of the Seri at least in its level. The habitat enforced a similar subsistence economy, unsettled living, scattering of population, inability of serious accumulation of property, and hence no doubt a relative paucity of most organizational aspects of culture. Whether the content of Cochimi culture was equally similar is difficult to say because of the melting away of the people. At any rate the question arises whether Cochimi and Seri are not historically connected, especially as both their languages are related to Yuman, whereas all other Sonora tribes are Uto-Aztecans. The connection seems the more possible in that southwest of Tiburon lies San Esteban Island; beyond that, San Lorenzo; and beyond, the great peninsula. The open-water distance nowhere exceeds fifteen miles. This is a difficult but not impossible gap to cross on cane rafts; and the Seri have skilful knowledge of currents and winds. The passage across the Infiernillo between mainland and Tiburon is little more than a mile at the narrowest point, but they often paddle five in their open boats to take advantage of weather conditions. The Seri remember navigating to San Esteban, and there is historical mention of crossings of the Gulf.

The final evidence for or against derivation of the Seri from Baja California will probably be linguistic, and if, as seems possible though doubtful, Cochimi speech can still be recorded in the peninsula, the answer may be definitive. The materials at present available

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197 are inconclusive. Some of the outstanding speech similarities and
● 171 differences are given in a section of the present paper; a fuller presentation will be made in a subsequent classification of the Yuman languages.

The Yuman tribes of the United States are better known, and
171 there are published or collected accounts of the Diegueño, Kamia, Cocopa, Yuma, Mohave, Maricopa-Halchidhoma, Yavapai, Walapai, and Havasupai. These fall into two groups, culturally: the farming tribes of the Colorado (and Gila) bottomlands, and the gathering tribes of the desert and semi-desert of Arizona and southern California, the latter again affiliating with those of northern Baja California, such as the Kiliwa and Akwa'ala-Paipai. As might be expected, it is the desert Yumans of Arizona who show the greater number of resemblances to the Seri and fewest differences.

The Pima as the immediate neighbors of the Seri, and the Opata and Cahita tribes beyond, ought to show many similarities with the Seri, plus differences due to their agriculture and activities like weaving which are normally encouraged by sedentary habits.

Such are some of the indications as to the history of the Seri
114 and their culture, as discussed more in detail below so far as the
121 preliminary data available allow. Further and intensive investigation is obviously needed. On the side of material life, Mr. Davis' studies
122 ought largely to fill the need. For social and spiritual culture, the work will be difficult. It is not that the Seri are unwilling, but that they are inaccessible and hard to communicate with. The obvious procedure would be a study of their speech until it served as a medium. In that way both their language and their culture could be recorded hand in hand. But the obstacles are numerous. The island is thirty miles long by twenty wide. There is not a roof on it. The six summer months are extremely hot, and, along the coast, said to be almost insufferable from gnats and mosquitoes. Most of the few water holes are inland; the Seri live, except during the cactus and mesquite harvest, scattered in small settlements along the shore, often several miles from water. There is no communication across the strait, except by open boat, subject to weather conditions; and then it is twenty miles to the nearest house and a hundred to a town. Life on the island would be both harsh and monotonous to an unusual degree. Nor can the Seri as yet be studied by taking one or two of them to civilization for a prolonged stay. They soon become restless and homesick. Added to all this is the fact that their Spanish, though reasonably fluent in some cases, is ungrammatical, and would hardly serve for securing paradigms or accurate translations of texts; and while able to endure hardships, the people are not accustomed to steady work or mental concentration. The difficulties would not be insuperable, when the destined linguist-ethnologist undertakes the task; but he should not under-rate them.

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eeke	older brother (of man or woman)		
eXe"e	younger brother (of man or woman?)		
i'q·de	younger brother of woman	rec. 'ipék	(older sister of man)
huya'k	younger brother (reference, not address?)		
emya'k	younger brother (term of endearment, cuando contento)		
ekŏ'me	younger sister (of man)		
etke	older sister of woman	rec. ica'k	(yngr. sister of w.)
ema"ŏx	father's older brother	rec. ek-ma"ŏ(x)	(man's y. br.'s child)
e'ite	father's younger br.	rec. ekŏ'tee (ekŏ'pee?)	(man's o. br.'s child)
u'yak	father's sister	rec. icŏk	(woman's br.'s child)
etma"ŏx	mother's older sister	rec. etxema"ŏ(x)	(woman's y. sis. ch.)
ista'k	mother's younger sis.	rec. epxee	(woman's o. sis. ch.)
exak	mother's brother	rec. e"ak	(man's sister's child)

All cousins, cross and parallel, are said to be brothers and sisters. The cases used as tests did not suffice to determine whether the names used depend on the respective ages of the cousins or of their parents.

eqŏqt	man's parent-in-law	rec. iqaqa'm	(son-in-law)
iqe'pŏc	woman's father in law	rec. iqa'mŏc	(daughter-in-law)
iqŏmŏc	woman's mother in law		
iqe'mut	wife's brother	rec. eqtoñqwa'l	(man's sis. husband)
eqmaXŏ'te	wife's older sister	rec. etmaXŏm*	(wom. y. sis.'s husb.)
ika'ite	wife's younger sister	rec. imaqe'te	(wom. o. sis.'s husb.)
eqwaq	husband's sister	rec. ikŏk	(wom.'s br.'s wife)
iqma"aX	hus.'s older brother	rec. eqmaXŏt	(man's y. br.'s wife)
iqŏ'ite	hus.'s younger brother	rec. iqe'tee ha'ta	(man's o. br.'s wife)

* Term of endearment, when drunk; otherwise they do not speak.

171
601

There is no word for child's parent-in-law (consuegro).

That a man distinguishes his son and daughter but a woman calls them by a single term, is a Yuman trait.

The number of sibling terms is greater than among the Yumans. The Diegueño-Kamia agree with the majority of Californian tribes in having four terms: older and younger brother and sister. The Yuma and Mohave have three, older siblings being merged; the Papago, two.

Six uncle-aunt terms, allotted as among the Seri, prevail through southern California, including the Yuman tribes; also among Walapai-

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Havasupai. This therefore looks like a trait of Yuman origin. The Papago go farther, with eight terms. 171 60

The Seri habit of calling cross cousins siblings prevails through central and northern California alongside the trait of designating them by uncle-nephew terms. All southern California, including the Yuman tribes, has special cross cousin terms. The Walapai-Havasupai combine the last two methods.

As compared with the three Seri parent-in-law terms, the California Yumans have two, the Walapai-Havasupai one. The twelve Seri sibling-in-law terms are most nearly approached in California by the Yuman Kamia, with seven. The Yuma have five; the Mohave, like the majority of Californian tribes, three. The Walapai-Havasupai, like the Hopi and apparently the Pima-Papago, have reduced separate terms for both siblings-in-law and children-in-law to very few.

Calendar and Astronomy

One informant said there were 12 moons in the year; another, 6. The list obtained consists of 12. Of these, about 6 refer to seasonal events, especially those concerned with food; 6 to constellations. This type of calendar resembles that of the Walapai-Havasupai. 805 821

1. June, eko'sLaX hi'caX, mesquite ripe.
2. July, antia'LLa hi'caX, grass green, rains.
3. August, soxwe'maL or xacuxe'maL (cf. 7), (certain stars) not yet visible (before dawn); tunas.
4. September, kê'to-ya'o, (stars of that name) appear; cold begins.
5. October, e'-ya'o, constellation jackrabbit (ê') rises in morning.
6. November, na'pXe-ya'o, constellation buzzard (nâ'pXe) appears (in morning).
7. December, xasoXwe'maL me'e (cf. 3; verified) (certain stars) not yet visible.
8. January, koyaXca'k, certain stars just begin to show; small sea-turtles appear.
9. February, koyaXa'ku, larger turtles appear.
10. March, eXno'lsea't hi'caX, eel-grass sea-weed (xno'ls) "appears." See below.
11. April, iqê'tmu hi'caX, sharks (a'qÂt) come.
12. May, ema'meme hi'caX, pitahaya ripe (ema'm was given as ripe fruit of sahuaro, pitahaya, etc.)

Some of these names appear to be merely connotive of the events to which they refer. The seasonal happenings would probably be more truly placed if the calendar fell a fortnight to a month later, beginning in June-July or July instead of June. This would put the beginning at about the summer solstice, and might account for the statement that the "year" had six moons. The list was recorded on

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February 28, 1930, which the informant (correctly) declared to be the first of a new moon. He also said it was eXno'iaa't, with which he began his list. This would roughly equate moon 10 with March, as per the list; but when asked about the edible "seeds" of the eel-grass, he stated that these were due next month.

Unfortunately, the informant who stated that there were six "months" in the year was not questioned further. He may have referred to a calendar of six seasons like that of the Lower Californians.

The upper large star in Orion (Betelgeuze) is an antelope; the three of the belt, mountain-sheep; the three of the hilt, an arrow; Sirius, a dog following the sheep.

The Pleiades, kmā'mk, are a woman (xmām, kmām) with children, who came outdoors to urinate.

Ursa Major is a sahuaro or pitahaya fruit-gathering crook, a pole with a bar diagonally across the end.

Kwe'pituX, quail (*codorniz*, qwe'pt) is a constellation.

Suxmi'ka, a man carrying a harpoon (*lanza*), may be Scorpio.

There are constellations Jackrabbit (ē'), Buzzard (nā'pXe), and kē'to, according to the calendar. These rise before dawn about March 1. Clouded skies prevented their being seen several mornings. A few days later, at 6 a. m. (7 a. m. Mexican time), Altair was visible well above the horizon; this may be Buzzard — compare Luiseño Buzzard-Altair.

Polaris was pointed out in answer to the question if there was a star that did not move.

The sickle of Leo was not recognized (Walapai-Havasupai, hand).

Of these, Orion-Mountain-sheep, Ursa-crook, Pole-carrier-Scorpio (?), Buzzard-Altair occur among Yuman tribes as far away as Diegueño, Walapai, Havasupai.

Myth Fragments

1.

People were born in a cane, the Seri in one joint, the Mexicans, Americans, Chinese in others, separate from each other. God (Dios, Yos) came along here from south, then went east (?), setting signal smokes; the Seri alone did not come to him, therefore have nothing.

2.

Coyote was trying to catch ducks. As he jumped, they flew away and he landed in the moon, where he is visible now.

3.

Death was caused by Coyote and Kontē'tXiat (*pinacate*, an insect that stinks, turns his black belly up, dung-beetle?). Coyote

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789 Some shamans display their ability to hold live coals in their mouth.

Taboos

[88] 784 At first menstruation, the girl eats nothing (!) for 8 days, only drinking water. For 4 nights a *fiesta* is held for her, men and women dancing in a circle, anti-sunwise. She is outside the ring. Her head is not covered. San-pit roasting was unknown to the informant.

[841] At menstruation a woman drinks hot water. She may cook for others. She may not eat deer meat.

[844] After childbirth, both husband and wife eat only *atole* (gruel) and water, he for 4, she for 8 days. She may not work at all, he only a little, such as getting wood, "hunting" as necessary, etc.

[88] [224] There is no puberty ceremony for boys. Nothing is said to be known of any rule forbidding a boy to eat of the first game killed by him.

[833] Continence before hunting deer was not observed. Nor was there any special treatment or respect due the deer carcass. It is said that deer meat could not be left behind unless there was too much, but this is probably a statement of practise rather than a taboo.

Dances

535 [727] Besides the girl's puberty dance, the Seri also had a scalp dance. Only the frontal piece of the scalp was used. This was hung on a pole. Men (armed) and women danced together around it. If the scalp fell down, all would die.

Dances seen were solo on a plank laid over a shallow pit. Several singers sat by, beating or rattling anything convenient. Each song and dance lasted scarcely three minutes. The tempo is fast. The step is a quick double shuffle with alternate feet. In one type, the dancer held to a stick with one hand, his body and hanging arm remaining as motionless as possible. Another type was without the stick, the dancer holding a gourd rattle and keeping his body bent forward somewhat.

534 171 Rattles are of gourds, e'Xée, on a stick, or of cocoons, Xekaké'ntta. Deer-hoof rattles were denied. The cocoons are on a band worn below the knee. The Yaqui-Mayo wear such knee-bands of cocoons; and sometimes of deer-hoofs. The Gila Pima also know the cocoon band.

Various Religious Items

276 Datura (toloache, jimsonweed) does not appear to have been used. Even the plant seems unknown, although it is said to occur in the Seri range.

778 789 Rain making seems to be by amulet rather than by direct shamanistic power. For instance, Antonio Herrera wears a small object

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524 Dice are three splints of cane; tapering toward both ends, nearly flat. The concave inside is greenish white, the outside darker. The count is: 0 insides up, win 4; 1 inside up, win 1; 2 insides up, lose 1 and play; 3 insides up, lose 4. The 3 splints are stacked together, then thrown endwise against the palm, a piece of turtle shell, or anything similar, so as to fly forward and scatter on the ground. (Some players probably acquire a degree of skill in making the canes fall right.) A player repeats until he throws 2 whites or insides. For points scored, he draws lines on the ground in front of himself. His opponent erases his lines as he wins, or adds to them as he loses, until he himself is ahead, when he begins to mark his own lines. Ten points wins the game. A stick is then set in the ground by the winner, who goes on playing the next game. That is, if he has 8, and throws 4, he sets up his stick, erases 6 lines so as to start the new game with a credit of 2, and throws again. The Seri perform these additions and subtractions with the rapidity of a practiced white man.

A ring of people may play at once. Their scoring in relation to one another was not ascertained, but it is presumably each from his neighbor, with the totals shown by sticks.

Since with fair throws the losses in this game must equal gains, a lead of 10 over an opponent is as much as could expectably be played for if the game were not to be unduly protracted.

526 Football race is played with *palo fierro* balls, perhaps 3 inches in diameter, one to each side of 4 runners. The ball may be moved only with the foot. The race is along the beach, where cactus and brush do not interfere. The distance, according to places named to Sr. Thomson and known to him, is about 6 miles. The men on a side relieve each other in informal relays; usually only 1 or 2 finish. The [648] Seri once went north to play the Papago this game, but lost.

Shinny is a woman's game, preliminary to the football race. Four women to a side carry sticks with which they try to throw an 8-12 inch hoop to a goal mark at the end of a short field. Behind each side stand the 4 men runners who are to race with a ball.

Notes on Material Culture

482 Women carry loads on their heads with a ring: men with the pén, Spanish *palanca* or lever, a stick over the shoulder, with load [171] hung from each end. These are the usual Sonora and Sinaloa Indian ways of carrying.

516 The Seri sit and lounge randomly. The men squat, occasionally cross the legs, put them sidewise, or sit with one knee up. The women wear long cloth skirts, but apparently sit just as variously.

714 Body armor, *naitlanikap*, with sleeves and helmet, and a shield. saXe'tiX, both of hide, were worn. The shield was described as 4 or 5 feet high, roof-shaped toward the front. It is not clear whether

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sounds like an expectable enough mythic idea, but seems involved with McGee's dubious conceptions as to totemism, discussed below. 114 193

The two-pointed fish-spear, with serrated points 6 inches long and spreading 5°, seen by Hardy (McGee, p. 193), is interesting because seemingly unreported in or near the area. 114 227

"Fishing" with staked pelicans who are then fed by free birds, is authenticated by the statement of Venegas for lower California, (McGee, p. 193). [226 231]

No fish nets, hooks, or lines were seen by McGee among the abandoned effects on Tiburon (p. 194). This is in accord with my observation. The abundance of sharks may interfere with net or deep water fishing.

The bow (p. 200) is of *palo blanco;* the release (pls. 28, 29), Mediterranean; the archer's position (pl. 29), with elbow above head, suggests a quick downward shot at a target or game lying on the ground not far away. 114 411

Mesquite, according to McGee (p. 207), is ground on the metate. Sr. Thomson told me of its being pounded in a hole in the ground. The Seri gave me the name a'kaɬɑ for what I understood to be this earth mortar. According to Sr. Thomson's description, the flour from the first beans cakes and lines the cavity firmly, so that the bulk of the material is secured quite cleanly. In general, mesquite is mortar-pounded rather than metate-ground by the tribes from whom we have records, as is expectable from the woody nature of the beans. 114 252

McGee (p. 207) noted the viznaga cactus, Echinocistus, as rare in the Seri habitat, presumably owing to its use for water by the natives. I made the same observation on the mainland, but Sr. Thomson stated that along the roads the plant is being gathered for candying. 114 137

The one basket described by McGee (p. 208, fig. 24) is bundle-coiled and plain. The only one I saw in use among the Seri was ornamented with a plain reddish band. Sr. Thomson presented me with two which bear patterns (fig. 13), and showed me a photograph of a collection made by Mr. Davis for the Museum of the American Indian, Heye Foundation, nearly all of which were decorated, some fairly elaborately. Several of these are shown by courtesy of that institution in figure 12. As McGee observes, there is obvious resemblance to Southwestern baskets; especially of the Papago, Pima, and Apache. Southern California basketry is less similar. That of Baja California is unknown from specimens, though the mention of water-tight vessels used for winnowing and parching suggests a coiled tray of Seri type. The surviving tribes of Sonora other than the Seri use few baskets distinguishable from those of the non-Indian population. 114 285 [171]

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114 262 The Seri "second harvest" of cactus seeds (p. 209), which Baegert and Clavigero also describe from Lower California (p. 211) is found also among the American Pima,[4] and is therefore likely to have prevailed as far as Cereus fruits were a principal food supply.

171 514 The ground-squirrel is not eaten by the Seri, the badger not by the Baja Californieños (p. 212).

McGee gives a valuable percentage estimate of Seri food composition: land game, large and small (including 6% of stolen stock), 21%; pelicans, other waterfowl, and eggs, 13; sea turtles, 25; fish, 15; shellfish, 10; cactus fruit, 9; other plants, 6; miscellaneous, 2; total animal, 84; maritime, nearly two-thirds. My impression is that clams, other mollusks, and crabs constitute more than a tenth of the total consumption. Clams especially can usually be obtained at low tide when wind and water prevent other food taking. I should also be inclined to raise the proportion of plant food, especially mesquite. The use of agave was almost certainly limited chiefly by the supply. Sealions, porpoises, and occasional whales could perhaps hardly be accounted for under the two percent of miscellaneous. On the other hand, deer are evidently taken only occasionally, and the figure for turtles seems too high, these animals being absent from Seri waters for months in the year and always free-swimming. McGee appears to have over-emphasized the importance of the turtle in Seri thought as well as life. I would incline to estimate the proportion of animal food in native times, before domestic animals could be preyed on, as rather under three-fourths of the total; of maritime, as perhaps three-fifths. Even these figures might be high for the bands primarily resident on the mainland, with free access to the mesquite thickets of the lower Sonora and Bacuachi (Bacavachi) courses, and the countless cactuses.

114 171 501 A double-bladed paddle pictured by the Dewey-Narragansett expedition of 1873 is reproduced by McGee (p. 219, fig. 28) without comment. This type of paddle is established for the Seri, Santa Barbara islanders, and San Francisco Bay Indians; then apparently is lacking until the Eskimo-Aleutian area. Among the Chumash it is native and associated with a plank-built canoe. On San Francisco Bay it was used with the rush balsa, and may or may not be due to Aleutian sea-otter hunters introduced by the Russians. It seems possible that the Seri and Chumash occurrences would prove connected by occasional use in Baja California, if we had fuller data, since some of the natives there went several leagues out into the open sea. We are so accustomed to think of the two-bladed paddle as an adjunct of the specialized kayak, that it too impresses as a complicated device, inappropriate with a simple raft. As a matter of fact, wherever scarcity of wood, or lack of skill and usage in working it,[5] resulted

[4] Russell, BAE-R 26:171, 1908.
[5] Cf. The Valley Nisenan, UC-PAAE, 24:283-290, 1929.

2: Kroeber E-5 (1930) 1931 NU31 Seri NU31

in a paddle blade being cut separately from the shaft, the inventive step from attaching one blade to attaching two blades would have been insignificant—in fact, would be an improvement or variation rather than an invention. The determining factor as to its adoption would probably be the type of navigation as set by water conditions. This is borne out by the distribution of the double paddle, which clings to areas of open salt-water navigation or large bays approximating open water conditions. On rivers and lakes the double paddle would rarely help and often be in the way. In this way the varying association with skin boat, wooden boat, and raft boat seems accounted for. Another factor must be size of the vessel navigated. A broad or high canoe would scarcely allow of alternate paddling on both sides. This may be the cause of the absence of the implement on the Northwest Coast. Whether the Arctic and the California-Seri occurrences are to be historically connected, must probably be left an open question for the present. An answer in favor of connection will evidently depend on the establishment of sufficient other connections to set up a favorable presumption. Until then, the considerations just mentioned make the possibility of independent origin equally plausible.

The single-bladed paddles seen by McGee (p. 219) and myself were two-piece and hafted with nails. McGee is more interested in balsa propulsion by recumbent women with hands, shells, or unhandled blades. That such crude devices were used along shore or in bays often enough to be mentioned, is wholly in line with the conspicuous Seri indifference, slovenliness, and lack of standards; but it is also obvious that real paddles being known and made, these would be the ones taken on open sea voyages of a dozen miles in a region of notably variable winds and currents. The Seri are never fools in practical matters within their compass; and they could not have acquired their indubitable navigating skill by letting their women do most of their paddling with bare hands. The one woman I saw aboard was carried as a passenger across the Infiernillo.

What is typical of Seri habits is that the harpoon shaft is also used for poling, and the harpoon cord as anchor rope, tow-line along shore, sheet rope, and for tying a blanket to a mast and pole to serve as sail; just as the bailer of a leaky skiff is an enamel-ware plate or pot employed at other times for food. The whole harpoon, including the rod-iron point, but dismounted, seems regularly to be taken along on a transport voyage.

The Seri houses I saw opposite Punta San Miguel were like those described by McGee (pp. 221-223): long, narrow, low, and open at least at one end; but they were unroofed. There was also one of double length, and another "joined obliquely"—that is, annexes occupied by younger kin and their families. The lengthwise double house was open through, though constricted at both ends and the

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342 middle. Two imperfect wind-breaks of brush, less than a quarter of a circumference in curvature, stood near the camp..

On the subject of textiles and textile clothing (pp. 171, 225-232),
114 McGee is necessarily vague on account of lack of specimens. He
281 says that native kilts, from waist to knee, were either of birdskin or
286 "a rectangle of coarse textile fabric," "woven probably on some prim-
291 itive device"; that it is practically certain that a long-sleeved, short-bodied shirt or wammus is "of local aboriginal design" and was "made primitively of haircloth or native textiles"; that the probable genetic series of Seri garments was: 1, the pelican-skin robe used as a kilt, 2, the textile shirt, 3, the textile kilt; and that Seri fabrics, according to a Mexican informant, "resemble coarse bagging, and are woven or netted quite plainly."

114 Human hair cord could be netted, or twined in double weft into
171 basket-like bags or mats; it could hardly be woven into cloth without
286 a loom. The same holds of *ixtle*, agave fiber. Bast of willow, cotton-wood, beanstalk, such as was spun and twined, and perhaps woven on a limited scale, by the Colorado river Yuman tribes, was not available to the Seri, though they may have had nearly equally soft substitutes, even in their desert. Cotton they did not have. *Ixtle* is a strong, harsh fiber, excellent for cordage, nets, open-mesh bags, and the like, and still largely used in Mexico for such purposes. It would also serve well for fringe-aprons, for which the Lower Californians used it. A fabric from it would be rough and stiff, giving little warmth, not very satisfactory for a kilt, and quite unserviceable for a fitted garment like a sleeved shirt. Cotton was the prevailing garment material found along the coast by the first Spaniards, north up to the Cahita (Ka'ita, namely Tehueco, Mayo, Yaqui); here *ixtle* became more prevalent though cotton persisted; but the type of garment is not clear.

As to looms, *ixtle* is today woven into carrying bags on a heddled belt-loom by the Nahua-speaking Indians of Sinaloa. The Mayo weave woolen girdles on a similar loom. They also weave woolen blankets on a demountable horizontal loom, the warp passing continuously around the two heavy yarn beams. It is not clear whether this is a hybrid Spanish or a purely native apparatus. The Opata and Pima Bajo loom is not known. The American Pima weave cotton both on a belt-loom and on a staked horizontal loom, but with warps in a single plane.[6] It is difficult to imagine these looms existing among the Seri, except the first mentioned; and this would not yield them much in the way of garments. There is no reason why they
114 should have worn more than the Lower Californian women's fringe-
291 aprons, supplemented perhaps by birdskin blankets and loin covers.
439 They no doubt secured occasional garments from neighboring tribes, as they gladly but irregularly wear those of whites today; and this

[6] Russell, BAE-R, 26:148-153, 1908.

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is what their "shirt" (McGee, pl. 29) probably was. The fabrics of McGee's Mexican informant may refer to gunny-sacks made over into improvised imitations of civilized garments; or to single-element carrying bags. It is entirely possible that contact with the cloth-weaving tribes of Sonora long ago induced the Seri to shrink from habitual complete nudity; but it is difficult to imagine them producing even a coarse wearable cloth. McGee's interpretation of the historic sequence of Seri garments is of course wholly speculative.

The cradle shown by McGee (p. 226, fig. 30) consists of a kite-shaped hoop with eight sticks tied across it and a lashing thong passed back and forth across it half-a-dozen times. Even allowing for some slip of the parts in transport to Washington, this specimen is quite typical in Seri disregard of evenness, neatness, order, or finish. The Yaqui cradle illustrated by Hrdlička[7] consists of eight or nine lengthwise sticks or canes twined close together. The Lower Californians used a basket or a turtleshell. The Gila Pima and river Yuman cradle is of "ladder" type, and therefore similar in structure to the Seri except that it lacks the point at the bottom and has the sides parallel; it also carries a hood of wickered or twilled splints. As regards basic structure, one form of Maidu cradle is most similar to the Seri; just as the plan of the Yaqui one reappears among Miwok, Yokuts, and Mono a little further south in California.[8] It appears from this irregular distribution that so simple an apparatus as the open or flat baby-carrier, which can be just as serviceable without a definite technique or style entering into it, is likely to vary locally without much significance, and that its forms will indicate historic connection only when they are parallel in a number of details. In these respects it resembles house types. In both these objects, new "inventions," certainly of detail elements and perhaps of basic structure, seem to be readily made and adopted.

McGee's finding (p. 247) that the Seri are "not habitual stone arrow-makers" has a parallel among the river Yumans, and, at least partially, among the remaining Sonoran tribes. His conclusion (p. 259) that the *yerba de la flecha* (magot, Sebastiana bilocularis?) was an Opata but probably not a Seri arrow poison, seems sound. The plant was shown me on the island, and the Seri knew it as venomous, but volunteered nothing as to using it on arrows.

That the question of Seri cannibalism must be left open, with a preponderance of evidence against the practice (p. 263), also seems a conservative judgment.

As to shields, McGee learned of loose pelican pelts and turtle-shells (p. 264), I of armor and a large upright shield of hide. Both accounts may be right, one referring to emergency pick-ups, the other ——— to prepared defence or attack.

[7] AA 6, pl. 9, 1904.
[8] BAE-B 78:688, fig. 48, pls. 58, 66.

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to prepared defence or attack. The Seri mode of life and induced temperament must have led to many instabilities, with make-shifts often actually more in use, but finished or efficient types of artifact seemingly latent and sporadically emerging in the stream of their culture. Thus, the shell alongside the double-bladed paddle; plain baskets seen in use, but a series patterned in a definite style being produced as soon as their manufacture was profitable; unroofed and roofed houses. Similarly, the two-pointed fish-spear and olla carrying-net, which neither McGee nor I saw, but which may persist in memory in the culture ready for revival on occasion.

Somewhat similar, perhaps, is the status of polygyny, which prevailed in McGee's day (p. 279) a half generation after a disastrous war, but was not the rule, or was successfully disavowed, in earlier times and to-day.

Errors and Misconstructions

McGee dwells at length (pp. 152-156) on three strong trends of Seri life and culture: the pedestrian habit, accompanied by quite exceptional fleetness; a hand and tooth sense with corresponding absence of tool sense; and a race sense unalterably opposed to mixture with alien blood.

All the Sonora and Southwestern Indians were and largely still are fast and sustained long-distance travelers on foot. There is nothing to show that the Seri were superior to the others. The one time they remember having met the Papago in a foot-ball race, they were beaten. Yaqui warfare is a record of at least equal endurance and ability to evade superior civilized forces. In fact the faculties of the Yaqui are the more remarkable in that they have always been settled farmers and often moved in larger bodies. The incredible fleetness of the Seri was probably most manifest in mesquite thickets and on rocky ground. That they should outrun a horseman on an open plain is the sort of tale that one hears on every frontier and which the more intelligent frontiersman does not take seriously.

Hand and tooth sense was undoubtedly strong among the Seri. The same thing, especially as regards food, is reported for the Lower Californians. But the inference of lack of tool sense is erroneous. Knives are prized by the Seri, and, along with nails, axes, and the like, are handled with a direct, crude effectiveness. The crudity is due to the lack of standard, order, and interest in finish which pervades all Seri cultural manifestations and which rests ultimately on their essential isolation and self-sufficiency in an unusually forbidding environment. What a Seri is interested in is not a neat job but one that will substantially meet his immediate need. Their modern plank boats are weak in plan, badly joined, and always leaky; but they serve. A structurally stronger boat would probably profit noth-

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ing, because it would be swamped in a sea which it could resist. The joining and calking are always carried far enough that the boat can be bailed faster than it leaks. That the Seri prefer to bail rather than to finick over joints, is a matter of preference. Most of our real frontier life runs on much the same plan, though sprung from a tradition of intrinsic standard and provided with a superior tool equipment. Tribes like the Walapai and Papago, who live in nearly the same desert, show much of the Seri combination of technological crudeness and effectiveness. They do make an exception in basketry, which is what has chiefly reached our museum cases from their culture; but the Davis-Heye collection shows that the Seri too can make baskets of unsuspected quality. My impression, based on the way the Seri handle their knives, boats, bows, and the like, is that they have excellent practical mechanical sense, but that their standards are astonishingly different from our own. Most people that depended so much on sailing their boats as the modern Seri do, would not be content with two sticks, a blanket, and a harpoon line. But, given the willingness to operate with this equipment, very few would be as successful in quickly rigging and skilfully handling the sail. And sailing is something the Seri have recently learned or evolved. They are the frontiersmen of native culture: hardy, rude, unorganized, practical, efficient; but, like our own frontiersmen, in no sense only half emerged from the tool-less animal. McGee was so inspired by the desire to find ultimate "primitiveness" among the Seri that he often ignored the tremendous effect of their habitat which he so well observed and described. After all, in his day cultural evolutionism was still in vogue.

As to race sense, McGee seems partly but only partly right. Chico Romero of his own accord asked me if other Indians had venereal diseases, and on the return question replied that the Seri were entirely free from them. I also saw and heard of no half-breeds. On the other hand, Chico's historical tradition told of the violation and keeping of captive Tepoca women, and since his own son was descended from one of them, in the second generation, Chico's mother-in-law must have been a Tepoca. McGee's "alien conjugal union" as the "blackest crime" (p. 11) is therefore an exaggeration, and his informant's statement that a Papago woman captive among the Seri never could have had children because she was an alien slave (p. 278), must rest upon a misunderstanding.

The groom's continence for a year after marriage as a moral test before admission to full husbandly status (pp. 280-3), is probably a matriarchally colored fantasy based on another misunderstanding. As already mentioned, Chico was interested, but mildly ribaldly amused, at the idea when it was put before him as a foreign Indian custom. He reacted like the average white man under the circumstances, not in the least like an actor skilfully feigning ignorance.

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ages (pp. 164-167), and Hardy's story of his being painted is interpreted as ceremonial adoption (pp. 277-8). My conviction is that the Seri paint primarily for adornment, and that further significance is either secondary or absent. When I reached the island and about thirty people, including visitors from other settlements, were gathered to receive and inspect me, all the younger women and one or two adolescent boys were freshly and very neatly painted. After all, their ragged cast-off civilized garments were nothing to make a show with on a state occasion. In former times, the everyday-wear pelican robes would not have served much better. The ocher red, dumortierite blue, and gypsum white pigments however gave a chance for decoration and display. Three days later, when our party was an old story, some of the faces still carried paint, but it was worn, defaced, and bedraggled. It seems unlikely that people should greet strangers by decorating themselves with representations of lineage totems which they at the same time denied or tried to conceal from their knowledge. The construal of Hardy's painting as an adoption-rite rests on the same blood-kin interpretation. It was probably nothing more than an act of friendliness tinged with the simple humor of which the Seri have a strong sense.

Face painting in fact seems to be the chief if not only purely aesthetic expression of Seri culture, their mode of life and psychophysiological habits being such as almost to prohibit any other form of art. In this painting, on the other hand, they have achieved a high degree of stylization and taste. The designs I saw were throughout in the manner illustrated by McGee in his plates 13-16, 18, 20, 22, 24-26.

Ethnographically, the interest of this style lies in its similarity to the river Yuman face paintings. The Seri first of all specialize on a horizontal bar across the nose and cheeks, immediately below the eyes; in addition to this, there may be vertical elements dependent over the cheeks. The design deliberately breaks across the natural lines of the face in such a way as to orient itself with reference to the eyes without touching them. Bordering or enclosing of the eyes is avoided; neither are planes like the cheeks, forehead, or chin felt as fields to be filled in with decoration. The fundamental plan attacks the face at once drastically and subtly. That the style has both feeling and rigor is shown by the fact that none of the endless variations of color and design detail depart much from the basic scheme. That this scheme is old is shown by Hardy's description of a century ago. It is a true art of high order within its narrow compass.

The Mohave paintings* are somewhat freer and more variable, but also less classical or chaste stylistically. The transverse element

* Kroeber, Handbook, BAE-B 78, figs. 60-62, 1925. With the Mohave, contrary to the Seri, the vertical elements predominate over the horizontal. The Gila Pima style (Russell, pl. 58), and the Havasupai (Spier, AMNH-AP 29:198, 1928), are also related.

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302 below the eyes and the verticals below them are predominant in most cases. Even where the design extends above the eyes, it does not cover the forehead, but terminates in a straight edge paralleling the one below. Where the chin is involved, the Mohave bring solid triangles up from the jaw and then leave the chin itself blank, instead of accentuating its contour with color, as a less sophisticated style would do. Like the Seri, the Mohave are a people with deficient material culture and little dress suitable for display. The two tribal styles are unquestionably connected in their history.

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COMPARISON AND PLACE OF SERI CULTURE

It may seem premature to attempt to place the Seri culturally with reference to other Southwestern tribes, since only a fraction of their and other Sonoran cultures is on record. But it does seem justifiable at least to forecast an answer to the problem of how far their culture is an exceptional growth or explainable by the generally accepted principles of historical origins and contact and environmental adaptation.

Any present comparison must be made primarily from the Seri outward. Were one to start with a more fully known tribe, too many absences of traits would be ambiguously construable as lacks either in Seri culture or in our knowledge of their culture. Positive Seri traits on the contrary, though less numerous, have definite meaning according as they occur or are known not to exist among other, better-known peoples. List 1 accordingly compiles the occurrence elsewhere of characteristic Seri traits, those peculiar to them, at least within the Southwest, being signalized by an asterisk.

For Lower California, data are about as meager as on the Seri, and, except in the extreme north of the peninsula, can probably no longer be secured. This is specially unfortunate because the environment, subsistence habits, and culture level of the Lower Californians were obviously similar to those of the Seri. To facilitate such comparisons as are possible, I have compiled in List 2 the principal specific known traits of peninsular culture. Those recorded by Baegert seem all to relate to one group, the Waicura in the south—but not the extreme end—of the peninsula, and have been subdivided as they recur or seem not to recur among the Seri. The data preserved by Clavigero and Venegas refer to several groups and are only partially localized as to occurrence. They have therefore been presented separately within the list. It so happens that nearly all of them are not known to be Seri.

List 3 bears indirectly on the Seri through the Pima, chief immediate neighbors of the Seri. The specific ethnological records of the southerly or lower Pima have never been systematically compiled. The upper Pima consist of some Sonoran divisions pretty well missionized and absorbed; of other divisions who have gradually come to be called Papago; and of the Gila River or United States Pima, who were brought under mission influence relatively late and imperfectly. Since nearly a century ago the Papago and Gila Pima have been able partly to revert to their old culture, while their kinsmen in Mexico have continued to lose theirs. It is unfortunate that the one systematic ethnologic account of any Pima group, Russell's monograph, deals with the peripheral Gila division. However, these Gila Pima are obviously similar in some respects to their neighbors, the Colorado River Yuman tribes. List 3 has therefore been drawn up

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to distinguish Yuman-Pima resemblances (which may have originated with either group) from Pima traits which are not River Yuman; and, to balance the picture, from River Yuman traits which are not Pima.

Distribution Lists

LIST 1. OCCURRENCE OF KNOWN SERI CULTURE ELEMENTS AMONG OTHER TRIBES

[Abbreviations: LC, SC, CC, Lower or Peninsular, Southern, Central California; RY, Colorado River Yuman tribes—Mohave, Yuma, Cocopa, Mariccpa; W-H, Walapai, Havasupai, or both; API, American or Gila Pima; Pue, Pueblo.]

Bodily

Head carrying by women. Yaqui-Mayo, RY, Pue, API.—Abs. SC, LC. Seems correlated with pottery water vessels.

Pole carrying by men. Y-M, Sinaloa. Absent in United States, probably in LC (single-load pole mentioned).

Net carrying-bag. LC, SC.—CC, W-H, baskets; RY, API, mesh frames.

Nose piercing. RY, LC.

Face paint, horizontal across nose under eyes. RY; some W-H. Vertical below eyes; RY, W-H, API.

Food

Little or no boiling of food. LC.

Both sexes cook. LC.

Re-eating cactus seeds. LC, API.

Technology

Unroofed house, windbreak. LC.

Cane balsa, LC; rushes, SC, RY, CC.

Double-bladed paddle. Chumash, CC (San Francisco Bay).

Fish harpoon. LC, CC; SC? Absent, RY.

Two-pronged fish spear. LC? (Clavigero, "horquilla").

Long self-bow. LC, SC, RY, Yaqui-Mayo.—API, Pue, less long.

Reed arrow, foreshafted. LC, SC, (RY), Pue, Yaqui-Mayo, Mex.—Arrowweed, API, RY.

Mediterranean release. SC, Apache.

Pottery. Yaqui-Mayo, API, RY, W-H, Pue. Abs. LC; SC (part), CC (part). Scraped, NW Mexico, W-H, Pue, CC. Paddled, RY, SC, API.

Multiple foundation coiled basketry. SC, CC; prob. LC; Pue, RY rare; API, W-H, three-rod.

Body armor of skin. W-H.

*Long skin shield.

Human hair cord, etc. LC, SC, API. Not RY, W-H, CC, Pue.

Kite-shaped stick cradle. CC. The related hoop type is W-H, ladder type API, RY, SC.

Kinship

Many terms. RY.

Reciprocity. RY, W-H, SC, CC; weaker, API, Pue.

*Numerous (8) sibling terms.

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*Numerous (12) sibling-in-law terms.—SC, CC, W-H, API, Pue, few terms for connections by marriage; Kamia 7, Yuma 6, Mohave 8. (7)

Age distinction of parent's siblings of same sex as parent. RY, W-H, API, SC.

Social

Wife purchase. SC, W-H.—Absent, RY, API, Pue, prob. LC.

Patrilocal residence. SC, RY, W-H, API.—Matrilocal, Pue, Navaho.

Parent-in-law avoidance, LC, CC, Navaho, Apache.—Absent, SC, RY, W-H, API, Pue.

Sibling-in-law avoidance. LC (?).

*Respect shown elder siblings in avoiding sexual references.

Death

Burial. API, Pue, some LC.—Cremation, SC, RY, W-H, some LC.

All property destroyed. SC, RY, W-H, API.—Not all, Pue.

Name of dead taboo. Same as last.

Games

Hidden-ball game. Pue, API, W-H, RY. Abs. SC, CC.
4 tubes. Pue, API. Abs. RY.
Guess for third tube. Pue, API (?).
Score 10-6-0-4. Pue, API.
Tubes marked end-middle-both-none (or 2 ends). API, (Pue, on dice).
Tubes named old man, etc. API.

Dice—three in number. Pue, Navaho, W-H (recent?). Abs. API, SC, CC.
Cane splints. Pue.
*Score 4-1-1-4.
*Tally on ground, no counters.
*Erase (subtract) in tallying.

Foot-ball race. SC, API, Pue. Abs. RY, W-H.
Ball. SC, API. Stick instead of ball, Pue.
Four runners to side. Pue. One or indefinite, SC, API.

Shinny, with *hoop. API, double ball. Abs. RY.
Played by women. CC, API. Men's game, RY.

Constellations

Mountain-sheep, Orion's belt. W-H, R-Y, SC (Diegueño).
Antelope, Betelgeuse.
Arrow, Sword hilt.
Dog, Sirius. Walapai, Sirius or Bellatrix is coyote.

Cactus-fruit gathering crook, Ursa Major. W-H.

Pole carrier, Scorpio (?). W-H.

Buzzard, Altair (?). SC.

*Quail.

*Jackrabbit.

Woman with children, Pleiades. All Yuman, Hacha, meaning usually unknown; Luis., girls; Walapai, coyote's or bat's daughters.

Not moving, Polaris. W-H, API.

Calendar

Year begins with cactus harvest. LC, API.

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171 Year of 12 moons. CC, W-H, API, some Pue; Seri, Diegueño, 6 repeated. Absent, LC.
Part of these named from constellations. W-H.
Less than 12 periods (?)—LC, 6; SC, Luiseño, 8, Juaneño, 10.

Ritual

Girls' puberty fast. SC, RY, W-H, perhaps LC.—API, seclusion, no fast; Pue, lacking.
Girl's puberty dance. SC, API, CC, perhaps LC.—Absent, RY, W-H, Pue.
Menstruating women forbidden deer meat. SC, CC, W-H.
Victory dance, scalp on pole. SC, CC, RY, W-H, Pue. Abs. API, perhaps LC.
By both sexes. CC, RY, W-H, Pue, API.
In circle. CC, W-H, API, Pue.
*Falling of scalp fatal to dancers.
Gourd rattle. RY, (W-H), API, Pue.
Cocoon rattle on knee. Yaqui-Mayo, API. On handle, CC. Neither, SC, RY, Pue.
Dancing on plank over pit, singly. CC (foot-drum).
*Holding pole.
Ritual number four. RY, W-H, API, Pue; prob. LC; SC, variable.
*Soul is blood.
Rain-making with amulet. CC, API.

Shamanism

Spirit quest. W-H. Absent, RY, API, Pue.
Ventriloquism in caves. LC, (W-H). Absent, SC, CC, RY, API, Pue.
Spirit enters shaman (possession without utterance). W-H. Absent, RY, API, Pue, CC.
Shaman lays on hands, breathes. RY.
Shaman sucks or blows through tube or hands. LC.

Myths

Death from coyote and insect. CC.
Coyote's child first victim. CC.
Fire from fly. SC, RY, API.
Sun's daughter. W-H.
Gambling for body. SC, RY, W-H, API.

LIST 2. LOWER CALIFORNIAN TRAITS OCCURRING AND LACKING AMONG THE SERI

A. Waicura traits which are also Seri.

Cane balsa: used in open sea.
Curved wind-break, unroofed, as dwelling.
Nose pierced (allegedly).
Turtleshell receptacle.
Little division of labor; cooking by both sexes.
Pitahaya not preserved.
Pitahaya seeds re-eaten.

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Fishing with harpoon only; no nets or hooks.
Singing and roasting on open fire; no boiling of food.
Mother-in-law taboo.
Shamans use caverns and ventriloquism.
Shamans suck or blow.
No special shamanistic treatment for rattlesnake bite.
Girls' puberty ceremony.
Women's child-bed restrictions ("ceremonies").
Readiness to laughter and merriment.
Inclination to pilfer, lie, slovenliness, and filth.

B. Waicuro-Seri traits found also over a larger area.

Men wear hair long.
Net-like carrying-bag of agave fiber.
Bow long and nearly straight.
Foreshafted cane (reed) arrow.
Earth-oven for agave.
Hair cut in mourning.
Long distance travel by running.

C. Waicuro traits not occurring or not reported among the modern Seri.

Wood raft.
Buckskin sandal.
Complete absence of roofed dwellings.
Absence of pottery; gut or bladder for transport of water.
Turtle shell only cradle.
Women's front and back apron.
Men carry on heads, women with tumpline.
Forehead protected by high piece of buckskin.
Men cross, women stretch legs in sitting (Seri variable).
Litter for transport of sick.
Ear piercing and enlarging.
Absence of fermented drink.
Marriage to wife's sisters.
Shamans of both sexes.
Shamans wear human hair mantle or wig.
Shamans blow or suck through tube (Seri, hands).
Shamans extract pain object.
Bleeding and ligaturing for sickness.
Boys' puberty ceremony.

D. Lower California traits (other than Waicuro), mostly Cochimí or unlocalized, not occurring or not reported among the Seri (Clavigero, Venegas)

Cabin-like arbors (*ramadas*) as house.
Pericú: cape or mantle (*capotillo*) in addition to woman's front and back apron.
Cochimí: front apron of reed, back of buckskin.

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North of Cochimí: cape of otter, rabbit, or jackrabbit fur (piel); woven rabbitskin blanket?

Buckskin sandal.

Guaicura of Loreto: head net.

No fermented drink.

Winnowing and parching trough (bateo) of water-tight reeds (basketry) or palm wood (carved).

Round (coiled basketry) dish (plato or escudilla, Cochimí adda), for food, drinking, and woman's hat.

Agave fiber net hung from forehead or pole to carry children (except Pericú).

Pericú: cradle a deeper trough (bateo).

Agave fiber net (from forehead?) for carrying (fruit)

Deer head decoy.

Curved throwing stick for rabbits.

Rabbit nets.

Fish nets.

Balsa of 3, 5, or 7 light logs, middle longest; used to 4-5 leagues from shore.

Bone awl.

Guaicura: marriage ceremony is exchange of a trough and carrying net.

Other tribes: dance at marriage.

Monogamy; only Pericú polygynous.

Husband has absolute authority over wife.

Levirate.

Ears (and noses) of boys pierced.

Pericú: creator called shaman.

Guaicura: creator of food (pitahaya and fish) comes from north, on east coast teaches the making of shamans' mantles, returns north.

Cochimí north of 30°: impersonator of creator comes from hills, with men eats food prepared in arbor by women. Similarly, return of dead from north impersonated, women retire, men eat food.

Shaman's wig or cape of human hair, from head to feet.

Pericú: add head-dress of deer tails to same.

Cochimí: add two belts of deer hoofs to same.

"Conjuring" with boards (*tablitas*) bearing designs.

Curing by sucking through joint of cane.

Burial or cremation (as convenient? varying according to locality?)

Mourning commemoration, rude figure of dead made of branches on pole, landed by shaman.

No moon-sequence calendar, but six named periods in year.

LIST 2. CULTURAL RESEMBLANCES AND DIFFERENCES OF GILA PIMA AND RIVER YUMAN TRIBES

A. Gila Pima and River Yuman common traits

Wooden mortar, with long wooden or stone pestle, for mesquite.

Absence of basketry seed-beater.

Type of planter and ("weaving sword" shape) weed-cutter (Russell's "digging-stick" and "hoe").

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Flood irrigation by one Pima village and Kwadhak (canal irrigation by other villages).
Wheat growing very early of importance.
Arrowweed bins or storage baskets.
Arrows of arrowweed, without foreshaft or head.
Few stone arrowheads.
"Potato-masher" type of war club.
Paddle for pottery making.
Cradle of wooden "ladder" type, with wicker basketry hood.
Metate flat, not grooved, with long mano; fairly shaped.
Head ring of willow bark for carrying.
Stone axes not made (prehistoric ones used by Pima for metate dressing).
House earth-covered, resting on 4 forked posts (Yuman, side posts too and rafters; Pima, bent willow frame).
Sweat-house lacking.
Man's breech-clout, woman's apron kilt, of inner bark of willow.
Men's hair long, unbraided, in "skeins" or gummed pencils.
Women's hair loose, cut in front.
Hair treated with plaster of mud and mesquite gum.
Face paint mostly arranged vertically below eyes.
Nose piercing of brave men.
Low aesthetic sense or interest, lack of finish in manufactures.
Flageolet (flute)—Pima from Maricopa.
Coiled basket used as drum—Pima from Maricopa.
Ring-and-pin game of gourd or pumpkin rings, with spiral scoring design.
Girl's puberty rite, 4 days' seclusion (Pima also dance, Mohave not).
Dance formation: men and women in two lines, back and forth (Pima, puberty dance).
No wife purchase.
Patrilineal and patrilocal descent.
Patrilineal sibs (Pima, 4 or 5, under moieties; Yumans, many); these have totemic reference but not names; designated by common names used by members (for fathers by Pima, for women by Yumans).
Slaves (Pima, children; Yumans, young women).
Chief's liberality.
Secondary names of men often refer to female genital organs.
Rigid taboo of names of dead.
Salt forbidden as ritual restriction.
Absence of altars, of specific dance regalia, and of masks (except Pima Navitco, imported?).
Shamans do not seek dream or trance.
Shamans brush and spray in curing.
Shamans killed for failure.
Myth episodes or tendencies:
Finding middle of earth.
Four tribes at first.
Rivalry of two first great gods.
Coyote sent on errand, fly makes fire, cremation (Pima actually bury!).

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Coyote leaps over two short men, steals heart of corpse.
Lengthy pseudo-historical tales of group wars.

B. Gila Pima traits not found among River Yumans

Canal irrigation.
Fermented drink of giant-cactus fruit or agave (northwestern limit of alcohol).
Pottery patterns after firing, of mesquite gum, slightly refired.
Coiled basketry; materials Typha, willow, Martynia.
Twilled basketry with lids.
Oval sifter of parallel rods.
Storage baskets, coiled, of willow and wheat straw.
Kioho carrying frame: 4 sticks, hoop, half-hitch agave-fiber net (Mohave, 2 looped sticks, wound with cord).
Cotton, loom weaving, blankets, patterned belts.
Outer frame of house of bent poles.
Flat-roofed shade earth-covered.
Foot-ball race (Yuman, present but uncharacteristic, favorite game hoop-and-pole).
Women's double-ball shinny (Yuman single-ball by men).
"Relay race" by teams (not clear: Russell, pp. 173-4).
Dice with scoring circuit; giant-cactus wood, marked middle-end-both-none.
Hidden ball game of cañuto type, 4 tubes marked middle-end-both-none, called old man, old woman, score apparently 10, 6, 4, 0 (not clear, Russell, p. 177), 100 grains to game, stick set up at winning each game (Yuman, simple hiding in sand).
Sororate.
Moieties.
Sibs not exogamous (?).
Sib designations refer to words used for father.
Purification rite for year-old children.
Naming ceremony with godparents (Spanish?).
Youths trained four days in tribal legends.
Tear salutation.
Musical rasp.
Dance in circle, arms over neighbors' shoulders.
"Name song" begging.
Girls' puberty dance.
Girl at puberty, menstruating woman, work basketry.
Victory dance apparently without scalp pole.
Navitco rain dance (from south?).
Shamans extract disease object.
Shamans trained by being "shot" by older shamans.
Women shamans cure only abdominal disease of men and women.
Curing by songs of animal diagnosed as causing disease.
Curing by masked Navitco.
Stone tablets.

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Omina, feather-stick offerings.
Calendar sticks (year tallies).
Most of origin myth except as mentioned as similar to River Yuman.

C. River Yuman traits not found among Gila Pima

House completely roofed with rafters.
Large fishing scoop of sticks.
Guessing game without tubes.
Kohot chiefs social entertainers and managers.
Same name borne by all women of one sib.
War as sport, with challenges, champions' contests, close-in mass fighting.
Cremation.
Mourning accompanied by singing, begins before death.
Mourning commemoration, with images and mimic battle.
Intra-tribal group disputes settled by regulated pushing match and stick fight contests.
Ceremonial induction of berdache into status.
Women may change sex socially.
Girl at puberty covered with hot sand.
Datura eaten by individuals (Pima, one song reference, Russell, p. 299).
Soul loss cause of disease.
Individual dreaming as basis of most religious functioning.
Dreaming largely of myth period, world origin, one sacred mountain, dying god, culture hero.
Many myth episodes and trends.
Song cycles: Tumanpa, Vinimulya, Nyohaiva, Raven, Salt, Deer, Turtle, Chuhuecha, Cane, Goose, etc.
Choice of cycles sung according to individual dreamer or learner, rather than function or occasion.
Musical style (Herzog, Journ. Am. Folk-Lore, 41, 1928).

Interpretation of the Comparative Data

Seri culture resemblances would expectably run along one or more of the following lines:

1. With the adjacent tribes of Sonora, of which, in default of direct knowledge, the American or Gila Pima may be taken as the nearest though imperfect representative. However, a considerable gap undoubtedly existed between these tribes and the Seri through the possession by the former of developed agriculture and cloth weaving. This gap would at once be apparent in a comparison made from the point of view of the Pima, Opata, or Yaqui. It need not exist from the Seri angle if Seri culture were essentially a reduced or impoverished copy of general Sonoran culture.

2. With the non-agricultural desert tribes of peninsular California. In this case, strongly preponderant similarity would be con-

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clusive proof of a common origin or active communications across the Gulf of California.

3. With the Yuman peoples other than those of the peninsula. Among these the Colorado river tribes are agricultural and otherwise specialized. Of those who farm sporadically or not at all, the Yavapai, Walapai, and Havasupai[21] of Arizona are geographically nearest and in a similar though less extreme environment.

4. Of more distant groups, those of southern California come into consideration because of their semi-desert environment, lack of agriculture, contacts with the Yumans, and through including, in the Diegueño, a Yuman people. The central Californians and Pueblos should give a measure of basic Seri relationships respectively toward the Pacific coast and the classical "Southwest" of recent archæology and ethnology. On the Apache, unfortunately, there are inadequate data.

The entries in list 1 summarize as follows:

	Agreements	*Disagreements*	*Surplus of Agreements*
Walapai-Havasupai	29	7	22
Gila Pima	31	12	19
Southern California	27	12	15
Lower California	18	3	15
Central California	18	5	13
Colorado River Yumans	23	16	7
Yaqui-Mayo	7	0	7
Pueblo	18	13	5
Peculiar to Seri, (*), 10			

Rather surprising is the high total of resemblances with the Gila Pima. It suggests that with systematic data available, the Papago and Sonora river Pima would show a culture fairly close to that of the Seri, except for agriculture, weaving, etc. Presumably the Opata and Yaqui-Mayo would be only a little farther removed, though in their case river valley habitats would add differences to those due to greater distance.

The peninsular California relations are somewhat puzzling. The greater number of listed Seri resemblances with southern as compared with lower California is obviously due to fuller data. The ratio of agreements to disagreements is probably more significant: about five to one for the peninsula, but two to one for southern California. The resemblance would be still greater if traits directly reflecting the environment had been included: such as cactus fruit diet, or use of turtle shell receptacles. Certain more detailed considerations arising from list 2 are discussed below.

[21] The Havasupai farm on a considerable scale, but appear to be essentially a Walapai off-shoot who have been able to add agriculture. For six months in the year their life is practically indistinguishable from that of the Walapai.

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Very notable is the high resemblance to the Yumans of Arizona, especially in contrast with those of the Colorado. Not only are there more agreements with the Walapai than with the Yuma and Mohave, but the excess of resemblances over differences is about three times as great. The divergence between the two Yuman groups would be still wider if the comparison had been two-way instead of one-way, on account of the river tribes possessing whole systems of cults, clans, etc., of which the Walapai, Havasupai, and presumably Yavapai are almost as free as the Seri.

The central Californians are geographically so remote that the only significant figure in their case seems to be the fair number of positive resemblances.

The Pueblo low net excess of agreements is surely significant. Had the comparison been the other way around, it would have yielded an overwhelming excess of disagreements.

As to Sinaloa, the rather scant and uncompiled data indicate its culture, from about the Sinaloa river southward, as probably in the main a dilution of that of central Mexico, just as its prevailing speech is generally accepted as having been a dialect of "Mexican" or Nahua. However, occurrences like that of the *palanca* or carrying pole in Sinaloa and among the Seri are evidences of connection in that direction also.

List 2 is a check on the Lower California part of 1 by reversing the comparison. On its face, it diminishes the Seri-Baja California resemblances. Evidently the Gulf formed a serious barrier to communications, and if the Seri came out of the peninsula, it was a long time ago. Puzzling is the fact that the Waicura, three to four degrees of latitude south of the Seri, show an excess of agreements; the Cochimí, directly opposite, an excess of traits not reported for the Seri. Different authorship of the Waicura and Cochimí records can hardly explain all of this difference. Quite surprising is the northern Cochimí account of a woman-deceiving impersonation both of the creator and of ghosts, which inevitably suggests a secret society of the Patwin-Pomo-Yuki type of north central California.[22] One would certainly not expect such a cult organization among the scattered, chronically hungry Lower Californians.

One tentative clue suggests itself. It is conceivable that the Seri came to Sonora from the peninsula when the Waicura, or a culture of their eighteenth century type, were still situated about latitude 29° or 28°, being subsequently dispossessed by Cochimí, or by cultural stimuli from the north, which resulted in richer local growths than have been taken for granted for the area. I am not ready to take

[22] The human hair wigs or mantles which covered the whole person, like the central Californian feather mantle or cape of the nobil, etc., are another parallel, but are reported for the peninsula generally.

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sides on this hypothesis. Intensive analysis of the data may strengthen or eliminate it.

List 3 bears on the Seri indirectly through segregating Gila Pima culture into those constituents which are also River Yuman (including the Maricopa) and those which are non-Yuman and therefore likely to be old or generic Pima. It must be remembered that the Gila outpost division of the Pima nation were in immediate contact and friendly alliance with the Maricopa, whose dialect and customs indicate them as a river Yuman tribe rather recently extruded from the lower Colorado valley. The Maricopa are first mentioned by Kino and his associates, just before 1700, as on the Gila. It seems unlikely that they left the Colorado more than about a hundred years earlier. However, this would give three centuries of close association of the two tribes, before which there may have existed a period of less specific communications up and down the Gila.

The array of Pima-Yuman traits in section A of list 3 is rather impressive. Several have a somewhat wider distribution, but even such traits are usually centered, or most intensely developed, in the Gila-Colorado tract. It is probable that the Pima and Yumans contributed about equally to what they share. Traits like agriculture, irrigation, and pottery, which extend thousands of miles southward but stop with or just beyond the Yumans, have certainly moved from the Gila to the Colorado. On the other hand, in some cases the Pima admit adoption of Maricopa elements. The myth-episode of the making of fire by the fly and coyote's theft of the heart must have originated among the cremating Yumans or southern Californians and been adopted with something of a wrench by the interring Pima.

Sections B and C of the list give the traits not shared by the two groups. The Pima list is about twice as long as the Yuman one. This appears to be due only in part to the fullness of Russell's monograph. Pima culture seems quantitatively the richer, River Yuman the more specialized. It will be noted that the Yuman traits include very few in material culture or technology, interest in which, as in ritual, seems to have been suppressed by the Yuma and Mohave in proportion as they became absorbed in their peculiar war customs and their individualistic dream religion. Again, as Herzog has pointed out, River Yuman music has developed an unusually well marked style of its own.[22]

The bearing on the Seri is this. Half-a-dozen non-Yuman Gila traits (list 3B) recur among the Seri—more if the several features of the dice and hiding games are counted separately; none of the non-Pima River Yuman traits (3C) are Seri. But this does not mean that the Seri are closer to the Pima than to the Yumans generally, because the desert Yumans, as represented by the Walapai and Hava-

[22] JAFL 41:183-231, 1928.

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supai, possess as many Seri traits (list 1) as do the Gila Pima. In other words, Seri culture is definitely related both to Pima and to the generalized, basal, and presumably original Yuman culture—which is mainly situated in a similar environment. On this foundation the River Yumans then reared their own culture through the adoption of agriculture, the reduction of technology, and special growths in spiritual culture. This River Yuman culture however did not appreciably influence the Seri, because its localized specializations remained impracticable, unacceptable, or unknown to them.

Here ends the comparative discussion of Seri culture. Tentative as the findings are, I trust that the examination has at least helped to shed light on problems of the area to which the Seri belong.

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SUMMARY AND CONCLUSIONS

121 Knowledge of the Seri is still in its infancy. McGee's actual
114 observations are excellent but slender in range. He has interwoven them with conjectures, some of which are erroneous and others unproved and doubtful. Intensive study of the Seri will be difficult, chiefly for physical and practical reasons, but, to judge from such explicit data as are in hand, should prove them to be a tribe unusually interesting indeed, yet fundamentally similar to others in the same region. So many of their known traits are shared with one or another of these tribes, that it is practically precluded that complete investigation will leave the Seri as a unique people or even as one set widely apart, except in their historical fortunes.

13 The most distinctive thing about the Seri is their environment.
182 This is extremely arid and lacking in water supply, but not desert in the ordinary, untechnical sense. Botanists describe it as a succulent vegetation desert. It is fairly well stocked with food inland and rich in food along shore. This territory is able to support a fair sized population, but scatters it and keeps it from settling down. The land is also inhospitable and difficult to strangers who are not ready to adopt the Seri mode of life. This fact has helped preserve Seri ethnic integrity and culture to an unusual degree. A considerable fraction of original Serian territory is wholly unoccupied by civilization today, a full three centuries after its frontier was settled. The Indian neighbors of the Seri, all being farmers in fertile valleys, had no more incentive or ability than Caucasians to penetrate Seri territory sustainedly.

171 Across the Gulf, the peninsula of California presents a very
174 similar environment, and was inhabited by tribes of very similar subsistence and residential habits, culture level, and temperament. But the Baja Californians differed from the Seri in being so situated, with reference to the rest of the world, that the length of the peninsula cut them off, except in the northern portion, from nearly all outside relations. Each group in the peninsula thus had contacts and stimuli only from others of similar culture. The Seri, on the contrary, having long been surrounded on the landward side by peoples of higher cultural level, were able to exploit this difference, in part by adopting cultural traits from their neighbors; and perhaps still more largely by preying upon them economically; while their habitat afforded them a refuge from destructive reprisals. Such may have been the condition in pre-Columbian days. At any rate it has been such since the coming of the Spaniards, and has made the "history" of the Seri different from that of the Baja Californians.

174 Three islands, Tiburon, San Esteban, and San Lorenzo, form stepping stones from Seri mainland to the peninsula. The water gaps between them are navigable to native craft and have been navigated

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by them at times. This raises the question of whether the Seri may not have reached their habitat from the peninsula, or possibly the reverse. The solution of this problem depends on an analysis of full data on physical type, speech, and culture content, and only a partly conclusive answer, discussed below, can as yet be given. In general behavior and temperament, Seri and peninsular Californians seem to have been strikingly alike; but this fact can not in itself be construed as evidence of common origin, because the similar psychology may be largely determined by similar residence and subsistence habits resting in turn on almost parallel environment; much as pastoral nomads or mariners in whatever part of the world, and with or without historical connections, are likely to exhibit analogous mental attitudes in contrast with rural or urban populations.

In any event, it is wholly unproved that the Seri possess a native endowment which is more animal-like, more dominated by instinctive impulses and less capable of cultural development, than other peoples'. In fact the improbability of such an assumption is indicated by their possession of culture traits, like certain games and their kinship system, which they either share with neighboring tribes or have developed into rather high specialization. The meagernesses of their culture are therefore evidently due to factors in their particular history or geography rather than to congenital deficiencies or abnormalities. This does not mean that it would be easy to convert the Seri to the mode of life of Pima or Mexican. Habits of irresponsibility and unsettlement once established, even through part of childhood only, are notoriously difficult to alter. Witness the Gypsies. However, such practical habit difficulties are of course no evidence as to quality of endowment.

The modern Seri are the amalgamated remnants of some three or four of a half dozen closely related Serian groups formerly recognized. The preponderant one in the fusion of these groups is likely to have been that which held Tiburon and the fronting mainland, on account of better preservation of their numbers and habits in the relatively inaccessible island refuge.

Seri physique is distinctive in physiognomy, expression, and habitus, as would be expectable in a people sharply set off from its neighbors in practises and attitudes. The measurements available show no very marked differences of gross anatomy from neighboring tribes, either in stature, head shape, or nose proportion. The head may be somewhat rounder than among Pima and Yaqui; the difference in body seems more to be one of greater slenderness than of greater height. The Seri abilities to endure hunger and fatigue and to run great distances are faculties possessed by nearly all tribes of the southwest United States and northwest Mexico.

The Seri language is intrinsically and markedly tonal, more given to consonontal accumulations than the neighboring Uto-Aztecan and

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197 Yuman dialects, and possessed of some relatively rare sounds like *f*. It bears an indubitable relation to Yuman, as was assumed forty years ago, but the relationship is remote enough to indicate that the Seri have had a history apart from that of the Yuman tribes for a long time, estimable at a thousand years at the least, to judge by the rate of change of most languages. The Yuman idioms seem to fall into two primary groups, Yuman in the narrower sense, in Arizona, southern upper California, and northern lower California; and Cochimi in central lower California. On Cochimi, which is generally reputed extinct, data are very scant. If this group of dialects showed markedly greater resemblance to Seri than do the other Yuman languages, a derivation of the Seri from the Cochimi across the Gulf of California (or the reverse, if Cochimi proved more different than Seri from Yuman) would be an almost inescapable inference. Unfortunately, the available data are too scant to allow of a definite decision. On their face, they seem to make out Cochimi and the narrower Yuman group as about equally distinct from Seri.

● 171 Comparative analysis of the known specific facts of Seri culture, while impeded by inadequate information on many tribes, especially in Mexico, shows positive relations in all directions, but outstandingly with three peoples: the Pima, the Arizona desert Yumans, and the Lower Californians.

The Pima in question are those of the Gila river, the remotest of their nation from the Seri, agricultural, and demonstrably subject to some cultural affection by the Yuman tribes of the lower Colorado. Quite expectably therefore they lack many elements of Seri culture besides those which they share; not to mention a large stock of their traits not possessed by the Seri. Had we satisfactorily specific data on more southerly Pima divisions, such as those of the Sonora river, who were immediate neighbors of the Seri, there can thus be little doubt that an even larger proportion of the Seri cultural inventory would be found among them. More or less the same would probably hold for the Yaqui. These adjacent cultures would seem to have contained most of Seri culture plus increments such as agriculture, cloth weaving, and others.

The Arizona desert Yuman tribes, the Yavapai, Walapai, Havasupai, live farther from the Seri, in fact beyond even the Gila Pima. It is therefore significant that they show almost as many cultural agreements with the Seri, and fewer disagreements. They are perforce an almost non-farming population, except in a few spots. It is clear that they and the Seri have jointly preserved many features of an old, non-agricultural, desert-adapted culture. The Yuman tribes of the lower Colorado are much more different, though their geographical distance from the Seri is no greater. They possess definitely fewer and lack more Seri traits. This is not only because they

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farm, but because they have secondarily specialized their culture away from the old Seri-Walapai substratum.

The Baja Californians must be reckoned as having participated in the same basal, low-level, desert culture, though of course, like every other people, with certain variants and developments of their own. That we can name fewer Seri traits in their culture than in that of the preceding groups, is probably due to the less store of our knowledge of them. More significant of relationship is the smallness of the number of Seri traits which they are known to lack. It is entirely possible that if there existed adequate information for both sides of the Gulf, Seri and Cochimi similarity would prove to be the closest of all. But at present this possibility cannot be either conclusively proved or disproved.

Seri similarities with southern and even central California are fairly numerous, and can be attributed partly to the common non-agricultural subsistence, which would tend to induce the adoption or retention of similar cultural traits. On the other hand, the basic farming life of the Opata, Mayo, and north Sinaloan peoples must have operated at many points in the opposite direction in spite of their geographical nearness. Pueblo culture is so highly specialized that its mass would expectably show little kinship to Seri, and such is the trend of the available comparative data.

The Seri thus relate culturally to other peoples much as might be anticipated from their geographical position and subsistence opportunities. The Seri problem consequently has to be removed from the category of those which hold out a hope or illusion of being particularly significant for the solution of basic questions or broad hypotheses. It is essentially a problem of specific local ethnography, with wider significances revealable only by impartial comparative studies; but of special interest because of the relatively well-preserved status of parts of old Seri culture and the human appeal of three centuries of outlaw history. The thorough study of this culture will involve much grinding physical hardship and possibly some danger. It is to be hoped that when the work is undertaken, it will not be in a spirit of personal adventure, with emphasis on the external difficulties to be overcome, but with a serious desire and competence to secure facts and understanding.

ABBREVIATIONS USED

AA—American Anthropologist.
AMNH-AP—American Museum of Natural History, Anthropological Papers.
BAE-B—Bureau of American Ethnology, Bulletin.
BAE-R—Bureau of American Ethnology, Reports.
JAFL—Journal of American Folk-Lore.
UC-PAAE—University of California, Publications in American Archaeology and Ethnology.

Food Habits

The food habits of all but a very few of the insects are totally unknown to the Indians but they do have accurate and detailed knowledge of the food habits of fish. This is probably due to the great economic importance of fish to the Seris. They also have very full data for the mammals, including bats, which are said to be insectivorous. The responses varied concerning lizards and often did not parallel the situation in nature. In some instances, the acuteness of the observation was remarkable. Thus, the Northern Crested lizard, Dipsosaurus dorsalis sonorensis, which occurs on the sands of Rancho San Francisco, inland from Desemboque, has been mentioned as climbing trees after fruit. Even more unusual, the leopard lizard, Crotaphytus wislizeni, was said to feed on other species of lizards. And indeed, it is one of the very few species of lizard in the region which habitually devours others of its own kind.

Mating Seasons, Eggs and Nesting

In most of these aspects of natural history the native information is quite deficient. In the case of birds, it is assumed that mating occurs in early spring, that the eggs are laid a month later, that is another month the young hatch out and about the third month they fly from the nest. This sequence seems to represent a conventionalized idea rather than a reflection of direct observation. Another difficult question for them to answer, with respect to the reptiles, was whether the young are born alive or whether they hatch from an egg. Only a few of the species are correctly described, among them the rattlesnakes. Sharks and mantas are said to give birth to live young.

Guesses as to the number of eggs varied from fairly accurate estimates for some of the birds to rough approximations ("many") for some of the reptiles and most of the fishes. The knowledge of bird nesting habits was fair. The informants had no difficulty in pointing out the particular localities where one or another species of bird nests nor in the identification of the nest by its shape and construction. This was especially true of the cormorants, egrets, sea-gulls and pelicans. All these are either marine or shore birds as will be noted.

Animals: Poisonous and Otherwise Feared

In contrast to the Mexicans, the Seris fear relatively few animals and they are almost always those which can inflict a vicious or toxic bite or sting. The Mexicans, on the other hand, are afraid of a great many animals. European folklore plays a part in this as does unfamiliarity with the desert and the consequent fear of it.

The Seris fear most the rattlesnake, both the Western Diamondback and the Sidewinder. These snakes, they say, bite with their fangs but the venom is located in the rear of the body, about two inches in front of the anus. A plant called "masco" (?) is used as a remedy both in the form of a drink and as a dressing for the wound. The Mexicans claim this remedy is effective. The coral snake is also considered to be venomous although the Seris believe that its bite is fatal only to Mexicans and not to themselves (!). Most of the

625 other snakes are also viewed as venomous but are claimed to be of mild disposition and do not bite people.

Among the lizards, curiously, the one feared most is not the highly poisonous Gila Monster, but the harmless little gekko, Coelonyx variegatus sonorensis, which lives in fallen and dried-up saguaros. The informants could not even be induced to touch specimens killed in alcohol. It is believed 758 that this creature could kill humans either by contact or by allowing them to inhale its vapors which cause a fatal lung illness. This little lizard is reminiscent of the European salamander in some ways. The Mexicans call it 771 locally "salamancesa", and attribute to it the same unpleasant traits which the Seris do. Since this little lizard does resemble the European salamander and the beliefs about it are quite similar to those in European folklore, it is possible that here is a case of a transfer of this folklore upon an animal of a different kind. These beliefs eventually perhaps diffused to the Seris.

A small desert night lizard, Xantusia vigilis, is also very much feared and is frequently confused with the gekko. It lives in an identical habitat. A toad, Bufo alvarius, is said to bite with its tongue and is supposed to be able to inject venom with it. Its blood and "milk" are also very toxic.

Several of the arthropods are believed to be dangerous. The Seris claim that the blood sucking cone-nosed beetle, Triatoma rubida, stings with its mouth parts and also causes an illness called ~~cyxhiP i Ve kaxop~~, which can be fatal to children. This bug actually is a vector of the Chagas disease and its repeated bites may cause a sensitization to them. But in this case it is impossible to tell which is the situation without a clinical analysis. Scorpions, which sting with their tails, are considered to be very dangerous. The Black Widow spider, which is very numerous in the locality, is also viewed as very toxic and is said to be sometimes fatal, although a few days' illness is all that its bite usually causes. The tarantula spider also bites but its venom is never fatal. The Sun spiders, Solifugida, are venomous but their venom supposedly kills horses but not people. All of these spiders and their relatives, according to the informants, sting with the rear end of their body in wasp-like fashion. No medicant is applied on the bite, nature being allowed to take its own course in the recovery.

Concerning other animals, the sting rays are much feared because of the venom in their thorns and their ability to inflict a nasty wound. The bats, according to some informants, can cause disintegration of the body by spitting on it and they also have venom in their tongues, although this belief was not shared by one of the more sophisticated informants.

Only a few animals are considered to be dangerous to eat owing to their toxicity. The toad is one and a little fish, Sphaeroides annulatus, is another. 762 Of this fish it is said that "one hundred years ago, a man ate one; he died", hence the avoidance. However, rattlesnakes are eaten with relish; only the head and the part of the body where venom is believed to be located being discarded.

171 The above discussion suggested some of the differences in the attitudes 775 toward animals between the Mexicans and the Seris. While the former fear many,

171 the latter are largely unconcerned with by far the greater majority of them.
825 If there is any magical importance attached to any of the species, it has not been discovered in the course of this field work and this fact has been corroborated by other recent observers.3

Summary

182 Extensive field work of this sort has many ramifications. One of the main
825 items investigated has been the acuteness of the native observation of animals. In the case of the Seris, this knowledge progressively increases both in volume and in accuracy with the increasing economic importance of the group. The mammals and large fish are the best known followed in order by birds, reptiles, smaller fish, insects and marine invertebrates. It is also obvious that local ecology, habits and anatomy of the various species of animals set definite limitations upon observation. Lack of understanding of the hibernation of reptiles through the winter is a case in point. Another example is in the Seris' inability to distinguish between the sexes of birds. Purely cultural factors are also potent as can be seen in the standardized responses to the questions about the age of animals and the development of birds. Seri knowledge of animals is remarkably free from mythology, although a number of animals are known to have had mythological significance in the past.

825 There is little fear of animals except of those which are actually dangerous.

An interesting fact emerges from the comparison of the particular aspects of the knowledge of natural history. Namely, that this knowledge is not always symmetrical in that some facets of natural history are far better known by the Seris than others. An excellent illustration is provided here in the complicated ways of sexing animals, in their extensive knowledge of the food habits of some of the animals and their ecological environment, and by their very limited ability to guess correctly the age of animals.

Not all of these differences can be accounted for in natural terms and it is suggested that the answer to this asymmetry lies, perhaps, in the cultural factors unaccounted for in this study. In spite of their dependence upon a relatively few economically important species of animals, the Seris do make use of much of their animal environment in their diet, as would be expected of a marginal people who still live today in a fishing and gathering economy.

FOOTNOTES

727 1. This field work was made possible by research grants from the Department
114 of Anthropology, University of Washington. Most of the work was done in Desemboque, Sonora, during the summer of 1953 with some additional work there in May 1955.

For much help in carrying out this field work I am indebted to my friend, Leo Sandoval, a school teacher in Desemboque.

8: Ascher E-5 (1960) 1962 NU31 Seri NU31

Elsewhere (Ascher 1961) I have disputed this portrayal of the potential of existing ethnography, citing examples where qualitative and quantitative models have been constructed from ethnography and suggesting that one task for archeology is to codify the literature in a manner useful to itself. Regardless of doubts about existing ethnographies for archeological purposes, the worth of future ethnography for archeology will depend on the acquisition of the relevant kinds of information. Although discussion on the subject has been recorded (Tax *et al.* 1953: 229-232), no specific guides have been produced. This paper provides and discusses an example, which can be used as a paradigm, model, or guide of the kind of information to be collected from ongoing communities which would be of general value for archeology. The subject culture is that of the Seri Indians of Sonora, Mexico; the example describes a persistent trait complex associated with fishing for the Pacific green turtle, with particular emphasis on one trait in the complex, the harpoon foreshaft.

Example from the Seri Indians

The Seri, who numbered approximately 200 individuals in 1960, occupy a band of coastal desert about four miles wide and seventy miles long in the state of Sonora in western Mexico. The band extends along the Gulf of California from Kino Bay in the south to Desemboque in the north, opposite the largest island in the Gulf, Tiburon. Although the region is desert, with an estimated average rainfall of less than eight inches per year, falling mostly in July and August, it is comparatively rich in succulents and small land mammals. The Gulf forms a natural trap for large fish and marine mammals and is a breeding ground for the Pacific green turtle. The scantiness of fresh water has constituted, in the past and present alike, the single crucial limiting factor to agriculture and human occupancy.

In the past the Seri may have comprised from four to six tribal groups, and they were certainly numerically larger, with a maximum estimated population of 2,000 (Kroeber 1931: 53, 30). Until very recently they also occupied Tiburon Island, and at some more remote period they extended south, north, and east over a territory whose bounds are uncertain (Kroeber 1931: 5). On the basis of linguistic change, Kroeber (1931: 54) calculated that the Seri could have inhabited this general region for 1,000 years. It is uncertain whether the original occupation stemmed from Baja California via the Gulf of California or from the north and west via an overland route or routes (Kroeber 1931: 39-51). The first contact with Europeans occurred as early as 1540 (McGee 1898: 51).

In culture content the Seri are most closely affiliated with the Pima (Kroeber 1931: 51), but they do not share the practice of agriculture with them or with their western neighbors. The Seri are primarily fishermen; secondarily they gather the fruits of succulents; and to a still lesser extent they hunt game. McGee (1898: 214)

412 the stimulus of the tourist trade, has kept this
285 tool alive. Another survival from McGee's times
301 are *Olivella* shell necklaces.

Seri Antecedants and Relationship

174 For complete lack of archaeological information, little can be deduced about Seri antecedents. Speculations can be made only on the basis of similarities of their post-historic cultures with the cultures of the surrounding tribes.

171 Individual traits between the Seri and their
174 neighbors show discordant connections. Comparative data assembled by Kroeber, Beals and Driver & Massey suggest almost equal possibilities of derivation from the Cochimí, the Gila, Pima and the Yuman tribes but favor much less connections to the south. Much is made of the basketry. Archae-
[172] ological basketry has been unearthed since the work of Kroeber and Beals was published (Massey, MS.), but it is different from the Serian. Seri basketry shows closest relationship to Pima-Papago complex (Malkin, MS.). But part of this may be not only post-historic but certainly very recent and is hardly an argument in favor of the Pima-Papago connections.

Kroeber (1930:5) thought that on the face of it, the Seri showed greatest affinity to the Cochimí on the grounds of their general development of economy—the hunting and gathering subsistence. But he also pointed out that relationship with the Cochimí may rest ultimately on the linguistic analysis if the Cochimí language can still be recorded—which is most dubious.

[P. 8 B]

*825 ster is really a curious case. The Seris deny that it is venomous or that it bites. Reasons why this really venomous beast is considered harmless by the Seri is probably twofold. First, it is quite rare in their territory; the area of Kino and Desemboque is near the southern-most boundary of its distribution. Second, it is sluggish and slow moving and quite unaggressive, and, as the Seri know it, it probably never has bitten any of them within their memory.

To break them down by the groupings, the toxic species are six species of snakes, four of lizards and the toad, and the non-toxic, all of the turtles, 10 species of lizards and one snake. It is clear then that almost all snakes are considered toxic, although in one instance, the red racer, there seems to be disagreement on the subject. But when the figures are broken down to the fatalities, this pattern disappears. For here, only both rattler, *Xanthusia*, *Coelonyx* and *Crotaphytus* are considered potentially fatal to the Seris, and the sixth, the coral snake, is supposedly fatal to the Mexicans but not to the Seris. There are good grounds for believing that, under certain circumstances, the bite of both rattlers, especially of the diamondback, can be fatal and there are cases on record when a young child (Seri) from Desemboque and a young man were killed by the large rattler—within the past few years (1950-1954). The sidewinder is slightly less feared, no doubt because it is smaller, but they think it does always cause illness. Both rattlers inflict the toxic bite with the two large teeth in the front, where the venom is stored. They both have venom also stored in the head and in the rear section of the body two inches or so from the anus. So, at least, the Seri think, and when they deliver the rattlers to the frying pans, they always are careful to cut off the head and the tail and throw them away. This belief in the location of snakes' venom in the head and the tail, in a variety of species and generally of snakes (whether actually toxic or not), seems widespread in a good many parts of the world in areas where snakes, especially the large ones, make up a favorite dish of the aborigines.[12] Of course, this belief in the location of the venom in the head and tail of the rattlers is also shared by the Mestizos of their area.

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*825 The coral snake represents somewhat a special case and is a good indication that many such ideas may owe their origin to the actual observation. This snake is greatly feared by the local Mestizos and is considered by them to be at last as deadly as the ratttlers, if not more. The Seris also think that it is venomous; they believe that it harbors venom in the head and tail and also that it inflicts venom with the fangs. But they also say that it does not bite as readily as the viper and that it is fatal to the Mexicans but not to the Seris. It is not hard to guess that the basis for this difference in the toxicity is the fact that the snake probably never has bitten any of the Indians. But the Seris

[12] I have observed this, by the way, among peoples of Victoria and Duala in the Cameroons—except that the belief there was associated with the large African rock python.

[P 29 B]

9cMalkin E-5 (1953-1958)1962 NU31 Seri NU31

*825 heard the Mexicans talk about the dreadful consequences of its bite, and they took them at their word!

However, it will be seen that not one of the snakes is considered to be dangerous in any way on mere handling of its body. Coral snakes, though actually potentially fatal, do not bite readily and often may be handled with impunity.

This then leaves the three lizards and the toad in the category of potentially fatal animals. This is mysterious because not one of these lizards is in any way harmful.

Of these, the leopard lizard (*Crotaphytus*) is dangerous simply through biting and through venom which it has in its teeth. The Seris seemed dubious, somewhat, if this beast could kill other men, but they were sure it could kill them (the Seris). They also denied that wild animals could die from its bite. This situation is difficult to explain except perhaps by an existence of some sort of myth connected with this lizard. It may be also that the vile temper of *Crotaphytus* when captured has persuaded the Seris that any animal so vicious must be dangerous.

But the two little perfectly harmless nocturnal lizards, the gecko and the *Xanthusia*, represents a different stripe of danger, but they are feared just as much as any of the really venomous snakes (rattler) if not more. Neither of them will bite, [753] the Seri say, but they'll cause an illness on touch which can be fatal and at best they'll cause an illness of the lungs which can also be fatal. In addition, touching them will cause flesh to fall off one's hands and body. This, the informants explained, was the reason why they were not eaten. That both of them are terribly feared, the gecko even more than the *Xanthusia*, I had examples galore. While collecting with the Seri in the dried-up sahuaros, we encountered a great many of these lizards after breaking up the logs. Invariably the Indians fled and retreated obviously alarmed at the sight of the wiggling little creatures and when I picked them up bare-handed they were altogether shocked. I could not persuade them to touch even later specimens killed in alcohol. Some showed clear fear of picking up or touching the vial in which these lizards were preserved. A good ●171 possibility is that this belief is in some ways con- *825 nected with the European folklore about the salamander. The gecko is called in the local Spanish *salamancesa* which means salamander. And the salamander, in the European mythology, may inflict harm on people in the very same manner as the gecko is supposed to do. The Mestizos, a good many of them at any rate, also hold similar views. There is a general similarity in the appearance and outward behaviour of the gecko and the salamander and, perhaps, we have here a transfer of

[P.30A]

9:Malkin E-5 (1953-1955)1962 MU31 Seri MU31

+825 an idea from one animal to another.[13] The *Xanthusia* ●[171] does not share this similarity to the salamander in appearance, but it is found along with the gecko and behaves much like the gecko when exposed to the light. Hence, perhaps, comes the association.

I excluded here from the discussion the red racer because the notions concerning it are conflicting, with some informants insisting that it is toxic and can cause death and others that it is not. But all agree that it'll bite—and painfully so.

Finally the toad. The toad, although unagressive and considered as such, is feared a great deal as a repository of all sorts of toxic traits. There was some disagreement as to its ability to bite, with some informants thinking that it does bite with its tongue, others thinking it can't bite at all. But all agree on the following attributes of the amphibian: venom in body, toxic on touch, always fatal to eat to most animals and to all men. In this the toad joins the gecko and the *Xanthusia*. [262] These too are believed to be fatal to eat and these three represent the only animals in this class that are considered inedible.

It is interesting that the list of toxic (though non-fatal) animals should also include the *Phrynosoma* although here there seemed to have been again disagreement between the informants. The lizard is perfectly harmless and actually will not [753] bite even in self-defense. But the Seris say it causes swelling.

752 For the rattlesnake bite, the remedy is a plant 278 called *Kásox*. An extract of this plant is made after boiling it in hot water and then it is taken orally. It is also applied to the wound and, the Seri say, it must be taken all day long for a full day. The Seris take this when they are harmed by these snakes. This plant is supposed to be found in the mountains near Kino but not in the Desemboque or Tiburon area. But in addition to their own medicaments, the Seris, especially the younger fellows, will make use of the regular anti-venom available at the school or mission.

Attitudes Toward Reptiles and Amphibians

+825 With the few exceptions, these animals are not particularly feared. Those that are feared are considered dangerous in some ways, and, in fact, most of them are either by their ability to inflict painful bite or by possession of venom. But otherwise, their attitude seems to be very much a matter of fact and one of unconcern, which seems to corroborate Kroeber's opinion of the Seris' psychological makeup in other matters.

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[13]Since this has been written, I have plenty of evidence that the gecko is similarly dreaded in many parts of the world.

[p. 30B]

9:Malkin E-5 (1953-1955)1962 NU31 Seri NU31

worn. I have observed women wearing necklaces of the former and women and very young boys of the latter. The olive shell, incidentally, is made into two sorts, the natural, unroasted shells which retain a greenish-purple, mottled color and the white. The white pallid color is achieved by roasting the shells over fire. The necklaces are mostly made up of either colored or white but occasionally they may be made of mixed shells and then they are usually alternately interlaced, now with one, now with another.

b) *Utensils:* Two species had been reported used as occasional drinking or dipping cups and spoons. *Lavicardium elatum* and *Ficus ventricosus*. *Ficus* is presently discarded, but the *Lavicardium* is still occasionally used so. There is no doubt that the incidental use of these shells increases during longer fishing expeditions when the Seris are apt to lose some of their gear.

c) *Money:* Interestingly, the brown cowry was supposed to have been used as a means of exchange, as money—in the past. If this is so, then the selection of this shell for such purpose is not surprising considering its widespread use throughout the world.

d) *Trade:* Altogether 12 species had been reported as traded off either in the past or present. The trade importance of various species of shells varies with the demand of the market and sometimes may be only sporadic and short-lived. Only a few of the species had been indicated as having been of any trade importance in the past, and it may well be that the Seris did not register the species which may have been briefly sold to and outsiders during the short-lived fads of demand. It may be said in general that the trade importance of the shells increases and that greater variety of them are exploited now than formerly. This is surely owing to the increasing accessibility of the Seri country and the increasing tourism, not only visitors from Hermosillo, but also from such far flung places as Tucson, Phoenix and even Los Angeles.

In some instances, the Seris had no idea what the shells were sold for. The augur shell is on and off sold to some American traders who show up in Desemboque once in a while and for whom the Seri women accumulate these shells. But what uses were made of these, the Indians surely didn't know. Neither did they know what uses were made of the *Murex* shell and the *Turbo*, both of which were periodically sold in bulk to Hermosillo. On the other hand, they had some idea what uses were made of some other shells. *Pteria* and *Atrina* contain pearls and these are much desired. Especially the pearls of *Atrina* which are sold to the Mexicans or to the visitors for 25-50 pesos each and therefore have immense value, for the local market. The *Pteria* shells are said to be used for button making, and the Seris themselves claim that they make buttons of this shell. The most important of all, however, at least at the time of my visits in 1953 and 1955, was the olive shell. It was easily the most commonly and most numerously collected shell of all that the Seris ever collected. Owing to the scarcity of it in Desembo-

9:Malkin E-5 (1953-1955)1962 MJ31 Seri MJ31

X

INSECTS AND ARACHNOIDS

114 Altogether information has been collected concerning 92 species of insects, scorpions, ticks, myriapods and arachnoids.

Economic uses

262 [114] McGee says that "good many insects" are part of the Seri diet, although he does not specify just which they were nor how significant. There is no doubt that in his days, the insects played some role in the Seris' food and that they were probably far more important in the distant past, in the [177] XVIII and early XIX centuries, before large flocks of livestock, horses and cattle of the Spanish rancheros offered excellent opportunities to supplement the usual diet.

Of all this but minor traces remain today. The Seris even have forgotten which insects had been eaten by their ancestors. Apart from the bees, only the Sphingid caterpillar has been indicated as "eaten in the past, but not now." As for the bees, [263] their honey still is part of the Seri diet. But with the availability of sugar, even this addiction dwindles.

* 825 857 Other than this I have been unable to discover any uses whatever, except perhaps as playthings of little boys, with the usual torture in view. The *Cicada* is most significant of these, of which more later.

Pets

231 The only insect pet is a *Cicada*. This insect is usually tied to a long thread, its forewings partly clipped off and then released into the air like a ● [171] kite. Local Mexicans also provide their own boys with a similar kind of toy.

Hunting

222 Only bees are hunted. They are usually flushed out of the cave shelters in the mountains. The operation is accomplished without the use of smoke. The honey is cut out with a knife.

Taxonomy

* 825 Seris' ideas of association of various insects are very loose. Few insects are recognized to form natural groupings; bees, butterflies, wasps, spiders are most distinct. However, there are all sorts of gradations blending confusedly with each other, often dependent on the knowledge and interest of particular informants.

Simple recognition is not always present. Out of 92 forms, 13 the informants could not identify, simply saying that they didn't know them. *Cicindela lemniscata*, *Melanotus cribricollis*, *Horistonotus*, *Meloid*, *Oxacis*, both species of *Cymatodera*, *Photopis*, *Scolopsella*, tiny Scarab, *Leptoremus*, *Homolocorus*, and *Reduviid*—all these were in the

[P. 49 B]

*825 or toxic contrary to their genuine nature. When such contrasts exist, the beliefs cannot always be explained as a matter of the influence from the Mexican folklore. The reasons for this I discussed in the chapter on the reptiles and amphibians. The explanation for such beliefs depends mostly on additional field work. It is also interesting that in some of these instances (bat for example) there is a suggestion that the belief in the toxicity or other unpleasant traits not only is not associated with the Mexican folklore but is basically aboriginal, and it is on the way out among the younger men.

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Attitudes

*825 182 With rare exceptions Seri attitudes toward animals are remarkably sober, pragmatic and matter of fact. This is evident in how little folklore or irrational fear is connected with the animals. It all runs pretty much along the line of their generalized attitudes, world view and religion as suggested by other investigators (Kroeber 1930:4; This is also the opinion of Spicer, personal communication). Elements of mystery are almost completely absent and this is probably not entirely due to the disintegration of their religion and culture as Kroeber (*Ibid*) thinks.

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*825 ●171 In other ways, their attitude toward animals ranges from indifference (adults) to downright deliberate cruelty (little boys). In this, the Seri boys differ markedly from the boys of some of the other groups I studied (Malkin 1958:89).

[P. 57 A]

3: Lothrop E-5 (1924-1925) 1928
SH6 Yahgan SH6
Seri NU31

have made themselves as comfortable as other tribes occupying an equivalent environment. That they did not, to the writer, indicates a lack of something vital in their mental makeup.

The brief comparison we have made between primitive European and Fuegian cultures shows that although the Fuegians had partly attained the technological plane called Neolithic in the Old World, nevertheless in most respects they were scarcely better off than the semi-simian Neanderthal man of Europe. Clearly then they were laggards or backsliders in the development of mankind, so that in depicting their manner of life we are justified in assuming that we are recreating a vista of life in Europe or elsewhere many thousands of years ago.

However, the tribes of Tierra del Fuego are not a unique phenomenon, as we shall show by comparison with an equally though differently untutored New World group.

B.—Fuegians Compared with the Seri

The Seri, who inhabit a barren territory on the eastern shore of the Gulf of California and the adjacent islands, of which the largest is Tiburon, are one of the most primitive Indian tribes on the North American continent. Their climate is hot and dry. Their food supply is abundant—both marine and terrestrial. Like Fuegia the region occupied by the Seri is isolated from the main stream of cultural development, so that the native society probably represents a form of life much more wide-spread long ago.

Like the Fuegians, the Seri had no agriculture and no domestic animals except the dog, which indeed seems to have been half-wild. Their most important food was the turtle, which they caught with a harpoon having a detachable head tied to a cord. This may be compared to the Yahgan seal-spear. Long ago they used a two-headed barbed spear with the barbs facing inward to catch fish. The Yahgan also employed a two-headed fish-spear, but did not set the barbs inward. For boats the Seri made reed balsas with high pointed ends, a seaworthy craft but one which can be used only in warm climates because in rough weather the crew are drenched with spray or wet by water coming through the floor. These balsas the Seri propelled with clam-shells or boards held in the hands. In addition to spearing fish off-shore the Seri also caught them with their hands in shallow pools at low tide like the Ona, and they obtained on the beach large quantities of shellfish—chiefly clams and oysters.

3: Lothrop E-5 (1924-1925) 1928
SH6 Yahgan SH6
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On shore the Seri gathered various wild vegetal foods. They clubbed roosting pelicans at night. They caught also many deer and rabbits. We use the word caught advisedly, for usually the Seri, fleet of foot and hardy, ran these animals down and literally caught them in their hands. Meat was eaten raw except when there was an oversupply. Then it was partly cooked to tempt their jaded appetites. At times in hunting and regularly in war they employed a bow and arrows of simple type. The arrow had a wooden tip, rarely a chipped stone point.

For tools the Seri used a bone or a wooden awl, a wooden marline spike, a stone hammer and anvil, and a clam-shell. The latter served as a knife, but its shape was not modified, nor was it set in a handle. Manual dexterity was at a minimum among these people, and their implements and weapons were even more primitive than those of the Fuegians.

The fundamental Seri garment was a pelican-skin robe, which, like the Yahgan cape, was shifted from side to side with the wind in inclement weather. Also they wore at times a kilt and sleeved shirt of woven material, and thus they placed themselves on a higher cultural plane than the Fuegians, for they not only had acquired the art of weaving, but of tailoring their garments, neither of which were known to the Indians of Tierra del Fuego. In addition, the Seri wore a belt, often of snake-skin, and sometimes sandals of turtle-flippers. They adorned their persons with necklaces of seeds, of wooden beads, of shell, and of hair. They painted designs on the faces much more elaborate in character than those of the Ona and Yahgan.

Seri houses, scarcely better than the Ona windbreak, were arches of saplings partly shingled with sponges and turtle-shells. Inadequate even in a warm climate, yet they offered more protection comparatively than the Fuegian houses. As the Seri were constantly moving from place to place, these rude shelters were frequently abandoned to be reoccupied on some other occasion.

Of household furniture the chief article was a globular pottery water-jar, because water was scarce in Seriland and had to be transported long distances. A yucca ring-base was provided for the water-jar, and at times two jars were transported in nets slung on a shoulder yoke. In addition the Seri sometimes made a cooking-pot, an open dish, miniature vessels, and crude figurines; they also used a shell cup, and made simple coiled baskets. Their

3: Lothrop E-5 (1924-1925) 1928
SH6 Yahgan SH6
Seri NU31

babies they carried on wooden frames like the Ona. Fire they made with a drill.

From the above remarks it appears that other inhabitants of the New World lived on a technological plane different in detail but no higher than the natives of Tierra del Fuego. Indeed in many respects—notably the lack of a knife and a scraper—the Seri are the more primitive. Yet their need was not so great, because the climate they enjoyed did not make such demands on their vitality.

When we examine social institutions we find the Seri on a markedly higher plane than the Fuegians. The tribe as a whole had marked national consciousness. It was divided into exogamic totemic clans based on maternal descent. Authority was lodged in the matrons, delegated to the elder brother for such masculine occupations as war and hunting. Religious concepts and practices also were on a higher plane than in Tierra del Fuego.

On the whole then we may say that the Seri, like the Fuegians, were a marginal group representing an early cultural stream; that both peoples were markedly deficient in houses, tools, and accouterments; but that the Seri, being closer to the fringe of higher culture, had borrowed in rudimentary form such higher arts as pottery-making and weaving, and had become endowed with more advanced religious and social practices. In both cases it seems that, although migratory by nature, their peregrinations had been circumscribed within fixed limits with resultant cultural atrophy, so that centuries had passed with little modification in their form of life.

The status of very primitive groups like the Fuegians and the Seri has bearing on the unknown pioneers who settled the New World, for the simplest and crudest tribes of the present may reflect the condition of their primitive migratory ancestors. We shall examine then the evidence afforded by such backward groups to throw light on the time when the Americas were settled and on the nature of the culture that was first introduced.

Boas,[1] Wissler,[2] Kroeber,[3] and others have brought forward evidence that man reached the New World in a state of cultural development corresponding to the beginning of the Neolithic period in Europe. This hypothesis rests on fairly well assured

[1] The History of the American Race; *Annals N. Y. Acad. of Science*, XXI, 1912.
[2] The American Indian, New York, 1917.
[3] American Culture and the Northwest Coast; *Amer. Anthr.*, N.S., XXV, no. 1. Also Anthropology, New York, 1923.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

sepultare. There is a weird, formal mourning for dead matrons, and suggestions of fear of or veneration for the manes.

Seriland is surrounded with prehistoric works, telling of a numerous population who successfully controlled the scant waters for irrigation, built villages and temples and fortresses, cultivated crops, kept domestic animals, and manufactured superior fictile and textile wares; but (save possibly in one spot) these records of aboriginal culture cease at the borders of Seriland. In their stead a few slightly worn pebbles and bits of pottery are found here and there, deeply embedded in the soil and weathered as by the suns of ages. There are also a few cairns of cobbles marking the burial places, and at least one cobble mound of striking dimensions but of unknown meaning; and there are a few shell-mounds, one so broad and high as to form a cape in the slowly transgressing shoreline (Punta Antigualla), and in which the protolithic implements and other relics are alike from the house-dotted surface to the tide level, 90 feet below.

The absence of relics of a superior culture, and the presence of Seri relics throughout deposits of high antiquity, suggest that the tribe is indigenous to Seriland; and this indication harmonizes with the peculiar isolation of the territory, the lowly culture and warlike habits of the people, the essentially distinct language, the singular marriage custom, and the local character of the beast-gods. And all these features combine to mark the Seri as children of the soil, or autochthones.

Recent Explorations and Surveys

Present knowledge of Seriland and its inhabitants is based primarily on the work of two expeditions by the Bureau of American Ethnology, conducted in 1894 and 1895, respectively; and, secondarily, on researches into the cartography and literature (descriptive, historical, and scientific) of the region. Both of the expeditions were projected largely for the purpose of making collections among little-known native tribes in the interests of the National Museum, and the general ethnologic inquiries were ancillary to this purpose.

The 1894 expedition was directed chiefly toward work among the Papago Indians in the vaguely defined territory known as Papagueria, lying south of Gila river and west of the Sierra Madre in southwestern Arizona and western Sonora (Mexico). Outfitting at Tucson early in October, the party moved southward, visiting the known Papago rancherias and seeking others, and thus defining the eastern limits of the Papago country. On the approach to the southern limits of the tribal range toward Rio Sonora, the evil repute of the Seri Indians sounded larger and larger, suggesting the desirability of scientific study of the tribe; and it was decided to attempt investigation. Accordingly the party was reorganized at Hermosillo, and, with the sanction of the Secretary of State and Acting Governor, Señor Don Ramón Corral, proceeded to Rancho San Francisco de Costa Rica,

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hours tumultuous waves come and go sporadically, while about the mile-wide boca the choppy sea sometimes takes the form of spire-like jets, spurting 5 or 10 feet high and breaking into aigrettes of glittering spray in most unwaterlike and wholly indescribable fashion. Dewey described the strait as "unsafe for navigation by any except the smallest class of vessels"; it is safe, indeed, only for portable and indestructible craft like the Seri balsas, which may be put off or carried ashore at will by craftsmen willing to wait for wind and tide, and unpossessed of impediments of a sort to be injured by wetting. Of such an environment the balsa is a natural product.

The adjunct islets of Seriland are miniatures of Tiburon in all essential respects, save that they are without fresh water. The largest is San Esteban, a somewhat complex butte rising sharply from the waters in a nearly continuous sea-cliff recording vigorous work by storms and tides; it is occasionally visited by the Seri, chiefly in search of water-fowl and eggs. The most important of the series in Seri economy and mythology is Isla Tasasne, off the mouth of Bahia Kino; it is a rugged butte some 600 feet high, rising in wave-cut cliffs on the sea side and pedimented by low spits and banks of sand toward the lea; the sand-banks are literally flocked with pelicans, while other fowl cover the flatter ledges and crowd the crannies of the pinnacle. Isla Turner is a somewhat smaller and still more rugged butte, bounded on both sides by precipitous cliffs, while Roca Foca is merely a great rock shelving upward from the storm-swept waters off the most exposed angle of Tiburon; in the crannies of the former birds nest abundantly, while the lower ledges of both are haunted by seals. Isla Patos, north of Tiburon, is a breeding-place for different water-fowl, and is especially noted as a refuge for ducks; it, too, is for the most part a rocky butte, with a sandy shelf at the eastern base. Beyond San Esteban lies the similar but smaller Isla San Lorenzo, while Isla Salsipuedes and a few other islets stretch thence northward half way to the southern point of Isla Angel de la Guarda, the second-largest island of the gulf. San Lorenzo and the smaller islets are occasionally visited by the Seri, partly for a mineral pigment used in face-painting, partly in quest of game; and they sometimes push on to the larger island to enjoy its fairly abundant game, including the easily taken iguana, amid the ruins of an ancient culture apparently akin to that of southern Mexico. Even the most frequented islets, Tasasne and Patos, can be reached only by crossing miles of open sea; but in their way the Seri are as canny navigators as they are skilful boat-builders—it is their habit to hug the shore in threatening weather, to await wind and tide for hours or days together, to set out on distant journeys only when all conditions favor, and in emergency to seize inspiration from the storm like the vikings of old, and bend supernormal power to the control of their craft.

Summarily, the prevailing features of Seriland may be said to be

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481 Examples of Seri fleetness and endurance might be multiplied indefinitely, and many of still more striking character might be adduced; but these instances, all attested by several witnesses, all corroborated by independent facts, and all consistent with the observations of the 1894 expedition, seem fairly to represent one aspect of the pedestrian habit of the tribe.

412 A trait of the Seri hardly less conspicuous than their pedestrian habit is habitual use of hands and teeth in lieu of the implements characteristic of even the lowly culture found among most primitive tribes. Perhaps the most nearly universal implement is the knife—at first of shell, tooth, bone, or wood, later of stone, and last of metal—and hardly a primitive tribe known from direct observation or from relics has been found independent of this most serviceable implement; yet the Seri may be described with reasonable accuracy as a knifeless folk. Awls and marlinspikes of bone and wood, shell cups, and protolithic mullers or hammers are found in numbers in their hands, on [172] their rancheria sites, and in their ancient shell accumulations, while rudely chipped stone arrowp ints are sparsely scattered over their range; yet not a single knife of stone or other wrought substance has [439] been found in their territory or in their possession, save for an occasional metal knife obtained by theft or barter. And the habit of dispensing with this primary implement is attested both by everyday customs and by the traditions and chronicles concerning the tribe. Thus, various observers (notably Hardy) have recorded the features and uses of balsas, harpoons, ollas, etc, yet no records of cutting implements have been found; similarly the chronicles contain records of [439] barter between the Seri and the Sonorenses through which the savages acquired aguardiente, manta, garments, sugar, grain, etc, yet no record is known of the leading articles of exchange to practically all other tribes of the continent, viz, cutlery; and in like manner the local traditions recount the constant desire of the Seri for liquor and tobacco, saccharine and other food substances, clothing or material for making it, tin cups, lard-cans, and other metallic utensils, as well as nails for harpoons and hoop-iron for arrowpoints, in addition to firearms and ammunition; yet the recounters are significantly silent on the subject of knives.

Conformably, the 60 Seri gathered near Costa Rica in 1894 made it their business to pick up or beg all sorts of industrial products and materials, yet apparently did not possess so many as a dozen knives in the entire band; and while protolithic implements, ollas, shell cups, paint-stones, etc., were seen in constant use, none of the men, women, or children were observed to use knives for cutting meat or for 264 any other customary purpose. Among the supplies laid on top of the jacal shown in plate X, to keep them out of the way of the dogs, was a hind leg of a horse, from femur to hoof (some three days dead and still

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life of the tribe ~~states~~: since the clans never reside and rarely camp nearer than 3 to 15 miles from the aguaje, a large part of the water consumed must be transported great distances in these vessels; since the region is one of extreme aridity, the lives of small parties often depend on the integrity of the olla and on the care with which the fragile vessel is protected from shock or overturning; and hence the utensil must occupy a large if not a dominant place in everyday thought—indeed, the fact that it does so is attested by constant custom and also by its employment as the most conspicuous among

FIG. 14—Rattlesnake necklace.

the mortuary sacrifices. Thus, the relation of the Seri olla to its makers and users is parallel with that of the ever-present earthen pot to the Pueblo people, or that of the cooking basket to the acorn-eaters of California, save that its relative importance is enhanced by the fewness of activital lines and motives in Seri life. Moreover, this most characteristic utensil is established and hallowed in Seri thought by immemorial associations: its sherds are sown over the hundred thousand square miles of ancient "despoblado" from Tiburon to Caborca, Magdalena, Rio Opodepe, and Cerro Prieto, and are scattered through the 90 feet of shells forming Punta Antigualla (perhaps the oldest shell mound of America); and all the sherds from the range

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and the shell-strata are so like and so different from any other fictile ware as to be distinguished at a glance. Hence it would seem manifest that the Seri olla must constitute a normal nucleus for the Seri esthetic; yet even here the field is practically barren, as is shown by the study of a score of usable and mortuary specimens and of thousands of sherds. The most ornate specimen seen is that depicted in plate XXXII. Its form, like that of the balsa, is a mechanical equation of forces and materials; its body-color is that of the clay, blotched and blackened irregularly by the smoke of the firing; and its decoration is limited to 17 faint lines or bands radiating downward from the ill-shaped neck. The radial bands were evidently drawn by a finger dipped in clayey water after the vessel was otherwise finished for the firing; they are irregular in placement, width, length, and direction; they generally run in pairs, two straight lines alternating with two zigzag lines, though the circuit is completed by two zigzags drawn wide apart and separated by a single straight line. The meaning of the device (if meaning there be) was not directly ascertained; but it is suggestive that its maker and owner was the mother of the youthful warrior from whom the rattlesnake necklace was obtained (her face-symbol is that shown in the lower left figure of plate XXVI), and that the vessel was surrendered more reluctantly than any other article obtained from the tribe.

Another utensil of some importance to the tribe is a basket of the type illustrated in figure 24. It is manufactured with much skill and is used for various domestic purposes, being practically water-tight and unbreakable, and materially lighter than even the unparalleledly light fictile ware of the Seri. In form and size and weave the half dozen examples seen correspond with widespread southwestern types; yet it is noteworthy that while otherwise similar baskets are habitually decorated by other basket-making tribes, the Seri specimens were absolutely devoid of decorative devices.

Practically the only remaining artifacts available for decoration are those connected with archery; and it suffices to say that while the bows are skilfully made and the arrows constructed with exceeding pains, not a single specimen seen showed the slightest trace of symbolism or of nonutilitarian motive.

Summarily, the Seri are characterized by extreme esthetic poverty. This has been noted by the early missionaries and by the few other travelers who have approached their haunts, as well as by the vaqueros on the Encinas and Serua and other ranchos bordering their range, who know them as "los pobrecitos". All observers have been struck with their destitution and squalor; yet when the impressions are particularized they are seen to denote absence of the poor luxuries, rather than the bare necessities, of primitive life. The people are pathetically poor in the industrial sense; their equipment in artifacts—implements, weapons, utensils, habitations, apparel—is meager almost, if not quite, beyond parallel in America; yet their esthetic equipment, practically

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262 Probably second in importance among Seri prey, as a food-source merely, stand the multifarious fishes with which the waters of Seriland teem, particularly if the class be held to comprise the cetaceans and seals and selachians ranked as leaders of the fish fauna in Seri lore.

225 Naturally, whales lie outside the ordinary range of Seri game, yet they are not without place in the tribal economy. During the visit to the Seri rancheria near Costa Rica in 1894, it was noted that various [173] events—births, deaths, journeys, etc—were referred to "The Time of the Big Fish"; and it was estimated from apparent ages of children and the like that this chronologic datum might be correlated roughly with the year 1867. The era-marking event was memorable to Mashém, to the elderwomen of the Turtle clan, and to other mature members of the group, because they had been enabled thereby to dispense with hunting and fishing for an agreeably long time, and because they had moved their houses; but the providential occurrence was not interpreted at the time. On visiting Isla Tiburon in 1895, the interpretation became clear; along 172 the western shore of Rada Ballena, near the first sand-spit north of the bight, lay the larger bones of a whale, estimated from the length of the mandibles and the dimensions of the vertebræ to have been 75 or 80 feet long. It was evident that the animal had gone into the shoal water at exceptionally high tide and had stranded during the ebb; while the condition of the bones suggested an exposure to the weather of perhaps half a dozen years. On the shrubby bank above the beach, [361] hard by the bleaching skeleton, stood the new rancheria, the most extensive seen in Seriland, comprising some fifteen or twenty habitable jacales; and fragments of ribs and other huge bones about and within the huts' attested transportation thither after the building, while the shallowness of the trails and the limited trampling of the fog shrubbery gave an air of freshness to the site and surroundings. The 172 262 traditions and the relics together made it manifest that "The Time of the Big Fish" had indeed marked an epoch in Seri life; that when the leviathan landed (whether through accident or partly through efforts of baisa men) it was quickly recognized as a vast contribution to the Seri larder; and that some of the clans, if not the entire tribe, gathered to gorge first flesh and blubber, next sun-softened cartilage and chitin, and then epiphyses and the fatter bones. Some of the ribs were splin- [252] tered and crushed, evidently by blows of the hupf, in order to give access to the cancellate interiors; several of the vertebræ were battered and split, and nearly all of the bones bore marks of hupf blows, aimed to loosen cartilaginous attachments, start epiphyses, or remove spongy and greasy processes. Little trace of fire was found; in one case a mandible was partly scorched, though the burning appeared to be fortuitous and long subsequent to the removal of the flesh; and a bit of charred and gnawed epiphysis, much resembling the fragments of half-cooked turtle plastron scattered over Seriland, was picked up in

[1] One of the smaller vertebræ and part of a rib are shown in the upper figure of plate VI.

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one of the huts. The condition of the remains and the various indications connected with the rancheria corroborated the tradition that the great creature had afforded unlimited and acceptable food for many moons; and various expressions of the tradition indicated that the event, though the most memorable of its class, was not unique in Seri lore.

A few bones and fragments of skin of the seal were found in and about the rancherias on Isla Tiburon, and an old basket rebottomed with sealskin was picked up in a recently abandoned jacal on Rada Ballena; a few bones provisionally identified with the porpoise (which haunts Boco Infierno in shoals) were also found amid the refuse about the old rancheria at the base of the long sand-spit terminating in Punta Tormenta; but nothing was learned specifically concerning the chase and consumption either of these animals or of the abundant sharks from which the island is named.

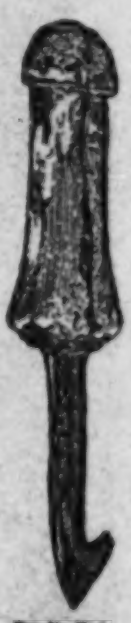

FIG. 21.—Fish-spearhead.

Among the exceedingly limited food supplies brought from the coast by the Seri group at Costa Rica in 1894, were rank remnants of partly desiccated fish, usually gnawed down to heads and tails; and Mashém and others spoke of fish as a habitual food, while Señor Encinas regarded it as the principal element of the tribal dietary. The harder bones and heavier scales of several varieties of fish were also found abundantly among the middens of both mainland and Tiburon shores in 1895. None of the remains bore noticeable traces of fire; and all observations, including those of Señor Encinas, indicate that the smaller varieties of fish are habitually eaten raw, either fresh or partially dried, according to the state of appetite at the time of taking—or the condition of finding when picked up as beach flotsam. But a single piscatorial device was observed, i. e., the barbed point and foreshaft, shown in figure 21—the iron point being, of course, accultural, and probably obtained surreptitiously. This harpoon, which measures 6 inches in length over all, is designed for use in connection with the main shaft of a turtle-catching tackle; and it is evidently intended for the larger varieties, perhaps porpoises or sharks. In 1827 Hardy observed a related device:

> They have a curious weapon which they employ for catching fish. It is a spear with a double point, forming an angle of about 5°. The insides of these two points, which are 6 inches long, are jagged, so that when the body of a fish is forced between them, it can not get away on account of the teeth.[1]

Don Andrés Noriega, of Costa Rica, described repeatedly and circumstantially a method of obtaining fish by aid of pelicans, in which a

[1] Travels, p. 289.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

412 bles utilized in emergency, and commonly discarded after a single use, are too numerous and too various for convenient or useful grouping.

411 There is a distinctive type of Seri stone artifacts represented by a single category of objects, viz, chipped arrowpoints. Several of the literary descriptions of the folk—particularly those based on second-hand information and far-traveled rumor—credit the Seri with habitual use of stone-tipped arrows,[1] and it is the current fashion among both Mexican and Indian residents of Sonora to ascribe to the Seri any shapely arrowpoint picked up from plain or valley; yet the observations among the tribesmen and in their haunts disclose but slight basis for classing the Seri with the aboriginal arrow-makers of America.

[114]

Among the 60 Seri (including 17 or 18 warriors) at Costa Rica in 1894, three bows and four quivers of arrows were observed, besides a number of stray arrows, chiefly in the hands of striplings. The arrows seen numbered some 60 or 70, including perhaps 20 "poisoned" specimens; nearly half of them were tipped with hoop-iron, as illustrated in plate XXX, while about as many more were fitted only with the customary foreshafts (usually sharpened and hardened by charring), and the small remainder had evidently lost iron tips in use; there was not a single stone-tipped arrow in the rancheria. Moreover, when the usually incisive and confident Mashém was asked for the Seri term for stone arrowpoint he was taken aback, and was unable to answer until after lengthy conference with other members of the tribe—his manner and that of his mates clearly indicating ignorance of such a term rather than the desire to conceal information so frequently manifested in connection with esoteric matters; and the term finally obtained (*ahst-ahk*, connoting stone and arrow) is the same as that used to denote the arrowpoint of hoop-iron. The most reasonable inference from the various facts is that whatsoever might have been the customs of their ancestors, the modern Seri are not accustomed to stone arrow-making.

FIG. 37.—Seri arrowpoints.

172 The 1895 expedition was slightly more successful in the search for
411 Seri arrows. About midway between the abandoned Rancho Libertad and Barranca Salina, an ancient Seri site was found to yield hundreds of typical potsherds, half a dozen shells such as those used for utensils, the fragments of a hupf evidently shattered by use as a fire-stone, and the small rudely chipped arrowpoint shown in figure 37*a*; and among the numerous relics found on a knoll overlooking Pozo Escalante (including two jacal frames, two or three graves, an abat, several shells

[1] The most specific reference is that of Hardy: "The men use bows and stone-pointed arrows, but whether they are poisoned, I do not know." Travels, p. 280.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

and discarded hupfs, a broken flotile figurine, etc), was the still ruder arrowpoint represented in figure 37b (both figures are natural size). The specimens are nearly identical in material—a jet-black slaty rock with a few lighter flecks interspersed, weathering gray on long exposure (as is shown by the partly natural surface of the larger point); similar rock abounds in several easterly spurs of Sierra Seri. The smaller specimen was evidently finished and used; its features indicate fairly skilful chipping, though its general form is crude—in addition to the asymmetric shouldering, the entire point is curved laterally in such manner as to interfere with accurate archery. The larger specimen is still more strongly curved laterally, and the chipping is childishly crude; while the rough surface, clumsy tang, and unfinished air indicate that it was never used even to the extent of shafting. It is possible that the specimens may have been imported by aliens, but the probabilities are strong that they were manufactured by the Seri. No other arrowpoints and no chips or spalls suggesting stone arrow-making were found in all Seriland, though the entire party of twelve were on constant lookout for them for a month. The natural inference from these facts is that the ancestral Seri, like their descendants, were not habitual stone arrow-makers.

There is a final category of Seri artifacts which would be classed as distinctive by Caucasians on the basis of material, though they are combined with the stone artifacts by the tribesmen; it comprises arrow-points of hoop-iron or other metal, harpoon-points of nails, spikes, or wire, awls of like materials, and other metallic adjuncts to ordinary implements. The use of iron is of course post-Columbian, and its ordinary sources are wreckage and stealage. The date of introduction is unknown, and probably goes back to the days of Cortés and Mendoza; certainly the value of metal was so well understood in 1709 that when Padre Salvatierra's bilander was beached in Seriland the tribesmen at once began to break her up for the nails (ante, page 67); yet the metal is wrought cold and only with hupf and abat like the local materials, and is habitually regarded and designated as a stone. By reason of the primitive methods of working, the metals are of course available only when in small pieces or slender shapes. There is a tradition among the vaqueros of the frontier that a quantity of hoop-iron designed for use in making casks was carried away from a rancheria in the vicinity of Bacanachito during a raid in the seventies, and that this stock has ever since served to supply the Seri with material for their arrowpoints; but it is probable that the chief supply is derived from the flotsam swept into the natural drift trap of Bahia Kunkaak by prevailing winds and tidal currents, and cast up on the long sandspit of Punta Tormenta after every storm. A surprising quantity and variety of wreckage was found on this point, and thence down the coast to Punta Narragansett, by the 1895 expedition: staves and heads of casks broken up after benching, a telegraph pole crossbar which had evidently

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I

INTRODUCTION

121 localities, but I think it is advisable to include others, whose nature is not so different from the main places of Seris' habitations.

361 I have selected then 25 localities and I shall give
13 their main characteristics below:

1. **Punta Peñasco** — a village along the upper shores of the Gulf of California, close to the U.S., [491] connected by a paved highway from Gila Bend. Typical Sonoran zone with extensive sand flats. Very rarely visited by the Indians.

2. **Porto Libertad** — rocky shores, located some 30 miles north of Desemboque. A Mexican village frequently visited by the Seris.

3. **Desemboque** — Seris' main settlement after 1940, just north of and around Punto Tepopa, only a few miles from Tiburon. A narrow strip of poor land, thoroughly permeated with alkali and salt. Vegetation is very sparse. The mesquite, elephant bush, creosote bush, *Cholla* and *Sahuaro* are the main trees. No *Palo Verde* or *Palo Fierro*. *Ocotillos*, *Sahuaros* and mesquite are stunted and scarce, only toward the mountains increasing in frequency and size. Along the shores, sand dunes [172] with kitchen middens, partly covered by vegetation. An arroyo nearby is empty except on a few occasions during the year when flash flood after rains rushes through. Rainfall very scarce. During the summer of 1953 I spent there, it rained very little—only twice and that was short and feeble. [312] Water is obtained from a well, near which there is a Mexican ranch where, owing to irrigation, some vegetables are grown and weeds are present such as *Datura*. The coast is largely rocky. Narrow beaches lack wide sand bars. Hence the fauna here is poor.

4. **Estero Sargente** — alkali flats and mud flats some 25 km. south of Desemboque along the coast. Vegetation very scarce. *Sahuaros* and *Ocotillios* and other desert trees grow some distance from the shore. Short grasses in some places clump the coastal dunes. Breeding and feeding place of many shore birds, especially of willets and egrets. On the alkali flats near the shore are many peculiar insects, not found in Desemboque, particularly tiger beetles and Oedemerids.

5. **Campo Vivora** — little more than half way down toward Desemboque from Estero Sargente, also along the coast. So named after supposedly [103] numerous rattlesnakes. Clumpy grasses. Favorite encampment of the Seris and others while fishing and hunting turtle. The only loggerhead turtle I have seen was right here.

[491] 6. **Porto Kino** — fishing village directly due east of Hermosillo, nowdays connected with Sonora's

[P. 1 illegible]

documentary data and second, also the archaeological data. The subject matter unfortunately is absent from the first. As for the archaeological data, there is none as yet to date for the area except Giffor's unpublished manuscript. Nor have we the kind of ethnography that would be of help—not until ethnographers will pay greater attention to the naturalistic knowledge of the people. Nor can the matter of the Seris' cultural connections be undertaken with the present material with any degree of reliability, simply because no such material exists for the neighboring group.

However, few suggestions outside the limitations and the main object of the present analysis can be made. From the fragmentary data available I shall try to show the change in utilization of animals by the Seris. I think I can also indicate a few points in support or denial of this or that idea of the Seris' cultural connections. I can also suggest the direction of the attitudes toward animals in the Seri culture, in a sphere which normally we assign variously within the domain of religion or world view. I can also indicate some of the major changes in the Seris' exploitation of general environment. All these can be suggested only fragmentarily, as only small bricks toward a generalized structure of our knowledge of the Seri culture. To this extent the present analysis should be helpful to the future student of the Seri culture and to our general understanding of it.

Procedure

The field work on which this material is based has been done during the summer of 1953, June-September and again for one week in May, 1955. The second visit took place at a most inopportune time, amidst bad measles, dysentery and a flu epidemic which completely disorganized the tribe and persuaded most of them to flee Desemboque into the coastal desert.

The work was accomplished mostly in Desemboque, the Seris' largest and most permanent settlement after 1940 where most of them lived. Occasional side trips were undertaken later to Hermosillo, Estero Sargente, Campo Vivora, Tiburon and some of the other places mostly with the view of evaluating their ecological nature and for the observation and acquisition of the zoological materials not available in Desemboque. These trips had been undertaken in the company of the Seris who then also doubled up as informants.

During the first two weeks of my stay in Desemboque, I did no interviewing but concentrated on the collections of zoological material, occasionally and informally asking for the name of this or that animal. After two weeks regular interviewing work was commenced, first with an aid of Mr. Leo Sandoval, Mexican, U.S.—educated school teacher, but later on entirely without an interpreter. There are sound reasons for this practice. Direct questioning allows the interrogator to evaluate the replies in their less obvious nuances, the reactions of the informant to the question, his hesitations, uncertainties and the like.

In the event of well-known animals with those colloquial Spanish name everybody, Mexican and

9:Malkin 2-5 (1963-1966)1962 NU31 Seri NU31

412 the stimulus of the tourist trade, has kept this
285 tool alive. Another survival from McGee's times
301 are *Olivella* shell necklaces.

Seri Antecedants and Relationship

174 For complete lack of archaeological information, little can be deduced about Seri antecedents. Speculations can be made only on the basis of similarities of their post-historic cultures with the cultures of the surrounding tribes.

171 Individual traits between the Seri and their
174 neighbors show discordant connections. Comparative data assembled by Kroeber, Beals and Driver & Massey suggest almost equal possibilities of derivation from the Cochimí, the Gila, Pima and the Yuman tribes but favor much less connections to the south. Much is made of the basketry. Archaeological basketry has been unearthed since the [172] work of Kroeber and Beals was published (Massey, MS.), but it is different from the Serian. Seri basketry shows closest relationship to Pima-Papago complex (Malkin, MS.). But part of this may be not only post-historic but certainly very recent and is hardly an argument in favor of the Pima-Papago connections.

Kroeber (1930:5) thought that on the face of it, the Seri showed greatest affinity to the Cochimí on the grounds of their general development of economy—the hunting and gathering subsistence. But he also pointed out that relationship with the Cochimí may rest ultimately on the linguistic analysis if the Cochimí language can still be recorded—which is most dubious.

[P. 8 B]

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MOLLUSCA

VII

Species	Food Prev.	Food Past	Decoration Prev.	Decoration Past	Trade Prev.	Trade Past	Bait
Octopus bimaculatus	x	x				x	x
Cadakia distinguenda		x					
Laevicardium elatum		x			x[1]		
Carditamera affinis	x	x					
Acmaea dalliana			x	x	x		
Crucibulum spinosum		x	x	x	x		
Chione undatella	x	x					
Chione californiensis	x	x					
Pteria peruviana	x	?	x	?	x		
Volsella capax	x	x					
Olivella dama			x	x	x		
Cypraea annettae				x[2]			
Tegula rugosa		x		x		x	
Conus regularis		x[3]		x	x	?	
Phyllonotus erythrostomus		x				x	
Turritella broderiana		x[3]			x	?	
Polinices reclusiana	x	x					
Chlamys subdudosa	x	?					
Atrina maura	x	?			x[4]		
Navicula pacifica		x					
Turbo fluctuosa	x	?			x		
Solenostira pallida			x	?	x		
Ceritium stercusmuscarum			x				
Trivia radians			x				
Ficus ventricosus	x						
Nioche bistrinoca	x	x					

[1]Occasionally used as dip spoon

[2]Supposedly used in the past for money

[3]In the past "giants of 300-400 maybe years ago have eaten it."

[4]Only pearls

These figures show then 26 out of 37 species exploited economically in some way, that is 70%. These figures show increase over the figures I have published previously (1956) which were 21 out of 36 species and 58% respectively. The corrected figures are the result of brief additional field work in 1955.

Food

A good part of the molluscan forms are used as food. Altogether 19 species are listed as such, although out of these, only 11 were reported as being part of the diet today while the remainder only in the past. It is obvious that there has been progressive decrease in the Seris' dependence on the molluscan diet within the past few generations.

Four of the species reported as part of the Seri diet at various times had been collected from the kitchen-middens. There are: *Pteria peruviana*, *Chlamys subdudosa*, *Volsella capax*, and *Navicula pacifica*. Of these four, *Navicula* has been reported as eaten in the past "maybe 100 years ago, but not

262 now," while the *Volsella* has been eaten in the past just as much as it is now. The find of these four ●172 species in great numbers in the kitchen-middens only indicates that they probably were an important part of the Seri past. Historical records are scarce and no archaeology had ever been done in the region, except for Gifford's (as yet unpublished) excavations at Caborca. But Caborca is far away from the coast. Strong circumstantial evidence suggests that a good many of the kitchen-middens represent relics of the Seris' past encampments.

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Of the different species the augur shell and the cone shell were said to have been "eaten in the past by the giants. Maybe 300-400 years ago." It is [173] hard to account for this idea except that it probably refers to a myth.

Preparation

252 Preparation of the mulluscan food differs little, if at all, from any other food of animal origin. The animals are simply separated from the shell, the meat is dropped in water and boiled, usually [263] for half an hour. Few ingredients other than salt are added and their use depends entirely on the availability of cash and on the individual tastes of the Indians. As far as I could tell, there is no differentiation in this for people of different sexes or ages. Also there is no preference for different 262 parts of the body.

Preferences

Some species are more liked than others, but this is related to their size rather than anything else. There does not appear to be any belief in the toxicity of molluscs and the occasional justification of the inedibility has been expressed in terms of size. Some species, it had been asserted, are not eaten simply because they are too small to bother. Only *Cardium consors*, as one of the in- * [825] formants suggested, is venomous, but even this, to him, seemed uncertain and dubious for he said "maybe it is venomous."

Other Uses

301 a) *Decoration*: A considerable number of shells * 825 were reported as used for decoration. The tabulation indicated altogether 10 species that had been or still are used for ornament. Three of these are discarded now, seven still in use. This is mostly in the form of various sorts of necklaces, which the women string on ordinary thread. *Solenostira pallida* is supposed to be worn as such by women and children, while *Cerithium stercusmuscarum* by the boys only. But I have never seen either of them make use of it in any way. On the other hand, *Trivia radiana* and the *Olive shell* are much

[P. 39 A]

*825 [172] [267] Because seasonal deposits of shells may differ archaeologically and because they do make up an important part of the Seri diet, both now as also in the past, the dominant species for each season are listed below:

Occurring in Summer only	More common in summer
Isognomon chemnitzianus	*Chlamys subnudosa*
Cardium consors	*Eurytellina ruboacens*
Codakia distinguenda	*Acmaea dalliana*
Ficus ventricosus	
Phallium abbreviatum	
Crepidula crepidula	
Trivia radiana	
Occurring in Winter only	**More common in winter**
Pteria peruviana	*Turbo fluctuosa*
Polinices reheriana	*Octopus bimaculatus*
No data	
Volsella capax	
Nisoche bistrionuca	

In three of the species which are present only during the hot season the Seris indicated that they winter buried in mud.

Rhythm

There is a clear suggestion that to the Seri the *Mollusca* show no predilection for either diurnal or nocturnal activity but that they are active both day and night. Data for this had been obtained for 10 species and this answer has been given in every case—merely saying that "it walks day and night." This falls in line quite closely with the Seris' ideas about other creatures of the sea in contrast to the terrestrial animals. There is but very feeble suggestion that some of the fishes are either nocturnal or diurnal. Vast majority are both.

Distribution 1/1

Familiarity with the geographical distribution of the molluscs is for the Seri in a way a function of their familiarity with the particular locality. The largest number of species they cite for the localities in which they regularly camp, the smallest for those they know very little. Thus, the records indicated for the coast of B. C. are only those where the informants indicated by the blanket statement "found everywhere." But this does not mean that they actually cited the animal from such a locality.

In many instances presence or absence of a molluscan has been explained by presence or absence of its favorite habitat. The informants repeatedly pointed out that excessive sandiness of the Kino's shores is responsible for an absence of a great variety of animal there. In other cases, presence of rocks is a requirement for several others. But these matters will be discussed in greater detail under the heading of ecology.

Ecology

The Seris have a very clear-cut idea concerning ecological preferences of the *Mollusca*, a matter which is not too difficult for them to observe.

[P 418] 1/1 [See category 116, pp 64-65 for distribution charts- Analyst.]

642
621 Little information could be elicited about subdivisions 7, 8,
[169] 9, and 10. The reason for this might be that Band VI was slow in
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as it was being displaced by Bands III and IV.

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425 sponding strip of land on the mainland. Thus the inhabitants of
167 subdivisions 2, 3, 4, 5, and 6 laid claim to the coastal areas directly
across the channel from them as shown by the dotted lines on
Fig. 4. They assumed that their new territories extended inland
[822] to include as much terrain as they chose to claim. At first the
people went to their mainland areas primarily to gather cactus
fruit. Eventually some of them remained on the mainland and
established subdivisions 11 and 12. This establishment superseded
the claims of the five Tiburon Island subdivisions to their main-
[101] land territories. Although the mainland subdivisions 11 and 12
formed, in some respects, a separate band in their own right, they
retained their name, *ta?eowkw kongkaak* "the people of Tiburon
Island." Eventually this group returned to Tiburon.

621 Of subdivisions 13 and 14 which are shown on Fig. 4, very
642 little is known. The people of subdivision 13 inhabited an area
131 encompassing the northern end of the dry lake, La Playa Noriega
[829] (San Bartolo). Some of the Seri believe that these people were
giants. Although in this area I have found clay figurines and other
[172] artifacts common to abandoned camps elsewhere, the Seri do not
[173] know the names of the camps of this subdivision. Subdivision 14
occupied the area surrounding the southern end of the same dry
lake.

Subdivision 15 occupied the general area which is now Villa
de Seris, a settlement on the southern edge of Hermosillo. As
[167] Hermosillo grew, it became increasingly difficult for these Seri
to maintain their customary way of life, and they eventually
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xnitom	"_____"
pahii	"flint"
kofte okl ifa	"large iguana peninsula"
koiih	"tubular"

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

262 Probably second in importance among Seri prey, as a food-source merely, stand the multifarious fishes with which the waters of Seriland teem, particularly if the class be held to comprise the cetaceans and seals and selachians ranked as leaders of the fish fauna in Seri lore.

225 Naturally, whales lie outside the ordinary range of Seri game, yet they are not without place in the tribal economy. During the visit to the Seri rancheria near Costa Rica in 1894, it was noted that various [173] events—births, deaths, journeys, etc—were referred to "The Time of the Big Fish"; and it was estimated from apparent ages of children and the like that this chronologic datum might be correlated roughly with the year 1857. The era-marking event was memorable to Masbém, to the elder women of the Turtle clan, and to other mature members of the group, because they had been enabled thereby to dispense with hunting and fishing for an agreeably long time, and because they had moved their houses; but the providential occurrence was not interpreted at the time. On visiting Isla Tiburon in 1895, the interpretation became clear; along 172 the western shore of Bada Ballena, near the first sand-spit north of the bight, lay the larger bones of a whale, estimated from the length of the mandibles and the dimensions of the vertebræ to have been 75 or 80 feet long. It was evident that the animal had gone into the shoal water at exceptionally high tide and had stranded during the ebb; while the condition of the bones suggested an exposure to the weather of perhaps half a dozen years. On the shrubby bank above the beach, [361] hard by the bleaching skeleton, stood the new rancheria, the most extensive seen in Seriland, comprising some fifteen or twenty habitable jacales; and fragments of ribs and other huge bones about and within the huts[1] attested transportation thither after the building, while the shallowness of the trails and the limited trampling of the fog shrubbery gave an air of freshness to the site and surroundings. The 172 262 traditions and the relics together made it manifest that "The Time of the Big Fish" had indeed marked an epoch in Seri life; that when the leviathan landed (whether through accident or partly through efforts of balsa men) it was quickly recognized as a vast contribution to the Seri larder; and that some of the clans, if not the entire tribe, gathered to gorge first flesh and blubber, next sun-softened cartilage and chitin, and then epiphyses and the fatter bones. Some of the ribs were splin- [252] tered and crushed, evidently by blows of the hupf, in order to give access to the cancellate interiors; several of the vertebræ were battered and split, and nearly all of the bones bore marks of hupf blows, aimed to loosen cartilaginous attachments, start epiphyses, or remove spongy and greasy processes. Little trace of fire was found; in one case a mandible was partly scorched, though the burning appeared to be fortuitous and long subsequent to the removal of the flesh; and a bit of charred and gnawed epiphysis, much resembling the fragments of half-cooked turtle plastron scattered over Seriland, was picked up in

[1] One of the smaller vertebræ and part of a rib are shown in the upper figure of plate VI.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

597 648 While the lieutenant attached no significance to the painting, the procedure would seem to have been a ceremonial adoption, such as might, for example, be used in connection with a confederate clan. The description of the painting is sufficiently explicit to identify the totem with that of the Turtle clan, represented by the clanmother and the daughter of the clan at Costa Rica in 1894 (plates XVIII and XXIV); but it is noteworthy that the salutation with which the ceremony terminated, and which may be rendered "Captain-Brother of the Sharks", would seem to identify the totem with the shark rather than the turtle.[1]

The second case of adoption (if so it may be styled) was that of Señor Encinas, after his bloodiest battle, in which nearly all of the Seri warriors were left on the field. In this case there was no ceremony, or at least none remembered by the beneficiary; he was merely informed by a delegation of aged dames that thenceforth he would be regarded as a stronger and more invulnerable chief (shaman) than any member of the tribe, and hence as the tribal leader.

173 563 727 The third instance is still less definite, though it seems to be trustworthy. There is a widespread tradition throughout Sonora that in the course of a brush between a band of Papago hunters and a marauding bunch of Seri warriors in the mountains southeast of Cieneguilla twenty-five or thirty years ago, a Papago maiden was captured and carried off to Tiburon; and that for some years thereafter—i. e., until the Papago had taken ample blood-vengeance—the intertribal animosity was exceptionally bitter. No wholly satisfactory basis for the traditions could be found among the Papago, though some of the silences of the old men were suggestive; nor was the tradition fully credited by Señor Encinas, despite its deep lodgment in the minds of some of his yoemanry. When Mashém was interrogated on different occasions, he merely shook his head in stolid silence; but when the device was adopted of inquiring the number of Papago children brought into the tribe through this woman he responded promptly with a snort of scorn, and followed this with the explanation that she never had children, and could not because she was an alien slave. The explanation was corroborated by clanmother Juana María and other matrons, with sundry expressions of contemptuous disapproval of the inquiry and scorn of the very idea that aliens could fructify within the tribe. Later, the ice being broken, Mashém intimated that the woman had recently died of old age and its consequences—doubtless as an outcast. On the whole, the direct testimony would seem to substantiate the tradition, and to supplement it with the short and simple annals of a spouseless and childless life (incredible of other tribes, but consistent

[124] [773] [1] This identification may possibly be correct, the collocation of the totem with the turtle was shaped through unwilling and perhaps misleading responses made by Mashém to inquiries in 1894—those responses denoting a sea monster which in the beginning helped the Ancient of Pelicans to make the world by pushing from below, and which is now very good food—a description apparently fitting the turtle more closely than the other animal.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

with the customs of the Seri), endured for many years and ending at last in unpitied death.

Collectively the cases seem to define a germ, rather than a mature custom, of adoption. In the first case a benefactor (by means regarded as magical) was formally inducted into the reigning family; in the second case the conquering hero (through what were again regarded as magical means) was less formally recognized and venerated, even worshiped, as an all-powerful shaman; while in the third case a representative of the doughtiest alien tribe was enslaved, probably with motives akin to those expressed in the carrying of chargeless guns, the making of imitation machetes, and other fetishistic devices. Except in the first instance there is no indication of consistent custom; but since the entire history of the tribe clearly contradicts regulated adoption of aliens (and indeed affords no other example), it must be inferred that any such custom is intratribal rather than intertribal.

MARRIAGE

The most striking and significant social facts discovered among the Seri relate to marriage customs.

As noted repeatedly elsewhere, the tribal population is preponderantly feminine, so that polygyny naturally prevails; the number of wives reaches three or possibly four, averaging about two, though the younger warriors commonly have but one, and there are always a number of spouseless (widowed) dames but no single men of marriageable age. So far as could be ascertained, no special formalities attend the taking of supernumerary wives, who are usually widowed sisters of the first spouse; it seems to be practically a family affair, governed by considerations of convenience rather than established regulations—an irregularity combining with other facts to suggest that polygyny is incidental, and perhaps of comparatively recent origin.

The primary mating of the Seri is attended by observances so elaborate as to show that marriage is one of the profoundest sacraments of the tribe, penetrating the innermost recesses of tribal thought, and interwoven with the essential fibers of tribal existence. Few if any other peoples devote such anxious care to their mating as do the Seri;[1] and among no other known tribe or folk is the moral aspect of conjugal union so rigorously guarded by collective action and individual devotion.

The initial movement toward formal marriage seems to be somewhat indefinite (or perhaps, rather, spontaneous); according to Mashem it may be made either by the prospective groom or else by his father, though not directly by the maiden or her kinswomen. In any event the prerequisites for the union are provisionally determined in the suitor's family; these relate to the suitability of age, the propriety of

[1] Perhaps the closest parallel in this respect is that found in the elaborate marriage regulations prevailing among the Australian aborigines, as described by Spencer and Gillen, Walter E. Roth, and other modern observers.

2: Kroeber E-5 (1930) 1931 NU31 Seri NU31

NEW DATA

Informants' Attitude

Most of my information was obtained from Chico Romero, the present official chief, a man of about 38. Santo Blanco and one or two other men contributed occasionally. Sr. Thomson was present most of the time and aided materially, both in encouraging the Seri and in helping to formulate questions suitably to their experience and comprehension. For instance, he repeatedly cleared up points in the kinship system by applying his knowledge of the actual relationship of Seri individuals, or their acquaintance with his relatives, to frame concrete cases, real or hypothetical, for which a denomination was then readily given. Without this aid, the system could not have been obtained with either reasonable surety or correctness. So far as possible, direct questions were replaced by giving to the Seri accounts of customs attributed to the Cocopa, of whose existence they know, and suggesting comparisons, in which they proved interested. On the whole, their attitude was friendly, coöperative, and appeared unsecretive. Concealment may be so automatic a habit with them that they practice it without giving a sign; but I had the constant impression that they told little about their religion because they knew little, and not from any skilfully concealed reluctance. Still, all negative statements must be regarded as only tentative when secured in a brief time through an imperfect medium of communication from informants not accustomed to mental exertion.

Historical Tradition

There were formerly four tribes, according to the informant: to the East, the Seris, at Pueblo de los Seris (the ex-mission, across the river from Hermosillo); to the West, the Tiburones, on the island; to the North, at Tepoca, the Xeka'aikö'ye; to the South, at Tastiota, the Antepkê'itaX or Tastioteños. Too many died at Pueblo Seris, so they joined the Tiburones. They fought the northern and southern groups. Sixty (or 68) Seri-Tiburones once went to Tepoca to kill a man and his two sons. They made marks and stuck a knife in the trail to cause them to stop. Then they shot them. The women and children were captured, taken to the island and kept, the women first being abused by the whole party. The informant's son José Manuel (13) had a Tepoca maternal grandmother; that is, the informant, now about 38, married the daughter of a Tepoca woman. (This would put the incident hardly earlier than 1860 or later than 1890.) Similarly, there is Tastioteño blood among the present Seri. The dialects of the several tribes are said to have been distinct, though allied.

It is evident that these memories cover only the last part of the period of Spanish contacts.

262 now," while the *Volsella* has been eaten in the past just as much as it is now. The find of these four 172 species in great numbers in the kitchen-middens only indicates that they probably were an important part of the Seri past. Historical records are scarce and no archaeology had ever been done in the region, except for Gifford's (as yet unpublished) excavations at Caborca. But Caborca is far away from the coast. Strong circumstantial evidence suggests that a good many of the kitchen-middens represent relics of the Seris' past encampments.

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Other Uses

301 a) *Decoration*: A considerable number of shells * 825 were reported as used for decoration. The tabulation indicated altogether 10 species that had been or still are used for ornament. Three of these are discarded now, seven still in use. This is mostly in the form of various sorts of necklaces, which the women string on ordinary thread. *Solenostira pallida* is supposed to be worn as such by women and children, while *Cerithium stercusmuscarum* by the boys only. But I have never seen either of them make use of it in any way. On the other hand, *Trivia radiana* and the *Olive shell* are much

[P. 39 A]

11: Moser L-5 (1956-1961) 1963
NU31 Seri NU31

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131
361

FIG. 1. Area of Present Seri Occupation

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One descendant of this band states that long ago his ancestors wandered north from the region of Guaymas. Eventually, they established land rights to the coastal area extending from Campo Ona on the south to Puerto Lobos on the north. Before long, however, they relinquished claim to the area between Campo Ona and Punta Tepopa.

It is to be understood, of course, that groups from this band, as well as groups from other bands, at times ranged far afield from their respective territories. Band I, for instance, had campsites as far north as the mouth of the Colorado River.

642 BAND II *xika xnai kkoii* "they who live toward the south wind"

101 131 This group is commonly referred to as the Tastioteño. These people roamed the coastal area from Guaymas to Bahia Kino.

BAND III *ta?eowkw kongkaak* "the people of Tiburon Island"

This band is referred to in the literature as the Seri or Tiburones. At one time their territory included only the northern and eastern coasts of Tiburon Island. Later it was extended to include the whole coastal strip of the mainland directly opposite the island.

BAND IV *?eno kongkaak* "the people of the desert"

The area this band occupied in the center of Tiburon Island is shown in Fig. 2.

642 131 173 628 [101] BAND V *xnaamotat* "they who came from the direction of the south wind"

The Seri believe that this band came originally from a region south of Guaymas. It may have been the Upanguayma group mentioned in the literature. Its members came in contact with the members of Band II with whom they resided, apparently for a period of years. Whether the *xnaamotat* were Seri or non-Seri, [99] I have been unable to ascertain. Since no informant suggests that this group spoke another language besides Seri, it seems reasonable to believe that it was simply a distinct dialect group.

642 628 721 [131] The *xnaamotat* were a belligerent people and, after fighting broke out between them and the members of Band II, they traveled northward. Eventually they established themselves on the relatively small coastal strip located east of Punta Tepopa as shown in Fig. 2.

642 BAND VI *xika ?ast ano koii* "they who live in the mountains"

[101] [131] This group, which has been recognized previously only by Griffen, inhabited San Esteban Island. It laid claim also to the greater part of the coast on the southern end of Tiburon Island. One informant stated that in earlier times this band had ranged over all of Tiburon Island except for the northern two-thirds of the eastern coast, but that they were slowly pushed southward by the movements of other groups.

642
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Subdivision 15 occupied the general area which is now Villa de Seris, a settlement on the southern edge of Hermosillo. As [167] Hermosillo grew, it became increasingly difficult for these Seri to maintain their customary way of life, and they eventually returned to Tiburon Island.

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xnitom	"_____"
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koiih	"tubular"

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628
648
[425]
[131]
[173]

BAND V

It was stated above that this band fought with Band II and then with Band I. Since Band V was likely killing cattle, they also may have been harassed by soldiers. Eventually Band V abandoned its territory near Punta Tepopa and headed south along the coast to a camp near present-day Bahia Kino. From this camp the entire group disappeared and was never seen again by members of the other bands. The Seri of today believe that Band V either traveled inland or was destroyed by a non-Seri force.

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[175]

BAND II

These people were rustlers and marauders. Government intervention in the situation was inevitable. The Seri recount the following final encounter between this group and the government forces.

The entire remaining membership of Band II was hiding out in a nearly inaccessible swamp thicket at Bahia Kino. Knowing that an armed force of soldiers and ranchers was searching for them, the people left their camp to seek safety elsewhere. Almost immediately they were attacked by the superior armed force which proceeded to wipe out the whole group. A youth who had avoided capture is said to have reported the affair to the Seri on Tiburon Island. This event may have occurred during the Encinas Wars fought from 1855 to 1865.

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727
[721]

BAND VI

The members of this band on San Esteban Island were little interested in the mainland and did not participate in the raids on man and livestock there. Nevertheless, they were to share in the severe punishment meted out to the bands guilty of multitudinous depredations.

Sometime after the massacre of Band II, a ship arrived at San Esteban, and many of the people were induced to go aboard. The rest of the inhabitants followed the ship to a camp on the eastern side of Tiburon Island where they were to receive gifts. As the people congregated, they were herded into a stone corral. Apparently, some of the San Esteban men were killed at this time. The rest of them, along with the women and children, were taken to Santa Rosa point on the mainland. Here, the Seri say, more of the men were killed. The remaining men were strung together by wire and led away, never to return.

The San Esteban women and children, along with some Tiburon Island women and children (of Band III), were taken in

so named must be of the same sex as the first. The significance of land ownership needs further investigation.

Many of the Seri still prefer, when possible, to live in their chosen band area. Sometimes a person, when he is approaching death, will ask to be taken to his own i?iziiting, where he can die and be buried in the area of his choice.

NOTES

1. Due to printing limitations, stress on Seri words has been omitted, and several orthographic symbol changes have been made for this paper. The phonetic values of the symbols used are the following: p is voiceless labial stop; t is vl. dental stop; k is vl. velar stop; ? is glottal stop; f is vl. labial flat spirant; w is vl. labial grooved-rounded spirant; s is vl. alveolar spirant; z is vl. alveo-palatal spirant; l is vl. lateral spirant; h is vl. velar spirant; x is vl. back velar spirant; m is labial nasal; n is dental nasal; ng is velar nasal; y is palatal semivowel; i is a high close front vowel; e is a low close front vowel; a is a low open central vowel; o is a mid close back vowel.

2. These data were compiled during field trips to the Seri camps during the years 1956-61, the studies being carried out under the auspices of the Summer Institute of Linguistics. The principal informant was R. Herrera T. whose information was checked with and supplemented by nine of the older members of the tribe. I am indebted to my colleague, David Thomas, who read an earlier draft of this paper and made helpful suggestions.

3. 1) W. J. McGee, "The Seri Indians," *Bureau of American Ethnology, Annual Report*, No. 17, Part 1. Washington, 1898. 2) A. L. Kroeber, "The Seri," *Southwest Museum Papers*, No. 6. Los Angeles, 1931. 3) W. B. Griffen, "Notes on Seri Indian Culture, Sonora, Mexico," *Latin American Monograph Series*, No. 10, Gainesville, 1959.

4. It will be noted that between subdivision 3 and 4 on Fig. 3 there is an unnumbered area, the status of which is uncertain.

5. Kroeber states that McGee's concept of Seri maternal lineages crystallized into totemic clans with matron rule seem a fantasy. In Kroeber's opinion, "The Seri may never have had sibs or clans; but the fact that they appear to lack them now is no positive evidence that they were without them three centuries ago. Shifts of residence, contraction of territory, shrinkage of numbers, amalgamation of distinct bands, may well have obliterated much of such social fabric as they once possessed."

Griffen discusses the nature of the former Seri bands and states, "they may have been patrilineal and exogamous. The criteria . . . that Julian Steward has exposited for the formation of exogamous, patrilineal bands . . . are and presumably would have been met formerly in the Seri habitat." Griffen lists other aspects of this type of band which are also verified to some extent by his data. From reading his material, it is obvious that he suspects the existence of clans at some earlier period. He emphasizes the need for further investigation.

6. G. P. Murdock, *Social Structure*, Macmillan Co., New York, 1949.

7. Marriages were usually contracted within the band.

8. As Kroeber points out, their memory likely covers only the latter part of the period of Spanish contacts.

9. The Seri recall nothing of Seri-Pima contacts and little of Seri-Apache relations.

10. The story is related that one day some Seri entered a cave where they found several Papago jugs filled with seeds. Being hungry, the people ate the seeds and left some arrows as token payment. The Seri say that the Papago apparently believed the arrows were intended as an insult. Fighting broke out soon afterward.

11. The Seri concept of the band annihilations is seen to be in contradiction to McGee's statement (p. 132): "Concordantly with their primary characteristic, the Seri have avoided ethnic and demotic union beyond the narrow limits of their own kindred; and even of these they seem to have cast out parts, annihilating the Guayma and Upanguayma, displacing and nearly destroying the Tepoka, and outlawing individuals and (apparently) small groups."

SERI BLUE

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ABSTRACT

The blue which the Seri Indians of Sonora, Mexico, use in face painting is not the mineral dumortierite, as previously believed, but is a prepared pigment. This paper is a description of the process in which three elements are combined to produce this pigment.

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McGee and Kroeber reported the mineral dumortierite as the source of the blue pigment used in Seri face painting (McGee 1898: 165-6; Kroeber 1931: 27). Coolidge described two blues, one a mixture of gypsum and a boiled root, the other a blue stone found on Tiburon Island (Coolidge 1939: 200). Xavier mentioned dumortierite and commercial bluing. She also referred to a third blue obtained from a plant on Tiburon (Xavier 1946). Present investigation has shown that as far as the Seri know, the only blues they have ever used are *ika?óil* "to cause to be blue" (commercial bluing) and the highly prized *?antezj kóil* "blue clay" of their own manufacture.[1]

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The components and the method of manufacture of *?antezj kóil* are said to have been taught to the women long ago by *?ant i?akímxoj* "they who tell the things about the earth." The actual color transformation is veiled in mystery to the Seri who say that if the process of making the clay is observed by any girl who has not passed the menarche, the blue will not appear. Its appearance is not attributed to shaman power, however.

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462
173
881
789
756

?antezj kóil has been in less demand during the last few decades since commercial bluing has been readily available. Nevertheless, *?antezj kóil* is the blue preferred by those women who continue to adorn their faces in the traditional manner.

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The three ingredients used in making the blue clay are the root bark of *xkoktz (Franseria dumosa)*, *iki kóizj* "to grind with" (a mixed clay in which montmorillonitic layers predominate), and *mokni óoxW* "excrement (sap) of *mókni (Guaiacum coulteri)*." The Seri say that the *iki kóizj* and the *mókni* are found only on Tiburon Island. The root bark of *tinkl (Franseria ambrosioides* Cav.) or of *xneejan siiktoj (Stegnospermum halimifoliam)* can be used instead of *xkoktz*. *tinkl* gives a distinct aroma to the clay. The plants mentioned are fairly common along the Sonoran coast.*

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*EDITOR'S NOTE: It is interesting to note that none of the ingredients is blue in its unaltered state.

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trial factors was the setting apart of the Salineros, or Seri Salineros; yet this distinction, fortuitous and variable at the best, expressed no essential character and has not been maintained. A much later distinction was that between the Seri and Tiburones, emphasized by Mühlenpfordt and exaggerated by Buschmann; but there seem to have been no better grounds for it than misapprehensions naturally attending a slowly crystallizing nomenclature. In any event it has not been maintained.

At several stages the chroniclers coupled the Seri with other tribes, on various grounds: in the eighteenth century they were thus combined with the Pima, the Piato, and especially the Apache tribes. In the earlier half of the nineteenth century they were frequently coupled in similar fashion with the Pima and Apache tribes, and in the later half of the nineteenth century, and even in its last lustrum, they have been similarly combined with the Yaqui. The later combinations seem to explain the earlier: the Yaqui outbreaks withdraw portions of the arm-bearing population from the Seri frontier, and the marauders take advantage of the withdrawal so regularly that a Yaqui scare is invariably followed by a Seri scare, and hence the two warlike tribes are constantly associated in the minds of the Sonorenses as synchronous insurrectionists; and scrutiny of the earlier chronicles indicates that most of the so-called combinations of former times were of similar sort.

On putting the chronicles together, it seems clear that the term "Seri" was originally of lax application, but was gradually restricted to the tribe inhabiting Tiburon and ranging adjacent territory, including the collingual but inimical Guayma and Upanguayma, and also the culingual and cotolerant Tepoka; and that the various Piman tribes, as well as the Apache, were always distinct, and commonly if not invariably inimical.

The ethnic relations of the Seri people attracted early and repeated attention. Humboldt gave currency, albeit not unquestioningly, to a supposed Chinese or related Oriental affiliation; Hardy noted the similarity of the Seri tongue to that of the Patagonians; Lavanderu classed the language as Arabic; Stone and Bancroft circulated a supposed identification of the speech with the Welsh; Ramirez, and more especially Pimentel, narrowed the field of affiliation to Mexico and defined the tongue as distinct; Orozco y Berra, and more especially Malte-Brun, slightly reextended the field and suggested affiliation with the Caribs; while Herzog, Gatschet, and Brinton reextended the field in another direction and saw, in a vocabulary obtained from a Seri scion but alien thinker, similarities between the Serian and Yuman tongues. The recent researches tend strongly to corroborate the evidence collected and the conclusions reached by Ramirez and Pimentel; for the somewhat extended comparisons between the Serian and neighboring languages (introduced and discussed in other paragraphs) indicate that the

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Seri tongue is distinct save for two or three Cochimí or other Yuman elements, which may be loan words such as might readily have been obtained through the largely inimical interchange of earlier centuries described by Padre Juan María de Sonora and other pioneer observers—certainly the slight and superficial similarities with other tongues of the region seem insufficient to meet the classific requirement of supposititious descent from "a common ancestral speech".[1] Accordingly the group may be defined (at least provisionally) as a linguistic family or stock, and may be distinguished by the family name long ago applied by Pimentel and Orozco, with the termination prescribed in Powell's fifth rule,[2] viz, *Serian*. Conformably, the classification of the group would become—

Serian stock, comprising—

Seri tribe, including Tiburones and (certain) Salineros;
Tepoka tribe;
Guayma tribe;
Upanguayma tribe.

Naturally this classification is provisional in certain respects. It is little more than tentative in so far as the Tepoka are concerned, since no word of the Tepoka tongue has ever been recorded, so far as is known, and since the tribe is still extant and within reach of research; it must be held provisional also in respect to the separateness of the stock, which may be found in the future to be affiliated with neighboring stocks, though the effect of the more recent and more critical researches in eliminating supposed evidences of affiliation points in the opposite direction. The arrangement is in some measure provisional also with respect to the relations between the long-extinct Guayma and Upanguayma and the type tribe, especially since contrary suggestion has been offered in terms implying the existence of unpublished data; yet the presumption in favor of the critical work by Ramirez, Pimentel, and Orozco is so strong that practically this feature of the classification may be deemed final.

No attempt has been made to render the tribal synonymy exhaustive, though search of the records has incidentally brought out the more important synonyms, as follows:

Seri Tribe

CERY—1826; Hardy, Travels, p. 95.
CERI—1875; Pimentel, Lenguas Indígenas, tome II, p. 229.
CERIS—1715; Villa-Señor, Theatro Americano, p. 391.
CERIS TEPOCAS—1760; Velasco, Noticias Estadísticas, p. 132.
HERI—1854; Buschmann, Die Spuren der aztekischen Sprache, p. 221.
HERIS—1615; Ribas, Triumphos de Nuestra Santa Fee, p. 358.
HYRIOS—1630 (?); Van der Aa, map.

[1] Indian linguistic families, by J. W. Powell, in Seventh Annual Report, Bureau of Ethnology, 1885–'86 (1891), p. 11.
[2] Ibid., p. 98.

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monly the carapace and the longer bones from the flippers of the larger specimens are preserved entire for other uses, and are cleaned only by teeth and talons and tongues, aided by time but not by fire; but the plastron, unless broken up and consumed immediately, is subjected to a cooking process in which it serves at once as skillet and outlet—it is laid on the fire, flesh side up, and at intervals the shriveling tissues are clawed off and devoured, while at last the scorched or charred scutes themselves are carried away to be eaten at leisure.[1]

Perhaps the most significant fact connected with the Seri turtle-fishing is the excellent adaptation of means to ends. The graceful and effective balsa is in large measure an appurtenance of the industry; the harpoon is hardly heavier and is much simpler than a trout-fishing tackle, yet serves for the certain capture of a 200-pound turtle; and the art of fishing for a quarry so shy and elusive that Caucasians may spend weeks on the shores without seeing a specimen is reduced to a perfection even transcending that of such artifacts as the light harpoon and fragile oila. Hardly less significant is the nonuse of that nearly universal implement, the knife, in every stage of the taking and consumption of the characteristic tribal prey; for it may fairly be inferred that the comparative inutility of the knife in dissevering the hard and horny chelonian derm, and the comparative effectiveness of the shell-breaking and bone-crushing hapĕ, have reacted cumulatively on the instincts of the tribe to retard the adoption of cutting devices. Of much significance, too, is the limited cooking process; for the habitual consumption of raw flesh betokens a fireless ancestry at no remote stage, while the crude cooking of (and in) that portion of the shell not consecrated to other uses might well form the germ of broiling or boiling on the one hand and of culinary utensils on the other hand. On the whole, the Seri turtle industry indicates a delicate adjustment of both vital and activital processes to a distinctive environment, in which the abundant chelonian fauna ranks as a prime factor.

Analogy with other primitive peoples would indicate that the flesh of the turtle is probably tabu to the Turtle clan, that the consumption of the quarry is preceded by an oblation, and that there are seasonal or other ceremonial rites connected with turtle-fishing; but no information has been obtained on any of these points save a few vague and unwilling suggestions from Mashém tending to establish the analogy.

Flotsam and stolen metal have played a rôle in the industries of Seriland so long that it is difficult to learn much of the turtle fishing

[1] These details were furnished largely by Mashém and Sidor Hariman, but were verified in essentials by personal observation of diastic customs at Costa Rica in 1894, and they were corroborated by observations on both shores of El Infiernillo and Bahía Kanhkaak in 1895. Especially significant were the remnants of a turtle feast on the southern beach of Punta Miguel interrupted by the approach of the exploring party. The indications were clear that the turtle had been landed and largely consumed before the fire was kindled, and that the cooking of the firmer portions had hardly been commenced before the camp was abandoned so hurriedly that not only the nearly eaten turtle and the glowing embers, but the harpoon (the specimen illustrated in figure 39), the still bloody and greasy hapĕ (that represented in plate LIV), and the fire-sticks were left behind. Charred fragments of charred plastrons are common relics about heavily shandoned camps generally.

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174 during prenatal times; but an intimation from Mashém that the old
177 men thought it much better to take the turtle with the teeth of an
411 "animal that goes in the water", and the similarity in terms for "harpoon" (or arrow) and "teeth" both suggest that the aboriginal point may have been a sea-lion tooth, and that the foreshaft itself may have been a larger tooth of seal or cetacean. While the modern harpoon is shaped with the aid of metal (hoop-iron, etc.), the forms are quite evidently vestigial of knifeless manufacture, in which a naturally rounded or abraded or fire-shaped foreshaft was fitted into the natural socket afforded by a cane stalk broken at its weakest point—i. e., just below the joint; and both function and socket arrangement (as well as the linguistic evidence) strongly suggest the cylindrical tooth as the germ of the apparatus.

223 It is probable that water-fowl, considered collectively, stand second in importance as Seri prey; and the foremost fowl is undoubtedly the pelican, which serves not only as a fruitful food-supply but as the chief source of apparel.

The principal haunt and only known breeding ground of the pelican in the Gulf of California is Isla Tasmo, an integral part of Seriland; and while the great birds are doubtless taken occasionally in Bahia Kunkaak, El Infiernillo, Bahia Tepoka, and other Seri waters, this island is the principal pelican hunting ground. According to Mashém's account, the chase of the pelican here is a well-organized collective process: at certain seasons, or at least at times deemed propitious by the shamans, pelican harvests are planned; and after some days of preparation a large party assemble at a certain convenient point (presumably Punta Antigualla) and await a still evening in the dark of the moon. When all conditions are favorable they set out for the island at late twilight, in order that it may be reached after dark; on approaching the shore the balsas are left in charge of the women, while the warriors and the larger boys, armed only with clubs, rush on the roosting fowls and slaughter them in great numbers—the favorite coup de grâce being a blow on the neck. The butchery is followed by a gluttonous feast, in which the half-famished families gorge the tenderer parts in the darkness, and noisily carouse in the carnage until overcome by slumber. Next day the matrons select the carcasses of least injured
[237] plumage and carefully remove the skins, the requisite incisions being
[291] made either with the edge of a shell-cup or with a sharp sliver of cane-stalk taken from an injured arrow or a broken balsa-cane. The feast holds for several days, or until the last bones are picked and the whole party eated, when the clans scatter at will, laden with skins and lethargic from the fortnight's food with which each maw is crammed.

Mashém's recital gave no indication as to whether the Pelican clan participate in the hunting orgies, though it clearly implies that the chase and feast are at least measurably ceremonial in character; and this implication was strengthened by the interest and comparative

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411 placed wing-feathers of hawk or falcon, neatly prepared by removing a thin strip of the rachis bearing the wider vexillum and attaching it by sinew wrappings at both ends, the feathers being about 5½ inches in length. The nock is a simple rounded notch, placed just below a joint and supported by the sinew ferrule; there is no feet-ping. The favorite point is a bit of flotsam hoop-iron, ground into elongate triangular shape with projecting barbs, and a short tang or shank fitted into a shallow notch in the foreshaft, cemented there with mesquite gum, and finally fixed firmly with sinew wrappings. A typical iron-point arrow, with bow and quiver, is depicted in plate XXX. Alternative points are of rudely chipped stone (two examples are illustrated in figure 37) somewhat clumsily attached to the foreshaft by mesquite gum and sinew wrapping; while the arrows used by boys and hunters of small game are usually pointless, the tip of the foreshaft being sharpened and hardened by slight charring. In some of the arrows, especially those designed for use in war, the foreshaft is notched, or else loosely attached to the main shaft, in order that it may be detached from the main shaft and remain in the body of enemy or prey. The foreshaft is commonly painted some bright color (red is prevalent), while the points and attachments of the "poisoned" specimens are smeared with some greasy substance.

The aboriginal Seri arrow has undoubtedly been modified during the centuries since the coming of Cortés and Mendoza with their metal-armed troopers; yet certain inferences as to the indigenous form of the weapon are easily drawn from its construction and the homologies of its parts.

The first feature of the artifact to attract attention is the relative clumsiness of attachment and frequent absence of points. The chipped-stone points are so rude as to be quite out of harmony with the otherwise delicately wrought and graceful arrow, while the attachment is strikingly rude; and it is still more noteworthy that the very name for stone arrowpoint was little understood at Costa Rica, and was obtained only after extended inquiry and repeated conferences among the older informants. Even the attachment of the effective points made from hoop-iron is bad constructionally; the sinew wrapping is carried around the entire blade in such manner as to sheathe the sharply ground edges and itself be cut on contact with firm tissue; and the fitting and wrapping are so rude as to be incongruous with the rest of the apparatus. On the whole the suggestion is strong that the arrowpoint is accultural—and this suggestion is further strengthened by the very existence of the practically functionless, and hence manifestly vestigial, hard-wood foreshaft. Turning to the structural homologies, the observer is at once struck with the parallelism running through the three most conspicuous compound artifacts found among the Seri, i. e., the harpoon, the fire-drill, and the arrow. All of these alike consist of two essential parts, main shaft and foreshaft; all are

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akin in function even in the superficial view of the Caucasian, and are much more closely related in primitive thought—indeed the fire-drill is but a featherless and nockless arrow, with the foreshaft charred at its fire-giving tip; and all are closely linked in language and allied with other terms in such wise as practically to establish identity among them in the thinking of their lowly makers (though unfortunately the incomplete vocabularies extant are insufficient for full study of the linguistic homologies). Briefly the indications are that the harpoon was the primary device, and that its foreshaft was a tooth of an aquatic fish-eater like the seal, or perchance in some cases an os penis; that its lineal successor was a loose-head lance for use on sea and land, at first with the unaided hand and later with the atlatl, or throwing-stick (the lance being now extinct, though recorded by early visitors to Seriland); that the next artifact-generation in the direct line was represented by the arrow, foreshafted with hard wood or tooth, made light and graceful and loose-headed or not, according to needs, and by the substitution of bow for atlatl; and that a somewhat aberrant line was marked by the taming of fire, its reproduction by the modified arrow, and the differentiation of fire-stick from arrow and either atlatl or bow.

In tracing these stages in technologic growth, it is to be remembered that the Seri are so primitive as to betray some of the very beginnings of activital concepts; that to them zoic potencies are the paramount powers of the cosmos; that in their simple thought fire is a bestial rather than a physical phenomenon; that in their naive philosophy the production of devouring flame is of a kind with vital birth and a similitude of sexual reproduction; and that according to their notions the conquest of quarry, including fire, is made practicable only by aid of the mystical potencies of beasts and flames gained through invocatory use of symbols or actual organs.

In the Seri tongue the term "fire-drill" is *kaak*, an indefinite generic meaning "kind" or "strong kind", with an egocentric connotation ("Our-Strong-Kind"), as in the proper tribal designation *Kun-kaak* or *Ku-kaak*; while the term for the nether fire-stick or hearth is either *maam* ("woman", or more properly "mother"), or else (and more commonly) *kaak-maam*, which may be rendered "Kind-Mother"—the "Kind", as among primitive folk generally, comprising both men and tutelary beasts; and in this case fire as the most mysterious of the beasts; there is thus a suggestive analogy between the designation for the fire-producing apparatus and that for the tribe itself. It should be noted that the zoic concept of fire is widespread among the more primitive peoples of various provinces, and sometimes persists in recognizable form in higher culture (witness the fire-breathing dragons of various mythologies, the "Red Flower" notion gathered in India by Kipling, etc); also that the ascription of sex to the fire sticks is prevalent among North American tribes, and at once helps to interpret the development of the fire-drill, fire-syringe, and other primitive devices, such, for example, as

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000 those so fully described by Hough,[1] and serves to explain the otherwise obscure genesis of the fire-sense, which must have accompanied and shaped that most significant of all steps in human progress, the conquest of fire.

411 The modern coordinate of the Seri arrow is the bow, made preferably from a straight and slender branch of the palo blanco. A typical specimen is illustrated in plate XXX; it is 4 feet 9½ inches long, with the outer face convex and the inner face flat; greatest width 1¾ inches, narrowed to 1¼ inches at the hand-hold; thickness at the hand-hold 1 inch, thinning to five-eighths inch at 8 inches from this point; tapering gradually in both dimensions toward the extremities, which are rudely notched to receive the cord (of mesquite-root fiber). The specimen [284] illustrated has been cracked and repaired in two places; in one place the repair was effected by a rough wrapping of sinew, and in the other by slipping over the wood a natural sheath of rawhide from the leg of a deer. The specimen is of added interest in that it combines bow [372] and nether fire-stick ("Strong-Kind-Mother"), one of the friction holes being worn out to the notched margin, and the other remaining in usable condition, as shown in the enlarged marginal drawing.[2]

Compared with the delicately finished and graceful arrow, the typical bow is a rude and clumsy device; it displays little skill in the selection and shaping of material, and evidently involves little labor in manufacture—indeed, the indications are that more actual labor is spent in the construction of a single arrow than in the making of a bow, while the arrow-making is expert work, betokening craft of a high order, and the bow-making little more than simple handiwork of the lowest order. The comparison affords some indication of the genesis [174] of Seri archery, and at the same time corroborates the independent suggestion that the arrow is of so much greater antiquity than the bow as to represent a distinct stage in cultural development—though the precise cultural significance of the bow is not easily ascertained.

Efforts were made to have different Seri warriors at Costa Rica in 1894 114 assume the normal archery attitude, with but moderate success, the 123 best pose obtained (illustrated in plate XXVIII) being manifestly unnat- 126 ural and a mere reflection of the attitude in the mind of the Caucasian poser; while the results of inquiries served only to indicate that the normal archery attitude was purposely avoided for reasons not ascertained. Fortunately another observer was more successful: in the course of the United States hydrographic surveys in 1873, Commander (now Admiral) Dewey received several visits from Seri warriors on board the *Narragansett*; and on the occasion of one of these visits, Mr 114 Hector von Hayer, of the hydrographic party, caught a photograph of 126 an archer in the act of drawing his bow. The negative was accident-

[1] Fire-making apparatus in the U. S. National Museum; the Museum Report for 1890, pt. II, 1894, pp. 331-367, and elsewhere.

[2] Ordinarily the nether fire-stick is of soft and porous wood, ocotoma palm-wood and water-logged pine being preferred.

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ally shattered, and no prints are known to have been made from it; but the fragments were carefully joined, and were kindly transferred to the Bureau by Mr Von Bayer in 1897, and from them plate XXIX was carefully drawn. The posture (partly concealed by the drapery) is extraordinary, being quite beyond the reach of the average human, and impossible of maintenance for any considerable interval even by the well-wonted Seri. The posture itself partly explains the difficulty of inducing the warriors at Costa Rica to assume it, since it is essentially a fleeting one, and indeed but a part of a continuous and stressful action—it is no less difficult to assume, or to catch in the camera, than the typical attitude of a baseball pitcher in action. The posture thus fortunately caught is quite in accord with the accounts of Seri archery from the esoteric side given by Mashém, and with the exoteric observations of Señor Encinas, Don Andrés, and others; for all accounts agree in indicating that the archer commonly rests inert and moveless as the watching feline up to a critical instant, then springs into movement as swiftly as the leaping jaguar, and hurls, rather than shoots, one, two, or three arrows before rushing in to the death or skulking to cover as the issue may require.

The Seri archery habit is in every way consistent with the general habits of the tribe, alike in the chase and in warfare, in which the tribesmen, actuated by the fierce blood-craze common to carnivores, either leap on their prey with purpling eyes and gnashing teeth, or beat quick and stealthy retreat; and it is especially significant in the light thrown on the bow as a device for swift and vigorous rather than accurate offense, an apparatus for lengthening the arm still more than does the harpoon, and at the same time strengthening and intensifying its stroke. The quick-changing attitudes of half hurling are equally suggestive of the use of the atlatl, and support Cushing's hypothesis[1] that the bow was derived from the corded throwing-stick. While the critical posture of Seri archery is unique in degree if not in kind in the western hemisphere, so far as is known, an approximation to it (illustrated in fig. 22) has been observed in Central Africa.[2] On the whole the Seri mode of using the bow, like its crude form and rude finish, indicates that it is a relatively new and ill-developed artifact, possibly acultural though more probably joined indigenously with the archaic arrow to beget a highly effective device for food-getting as well as for warfare; while the genetic stages are still displayed not only in the homologies between arrow and harpoon, but by the common functions of both arrow and bow with the fire-sticks.

Concordantly, as indicated by the use of the archery apparatus, the individual taking of large game is effected either by stealthy stalking or by patient ambuscade ended by a sudden rush; when, if the chase is successful, the quarry is rent and consumed as at the finish of the

[1] The Arrow. Proceedings Am. Ass. Adv. Sci., vol. xlvii, 1898, pp. 330-348.
[2] Glave's Journey to the Livingstone Tree. The Century Magazine, vol. xlii, 1891, p. 709.

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extreme lightness in proportion to capacity, a quality due to the spongy character of the torote coil and to the thinness of the splints used in the woof. The inside dimensions, weight, and dry-measure capacity (filled to the level of the brim with rice) of two typical specimens approaching extremes in size are indicated in the accompanying table. As noted elsewhere, the ware is absolutely without decorative devices in weave, paint, or form; it is baldly utilitarian, a model of economy in material and in the balance between structure and function, approaching in this respect the thin-walled canteen-olla, the graceful balsa, and the light but effective harpoon. The structural correspondence of the ware to a widespread type and its limited use among the tribe suggest an aboriginal origin for the Seri basketry; but the delicate adjustment of means to ends in the manufacture and the strictly local character of the material quite as strongly suggest an indigenous development.

Museum No.	Diameter	Depth	Weight	Capacity
174338.....	38 cm. (15 in.)	9.5 cm. (3¾ in.)	493 g. (17 oz.)	6.25 l. (6.6 qt.)
174339a ...	23 cm. (9 in.)	5.0 cm. (2 in.)	142 g. (5 oz.)	1 l. (1.06 qt.)

It is impossible to portray justly the food habits of the Seri without some reference to a systematic scatophagy, which seems to possess ritual as well as economic features. In its simplest aspect this custom is connected with the tuna harvests; the fruits are eaten in enormous quantity, and are imperfectly digested, the hard-coated seeds especially passing through the system unchanged; the feces containing these seeds are preserved with some care, and after the harvest is passed the hoard (desiccated, of course, in the dry climate) is ground between hupf and abat, and winnowed in baskets precisely as are the mesquite beans; and the product is then eaten either dry or in the form of atole like the mesquite meal. In superficial view this final factor is the precise homologue of the "second harvest" of the California Indians as described by Clavigero, Baegert,[1] and others; but it gains importance, among

[1] An Account of the Aboriginal Inhabitants of the Californian Peninsula, as given by Jacob Baegert, a German Jesuit missionary. . . . Translated and arranged for the Smithsonian Institution by Charles Rau: Ann. Rep. Smithsonian Inst. for 1863, pp. 392-399. Baegert's account of foods (pp. 393-397) is so opposite as to be worthy of quotation nearly entire:

"Notwithstanding the barrenness of the country, a Californian hardly ever dies of hunger, except, perhaps, now and then an individual that falls sick in the wilderness and at a great distance from the mission, for those who are in good health trouble themselves very little about such patients, even if these should happen to be their husbands, wives, or other relations; and a little child that has lost its mother or both parents is also occasionally in danger of starving to death, because in some instances no one will take charge of it, the father being sometimes inhuman enough to abandon his offspring to its fate.

"The food of the Californians, as will be seen, is certainly of a mean quality, yet it keeps them in a healthy condition, and they become strong and grow old in spite of their poor diet. The only period of the year during which the Californians can satisfy their appetite without restraint is the season of the pitahayas, which ripen in the middle of June and abound for more than eight weeks. The gathering of this fruit may be considered as the harvest of the native inhabitants. They can eat as much of it as they please, and with none this food agrees so well that they become corpulent during that period; and for this reason I was sometimes unable to recognize at first sight individuals, otherwise perfectly

1: McGee E-5 (1894-1895)1899 NU31 Ser: NU31

Summarily, the customary apparel of Seri men and women may be regarded as limited to three articles—(1) a kilt, normally of coarse textile fabric, which is made a prime necessity by a well-developed pudency; (2) a short wammus, also normally of coarse textile fabric, which is apparently regarded as a convenience and luxury rather than a necessity; and (3) a robe, normally of pelican skin, sometimes substituted for either or both of the other articles, but ordinarily used as bedding or as a buckler. The most valued of these articles is the robe, which in the absence of the others replaces the kilt; yet pudency demands the habitual use of some form of kilt, while both wammus and robe are held so far superfluous that they may be laid aside or bartered or otherwise dispensed with whenever occasion arises. 291

On considering the special functions and probable genesis of the Seri apparel, the student is impressed by the absence of the breech-clout, except perhaps in temporary improvisations—though the absence of this widespread article of primitive costumery need awaken little surprise in view of the environment, and especially of the abounding barbs of Seriland, which render all apparel of doubtful value save for the protection of tissues softened by habitual covering. The prevailing thornliness of the habitat renders the free flowing and easily removable apron the most serviceable protection for the exposed vitals of the pubic region; and this device, a common one in thorny habitats generally, grades naturally into the short skirt or kilt; while it would well accord with the maritime habit and habitual thought of the Seri to apply the tough and densely feathered skin of the pelican to the purpose. This suggestion as to the nascent covering of the tribe consists with the tribal faith, in which the Ancient of Pelicans ranks as the creative deity, while its modern representative is esteemed a protective tutelary possessing talismanic powers against cold, wet, bestial claw and fang, alien arrows, and all other evils; so that the use of this feathered pelt as a shield against spiny shrubbery, sharp-leaved sedges, and barb-thorned cacti is quite in harmony with Seri philosophy. Accordingly it seems clear that the pelican-skin kilt was autochthonous among the Seri, and that it was the original form of tribal apparel; and it is of no small significance that the type persists in actual use as well as in suggestive vestigial forms, such as pelican-down swaddling for infants, pelican-feather plumes on cradle nets, etc. 182 291 [776] [774]

The passage from the pelican-skin kilt to the garment of textile fabric under the slow processes of primitive thought may not be traced confidently, though a strong suggestion arises in the Seri hair-cult (a Samoonian faith not without parallel in far higher culture) under which mystical powers and talismanic virtues are imputed to the human pelage. It is in connection with this cult that the Seri locks are so attentively cultivated and so assiduously preserved and consecrated to more intimate personal uses in belts, necklaces, and the like; and although the connecting links have not been found, it is thoroughly 174 291 826

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

In accord with Seri thought to assume that in earlier times the hair necklaces were expanded into rudimentary apparel in connection with pelican-skin shields, and after the conquest of vegetal fibers into more finished garments probably woven partly of hair and worn in such wise as to supplement the natural pelage in the protection of back, shoulders, chest, and arms. If the indication of the tribal cult be valid, it would appear that the wammus was the second piece of apparel in order of genesis, though the first to be made of artificial fabric; and it is noteworthy that the suggestion is supported by the form of the short and free-flowing garment underlying the flowing tresses of warriors and matrons, as well as the vestigial use of human-hair cords for neckbands and fastening strings; while its antiquity in comparison with the textile kilt is indicated by the fact that it is a finished artifact, evidently fitted to its functions by generations of adjustment.

The step from the making of the wammus to the substitution of artificial fabrics for the pelican-skin kilt was an easy and natural one; and it need only be noted that the transition is still incomplete, since the feathered pelt is unquestioningly substituted for the fabric whenever occasion demands, yet that the kilt in some form must be much more archaic than the wammus, since it is correlated with the pudency sense,[1] while the complete garment is not so correlated save in slight and incipient degree.

Accordingly the three articles of apparel may be seriated genetically as (1) the pelican-skin robe, used long as a kilt, and only lately relegated to emergency use and bedding; (2) the well-differentiated wammus of textile fabric with hair-cord fastenings; and (3) the textile kilt, with or without a hair-cord belt. And the three artifacts are local and presumptively—indeed manifestly—autochthonous, and exemplify the interdependence of artifacts and environment no less strikingly than the Seri baisa or basket or jacal.

TOOLS AND THEIR USES

In advanced culture tools are finished products, made and used in accordance with preconceived designs or established arts for the production of commodities; in primal life (as well exemplified by Seri handicraft) tools are mere by-products incidental to the largely instinctive activities directed toward the maintenance of life. Accordingly, the tools of advanced culture form the nucleus of industries, while the designless tools of the prime cluster about the outskirts of industrial

[1] In this writing the conclusion reached in an unpublished discussion of the beginning of clothing is assumed—i. e., that the primal apparel was purely protective, and that the habitual concealment of portions of the body incidental to its wearing gradually planted the pudency sense. The germ of clothing, without attendant pudency, is well illustrated in Karl von den Steinen's observations and discussions of the Brazilian natives (Unter den Naturvölkern Zentral-Brasiliens, Berlin, 1894, pp. 198-199). It is noteworthy that the Seri, more primitive as they are in so many respects than any other American aborigines known, are much farther advanced than the Brazilian natives in appareling and its effects on character. The similarities and the differences are alike interesting; yet in both cases the costumes reflect environmental conditions and needs with remarkable fidelity.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

177 411 726 included a heavy Springfield "remodeled" rifle, lacking not only ammunition but breechblock and firing pin; while Don Andrés Noriega, of Costa Rica, and L. K. Thompson, of Hermosillo, described a rifle of modern make captured similarly two years before, which was in good working order and charged with a counterfeit cartridge ingeniously fashioned from raw buckskin in imitation of a center-fire brass shell and loaded with a polished stone bullet.[1] The finders opined that the rifles were carried to bluff the enemy, and even that the counterfeit cartridge was designed to do deadly execution; but it would better accord with Seri customs, and with the law of piratical acculturation which they typify,[2] to infer that the weapons were regarded rather as symbols of mystical potencies than as simple scarecrows. Of related import were two or three pseudomachetes made from rust-pitted cask hoops, reported by the majordomo and several vaqueros at Costa Rica; and of still greater significance was a machete picked up in a just-abandoned jacal by Don Ygnacio Lozania—veteran of the Andrade expedition and the Eucinas conquest—which was laboriously rasped and scraped out of paloblanco wood, colored in imitation of iron blade and mahogany handle by means of face-paints, and even furnished with "eyes" replacing the handle-rivets, in the form of embedded iron scales. Some of the Seri are familiar with the normal use of firearms, as was demonstrated by the Robinson and other episodes, and many of them modernly make some use of machetes or other knives, as shown by various rudely whittled wooden artifacts; yet the burden of proof indicates that the chief use of the Caucasian's weapons in the heat of actual warfare is shamanistic and symbolic. This interpretation is, in fact, practically established by the experience of the frontier; for the vaqueros and local soldiery have little fear of the ill-understood firearms and clumsily handled machetes occasionally seen in Seri hands, though they dread unspeakably the necromantic arrows and flesh-rending teeth with which the agile foes are credited.

174 324 The mystical potency ascribed to Caucasian firearms and cutlery by the zoomimic tribesmen is of interest as a reflection of motives and methods pervading the entire range of their activities; at the same time it suggests the genesis of the aberrant technolithic craft displayed in arrow-chipping. The information obtained from Mashém and his mates concerning chipped arrowpoints implied that the process was hieratic and little understood by the body of the tribe, its place in the tribal knowledge, indeed, being similar to that of the brewing of the arrow "poison", which is the special work of shamans; and this information, comporting as it does with the rarity of the chipped points and

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[1] The imitative skill of the Seri was illustrated at Costa Rica some years ago, when the petty accounts for labor, etc, were kept by means of tokens stamped from sheet brass. While a Seri raucheria was maintained near the rancho, the storekeeper detected a number of counterfeits of his tokens, so well executed as to pass readily over the counter in ordinary exchange—and after extended detective work the counterfeiting was traced to the raucheria.

[2] American Anthropologist, vol. 11, August, 1898, pp. 243-256.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

the crudeness of the work, strongly supports the inference that the stone arrow-making of the Seri was originally a fetishistic mimicry of alien devices—a plane, indeed, above which the craft has hardly risen even in recent decades. 174 324

While the Seri are devoid of military tactics in the strict sense of the term, they have certain customs of warfare which seem to be scrupulously observed. These customs are closely akin to those followed in hunting the larger land animals—indeed, the warfare of the tribe is merely an intensified counterpart of their chase. 726 [224]

The favorite tactical device of the warriors, as indicated by the great majority of their battles, is the ambuscade, laid and sprung either with or without the aid of decoys (usually aged women). Sometimes a considerable body act in concert under a prearranged plan; more commonly a few warriors only are involved at the outset, though these may be joined as the crisis approaches by companions lurking behind rocks and shrubs to be either on hand at the finish or in the way of ready flight, according to the turn of the battle-tide; and it is probable that the greater part of the ambuscades prove stillborn by reason of the oozing courage of leaders and the shirking of their supporters if the prospective victims present a bold front, or if the final omens are otherwise adverse. The ambuscade, with its flying contingent, grades into the device of stalking a stationary or slowly moving enemy, the stealthy approach terminating either in covert attack at close range or in sudden rush by a superior force. The theory, or rather the instinctive plan, of the campaign is to seek advantage in both position and numbers, to keep under cover until the instant of attack, to have sure and ample lines of retreat, and in every way to minimize individual risk.

There is a widespread notion toward the Seri frontier that the savages are given to sorties and surprises by night; but both specific testimony and the records indicate, when carefully analyzed, that this tactical device is much less common in practice than in repute, and is not, indeed, characteristic of the tribe. A few known battles began in attacks by night; but the war parties, like the hunting and fishing parties (save in the semiceremonial pelican pilgrimages), display decided preference for daylight in their forays—indeed, there are various indications that the folk are much more timid and oppressed with superstitious fears by night than by day.

In rare cases small parties of aliens have been half openly surrounded and done to death by considerably larger parties of the savage folk; but this method, too, is incongruous with the fixed habits of the tribe and with the deep-planted instinct of avoiding personal exposure.

A considerable number of the long list of homicides charged against the Seri, and marking the beginning of many of their battles, were individual rather than collective, the consummation of inimical impulse sometimes treacherously concealed for favorable opportunity, as in the 186 648

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

with the customs of the Seri), endured for many years and ending at last in unpitied death.

Collectively the cases seem to define a germ, rather than a mature custom, of adoption. In the first case a benefactor (by means regarded as magical) was formally inducted into the reigning family; in the second case the conquering hero (through what were again regarded as magical means) was less formally recognized and venerated, even worshiped, as an all-powerful shaman; while in the third case a representative of the doughtiest alien tribe was enslaved, probably with motives akin to those expressed in the carrying of chargeless guns, the making of imitation machetes, and other fetishistic devices. Except in the first instance there is no indication of consistent custom; but since the entire history of the tribe clearly contradicts regulated adoption of aliens (and indeed affords no other example), it must be inferred that any such custom is intratribal rather than intertribal.

MARRIAGE

The most striking and significant social facts discovered among the Seri relate to marriage customs.

As noted repeatedly elsewhere, the tribal population is preponderantly feminine, so that polygyny naturally prevails; the number of wives reaches three or possibly four, averaging about two, though the younger warriors commonly have but one, and there are always a number of spouseless (widowed) dames but no single men of marriageable age. So far as could be ascertained, no special formalities attend the taking of supernumerary wives, who are usually widowed sisters of the first spouse; it seems to be practically a family affair, governed by considerations of convenience rather than established regulations—an irregularity combining with other facts to suggest that polygyny is incidental, and perhaps of comparatively recent origin.

The primary mating of the Seri is attended by observances so elaborate as to show that marriage is one of the profoundest sacraments of the tribe, penetrating the innermost recesses of tribal thought, and interwoven with the essential fibers of tribal existence. Few if any other peoples devote such anxious care to their mating as do the Seri;[1] and among no other known tribe or folk is the moral aspect of conjugal union so rigorously guarded by collective action and individual devotion.

The initial movement toward formal marriage seems to be somewhat indefinite (or perhaps, rather, spontaneous); according to Mashém it may be made either by the prospective groom or else by his father, though not directly by the maiden or her kinswomen. In any event the prerequisites for the union are provisionally determined in the suitor's family; these relate to the suitability of age, the propriety of

[1] Perhaps the closest parallel in this respect is that found in the elaborate marriage regulations prevailing among the Australian aborigines, as described by Spencer and Gillen, Walter E. Roth, and other modern observers.

2: Kroeber E-5 (1930)1931 NU31 Seri NU31

114 Davis has had fuller opportunity to investigate, but confined my
121 attention to the social and religious sides of their life. There was the more reason for this since it is in dealing with these latter aspects, where verbal communications are as important as observation, that McGee's monograph is most tenuous and dubious. I also secured linguistic notes for the preliminary placing of the curious tonal speech of the Seri.

178 Seri culture in its present form is a fragmentary thing such as
182 could hardly have existed under purely native conditions. Religion especially has suffered, no doubt under Christian influence, without many elements of Christianity having been taken over in exchange. Of mythology, only tatters seem to remain; of ritual, little more; only shamanism seems to be fairly well preserved. Nor, beyond the Spanish names for God and the cross, do the Seri give evidence of being or having been Catholics. The result is that they seem remarkably religionless. I do not know of a native people that appears so free from superstition and so unspiritual in its attitudes. Possibly I conferred with the wrong informants; but those I talked with seemed unsecretive. Social culture is better preserved, as is evident from a set of kinship terms that are numerous, precise, and untouched by Spanish concepts. On the other hand, there is little formal social organization. Whether this is also the result of a loss, is hard to say. The Seri may never have had sibs or clans; but the fact that they appear to lack them now is no positive evidence that they were without them three centuries ago. Shifts of residence, contraction of territory, shrinkage of numbers, amalgamation of distinct bands, may well have obliterated much of such social fabric as they once possessed. Games and the calendar are wholly native and intact, but taboos connected with sex, age, food, and the like seem fewer than among the backward tribes of the southwestern United States. It seems reasonable to construe this condition as the result of varyingly hostile, parasitic, and missionizing Spanish-Mexican contacts; especially when one realizes how overwhelmingly, though also spottily, this influence has affected the other tribes of Sonora—the Yaqui, Mayo, Pima, and Opata.

101 Historically the Seri are not a tribe but the consolidated rem-
131 nant of a series of dialectically distinct tribes that once held the barren coast of Sonora from Guaymas to Puerto Libertad. Tiburon
174 Island is the stronghold in which the mixed survivors, probably now numbering less than 200, have taken refuge, and, owing to its inaccessibility, drought, and poverty, have succeeded in maintaining themselves and their blended and reduced culture. Toward the interior, it is doubtful if they ranged beyond the present line of the Southern Pacific railroad, if that far. Orozco y Berra indeed assigns them territory up the Sonora River to Ures, on his famous map, which is still basic to all other ethnic maps of Mexico. But from Hermosillo

2: Kroeber E-5 (1930) 1931 NU31 Seri NU31

to Ures is good farming country, and why the only non-agricultural people in Sonora should have held this stretch, is hard to see. Moreover, Orosco's bringing the Serian tribes so far inland as to abut on the Opata, severs the continuity of the American Pima Alto and Papago with the Mexican Pima Bajo, whose speech is almost identical. This identity is best understood as the reflection of a continuous occupation by the Pima of the whole foothill country from the Gila to the Mayo, between the Serian desert lowlanders and the Opata in their mountain valleys, with the Yaqui, Mayo, and other Cahita peoples replacing the Serians south of Guaymas where heavier rainfall and large flowing rivers made the lowlands attractive to farming peoples. The natural inland frontier of the Seri along the Sonora River would have been at the Siete Cerros, a low range some 25 miles, more or less, west of Hermosillo, where grass ends and creosote bush and giant sahuaro cactus soon become dominant beside mesquite. This boundary would have put the farmers on farm land, the roving gatherers into the succulently overgrown desert and along the food-stocked coast.

The Seri, then, in the wider sense, including the Guaymas, Tepocas, etc., were anomalous among the native peoples of Sonora in habitat as well as in culture. Now a similar country, almost waterless and cactus dominated, is the central segment of Mexican California. Here lived the Cochimi, dialectically the most divergent of the Yuman peoples, and with a culture similar to that of the Seri at least in its level. The habitat enforced a similar subsistence economy, unsettled living, scattering of population, inability of serious accumulation of property, and hence no doubt a relative paucity of most organizational aspects of culture. Whether the content of Cochimi culture was equally similar is difficult to say because of the melting away of the people. At any rate the question arises whether Cochimi and Seri are not historically connected, especially as both their languages are related to Yuman, whereas all other Sonora tribes are Uto-Aztecans. The connection seems the more possible in that southwest of Tiburon lies San Esteban Island; beyond that, San Lorenzo; and beyond, the great peninsula. The open-water distance nowhere exceeds fifteen miles. This is a difficult but not impossible gap to cross on cane rafts; and the Seri have skilful knowledge of currents and winds. The passage across the Infiernillo between mainland and Tiburon is little more than a mile at the narrowest point, but they often paddle five in their open boats to take advantage of weather conditions. The Seri remember navigating to San Esteban, and there is historical mention of crossings of the Gulf.

The final evidence for or against derivation of the Seri from Baja California will probably be linguistic, and if, as seems possible though doubtful, Cochimi speech can still be recorded in the peninsula, the answer may be definitive. The materials at present available

2: Kroeber E-5 (1930)1931 NU31 Seri NU31

114 583 As to the "total absence" (p. 285) of marriage purchase, whereas I found it, such purchase can hardly be believed to have originated wholly within the last 35 years, in view of its wide distribution in native America.

114 614 The whole matter of maternal lineages crystallised into totemic clans with matron rule (pp. 10-11, 167-8, 269 seq.) seems a fantasy. A careful reading of the passages in questions reveals how much McGee has built up on statements which he conscientiously admits to have been slender, probable only, and subject to possible misunderstanding. It must be remembered that in 1894 the matriarchate as original and primitive was still standard anthropological doctrine. At any rate, I got nothing suggesting even matrilineal reckoning in my indirect approaches to the subject, and explicit denials when it was directly presented.

114 342 That house-building may now and then be "accompanied by a chant" (p. 223) is possible, though it seems out of accord with the haphazard and shiftless methods of Seri work and the flimsy irregularity of their homes; but that the chant was "usually led by the eldest matron" seems more matriarchate.

114 174 That the Upanguayma, Guayma, and Tepoka were successively "extruded" (p. 75) would be correct if there were anything to show that the Seri were the parent stock of superior virtue, conservatism, and faithful attachment to their original habitat.

114 601 The statement (p. 11) that "kinship terms are strikingly scanty," made in the face of round-about and imperfect speech communications with the Seri, I cite only as an indication of the degree of McGee's readiness to fall back upon his preconceptions when facts became thin.

114 304 I did not note the absence of superior medial incisor teeth observed by McGee (p. 169) in married women. If a regular practise, its connection with the puberty rite would be a natural inference. But knocking out of teeth is a rare custom in America.

114 224 McGee's statements (pp. 196-7) that it is "undignified, if not wrong" to kill deer other than with the hands, and that jackrabbits are "customarily taken alive to camp," seem over-emphases. That a sense of sport or passing pride, or lack of weapons, now and then leads to such happenings, I do not doubt; but the Seri seem too practical and unromantic to exact rules on the point. I suspect that a youth who insisted on living up to them would soon be considered a vain bore. I may add that I saw a crippled wild duck hobble about the camp on Tiburon for two days, being played with occasionally by the children—without unusual roughness or unkindliness—and that finally it wandered to the water and gradually drifted off without notice being taken.

114 352 614 Face painting is construed by McGee as sematic of totemic line-

2: Kroeber E-5 (1930) 1931 NU31 Seri NU31

SERIAN TERRITORY AND TRIBES

The close speech unity of the Seri, Tepoca, Salineros, Guaymas, and Upanguaymas is affirmed by all the older authors. The name Seri has however been used in several senses, even in pre-ethnologic days: (1), for the entire group of related tribes, sometimes excluding and sometimes including the Guaymas; (2), for the inhabitants of Tiburon Island and the immediately opposite stretch of mainland; (3), for the inlanders more or less associated with the mission establishments from Hermosillo upstream, in contrast with the "Tiburones" of the island; (4), for the modern fusion of mainlanders and islanders, which evidently includes descendants of all Serian tribes except the Guaymas and Upanguaymas, who became absorbed in the lowermost Yaqui tribe or village of Belem. It is in this fourth and last sense that I use the term; my principal informant, in the tradition given, employed the third meaning; McGee mostly the second, with a strong implication of the thorough apartness and greater primitiveness of the islanders, as compared with their ethnic kinsmen.

The Tastioteños of my informant appear not to be known otherwise. The coastwise alignment of tribes from south to north seems to have been: Guaymas, Upanguaymas, Tastioteño, Seri or Tiburones, Tepoca, Salinero.

As already mentioned in the Introduction, it seems inherently unlikely that Serian territory extended as far up the Sonora river as Ures, near which Orozco y Berra puts the boundary. His undue extension is probably due to the fact that the missions to which Serians (other than Guaymas-Upanguaymas) became attached, were situated in the valley of the Opodepe or Horcasitas branch of the Sonora. According to McGee[10] these Missions were: Santa Magdalena de Tepoca, founded in 1687, soon abandoned, location long lost but probably up-stream from next; Nacameri, 7 leagues below Opodepe; Nuestra Señora del Pópulo, 9 leagues down, at Horcasitas; Nuestra Señora de los Angeles, 3-4 leagues down, maintained, with preceding, until 1767; Pitic or Pueblo de los Seris, more than 12 leagues down (opposite Hermosillo), founded last, in 1742. Nacameri and Pitic sound like Pima, not Seri, words. Whether the river valleys from Hermosillo up were actually Pima territory, as here surmised, will have to be established from documentary sources, possibly supplemented by recollections of the Pima surviving about Ures. It is conceivable that Serian tribes had driven the Pima out of the Sonora valley shortly before the founding of the missions, thus effectuating the division into Pima Bajos and Altos; or that the Pima shrinkage out of the middle of their territory began after their mis-

[10] Pp. 80, 88, 78, 72.

2; Kroeber E-5 (1930)1931 NU31 Seri NU31

On the other hand, if the hypothesis were true that the Seri reached their historic habitat from across the Gulf, they would have come from territory which in recent times was Cochimí, and their presumably closest relationship would be with these former neighbors, and only indirectly with the other Yumans. Thus the line of affinity would be Seri-Cochimí-main Yuman.

It is to test these two alternative hypotheses of Seri origins that the accompanying comparative vocabularies of Seri, Cochimí, Yuma, and Cocopa have been selected. They are limited because the only material pertinent to the problem at issue is stems represented in all three linguistic groups; and both the Seri and Cochimí data are scant. A number of words of the same meaning differ completely in the three groups—in their surface appearance at any rate—and have therefore been omitted as irrelevant. The residue consists of 33 Seri words which show more or less resemblance to the corresponding Cochimí or Yuman words or to both.

The Seri, Yuma, and Cocopa vocabularies were recorded by myself. Yuma and Cocopa represent distinct branches of Yuman. Cochimí 1 and 2 were recorded or copied respectively by W. M. Gabb in 1867 and by J. R. Bartlett about 1852, and are transcribed from photostat copies of the originals filed in the Bureau of American Ethnology and furnished through the courtesy of its Chief, Mr. Matthew Stirling. Both are entered on Smithsonian printed blanks. The Bartlett vocabulary is designated "from M. Robinia at Guaymas." It may represent a vocabulary taken down by Robinia from a Cochimí and given to Bartlett, or a record made by Bartlett from Sr. Robinia's memory of Cochimí. The words for two and three are identical, even in spelling, with those given by Clavigero. Those for one and man (tepeeg and tama in Clavigero) are different. The Bartlett vocabulary may thus not go back to a single native source.

The relations of the Cochimí dialects are not clear. To judge from the three Lord's prayers given by Clavigero, languages rather than dialects may have been involved. These prayers begin respectively pennayû nakaenambá, ua-lappá amma-bang miamú, cahai apá ambeing miá, and are attributed to latitudes 25°30'-26°, 28°, and 29°-31° in the peninsula. Gabb's entry for "my father" is ka-ai and for "sky" em-hai, which clearly correspond to Clavigero's northern Cochimí cahai (h silent in Spanish, usually a glottal stop) and ambei-ng ("in heaven"). Bartlett's dialect is not so easily identified. His word for father is calembag, and his sky remains a blank entry. There are a few other identities with Clavigero, besides the numerals mentioned, but they are to words scattered in Clavigero's

2: Kroeber E-5 (1930) 1931 NU31 Seri NU31

The Seri similarities evident in the vocabulary may be summarized as follows:

Definitely more similar to Cochimí: man, person, large : 3.
Somewhat more similar to Cochimí: tooth, house, two, three : 4.
Equally similar to Cochimí and Yuman: nose, bone, blood, sky, earth, fire, drink : 7.
Somewhat more similar to Yuman: hair, tongue, water : 3.
Definitely more similar to Yuman: eye, wood, dog : 3.
Perhaps more similar to Cochimí: sea, maize, bird, small, yellow : 5.
Perhaps equally similar: rock, good, one, eat : 4.
Perhaps more similar to Yuman: ear, beard, moon, tobacco : 4.

The result is, in brief, that the available data indicate the Seri language as about equally related to, and differentiated from, normal Yuman and Cochimí. There is proof neither for the hypothesis that Seri and Cochimí branched off in different directions from the main body of Yuman tribes, nor for the one which would branch the Seri off from the Cochimí after these had drifted into the peninsula and acquired a certain specialization there. The relation of the three language groups might be described as an equilateral one—or more exactly as isosceles, with Cochimí and Yuman somewhat the nearest to each other, but Seri equidistant from both.

Various hypothetical considerations might be adduced to explain this condition. Seri might be construed as an ancient offshoot from Yuman or proto-Yuman, which later came into contact with the Cochimí off-shoot and was influenced by it. Or, Seri might be conceived of as a Yuman branch that had drifted earliest into the peninsula and then was superseded there by Cochimí as a later offshoot from Yuman. But all such suppositions are equally lacking in positive evidence in their favor, and discussion of them tends to become fine-spun among conjectures. It is wisest to accept the salient fact, namely that available linguistic evidence affords no decisive proof either for or against the hypothesis that the Seri originated in peninsular California, and to leave the problem there in the hope that fuller knowledge of the languages will ultimately solve it.

Z: Kroeber E-5 (1930) 1931 NU31 Seri NU31

Very notable is the high resemblance to the Yumans of Arizona, especially in contrast with those of the Colorado. Not only are there more agreements with the Walapai than with the Yuma and Mohave, but the excess of resemblances over differences is about three times as great. The divergence between the two Yuman groups would be still wider if the comparison had been two-way instead of one-way, on account of the river tribes possessing whole systems of cults, clans, etc., of which the Walapai, Havasupai, and presumably Yavapai are almost as free as the Seri. 171

The central Californians are geographically so remote that the only significant figure in their case seems to be the fair number of positive resemblances.

The Pueblo low net excess of agreements is surely significant. Had the comparison been the other way around, it would have yielded an overwhelming excess of disagreements.

As to Sinaloa, the rather scant and uncompiled data indicate its culture, from about the Sinaloa river southward, as probably in the main a dilution of that of central Mexico, just as its prevailing speech is generally accepted as having been a dialect of "Mexican" or Nahua. However, occurrences like that of the *palanca* or carrying pole in Sinaloa and among the Seri are evidences of connection in that direction also.

List 2 is a check on the Lower California part of 1 by reversing the comparison. On its face, it diminishes the Seri-Baja California resemblances. Evidently the Gulf formed a serious barrier to communications, and if the Seri came out of the peninsula, it was a long time ago. Puzzling is the fact that the Waicura, three to four degrees of latitude south of the Seri, show an excess of agreements; the Cochimí, directly opposite, an excess of traits not reported for the Seri. Different authorship of the Waicura and Cochimí records can hardly explain all of this difference. Quite surprising is the northern Cochimí account of a woman-deceiving impersonation both of the creator and of ghosts, which inevitably suggests a secret society of the Patwin-Pomo-Yuki type of north central California.* One would certainly not expect such a cult organization among the scattered, chronically hungry Lower Californians.

One tentative clue suggests itself. It is conceivable that the Seri came to Sonora from the peninsula when the Waicura, or a culture of their eighteenth century type, were still situated about latitude 29° or 28°, being subsequently dispossessed by Cochimí, or by cultural stimuli from the north, which resulted in richer local growths than have been taken for granted for the area. I am not ready to take 174

* The human hair wigs or mantles which covered the whole person, like the ancient Californian feather mantle or cape of the moki, etc., are another parallel, but are reported for the peninsula generally.

2: Kroeber E-5 (1930)1931 NU31 Seri NU31

sides on this hypothesis. Intensive analysis of the data may strengthen or eliminate it.

List 3 bears on the Seri indirectly through segregating Gila Pima culture into those constituents which are also River Yuman (including the Maricopa) and those which are non-Yuman and therefore likely to be old or generic Pima. It must be remembered that the Gila outpost division of the Pima nation were in immediate contact and friendly alliance with the Maricopa, whose dialect and customs indicate them as a river Yuman tribe rather recently extruded from the lower Colorado valley. The Maricopa are first mentioned by Kino and his associates, just before 1700, as on the Gila. It seems unlikely that they left the Colorado more than about a hundred years earlier. However, this would give three centuries of close association of the two tribes, before which there may have existed a period of less specific communications up and down the Gila.

The array of Pima-Yuman traits in section A of list 3 is rather impressive.. Several have a somewhat wider distribution, but even such traits are usually centered, or most intensely developed, in the Gila-Colorado tract. It is probable that the Pima and Yumans contributed about equally to what they share. Traits like agriculture, irrigation, and pottery, which extend thousands of miles southward but stop with or just beyond the Yumans, have certainly moved from the Gila to the Colorado. On the other hand, in some cases the Pima admit adoption of Maricopa elements. The myth-episode of the making of fire by the fly and coyote's theft of the heart must have originated among the cremating Yumans or southern Californians and been adopted with something of a wrench by the interring Pima.

Sections B and C of the list give the traits not shared by the two groups. The Pima list is about twice as long as the Yuman one. This appears to be due only in part to the fullness of Russell's monograph. Pima culture seems quantitatively the richer, River Yuman the more specialized. It will be noted that the Yuman traits include very few in material culture or technology, interest in which, as in ritual, seems to have been suppressed by the Yuma and Mohave in proportion as they became absorbed in their peculiar war customs and their individualistic dream religion. Again, as Herzog has pointed out, River Yuman music has developed an unusually well marked style of its own.[53]

The bearing on the Seri is this. Half-a-dozen non-Yuman Gila traits (list 3B) recur among the Seri—more if the several features of the dice and hiding games are counted separately; none of the non-Pima River Yuman traits (3C) are Seri. But this does not mean that the Seri are closer to the Pima than to the Yumans generally, because the desert Yumans, as represented by the Walapai and Hava-

[53] JAFL 41:188-231, 1928.

2: Kroeber E-5 (1930)1931 NU31 Seri NU31

SUMMARY AND CONCLUSIONS

121 Knowledge of the Seri is still in its infancy. McGee's actual
114 observations are excellent but slender in range. He has interwoven them with conjectures, some of which are erroneous and others unproved and doubtful. Intensive study of the Seri will be difficult, chiefly for physical and practical reasons, but, to judge from such explicit data as are in hand, should prove them to be a tribe unusually interesting indeed, yet fundamentally similar to others in the same region. So many of their known traits are shared with one or another of these tribes, that it is practically precluded that complete investigation will leave the Seri as a unique people or even as one set widely apart, except in their historical fortunes.

13 The most distinctive thing about the Seri is their environment.
182 This is extremely arid and lacking in water supply, but not desert in the ordinary, untechnical sense. Botanists describe it as a succulent vegetation desert. It is fairly well stocked with food inland and rich in food along shore. This territory is able to support a fair sized population, but scatters it and keeps it from settling down. The land is also inhospitable and difficult to strangers who are not ready to adopt the Seri mode of life. This fact has helped preserve Seri ethnic integrity and culture to an unusual degree. A considerable fraction of original Serian territory is wholly unoccupied by civilization today, a full three centuries after its frontier was settled. The Indian neighbors of the Seri, all being farmers in fertile valleys, had no more incentive or ability than Caucasians to penetrate Seri territory sustainedly.

171 Across the Gulf, the peninsula of California presents a very
174 similar environment, and was inhabited by tribes of very similar subsistence and residential habits, culture level, and temperament. But the Baja Californians differed from the Seri in being so situated, with reference to the rest of the world, that the length of the peninsula cut them off, except in the northern portion, from nearly all outside relations. Each group in the peninsula thus had contacts and stimuli only from others of similar culture. The Seri, on the contrary, having long been surrounded on the landward side by peoples of higher cultural level, were able to exploit this difference, in part by adopting cultural traits from their neighbors; and perhaps still more largely by preying upon them economically; while their habitat afforded them a refuge from destructive reprisals. Such may have been the condition in pre-Columbian days. At any rate it has been such since the coming of the Spaniards, and has made the "history" of the Seri different from that of the Baja Californians.

174 Three islands, Tiburon, San Esteban, and San Lorenzo, form stepping stones from Seri mainland to the peninsula. The water gaps between them are navigable to native craft and have been navigated

2: Kroeber E-5 (1930) 1931 NU31 Seri NU31

by them at times. This raises the question of whether the Seri may not have reached their habitat from the peninsula, or possibly the reverse. The solution of this problem depends on an analysis of full data on physical type, speech, and culture content, and only a partly conclusive answer, discussed below, can as yet be given. In general behavior and temperament, Seri and peninsular Californians seem to have been strikingly alike; but this fact can not in itself be construed as evidence of common origin, because the similar psychology may be largely determined by similar residence and subsistence habits resting in turn on almost parallel environment; much as pastoral nomads or mariners in whatever part of the world, and with or without historical connections, are likely to exhibit analogous mental attitudes in contrast with rural or urban populations.

In any event, it is wholly unproved that the Seri possess a native endowment which is more animal-like, more dominated by instinctive impulses and less capable of cultural development, than other peoples'. In fact the improbability of such an assumption is indicated by their possession of culture traits, like certain games and their kinship system, which they either share with neighboring tribes or have developed into rather high specialization. The meagernesses of their culture are therefore evidently due to factors in their particular history or geography rather than to congenital deficiencies or abnormalities. This does not mean that it would be easy to convert the Seri to the mode of life of Pima or Mexican. Habits of irresponsibility and unsettlement once established, even through part of childhood only, are notoriously difficult to alter. Witness the Gypsies. However, such practical habit difficulties are of course no evidence as to quality of endowment.

The modern Seri are the amalgamated remnants of some three or four of a half dozen closely related Serian groups formerly recognized. The preponderant one in the fusion of these groups is likely to have been that which held Tiburon and the fronting mainland, on account of better preservation of their numbers and habits in the relatively inaccessible island refuge.

Seri physique is distinctive in physiognomy, expression, and habitus, as would be expectable in a people sharply set off from its neighbors in practises and attitudes. The measurements available show no very marked differences of gross anatomy from neighboring tribes, either in stature, head shape, or nose proportion. The head may be somewhat rounder than among Pima and Yaqui; the difference in body seems more to be one of greater slenderness than of greater height. The Seri abilities to endure hunger and fatigue and to run great distances are faculties possessed by nearly all tribes of the southwest United States and northwest Mexico.

The Seri language is intrinsically and markedly tonal, more given to consonontal accumulations than the neighboring Uto-Aztecan and

8: Ascher E-5 (1960) 1962 NU31 Seri NU31

Elsewhere (Ascher 1961) I have disputed this portrayal of the potential of existing ethnography, citing examples where qualitative and quantitative models have been constructed from ethnography and suggesting that one task for archeology is to codify the literature in a manner useful to itself. Regardless of doubts about existing ethnographies for archeological purposes, the worth of future ethnography for archeology will depend on the acquisition of the relevant kinds of information. Although discussion on the subject has been recorded (Tax *et al.* 1953: 229-232), no specific guides have been produced. This paper provides and discusses an example, which can be used as a paradigm, model, or guide of the kind of information to be collected from ongoing communities which would be of general value for archeology. The subject culture is that of the Seri Indians of Sonora, Mexico; the example describes a persistent trait complex associated with fishing for the Pacific green turtle, with particular emphasis on one trait in the complex, the harpoon foreshaft.

Example from the Seri Indians

The Seri, who numbered approximately 200 individuals in 1960, occupy a band of coastal desert about four miles wide and seventy miles long in the state of Sonora in western Mexico. The band extends along the Gulf of California from Kinó Bay in the south to Desemboque in the north, opposite the largest island in the Gulf, Tiburon. Although the region is desert, with an estimated average rainfall of less than eight inches per year, falling mostly in July and August, it is comparatively rich in succulents and small land mammals. The Gulf forms a natural trap for large fish and marine mammals and is a breeding ground for the Pacific green turtle. The scantiness of fresh water has constituted, in the past and present alike, the single crucial limiting factor to agriculture and human occupancy.

In the past the Seri may have comprised from four to six tribal groups, and they were certainly numerically larger, with a maximum estimated population of 2,000 (Kroeber 1931: 53, 30). Until very recently they also occupied Tiburon Island, and at some more remote period they extended south, north, and east over a territory whose bounds are uncertain (Kroeber 1931: 5). On the basis of linguistic change, Kroeber (1931: 54) calculated that the Seri could have inhabited this general region for 1,000 years. It is uncertain whether the original occupation stemmed from Baja California via the Gulf of California or from the north and west via an overland route or routes (Kroeber 1931: 39-51). The first contact with Europeans occurred as early as 1540 (McGee 1898: 51).

In culture content the Seri are most closely affiliated with the Pima (Kroeber 1931: 51), but they do not share the practice of agriculture with them or with their western neighbors. The Seri are primarily fishermen; secondarily they gather the fruits of succulents; and to a still lesser extent they hunt game. McGee (1898: 214)

9:Malkin E-6 (1963-1965)1962 MU31 Seri MU31

412 the stimulus of the tourist trade, has kept this
285 tool alive. Another survival from McGee's times
301 are *Olivella* shell necklaces.

Seri Antecedants and Relationship

● 174 For complete lack of archaeological information, little can be deduced about Seri antecedents. Speculations can be made only on the basis of similarities of their post-historic cultures with the cultures of the surrounding tribes.

171 Individual traits between the Seri and their
174 neighbors show discordant connections. Comparative data assembled by Kroeber, Beals and Driver & Massey suggest almost equal possibilities of derivation from the Cochimí, the Gila, Pima and the Yuman tribes but favor much less connections to the south. Much is made of the basketry. Archae-
[172] ological basketry has been unearthed since the work of Kroeber and Beals was published (Massey, MS.), but it is different from the Serian. Seri basketry shows closest relationship to Pima-Papago complex (Malkin, MS.). But part of this may be not only post-historic but certainly very recent and is hardly an argument in favor of the Pima-Papago connections.

Kroeber (1930:5) thought that on the face of it, the Seri showed greatest affinity to the Cochimí on the grounds of their general development of economy—the hunting and gathering subsistence. But he also pointed out that relationship with the Cochimí may rest ultimately on the linguistic analysis if the Cochimí language can still be recorded—which is most dubious.

[P. 8 B]

9:Malkin E-5 (1953-1955)1962 NU31 Seri NU31

262 now," while the *Volsella* has been eaten in the past
172 just as much as it is now. The find of these four species in great numbers in the kitchen-middens only indicates that they probably were an important part of the Seri past. Historical records are scarce and no archaeology had ever been done in the region, except for Gifford's (as yet unpublished) excavations at Caborca. But Caborca is far away from the coast. Strong circumstantial evidence suggests that a good many of the kitchen-middens represent relics of the Seris' past encampments.

262 The verbal data for the Seris' past use of some species of molluscs in their diet is uncertain or unavailable. But it is safe to assume that if the animal is eaten today, then it certainly had been
●[174] also eaten in the past. It is not probable that the Seris should suddenly develop a taste for obscure kinds of animal food, while the entire trend had been in the other direction.

Of the different species the augur shell and the cone shell were said to have been "eaten in the past by the giants. Maybe 300-400 years ago." It is
[173] hard to account for this idea except that it probably refers to a myth.

Preparation

252 Preparation of the mulluscan food differs little, if at all, from any other food of animal origin. The animals are simply separated from the shell, the meat is dropped in water and boiled, usually
[263] for half an hour. Few ingredients other than salt are added and their use depends entirely on the availability of cash and on the individual tastes of the Indians. As far as I could tell, there is no differentiation in this for people of different sexes
262 or ages. Also there is no preference for different parts of the body.

Preferences

Some species are more liked than others, but this is related to their size rather than anything else. There does not appear to be any belief in the toxicity of molluscs and the occasional justification of the inedibility has been expressed in terms of size. Some species, it had been asserted, are not eaten simply because they are too small
* [825] to bother. Only *Cardium consors*, as one of the informants suggested, is venomous, but even this, to him, seemed uncertain and dubious for he said "maybe it is venomous."

Other Uses

301 a) *Decoration*: A considerable number of shells
* 825 were reported as used for decoration. The tabulation indicated altogether 10 species that had been or still are used for ornament. Three of these are discarded now, seven still in use. This is mostly in the form of various sorts of necklaces, which the women string on ordinary thread. *Solenostira pallida* is supposed to be worn as such by women and children, while *Cerithium stercusmuscarum* by the boys only. But I have never seen either of them make use of it in any way. On the other hand, *Trivia radiana* and the *Olive shell* are much

[P. 39 A]

so named must be of the same sex as the first. The significance of land ownership needs further investigation.

Many of the Seri still prefer, when possible, to live in their chosen band area. Sometimes a person, when he is approaching death, will ask to be taken to his own i?iziiting, where he can die and be buried in the area of his choice.

NOTES

1. Due to printing limitations, stress on Seri words has been omitted, and several orthographic symbol changes have been made for this paper. The phonetic values of the symbols used are the following: p is voiceless labial stop; t is vl. dental stop; k is vl. velar stop; ? is glottal stop; f is vl. labial flat spirant; ʋ is vl. labial grooved-rounded spirant; s is vl. alveolar spirant; z is vl. alveo-palatal spirant; l is vl. lateral spirant; h is vl. velar spirant; x is vl. back velar spirant; m is labial nasal; n is dental nasal; ng is velar nasal; y is palatal semivowel; i is a high close front vowel; e is a low close front vowel; a is a low open central vowel; o is a mid close back vowel.

2. These data were compiled during field trips to the Seri camps during the years 1956-61, the studies being carried out under the auspices of the Summer Institute of Linguistics. The principal informant was R. Herrera T. whose information was checked with and supplemented by nine of the older members of the tribe. I am indebted to my colleague, David Thomas, who read an earlier draft of this paper and made helpful suggestions.

3. 1) W. J. McGee, "The Seri Indians," *Bureau of American Ethnology, Annual Report*, No. 17, Part 1. Washington, 1898. 2) A. L. Kroeber, "The Seri," *Southwest Museum Papers*, No. 6. Los Angeles, 1931. 3) W. B. Griffen, "Notes on Seri Indian Culture, Sonora, Mexico," *Latin American Monograph Series*, No. 10, Gainesville, 1959.

4. It will be noted that between subdivision 3 and 4 on Fig. 3 there is an unnumbered area, the status of which is uncertain.

5. Kroeber states that McGee's concept of Seri maternal lineages crystallized into totemic clans with matron rule seem a fantasy. In Kroeber's opinion, "The Seri may never have had sibs or clans; but the fact that they appear to lack them now is no positive evidence that they were without them three centuries ago. Shifts of residence, contraction of territory, shrinkage of numbers, amalgamation of distinct bands, may well have obliterated much of such social fabric as they once possessed."

Griffen discusses the nature of the former Seri bands and states, "they may have been patrilineal and exogamous. The criteria . . . that Julian Steward has exposited for the formation of exogamous, patrilineal bands . . . are and presumably would have been met formerly in the Seri habitat." Griffen lists other aspects of this type of band which are also verified to some extent by his data. From reading his material, it is obvious that he suspects the existence of clans at some earlier period. He emphasizes the need for further investigation.

6. G. P. Murdock, *Social Structure*, Macmillan Co., New York, 1949.

7. Marriages were usually contracted within the band.

8. As Kroeber points out, their memory likely covers only the latter part of the period of Spanish contacts.

9. The Seri recall nothing of Seri-Pima contacts and little of Seri-Apache relations.

10. The story is related that one day some Seri entered a cave where they found several Papago jugs filled with seeds. Being hungry, the people ate the seeds and left some arrows as token payment. The Seri say that the Papago apparently believed the arrows were intended as an insult. Fighting broke out soon afterward.

11. The Seri concept of the band annihilations is seen to be in contradiction to McGee's statement (p. 132): "Concordantly with their primary characteristic, the Seri have avoided ethnic and demotic union beyond the narrow limits of their own kindred; and even of these they seem to have cast out parts, annihilating the Guayma and Upanguayma, displacing and nearly destroying the Tepoka, and outlawing individuals and (apparently) small groups."

1: McGee NU31 Seri NU31

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[For the recorded history of the Seri see category 116, pp. 15, 17-19, 51-117, 126-130, 132-135.]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

000 between these stages and that next higher in the series with unparalleled clearness; their craft also displays an aberrant (and hence presumptively acultural) feature pertaining to the technolithic stage; and in so far as their craftsmen use the material typical of the age of metal they degrade it to the transitional substage between dominant zoomimicry and designless stone-using.

Viewed in the general light of their pacific industries, the Seri are, accordingly, among the most primitive of known tribes; their technic is in harmony with their esthetic, and also with their somatic and tribal characteristics, in attesting a lowly plane of development; while their industries, like their other demotic features, are essentially autochthonous.

WARFARE

175 721 Something is known of Seri warfare through the history of the centuries since 1540, and especially through the bloody episodes of the Encinas régime and the occasional outbreaks of the last decade or two. The available data clearly indicate that the warfare of the tribe complements their pacific industries in every essential respect.

As befits their primitive character, warfare has played an important rôle in the history of the folk, forming, indeed, one of the chief factors in determining the course of tribal development. There is no means of estimating the losses suffered and occasioned in warfare with the neighboring tribes during either prehistoric or historic times; but the indications are that they were much greater than the losses connected with Caucasian contact. Neither is it practicable to estimate reliably the fatalities attending the interminable conflicts with the Spanish invaders and their descendants, though it is safe to say that the Seri losses in strife against Spaniards and Mexicans aggregate many hundred, and that the correlative loss on the part of their enemies reaches several score, if not some hundred, lives. Few if any other aboriginal tribes of America have had so sanguinary a history as the Seri, and none other has at once so long and so bloody a record.

411 According to the consistent accounts of several survivors of conflict with the Seri, their chief weapons are arrows, stones, and clubs—though several survivors manifest greater fear of the throttling hands and rending teeth of the savage warriors than of all their artificial weapons combined. A striking feature of the recitals, indeed, is the rarity of reference to weapons; the ambushes or surrounds or chance meetings, with their disastrous or happy consequences, are commonly described with considerable detail; the carbines or rifles, the machetes and knives, or the deftly thrown riatas employed by the rancheros or vaqueros are mentioned with full appreciation of their serviceability; but the ordinary expressions concerning the despised yet dreaded Seri are precisely those employed in recounting conflicts with carnivorous beasts. When Andrés Noriega's kinswoman proudly related how he

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

CHIEFSHIP

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The unformulated tribal laws of the Seri are intimately connected with leadership, which is, in turn, largely a reflection of personal characteristics; so that the tribal organization is about as variable as that of the practically autonomous herds of cattle ranging the Sonoran plains adjacent to Seriland. Indeed, just as the stock-clans enjoy a precedence on pasturage and at waterholes, determined by the valor and strength of the bulls by which they are led, so the Seri clans appear to be graded by the prowess of their masculine leaders, combined with the sortilegic success of the leaders' consorts; while, just as the leadership of the cattle shifts from band to band as the years go by, according to the fairly equal hazard of natural selection, so the clan dynasties of the human group rise, flourish, and decline in an endless succession shaped by the chances of birth and survival under a capricious environment, by the fate of battles internecine and external, and by various other factors. The instability of the Seri organization is demonstrated by the tribal changes recorded in history, as well as by the vicissitudes within the memory of Señor Encinas and others. At the beginning of the records the Upanguayma were already exiled from Seriland proper [175] and apparently suffering from raids of their collinguals; within a century the Guayma, also, were expatriated and nearly annihilated; then, in the early part of the present century, the Tepoka were extruded and (after a series of wars in active progress in Hardy's time) forced far up the coast to one of the poorest habitats ever occupied by any folk. So, too, throughout the Encinas régime the internal dissensions continued whenever the clans were not combined against aliens; and the veteran pioneer has seen much intratribal strife, attended by the rise and passing of many chiefs, both acknowledged and pretended, and often exercising chiefly prerogatives two or three at a time. This instability grows largely out of the fact that the essential unit is the clan, and that the tribe is nothing more than a lax aggregation; and it is measurably explained by the crude customs accompanying the choice of leaders.

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As already noted, the clan organization is maternal, and the clan-mother is the central figure of the group; but the executive power resides in her brothers in the order of seniority—i. e., while the personal arrangement of the group is maternal, the appellate administration is fraternal. So far as could be ascertained, the form of government is clearly discriminable from that commonly styled avuncular; for, in the first place, the minor administration accompanying the control of property invests the elderwomen with exceptional legislative and judicative powers, while, in the second place, there are no old men (by reason of the militant habit), so that the reverence for age so assiduously cultivated in primitive life extends to matrons much more than to men. [889]

3:Davis & Dawson 2-5 (1932-1940) 1945
MUSI Seri MUSI

THE SAVAGE SERIS OF SONORA—I

By EDWARD H. DAVIS AND E. YALE DAWSON

WHEN the Seri Indians pass into extinction, "good riddance" will be voiced by many a Mexican, for centuries of warfare against the invaders of their inhospitable lands have made this small tribe notorious among the aborigines of Mexico. Many people will be ignorant of their passing, but a few of us even now watch with some regret the losing struggle of their diminishing numbers against the spreading civilization that tramples out the wild things and destroys the natural features of the earth. With the Seri goes a link with a past, primeval age of nature in America, for these are a strange and primitive people, a people whose lives and habits assign them to the initial place in the scale of cultural development among American Indians, and hence to the lowest recognized phase of savagery.

In 1540 one of Coronado's officers was the first to capture and bring into the army encampment in Sonora a Seri warrior, an Indian so large and tall that his stature created a sensation among the Spanish soldiery. It was three and a half centuries, however, before the Seri tribe was finally subjugated by an invading force, and then only after the slaughter of nine-tenths of its population.

In modern times, though the encroachment of settlements has forced the Seris into domestic contact with the Mexican people, few outsiders have ever come to know them. Until the fishing village of Kino was settled some ten years ago, there were only two men they counted real friends among aliens. The senior author was one of those. Today the Seri not only must tolerate the encroachment of the Mexican, but must suffer from imported diseases which are gradually destroying him. The present life of the Seri is but an echo of its past, but in this modern world the habits of the survivors of America's most primitive people are none the less astonishing. Their gradual acquisition of modern implements and materials has gone along with centuries of warfare and bloodshed, and their submission to law entails a long story of violence. Before considering these more recent phases of their history, however, let

[p. 193(A)]

3:Davis & Dawson E-5 (1922-1940) 1945
MU21 Seri MU21

THE SAVAGE SERIS OF SONORA—II*

By EDWARD H. DAVIS AND E. YALE DAWSON

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After the Seris' first contact with the invading white man through Coronado's soldiers in 1540, they lived for nearly another century outside the influence of the civilization that was eventually to engulf them. By the early 17th century, however, pearls were discovered in the Gulf and the sailing ships that began to ply the waters introduced the first great innovation into Seri culture. The Indians found on their beaches boards from these ships and, most important, flotsam hoop-iron and nails. One of the great difficulties in constructing arrows and harpoons had been the fashioning of the point. The stone, tooth, or bone points were difficult to make and more difficult to attach securely to the shaft. The more easily worked iron proved a boon to their hunting and fishing, and later made a more satisfactory weapon of war than they had hitherto possessed.

000 The beginning of Seri wars was the year

* Continued from page 202 of preceding issue.

[p. 261(A)]

8: Ascher E-5 (1960) 1962 NU31 Seri NU31

225 In fishing for turtle, one man stands at the bow of the boat, holding the mainshaft and extension cord in one hand. When he sights a turtle, he propels the mainshaft at the animal's carapace, retaining a firm grip on the mainshaft and the extension cord. If it is struck, the turtle lurches away, loosening the foreshaft and unplugging it from the mainshaft. Tired eventually by the tension [411] applied by the fisherman on the extension cord, the turtle is finally stunned by a wooden club and lifted into the boat.

225 There is evidence that the turtle-fishing complex has consider-
175 able time depth and stability. The Seri were using similar apparatus and methods at least as early as 1825 (Hardy 1829: 296-297). At [501] this time they employed balsa boats rather than wooden boats with outboard motors and torches of cactus fibers instead of kerosene lamps. The complex continued, apparently with little change, through 1896 (McGee 1898: 187-193). Wooden boats and kerosene [177] lamps began to be adopted during the 1920s, and outboard motors were introduced in the 1940s.

411 During the entire period of 135 years (1825-1960), however, the harpoon tackle underwent only one important innovation. The 225 gasket on the foreshaft was introduced by a Seri Indian about the 176 year 1935. The addition of the gasket was related to, and coincided [439] in time with, the first attempts of the Seri to supply turtles to the commercial market. When they caught turtles solely for their own use, they did not need to keep the animals alive for very long, but when they began to sell them it became important to preserve them alive until they reached the market. The gasket acts like the hilt on a sword, preventing the entrance of the foreshaft hafting into the turtle's body. Through its contact with the carapace, it restricts the rotation of the point within the animal's body and provides a seal which inhibits the loss of blood, and thus prevents early death. After the turtle is stunned with a club and lifted into the boat, the foreshaft is removed and the hole which it made is stuffed with a piece of cloth.

124 Seri men were shown a harpoon foreshaft from a museum archive and asked what it was for and whether they themselves made similar 411 ones. If an informant acknowledged that he made them, he was asked, at the minimum, to detail the materials he used, the procedures he followed, and the approximate amount of time it would take him to produce one. Later he was requested to show the field worker examples of the foreshafts he had made. Of the approximately 40 adult Seri males, about 25 were available for questioning. Of these, approximately ten did not make foreshafts or had made them in the past but did so no longer; they were mainly older men and those [474] engaged in the administration of the Sociedad Cooperative de Pro- [887] duccion Pesquera Seri. Five men either would not or could not volunteer information. Data were obtained from the remaining ten adult men and from one eight-year-old boy; they include 21 foreshafts made by these eleven people.

411 The materials from which a foreshaft can be shaped and as-
325 sembled vary within what is available in the Seri environment. Iron

10:Davis E-5 (1922-ca. 1939) 1965 NU31 Seri NU31

Section V

The Seri Indian

Unfinished Book Manuscript

War Chief of the Seris

The Pelican Skin Robe

175 131 Three centuries ago they were a friendly people living along the banks of the Sonora River from Hermosillo to where the flow of water sinks into the marshy banks along the coast of the Gulf of California.

175 787 The great Padre of the Pimas, Eusebio Francisco Kino, first visited the Seris in 1685, and found them "a very gentle people." After a short preachment to them he noted that "With very great insistency they begged me to remain with them and baptize them saying they would give me horses, fish and many products of the country, and that they would build me a house and a church. On three different days I said Mass in their country."

The Padre could not remain but two years later (1687), he sent Father Adan Lily to them. Lily established a mission---Santa Maria del Popula---on the banks of the River near what is now Hermosillo. The Seris remained faithful to the Padres when the whole country rose in revolt some years later.

175 [134] The withering hand of time worked against them, however. They were pushed farther and farther down onto the barren lands along the gulf coast until, finally, in a fierce and desperate retreat out into the sea and onto the desert Island of Tiburon. The swift and deadly channel between the Island and the Sonoran mainland gave them protection. They retrogressed through the centuries into a fierce and, perhaps, cannibalistic tribe.

114 [129] As late as 1922, when Edward Davis first visited Tiburon Island, a man was putting his life on the line when he stepped on the Island. But perhaps the quality of the man had something to do with it. As did Father Kino, Edward Davis was able to make friends of them.

The following manuscript is an incompleted book on the Seris which was found among his papers.

[pp. 6-138 not processed]

000 possible for producing domestic crops of any kind. There is no water
312 for irrigation, and drinking water is very scarce, rising in only a few parts of the Island in places known only to the Indians.

648 For centuries these nomads of the wastes have borne an evil repu-
[10] tation as killers and cannibals, and many an expedition to the Island for trade or exploration has never left its beautiful shores. Lured away from their boats by friendly gestures of the Indians, every last man has been killed by arrow or rifle and the expedition never heard from. No survivor has ever returned to relate his experience and, up to the time of my visit, a man risked his life to go among the Seris on their Island.

Time after time, for four hundred years, the Spaniards, and later the Mexicans, have tried to exterminate them. They have been ambushed, hunted, killed on sight for years; diseases have decimated them: they have been the Ishmaelites among the native tribes of Mexico, with every man's hand against them. Now only a small remnant survives.

[13] They have also taken heavy toll of those who have invaded their territory, which at one time extended from Altar on the north to Guaymas on the south, and from Hermosillo to the coast. When hard pressed, they retired to their Island sanctuary where, deep in the rugged ranges, they have defied pursuit. They are strong, brave, neither asking nor giving quarter in battle---men of marvelous endurance, tireless walkers, swift runners, wonderful trackers.

Within the last few years the Government has definitely set aside Tiburon as their exclusive home and sanctuary, with a strip along the mainland as their hunting and fishing ground, and where they can harvest the fruits of the giant cacti without fear of being killed. No person is allowed on this Island without special permission from the Governor of Sonora, or their Superintendent and devoted friend, Roberto Thomson. The Government has declared a permanent closed season on Seris.

• 175 As to the reputation of these nomads of the wastes of being can-
648 nibals, I quote the following extract from the *Life of Bill Fain:*
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After I had been in Yuma some time, a Yuma school teacher asked what I knew about Tiburon Island and the Seris. He said he had heard there was gold on the Island and he in company with a sailor intended to go down there. I said "Partner, I have been at the head of the Gulf several times, and interviewed many Mexican sailors and fishermen. These Seris are murderers and cannibals and my advice is, don't go, for as sure as God made little apples, you and your friend will make a fine feast for the *Tiburones.*"

He said the sailor would manage the boat and they would prospect on the Island and pack the gold out. And besides, they were going unarmed and trust themselves to the tender mercies of the most treacherous Indians in North America. I told him, "My advice is to stay just as far away from that Island as you can, if you want to teach school any longer." My advice was thrown away.

Some weeks later several mining men in skirting the coast opposite Tiburon, came across a place where the Seris had evidently been feasting on human flesh,

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near the narrow channel called *Infernillo*. They knew about the missing school teacher and sailor and without doubt this was the place where they had been eaten. There were the bones of two human beings, and there seemed to be a sort of cross, with hands severed at the wrists, nailed to the ends of the cross with big spikes, with a piece of leather, about as big as a dollar, to keep the nails from pulling through. The hands were from a white man, and many scattered papers from a valise near by, with the man's name stamped on it, was ample proof that the remains were those of the Yuma teacher and this sailor friend. The holes cut out of the valise fitted the leather washers. Even the bones were broken to extract the marrow. The teacher never showed up and everything happened just as I predicted. This was about 1893.

About a year after this, five other men left Yuma in a boat, called the *Examiner*, for Tiburon. Clark was an old frontiersman, O'Brien was a good man too, but not so old at the game; Charley Cowles was a mining man and the two *Examiner* reporters wanted to write up the Seris and the Island and hunt deer. All were fully armed. I gave Clark and O'Brien the same advice as I gave the school master and said on no account to all desert the boat; for O'Brien to make some excuse and stay in the large boat with a shot gun loaded with buckshot and land the reporters with the small skiff. I told Clark not to land but to stay in the skiff. I said they were all flying in the face of sure death once they landed. Charley disembarked at the mouth of a river and left for the interior.

When the boat got close to the Island, it was anchored according to my instructions and Clark and the reporters got in the skiff and were rowed close to shore, when the reporters jumped out and waded. Twelve or fifteen wild natives had emerged from the brush and were making signs of friendship and they shook hands all around with the reporters. One of the men could talk Spanish and he asked about deer and one of the Indians pointed to the mountains of the interior and said, *"Si Senor, bastante venado."* So they all started inland and were soon concealed by the brush.

Of course, even two men fully armed and good gun men, would stand no chance with that number of wild natives.

Soon after they had disappeared around the point of a hill, the men in the boats heard the crack of a gun, followed by the scream of a man in mortal anguish. The men never showed up and Clark started for the big boat in his skiff. About this time, a great buck Indian started out in a dugout canoe to cut him off. O'Brien had kept himself concealed until the Indian came within range, when he raised up and threatened to shoot, and waved him back.

He went back all right, and as soon as Clark came aboard, they raised the anchor and sailed south to Guaymas, sold the boat, and returned by train. They give me the details as here recorded. Friends of the newspapermen took the matter up with the authorities at Washington and they had some diplomatic exchanges with the Mexican Government. Mexico answered: "If you don't want your Americans killed, keep them away from Tiburon."

[*Life of Bill Fain*, unpublished manuscript from the Davis collection.]

About 1893 George Porter and John Johnson fitted out the small sloop *World* in San Diego, to go down in the Gulf for shells and curios, and trade with the Seris. They came to grief in the same way. The men were lured ashore by the friendly attitude of the natives, led up the beach, then retreat cut off and they were shot down and "eaten by the Seris."

Dr. [W J]-McGee of the Smithsonian Institute of Washington, in 1895, visited the Island with a party of scientists to study the

[text continues on p. 146]

175 Indians. Dr. McGee, confirming Bill Fain's story of the disappearance
648 of Robinson and Logan, the San Francisco newspapermen, secured the
266 facts from a Seri who spoke Spanish, as follows:

> On reaching the Island, Robinson and Logan asked the natives if there were any deer to be shot and receiving an affirmative reply, they started for the interior toward the mountain with several Seris as escort, leaving the two other men with the boats. On the face of it, this was a most foolhardy performance and Robinson actually loaned his rifle to one of the Seris, who accompanied him. The Seri shot Logan in the back and wounded Robinson who called for help. In trying to escape he stumbled and fell and the Indians beat his brains out with rocks.

On the Gulf Coast, this list of killed and of course eaten, could be greatly enlarged and leads to the fact that, up to recent years, no stranger---American, Mexican or Indian---could land on Tiburon and live. Ever since Sonora was settled, two or three hundred years ago, the Island has borne a sinister reputation and up to recent years, it has lived up to its reputation. Even now, no one is allowed to land on the Island without permission of the Governor or the Superintendent.

[191] The Island of Tiburon is isolated, its approaches guarded by deserts and sea, and its people the wildest and most primitive race in North America---every man's hand against them, and they against every body.

175 Dr. McGee's investigations in 1895 failed to convict the Seris of
648 cannibalism or of eating any part of either whites or Indians, killed
266 on the Island or killed in battle. This reputation of cannibalism is
114 prevalent in Mexico as well as in the United States, but the charge has never been proven.

It is true, they eat the flesh of animals raw as well as partially cooked, and that may have given rise to this gruesome reputation, but my own investigations covering several visits on the Island and on the Sonoran coast, failed to convince me that they had eaten human flesh. They told me themselves they had not, and if all reports of cannibalism by the Seris were traced back to their source, they would end in surmise or guesswork. No one, so far as I have been able to find, has actually seen a Seri eat human flesh. Until such a witness can be produced, the Seri remains unconvicted.

Let us examine the so-called evidence of the mining men, as quoted by Bill Fain: the finding of a white man's hands spiked to a cross, and the schoolmaster's papers scattered on the Gulf Coast of Sonora. This evidence is too circumstantial. The discs of leather even fitted the holes in the bag.

In the first place, nails are scarce in Sonora, and no Seri at that time would risk his life to procure nails or spikes at any ranch. Nearly all woods in that region are hard and would almost certainly turn a nail. The Seris had no axes to chop trees to make crosses, and

175 if they were as hungry then as they are today, they would not stop to
648 spike a man up preparatory to serving him. Their only tools then were
266 rocks to use as hammers and hoop iron for knives, and these are in
114 universal use today.
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There is no doubt that the men were killed, but I think these mining men purposely exaggerated their findings, if any.

648 There is no doubt that the Seris were brave fighters, treacherous
721 murderers, sparing neither men, women or children on their raids,
727 killing ruthlessly. But there is one charge which cannot be brought against them, which cannot be said of many tribes north of the border. So far as I could find out, they never tortured nor scalped.

648 The Seris never took prisoners and they never inter-married with
721 other tribes, so their strain is pure.
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There was one exception. Sixty or seventy years ago, the Seri
563 Chief Coyote Iguana and his band of warriors held up the stage between Hermosillo and Guaymas, and killed all except a handsome Spanish girl of the better class. This girl, Coyote Iguana made his wife and by her raised a family. One granddaughter still survived in 1924, and while more attractive than the general run of Seri, her complexion was fully as dark.

800 The Seris, Ishmaelites among the native tribes of Mexico---the most fascinating Indians in North America!

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123 *Reception Committee, Tiburon Island - 1936*
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On the twenty-fifth of April, nineteen twenty-two, I engaged the services of Roberto Thompson, who with his father and grandfather

[text continues on p. 149]

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BAND V

It was stated above that this band fought with Band II and then with Band I. Since Band V was likely killing cattle, they also may have been harassed by soldiers. Eventually Band V abandoned its territory near Punta Tepopa and headed south along the coast to a camp near present-day Bahia Kino. From this camp the entire group disappeared and was never seen again by members of the other bands. The Seri of today believe that Band V either traveled inland or was destroyed by a non-Seri force.

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BAND II

These people were rustlers and marauders. Government intervention in the situation was inevitable. The Seri recount the following final encounter between this group and the government forces.

The entire remaining membership of Band II was hiding out in a nearly inaccessible swamp thicket at Bahia Kino. Knowing that an armed force of soldiers and ranchers was searching for them, the people left their camp to seek safety elsewhere. Almost immediately they were attacked by the superior armed force which proceeded to wipe out the whole group. A youth who had avoided capture is said to have reported the affair to the Seri on Tiburon Island. This event may have occurred during the Encinas Wars fought from 1855 to 1865.

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BAND VI

The members of this band on San Esteban Island were little interested in the mainland and did not participate in the raids on man and livestock there. Nevertheless, they were to share in the severe punishment meted out to the bands guilty of multitudinous depredations.

Sometime after the massacre of Band II, a ship arrived at San Esteban, and many of the people were induced to go aboard. The rest of the inhabitants followed the ship to a camp on the eastern side of Tiburon Island where they were to receive gifts. As the people congregated, they were herded into a stone corral. Apparently, some of the San Esteban men were killed at this time. The rest of them, along with the women and children, were taken to Santa Rosa point on the mainland. Here, the Seri say, more of the men were killed. The remaining men were strung together by wire and led away, never to return.

The San Esteban women and children, along with some Tiburon Island women and children (of Band III), were taken in

225 In fishing for turtle, one man stands at the bow of the boat, holding the mainshaft and extension cord in one hand. When he sights a turtle, he propels the mainshaft at the animal's carapace, retaining a firm grip on the mainshaft and the extension cord. If it is struck, the turtle lurches away, loosening the foreshaft and unplugging it from the mainshaft. Tired eventually by the tension [411] applied by the fisherman on the extension cord, the turtle is finally stunned by a wooden club and lifted into the boat.

225 There is evidence that the turtle-fishing complex has consider-175 able time depth and stability. The Seri were using similar apparatus and methods at least as early as 1825 (Hardy 1829: 296-297). At [501] this time they employed balsa boats rather than wooden boats with outboard motors and torches of cactus fibers instead of kerosene lamps. The complex continued, apparently with little change, through 1896 (McGee 1898: 187-193). Wooden boats and kerosene [177] lamps began to be adopted during the 1920s, and outboard motors were introduced in the 1940s.

411 During the entire period of 135 years (1825-1960), however, the harpoon tackle underwent only one important innovation. The 225 gasket on the foreshaft was introduced by a Seri Indian about the ● 176 year 1935. The addition of the gasket was related to, and coincided [439] in time with, the first attempts of the Seri to supply turtles to the commercial market. When they caught turtles solely for their own use, they did not need to keep the animals alive for very long, but when they began to sell them it became important to preserve them alive until they reached the market. The gasket acts like the hilt on a sword, preventing the entrance of the foreshaft hafting into the turtle's body. Through its contact with the carapace, it restricts the rotation of the point within the animal's body and provides a seal which inhibits the loss of blood, and thus prevents early death. After the turtle is stunned with a club and lifted into the boat, the foreshaft is removed and the hole which it made is stuffed with a piece of cloth.

124 Seri men were shown a harpoon foreshaft from a museum archive and asked what it was for and whether they themselves made similar 411 ones. If an informant acknowledged that he made them, he was asked, at the minimum, to detail the materials he used, the procedures he followed, and the approximate amount of time it would take him to produce one. Later he was requested to show the field worker examples of the foreshafts he had made. Of the approximately 40 adult Seri males, about 25 were available for questioning. Of these, approximately ten did not make foreshafts or had made them in the past but did so no longer; they were mainly older men and those [474] engaged in the administration of the Sociedad Cooperative de Pro-[887] duccion Pesquera Seri. Five men either would not or could not volunteer information. Data were obtained from the remaining ten adult men and from one eight-year-old boy; they include 21 foreshafts made by these eleven people.

411 The materials from which a foreshaft can be shaped and as-325 sembled vary within what is available in the Seri environment. Iron

8: Ascher E-5 (1960) 1962 NU31 Seri NU31

TABLE 1
Foreshaft Specifications

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Manufacturer	Plate Reference	Approx. Age of Artifact	Length of Hafting (Centimeters)	Length of Point (Centimeters)
Ernesto Dias	Ia	2	6.5	5.3
José Estorga	Ib	6	6.5	5.6
Francisco Garcia	Ic	4	6.5	5.8
Alberto Mendes	Id	5	5.8	5.7
Ignacio Molina	Ie	3	8.7	11.5
Louis Moreno	If	3	7.8	4.8
Ramon Perrales	Ig	3	7.0	4.4
Francisco Barnett	IIa	1	6.8	5.2
	IIb	2	6.4	5.3
	IIc	2	6.8	5.9
	IId	2	7.3	6.1
	IIe	–	7.7	5.8
Miguel Barnett		3	7.8	5.0
		3	6.0	4.9
		5	6.1	4.5
Ernesto Corrales		1	3.1	2.8
(8-year old boy)		1	3.0	4.2
Juan Moreno		7	6.5	5.0
		7	6.7	4.9
		8	6.7	5.2
		7	6.1	5.1

cause he did not believe it would help retard death. This man, interestingly enough, is the nephew of Alberto Molina, whom the Seri believe responsible for having introduced the gasket. The foreshaft produced by Ignacio (Plate Ie) is the most divergent one in the entire collection. It is, for example, the only one in which the point has two barbs and, except for those made by the eight-year-old boy, the only one in which the length of the point above the hafting exceeds that of the hafting. The finished products also show some variation in the source of the rubber used for the gasket and in the kind of wood used for the hafting. Six of the eight gaskets are shaped from an automobile tire, two from scraps of rubber of which the men did not recall the source. Three haftings (Plate Ia, d, g) are made of ironwood, all the others of mesquite, which is easier to obtain than suitable ironwood or nonindigenous woods.

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Discussion

The foregoing example is designed as a paradigm to illustrate how observations on ongoing cultures might be adapted to the problems of archeological reconstruction. It is, of course, imperative to focus on behavior where matter is changed in some way, because it is only in altered matter that behavior is protracted through time. The example is deliberately selected to capitalize on an important area

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1: McGee E-5 (1894-1895)1898 NU31 S...t NU31

and larger bones, sucked up the blood stains, and buried the few remains in cactus thickets, impenetrable save by their own hardy limbs and bodies. Nor did any of the tribe except the two restrained neophytes ever really enter the collective life of the patriarchal group headed by Don Pascual; they attended no industrial or social or churchly function save in response to reminder and solicitation; they craved the white man's medicines in slight disorders, but rejected them in extremis; and the dying or dead were spirited away to be inhumed and mourned, according to their wont, in their harsh but beloved motherland.

During this period of mutual toleration the Seri were so deeply influenced by the white contact that, for probably the only time in their history, they voluntarily allowed an alien free entry into their territory; and Don Pascual explored the coast of Bahia Kino, projected a port, and even visited Isla Tiburon twice or thrice. In one of these visits he was ferried over Boca Infierno on a balsa, but, finding himself unable to keep pace with the swift-footed Seri on their hilly pathways, he returned for his saddle mule; halfway across, the poor animal swimming behind the balsa suddenly plunged and struggled, and, on landing, hobbled out on three legs—the fourth having being snapped by a shark. Warned by this incident, Don Pascual abandoned a half-formed plan of stocking the island, and afterward brought up a small vessel from Guaymas in which he carried across a dozen caballeros (including Don Ygnacio Lozania, who had visited the island with the Andrade expedition); and this party examined the southeastern quarter of the island, watering two or three times at Tinaja Anita, and pushing as far westward as Arroyo Carrizal. On this trip he studied the Seri house-building, and was the first to note the large use of turtle-shells and sponges in the process.[1]

About the middle fifties it became apparent that the Seri were dividing into a parasitical portion clustered about the rancho (as their forbears gathered about Populo and Pueblo Seri long before), and a more independent faction clinging to their rugged ranges and gale-swept fishing grounds; and it became evident, too, that the thievery of the dependent faction would soon ruin the rancho if not checked, or at least greatly diminished. Accordingly the passive policy was modified by introducing a more active police service. At first the penalties for theft and misdemeanors were light, and the system promised well—especially as even a slight punishment was equivalent to banishment, the criminal fleeing to Tiburon on his escape or immediately after the crime; yet the experience of a year or two proved that the escaped parasites seldom resumed the hard customs of their tribal life, but generally returned to the borderland and there preyed on the wandering stock from the rancho. Finally, driven to extremity, and supported

[1] Typical Seri houses, as described by Don Pascual in 1854, were observed on Tiburon by the 1895 expedition, as shown by the photographs reproduced in plates VII, VIII, and IX.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

648 been slaughtered for some months, an aged woman may be seen skulking about the mesquite clumps in sight of the rancho; if her presence is tolerated for a day or two, she approaches to beg for water and food and to receive the cast-off rags hastily forced on her nakedness by the sensitive señoras; if she deem her welcome not too chill, she erects a jacal a few hundred yards away, and there she is usually found, a morning or two later, to be accompanied by a younger matron with a child or two; and if these are tolerated, the rancheria may grow to half a dozen jacales and half a hundred persons.[1] The band may remain a fortnight or even a month; but in case of serious illness of any of their number, or of threat or punishment for petty peccadillos, or of an unusual storm, or of a brilliant meteor, or of any exceptional occurrence about the rancho, the rancheria is commonly found empty next morning. If the attachés of the rancho are indisposed to tolerate the first envoy, yet feel kindly rather than rancorous, she is merely dogged and stoned away like a depredating domestic animal from another hacienda; if the rancor of past encounters remains, the mercy accorded her is precisely that shown the predatory coyote or other feral animal from the fastnesses of the sierras—and the tribe take warning and doubtless rejoice that their loss is no greater.

1175 ●177 [648] Any recital of the common history of the peculiarly savage Seri and the whites necessarily conveys an exaggerated notion of intimacy and mutual influence, since it emphasizes the few positive interrelations scattered along the decades of neglected nonrelation; and this is true of the Encinas régime as of earlier centuries. The great fact is that throughout their recorded history the Seri have touched civilization so slightly and so seldom that the effect of each contact was largely lost before the next supervened; and the unprecedentedly intimate contact of the Encinas régime, especially during the initial period of abnormal toleration, serves less to indicate relationship in characteristics and sympathies than to measure the breadth of the chasm between the Seri and the Mexican—a chasm not exceeded, and probably not equaled, elsewhere in America. About the middle fifties, probably every Seri above infancy and below decrepitude had seen Don Pascual and some other habitués of the rancho; they yielded to the seductions of indolent scavengering apparently more numerously than ever before; they substituted cast-off rags and barter-bought manta (plain cotton cloth) for the products of their own primitive weaving; they ate cooked food when it fell in their way; they half-heartedly adopted metal cutting implements, and sought or stole nails and hoop-iron for arrowpoints; some of them acquired a smattering of Spanish, and many of them solicited and sported Spanish names, just as they begged and flaunted tawdry handkerchiefs and beads; and they generally enjoyed mildly the ecclesiastical fiestas, and took kindly to the cross as a symbol of peace and plenty and perhaps of deeper import. Yet

[1] A typical simple camp and the entire rancheria gathered at Costa Rica in 1895 are shown from photographs in plates I and II.

1: McGee E-5 (1894-1895):1898 NU31 Seri NU31

even during this halcyon term no Seri save Kolusio and the Altar outlaw ever learned to live in a house; none but these and Mashém wore hats habitually; and, despite the fact that they often witnessed and sometimes playfully or perforce participated in the processes, no Seri ever really encompassed the idea of house-building or even of making adobe. Though surrounded by horses when near the rancho, they never learned to ride nor to use the animals otherwise than for immediate slaughter and consumption; though in frequent sight of skilful ropers, they never fully grasped the idea of the riata, preferring to seize their prey with hands and teeth; though familiar with the agricultural operations of the rancho, they never turned a sod nor planted a seed on their own account; though in frequent sight of cooking, they seldom began and never finished the process with their own food; though acquainted with firearms, they continued to regard them as thaumaturgic devices, and chose the bow and arrow for actual use; though submitting to apparel on the frontier, they commonly cast away the incumbrances on returning to their lairs; and no Mexican or other Caucasian ever saw within their esoteric life—their names remained unrevealed, their hair remained sacred, their mourning for the dead was unheard save at a distance, and no alien, even unto today, has ever seen the birth of their babes, the christening of their children, the burial of their dead, or the ceremonies of their shrines. The Seri and the whites were, indeed, mutually tolerant; but, so far as concerns mutual sympathy, the toleration was almost precisely on a par with that between the ranchero and the vulture-flock that scavengers his corrals—and when depredation began the toleration was of a piece with that between householders and their unwillingly domiciled rodents. It is not too much to say that the interracial mistrust and hatred of the Western Hemisphere culminates on the borders of Seriland; though the antipathy is commonly regarded by the alien tribesmen and the Mexicans as other than racial, since the Seri are felt to be hardly human—a feeling fully shared by the Seri, who undoubtedly deem themselves more closely akin to their deified bestial tutelaries than to the hated humans haunting their borders.

Even during the Encinas régime the Seri came in occasional contact with aliens on other parts of the frontier: on Hacienda Seris, the somewhat remoter borderland outpost on the north, the relations between the landholders and the Seri were analogous to those on the Encinas plains, though less acute in the ratio of relative distance. Occasionally small parties of warriors journeyed to Guaymas[1] on balsas or on foot to barter pelican-skin robes for Caucasian commodities, chiefly aguardiente and manta; still more rarely similar pilgrimages were made to the outskirts of Hermosillo; a few marauding raids were made to the ranchos lying near Ciénegulla and Caborca; and a num-

[1] The accompanying plate XII is reproduced from a photograph of a small group of Seri traders taken near Guaymas, probably during the eighties. It was kindly furnished by F. A. Ober, who purchased it in Guaymas.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

blocks or metates, though it is manifest that most of the camps were fireless and many foodless. It is particularly noteworthy that even the more temporary resting-places are seldom if ever less than a mile or two from the nearest fresh water. In short, the Seri are not a domiciliary folk, but rather homeless wanderers, customarily roving from place to place, frequently if not commonly sleeping where overtaken by exhaustion or storm, ordinarily slumbering through a part of the day and watching by night, habitually avoiding fresh waters save in hurried and stealthy visits, and apparently gathering in their flimsy huts only on special occasions.

In conformity with their rovingness the Seri are notable burden-bearers. They habitually carry their entire stock of personal belongings (arms, implements, utensils, and bedding), as well as their stock of food and—weightiest burden of all—the water requisite for prolonged sustenance amid scorching deserts, in all their wanderings, the water being borne chiefly by women, in ollas, either balanced on the head singly or slung in pairs on rude yokes like those of Chinese coolies. And they have never grasped the idea of imposing their burdens on their bestial associates; their coyote-curs are not harnessed or even led; when they surround and capture horses, burros, and kine they make no use of ropes, never think of mounting even when pursued by vaqueros, but immediately break the necks or club out the brains of the beasts, perchance to tear the writhing body into quarters and flee for their lives with the reeking flesh still quivering on their sturdy heads and brawny shoulders—and scores of vaqueros agree in the affirmation (wholly incredible as it would be if supported by fewer witnesses) that even when so burdened the Seri skim the sand wastes of Desierto Encinas more rapidly than avenging horsemen can follow.

The hardly conceivable fleetness of the Seri is conformable with their habitual rovingness and their ability as burden-bearers; and this faculty is established by cumulative evidence so voluminous and consistent as to outweigh the presumption arising from the standards attained among other peoples. A few minutes after they were photographed, the group of boys shown in plate XVI, with several others of about the same size, provided themselves with a stock of their favorite human-hair cords, "rounded up" a dozen mongrel coyote-dogs haunting the rancheria at Costa Rica, and herded the unwilling animals toward a shrubbery-free space a quarter of a mile away, in order to rope them in imitation of the work of the Mexican cowboys earlier in the morning. From time to time as they went a frightened cur sneaked or broke through the cordon of boys, and made for distant shrub-tufts at top speed; yet in every case a boy darted from the ring, headed off the animal within one or two hundred yards, and lashed it back to its place. On arriving at their miniature rodeo the boys widened their ring, and at a signal scattered and frightened the dogs; then, when the fleeing animals had a fair start, each selected his victim and fol-

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

lowed it, yelling and swinging his light lasso, until, after much doubling and dodging and many unsuccessful casts, he caught and dragged the howling beast back to the open; and it was only after half a dozen repetitions that enough dogs had escaped to spoil the sport. As the boys lounged chattering back toward the rancheria their course lay between two clumps of the usual desert shrubbery, so placed that when the first was obliquely left and 40 or 50 feet distant from them, the other was obliquely right and 100 feet away. At this point a bevy of small birds (perhaps blackbirds—at any rate corresponding to blackbirds in size and flight) fluttered suddenly out of the nearer clump toward the more distant one, when, too instantaneously for the untrained eye to catch exchange of signal or beginning of movement, the boys lunged forward in a common effort to seize the birds; and though none were entirely successful, one exultantly displayed a tuft of feathers clutched by his fingers as the bird darted into and through the thorny harbor. When the distances were paced it was found that, although the birds had the advantage of the start, the boys covered at least 90 per cent of their distance in the same time; while the spontaneity of the impulse demonstrated habitual chase of flying game under fit conditions.

While obtaining the Seri vocabulary with Mashém's aid, advantage was taken of every opportunity to secure collateral information concerning the actual use of the terms, and thereby of gaining insight into the tribal habits. Through his naive explanations, usually repeated and corroborated by the elderwoman of the Turtle clan (Juana María) and others of the tribe, it was learned that half-grown Seri boys are fond of hunting hares (jack-rabbits); that they usually go out for this purpose in threes or fours; that when a hare is started they scatter, one following it slowly while the others set off obliquely in such manner as to head it off and keep it in a zigzag or doubling course until it tires; and that they then close in and take the animal in their hands, frequently bringing it in alive to show that it was fairly caught—for it is deemed discreditable, if not actually wrong, to take game animals without giving them opportunity for escape or defense by exercise of their natural powers. Similarly, Mashém described the chase of the bura and other deer as ordinarily conducted by five persons (of whom one or two may be youths), who scatter at sight of the quarry, gradually surround it, bewilder it by confronting it at all points, and finally close in either to seize it with their hands, or perhaps to brain it with a stone or short club; the former being held the proper way and the latter a partial failure. This hunting custom, described as a commonplace by Mashém, is established by the vaqueros who had frequently witnessed it from a distance; and the same extra-tribal observers described still more striking feats of individual Seri hunters: Don Manuel, son of Señor Encinas, and Don Ygnacio Lozania were endeavoring to train to work a robust Seri (one of a band sojourning temporarily at Costa

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291 erty even transcending the poor apparel, flimsy habitations, and generally ill-developed artifacts of the lowly tribe.

[237] The most prominent personal possession is the pelican-skin robe; it is usually made of six skins, slightly dressed and in full plumage, sewed together with sinew in a conventional pattern of such sort as to give the greatest possible expanse consistent with the irregular outlines of the individual skins, and at the same time to display a conventional color pattern on the feathered side, the colors ranging from the dorsal slate to the ventral white of the fowl (as indicated in plate XXIII); sometimes there are only four skins and rarely there are eight, but the conventional arrangement is maintained. Before the beginning of a

[301] [824]

FIG. 8—Dried flower necklace.

[177] fairly regular barter at Rancho de Costa Rica, and hence before the introduction of manta and other stuffs, the pelican-skin robes were supplemented by kilts made of mesquite root or other fibers, spun and twisted

[266] in the fingers and woven probably on some primitive device no longer in use; but so far as is known these native fabrics were devoid of decorative patterns in color or weave. Less habitually a short wammus or shirt, with long sleeves, made of a material similar to that of the kilt, was worn; but it, too, was without ornamentation, so far as can be ascertained. The remaining article of utilitarian apparel is the belt, usually consisting of a strip of skin (of deer, rabbit, peccary, etc), slightly dressed with the hair on; frequently this is replaced by a cord or braided band of human hair, while the favorite belt of some of the

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29 young warriors is a snake skin (such as that illustrated in figure 7); but so far as was seen the belts are not extended into tassels, decorative appendages, or even flowing ends.

30 The presumptively decorative costumery observed is limited to necklaces, usually of strung seeds, shells, and beads of wood or bone (figures 8, 9, 10, 11, 12, and 13), though animal appendages, such as hoofs, teeth, etc, are sometimes worn. The most highly prized necklace found at Costa Rica was a human-hair cord with nine crotalus rattles attached (figure 14), worn by a young warrior of the Rattlesnake (?) clan. Not the slightest indication of headdresses was seen (though deer and lion masks are said by Hardy to have been worn on occasions); there were no bracelets, leg-bands, or rings of any description, and the cheap jewelry given to many of the women and youths at Costa Rica was either strung about the neck or concealed; while it is significant that even the showiest jewelry was less appreciated than bits of manta or lumps of sugar. When it is remembered that the Seri have been in occasional contact with Caucasians for over three and a half centuries, the fact that not a single glass bead was found among them becomes significant: and the significance of the simple fact is increased by the virtual absence of that persistent desire and protean use for beads—or beadsense—so prominent among most primitive tribes.

FIG. 8.—Seed necklace.

Fig. 10.—Nut pendants.

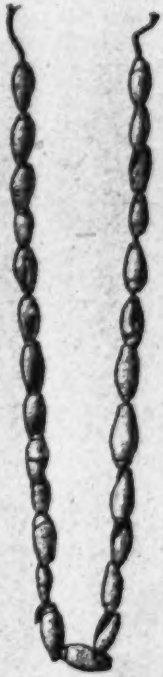

FIG. 11.—Shell beads.

FIG. 12.—Wooden beads.

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Naturally the conditions at Costa Rica were unfavorable to the study of native ideas concerning apparel. The women and some of the children were arrayed chiefly in cast-off habiliments of the rancheras or in nondescript rags, while the men either aped Mexican fashions, like Maahém, or shamefacedly sweltered under the unaccustomed burden of tatterdemalion gear; yet there was a meaningful absence of that desire for finery so prominent among primitive peoples—a fact quite as eloquent in itself as the absence of bracelets and bangles, tassels and trappings. It is probable that the shamans and mystery-bedged crones in the depths of Seriland enhance their influence by the aid of symbolic paraphernalia (indeed, some inkling of such customs is found in the meager records of earlier visitors);[1] yet the conspicuous feature of Seri costumery is the dearth of decorative devices.

FIG. 13—Necklace of wooden beads.

The habitations of the tribe are the simplest of jacales—mere bowers, affording partial protection from sun and wind, but not designed to shed rain or bar cold. Half a dozen of these were examined at Costa Rica in 1894 and probably a hundred more, in various stages of habitability, in Seriland proper in 1895, yet not the slightest trace of decoration was observed—the structures are plainly and barrenly utilitarian in every feature. The same may be said of the balsas in which the Seri navigate their stormy waters; for the peculiarly graceful curves of the craft evidently stand for nothing more than the mechanical solution of a complex problem in balanced forces, wrought out through the experience of generations, while the simple reed bundles are absolutely devoid of paint, of superfluous cord, of fetishistic appendages or markings, of tritons, nereids, or other votive symbols at bow or stern, and of industrially superfluous features or attachments in general—indeed, the only appendages discovered were one or two simple wooden marlinspikes (shown in figure 26), thrust among the reeds to be at hand in case of need for repairs.

Among the utensils employed in the primitive householdry of the Seri the most conspicuous and at the same time the most essential is the olla, or water-jar. Its technical features are described elsewhere; but it may here be noted that the olla is the central artifact about which the very

[1] Hardy noted the use of "a small leathern bag, painted and otherwise ornamented", as a medicine rattle (Travels, p. 282), and also described a wind-symbol and an effigy used for thaumaturgic purposes (ibid., pp. 284, 286).

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mouly the carapace and the longer bones from the flippers of the larger specimens are preserved entire for other uses, and are cleaned only by teeth and talons and tongues, aided by time but not by fire; but the plastron, unless broken up and consumed immediately, is subjected to a cooking process in which it serves at once as skillet and outlet—it is laid on the fire, flesh side up, and at intervals the shriveling tissues are clawed off and devoured, while at last the scorched or charred scutes themselves are carried away to be eaten at leisure.[1]

Perhaps the most significant fact connected with the Seri turtle-fishing is the excellent adaptation of means to ends. The graceful and effective balsa is in large measure an appurtenance of the industry; the harpoon is hardly heavier and is much simpler than a trout-fishing tackle, yet serves for the certain capture of a 200-pound turtle; and the art of fishing for a quarry so shy and elusive that Caucasians may spend weeks on the shores without seeing a specimen is reduced to a perfection even transcending that of such artifacts as the light harpoon and fragile olla. Hardly less significant is the nonuse of that nearly universal implement, the knife, in every stage of the taking and consumption of the characteristic tribal prey; for it may fairly be inferred that the comparative inutility of the knife in dissevering the hard and horny chelonian derm, and the comparative effectiveness of the shell-breaking and bone-crushing hupf, have reacted cumulatively on the instincts of the tribe to retard the adoption of cutting devices. Of much significance, too, is the limited cooking process; for the habitual consumption of raw flesh betokens a fireless ancestry at no remote stage, while the crude cooking of (and in) that portion of the shell not consecrated to other uses might well form the germ of broiling or boiling on the one hand and of culinary utensils on the other hand. On the whole, the Seri turtle industry indicates a delicate adjustment of both vital and activital processes to a distinctive environment, in which the abundant chelonian fauna ranks as a prime factor.

Analogy with other primitive peoples would indicate that the flesh of the turtle is probably tabu to the Turtle clan, that the consumption of the quarry is preceded by an oblation, and that there are seasonal or other ceremonial rites connected with turtle-fishing; but no information has been obtained on any of these points save a few vague and unwilling suggestions from Mashém tending to establish the analogy.

Flotsam and stolen metal have played a rôle in the industries of Seriland so long that it is difficult to learn much of the turtle-fishing

[1] These details were furnished largely by Mashem and Señor Encinas, but were verified in essentials by personal observation of dietetic customs at Costa Rica in 1894; and they were corroborated by observations on both shores of El Infiernillo and Bahía Kunkaak in 1895. Especially significant were the remnants of a turtle feast on the southern beach of Punta Miguel interrupted by the approach of the exploring party. The indications were clear that the turtle had been landed and largely consumed before the fire was kindled, and that the cooking of the firmer portions had hardly been commenced before the camp was abandoned so hurriedly that not only the nearly eaten turtle and the glowing embers, but the harpoon (the specimen illustrated in figure 20), the still bloody and greasy hupf (that represented in plate LIV), and the fire-sticks were left behind. Gnawed fragments of charred plastrons are common relics about hastily abandoned camps generally.

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during prenatal times; but an intimation from Mashém that the old men thought it much better to take the turtle with the teeth of an "animal that goes in the water", and the similarity in terms for "harpoon" (or arrow) and "teeth" both suggest that the aboriginal point may have been a sea-lion tooth, and that the foreshaft itself may have been a larger tooth of seal or cetacean. While the modern harpoon is shaped with the aid of metal (hoop-iron, etc.), the forms are quite evidently vestigial of knifeless manufacture, in which a naturally rounded or abraded or fire-shaped foreshaft was fitted into the natural socket afforded by a cane-stalk broken at its weakest point—i. e., just below the joint; and both function and socket arrangement (as well as the linguistic evidence) strongly suggest the cylindrical tooth as the germ of the apparatus.

It is probable that water-fowl, considered collectively, stand second in importance as Seri prey; and the foremost fowl is undoubtedly the pelican, which serves not only as a fruitful food-supply but as the chief source of apparel.

The principal haunt and only known breeding ground of the pelican in the Gulf of California is Isla Tasane, an integral part of Seriland; and while the great birds are doubtless taken occasionally in Bahia Kunkaak, El Infiernillo, Bahia Tepoka, and other Seri waters, this island is the principal pelican hunting ground. According to Mashém's account, the chase of the pelican here is a well-organized collective process: at certain seasons, or at least at times deemed propitious by the shamans, pelican harvests are planned; and after some days of preparation a large party assemble at a certain convenient point (presumably Punta Antigualla) and await a still evening in the dark of the moon. When all conditions are favorable they set out for the island at late twilight, in order that it may be reached after dark; on approaching the shore the balsas are left in charge of the women, while the warriors and the larger boys, armed only with clubs, rush on the roosting fowls and slaughter them in great numbers—the favorite coup de grâce being a blow on the neck. The butchery is followed by a gluttonous feast, in which the half-famished families gorge the tenderer parts in the darkness, and noisily carouse in the carnage until overcome by slumber. Next day the matrons select the carcasses of least injured plumage and carefully remove the skins, the requisite incisions being made either with the edge of a shell-cup or with a sharp sliver of cane-stalk taken from an injured arrow or a broken balsa-cane. The feast holds for several days, or until the last bones are picked and the whole party sated, when the clans scatter at will, laden with skins and lethargic from the fortnight's food with which each maw is crammed.

Mashém's recital gave no indication as to whether the Pelican clan participate in the hunting orgies, though it clearly implies that the chase and feast are at least measurably ceremonial in character; and this implication was strengthened by the interest and comparative

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strong wrench on the horns or stunned with a blow of war-club or hupf, as conditions may demand. Straggling swine and wandering dogs are occasionally ambushed or stalked and transfixed with arrows, torn hurriedly into fragments, or shouldered and carried off struggling, as exigency may require; while sheep and goats are practically barred from the entire Seri frontier because of their utter helplessness in the face of so hardy huntsmen.

The quantity of stock consumed by the Seri varies greatly with the policy of rancheros and vaqueros. At different times during the last two and a half centuries it has been estimated that the chief portion of the subsistence of the tribe was derived from stolen stock, and it is probable that during the early period of the Encinas régime this

FIG. 23—Desiccated pork.

estimate was fair; but under the Draconian rule of a Seri head for each head of slaughtered stock, the consumption is reduced to a few dozen head annually, including superannuated, crippled, and diseased animals unable to keep up with the herds, those bogged in Playa Noriega and other basins during freshets, the stallions and bulls slain in strife for leadership of their bands, and the festering or semimummied carcasses gladly turned over by idle rancheros on the chance visits of Seri bands to the frontier (such as the specimen in the photograph reproduced in figure 23).

No special devices have been developed in connection with the chase for stock, nor has material progress been made in acquiring Caucasian devices. There are, indeed, indications of a disposition to use

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177 224 knives in severing the tough integuments and tendons of horses and kine, although the tendency has not yet resulted (as elsewhere noted, ante, pp. 153–154) in the development of a knife-sense; and although boys on the frontier play at roping dogs, no effort to use the riata or any form of rope is made in the actual chase. As naively explained by Maahém amid approving grunts from his clan-mates, they have no time for ropes or knives when hungry.

262 A quantitatively unimportant yet by no means negligible fraction of the normal diet of Seriland is vegetal; and while the sources of vegetal food are many and diverse, the chief constituent is a single product characteristic of American deserts, viz, the tuna; or prickly pear.

222 All of the cacti of the region yield tunas in considerable quantity. The pitahaya is perhaps the most abundant producer, and its name is often given to the fruit; the huge saguaro affords an enormous annual yield, and the still more gigantic saguesa is even more prolific, especially in its immense forests along the eastern base of Sierra Seri; the cina adds materially to the aggregate product, while the nopal, or common prickly pear, contributes a quota acquiring importance from the facility with which it may be harvested. The fruits of all these cacti are sometimes classed as sweet tunas, in contradistinction from the sour tunas yielded in great abundance by the cholla and consumed with avidity by stock, though seldom eaten by men. The edible tunas average about the size of lemons, and resemble figs save that their skin is beset with prickles. The portion eaten is a luscious pulp, filled with minute seeds like those of the fig save that they are too hard for mastication or digestion, its flavor ranging from the sickly sweet of the overcultivated fig to a pleasant acidity. While occasional tunas may be found at any time during the year, the normal harvest occurs about midsummer, or shortly before the July-August humid season, and lasts for several weeks. During the height of the season the clans withdraw from the coast and give undivided attention to the collection and consumption of the fruits, gorging them in such quantities that, according to the testimony of the vaqueros, they are fattened beyond recognition. Commonly the tunas are eaten just as they are gathered, and the families and larger bands move about from pitahaya to pitahaya and from valley to valley in a slovenly chase of this natural harvest, until waning supply and cloying appetite drive them back to the severer chase of turtle and pelican. The fruit is not cooked, and never preserved save in the noisome way of nature, and is rarely transported in quantities or over distances of industrial importance; yet the product may have some connection with the basketry of the tribe. The devices for collecting the fruits, especially from the lofty saguaro and saguesa, are mere improvisations of harpoon shafts, paloblanco branches, or chance cane-stalks carried primarily for arrow-making or balsa construction. [412]

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ary sense-effects (as when the sense of smell is intensified by exercise of the organs of taste), or, in another direction, by the habit of the youthful penman who shapes his letters by aid of lingual and facial contortion; yet it is a characteristic of primitive life—one doubtless due to the interrelations of psycho-physical functions—to not only employ but to greatly exalt vocal formulas associated with manual activities, so that words, and eventually *the* Word, acquires a mystical or talismanic or sacred significance pervading all lower culture—indeed the savage shaman is unable to work his marvels without mumbled incantations ending in some formulated and well-understood utterance, and his practice persists in the meaningless mummery and culminating "presto" of modern jugglery. So, viewed in the light of psycho-physical causes and prevalent customs connected with vocal formulas, it would seem probable that the conventional features of the Seri jacales are crystallized in the tribal lore quite as effectually through the associated work-chants as through direct memory of the forms and structures themselves. And the simple runes chanted in unison by Seri matrons engaged in bending and lashing their okatilla house-bows apparently define a nascent stage in the development of the elaborate fiducial house-building ceremonies characteristic of various higher tribes; for the spontaneous vocal accompaniment tends naturally to run into ritual under that law of the development of myth or fable which explains so many of the customs and notions of primitive peoples.[1]

APPARELING

Slightly as they have been affected by three centuries of sporadic contact with higher culture, the Seri reveal many marks of acculturation; and the most conspicuous of these are connected with clothing, especially on the frontier, where women and even warriors habitually wear a livery of subserviency in the form of cast-off Caucasian rags (as illustrated in most of the photographs taken at Costa Rica). Even in the depths of Seriland the native fabrics are largely replaced by white men's stuffs, obtained by barter, beggary, and robbery; yet it is easy to distinguish the harlequin veneer of borrowed trappings from the few fixed types of covering that seem characteristic.

The most distinctive piece of apparel is a kilt, extending from waist to knees, worn alike by men and women and the larger children. Aboriginally it was either a birdskin robe or a rectangle of coarse textile fabric, secured at the waist by a hair-cord belt; acculturally it is usually a rectangle of manta (course sheeting) or other stuff, preferably cotton or linen but sometimes woolen, fastened either by tucking in the corners or by a belt of cord. Good specimens of the acultural cloth kilt worn by men and larger boys are illustrated in plates XVI

[1] The law of fable in its relation to primitive surgery is formulated in the Sixteenth Ann. Rep. Bur. Am. Eth., 1897, p. 22.

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and XIX; the birdskin kilt (put on for the purpose) is illustrated in plate XVIII, while the aboriginal fabric is fairly represented in plate XXIX. Although ordinarily worn as a kilt, the same article (temporarily replaced by an improvised substitute) serves other purposes at the convenience of the wearer; in the chase for tunas and for moving game it becomes a bag or pack-sheet; in case of cold rain it is shifted to the shoulders or the exposed side; during the siesta it is elevated on a shrub and a stick to serve as a canopy; at sleeping time generally it forms (especially when of birdskin) a bed, i. e., a combined mattress and coverlet; and in attack or defense the pelican skin is at once standard, buckler, and waving cape to confuse quarry or enemy after the manner of the toreador's cloak. 291 [177] [482] [513]

An almost equally distinctive garment is a short shirt or wammus, with long sleeves, worn by men and women but not by children; ordinarily it covers the thorax, missing connection with the kilt by a few inches, and so affording ventilation and space for suckling the teeming offspring. Unlike the kilt, it is an actual garment, fitted with sleeves and fastened in front with hair-cord strings. Although the Seri wammus corresponds fairly with a Yaqui garment, it seems practically certain that it is of local aboriginal design, and that it was made primitively of haircloth or native textiles (as illustrated in plate XXIX) and worn rather ceremoniously; but latterly it is made of manta and is worn habitually (at least by the women and on the frontier), though cast aside in preparation for any special task or effort—i. e., it is not connected with pudency-sense, save to a slight degree in the younger women. The form, function, and prevalence of the wammus are illustrated by the group shown in plate XIII, in which nearly all of the thirty-odd adults wear the garment. [171] [177]

These two articles constitute the ordinary wearing apparel of the Seri, though they are commonly supplemented (especially when both are of manta) by a pelican-skin robe, which is habitually carried to serve as bed or mackintosh, according to the chance of journey and weather, or as a shield in sudden warfare. No head-covering is used, save in the ceremonial masquerade, when the heads of animals are worn as masks,[1] or in aping Caucasian customs, especially on expeditions for barter (as illustrated in plate XII). Loose trousers of Mexican pattern are sometimes put on at frontier points, but are discarded in Seriland proper, save by Mashém, who maintains prestige partly by this borrowed badge of Caucasian superiority. Leggings and moccasins are eschewed, naturally enough, since they would afford little protection from the sharp spalls and savage thorns of the district, and would give lodgment for the barbed spines inevitably gathered in rapid chase or flight over cactus-dotted stretches; and the only foot-covering seen (save Mashém's boots) was a single sandal made from the rough skin of a turtle-flipper, apparently for ceremonial rather than practical use. [177]

[1] Hardy (Travels, p. 78) describes the ceremonial wearing of the heads of deer with horns attached.

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291 [177] Of all the party at Costa Rica in 1894 subchief Mashém was the only one who wore Caucasian apparel with any air of comfort and fitness; yet even he, with hat and shirt, boots and breeches, and loose bandana about his neck in cowboy style (plate XVII), did not feel fully dressed without the slender hair-cord necklace of his kin in its wonted place. On the frontier improvised fig-leaves were sometimes put on the children of less than a dozen years (as illustrated by the standing infant shown in plate XIV, who was thus dressed hastily for her picture); and a common garb of the smaller children at Costa Rica, as they played about the rancheria or wandered in directions away from the white

[412] [854]

FIG. 29.—Seri hairbrush.

FIG. 30.—Seri cradle.

man's rancho, was limited to a cincture of hair cord or snake skin, or perhaps of agave fiber, under which an improvised kilt might be tucked on the Caucasian's approach.

281 513 In addition to the individual apparel, each clan, or at least the elder-woman or her fraternal executive, accumulates some surplus material as opportunity offers, and this serves as family bedding until occasion arises for converting it to other uses. Of late the prevailing materials are pelican skins, lightly dressed and joined into robes by sinew stitching; deerskins, dried or partially dressed; cormorant skins, treated like those of the pelican; seal skins, usually fragmentary; peccary skins,

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said discarded hupfs, a broken fictile figurine, etc), was the still ruder arrowpoint represented in figure 37*b* (both figures are natural size). The specimens are nearly identical in material—a jet-black slaty rock with a few lighter flecks interspersed, weathering gray on long exposure (as is shown by the partly natural surface of the larger point); similar rock abounds in several easterly spurs of Sierra Seri. The smaller specimen was evidently finished and used; its features indicate fairly skilful chipping, though its general form is crude—in addition to the asymmetric shouldering, the entire point is curved laterally in such manner as to interfere with accurate archery. The larger specimen is still more strongly curved laterally, and the chipping is childishly crude; while the rough surface, clumsy tang, and unfinished air indicate that it was never used even to the extent of shafting. It is possible that the specimens may have been imported by aliens, but the probabilities are strong that they were manufactured by the Seri. No other arrowpoints and no chips or spalls suggesting stone arrow-making were found in all Seriland, though the entire party of twelve were on constant lookout for them for a month. The natural inference from these facts is that the ancestral Seri, like their descendants, were not habitual stone arrow-makers.

There is a final category of Seri artifacts which would be classed as distinctive by Caucasians on the basis of material, though they are combined with the stone artifacts by the tribesmen; it comprises arrow-points of hoop-iron or other metal, harpoon-points of nails, spikes, or wire, awls of like materials, and other metallic adjuncts to ordinary implements. The use of iron is of course post-Columbian, and its ordinary sources are wreckage and stealage. The date of introduction is unknown, and probably goes back to the days of Cortés and Mendoza; certainly the value of metal was so well understood in 1709 that when Padre Salvatierra's bilander was beached in Seriland the tribesmen at once began to break her up for the nails (ante, page 67); yet the metal is wrought cold and only with hupf and abat like the local materials, and is habitually regarded and designated as a stone. By reason of the primitive methods of working, the metals are of course available only when in small pieces or slender shapes. There is a tradition among the vaqueros of the frontier that a quantity of hoop-iron designed for use in making casks was carried away from a rancheria in the vicinity of Bacanchito during a raid in the seventies, and that this stock has ever since served to supply the Seri with material for their arrowpoints; but it is probable that the chief supply is derived from the flotsam swept into the natural drift trap of Bahia Kunkaak by prevailing winds and tidal currents, and cast up on the long sandspit of Punta Tormenta after every storm. A surprising quantity and variety of wreckage was found on this point, and thence down the coast to Punta Narragansett, by the 1895 expedition: staves and heads of casks broken up after beaching, a telegraph pole crossbar which had evidently

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177 brought in a cargo of large wire, and a piece of door-frame with heavy
502 strap-iron hinges attached with screws, were among the troves of the tribesmen within a few weeks; and it was noted that while even the hinge screws and the tacks attaching tags to the cask-heads had been extracted by breaking up the wood, the roughly forged hinges of 2 by ½-inch wrought iron had been abandoned after a tentative battering with cobbles, and lay among the refuse stones about the jacales.

412 A rough census of the stone implements of Seriland is not without interest, even though it be no more than an approximation. Some 20 or 25 habitable and recently inhabited jacales were visited, with about twice as many more in various stages of ruin, fully two-thirds of these being on the island; and at least an equal number of camps or other houseless sites were noted. About these 150 jacales and sites there were, say, 50 ahsta, ranging from nearly natural bowlders to the comparatively well-wrought specimen illustrated in plate XXXIX, and an equal number of cobbles used interchangeably as ahsta and hupfs; there were also 200 or 300 pebbles bearing traces of use as hupfs, of which about a third were worn so decidedly as to attest repeated if not regular use; while no flaked or spalled implements were observed save the two doubtful examples illustrated in plates XLVII and L, and only two chipped arrowpoints. It may be assumed that the sites visited and the artifacts observed comprise from a tenth to a fifth of those of all Seriland, in addition to, say, 75 finished hupfs habitually carried by Seri matrons in their wanderings; and it may be assumed also that 50 or 100 metallic harpoon-points and several hundred hoop-iron arrowpoints are habitually carried by the warriors and their spouses.

[324] The most impressive fact brought out by this census is the practical absence of stone artifacts wrought by flaking or chipping in accordance with preconceived design; excepting the exceedingly rare arrow-points there are none of these. And the assemblage of wrought stones demonstrates not merely that the Seri are practically without flaked or chipped implements, but that they eschew and discard stones edged by fracture whether naturally or through accident of use.

Summarily, the Seri artifacts of inorganic material fall into three groups, viz: (I) The large and characteristic one comprising regularly-used hupfs and ahsta, with their little-used and discarded representatives; (II) the small and aberrant group represented by chipped arrow-points, and (III) the considerable group comprising the cold-wrought metal points for arrows and harpoons and awls—though it is to be remembered that the Seri themselves combine the second and third of these groups.

I. On reviewing the artifacts of the larger group it becomes clear (1) that they immediately reflect environment, in that they are characteristic natural objects of the territory; (2) that they come into use as implements through chance demands met by hasty selection from the

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

abundant material; (3) that the great majority of the objects so employed are discarded after a use or two; (4) that when the object proves especially serviceable, and other conditions favor, it is retained to meet later needs; (5) that the retained objects are gradually modified in form and surface by repeated use; (6) that if the modification diminishes the serviceability of the object in the notion of the user (e. g., by such fracture as to produce sharp edges), it is discarded; (7) that if the modification enhances the serviceability of the specimen in the mind of the user it is the more sedulously preserved; and (8) that through the instinctive desire for perservation, coupled with the thaumaturgic cast of primitive thinking, the object acquires at once an artificialized form and a fetichistic as well as a utilitarian function. The significant feature of the development is the total absence of foresight or design, save in so far as the concepts are fiducial rather than technical or directly industrial.

II. On reviewing the almost insignificantly small group of chipped stone artifacts, it seems clear that while the material is local the design is so incongruous with custom and characteristic thought as to raise the presumption that stone-chipping is an alien and imperfectly assimilated craft. The conspicuous and significant feature of the chipped stone artifact is the shapement in accordance with preconceived design.

III. On reviewing the arbitrarily separated group of metallic artifacts it is found clear (1) that the material is foreign; (2) that it is avidly sought and sedulously saved and utilized; (3) that it is wrought only by the crude methods used for fashioning the most primitive of implements and tools; and (4) that it is used chiefly as a substitute for organic substances employed in symbolic imitation of the natural organs and functions of animals. The significant features of the use of iron artifacts are (*a*) the absence of either alien or specialized designs, and (*b*) the mimicry of bestial characters as conceived in primitive philosophy.

Classed by material and motive jointly, the three groups are diverse in important respects: The first is local in material, local in motive; the second is local in material, foreign in design; the third is foreign in material, local in motive.

On recapitulating the several phases of Seri handicraft, the devices are found to fall into genetic classes of such sort as to illumine certain notable stages of primitive technic.

The initial class comprises teeth, beaks and mandibles, claws, hoofs, and horns, used in imitation or symbolic mimicry of either actual or imputed function of animals, chiefly those to which the organs pertain, together with vegetal spines and stalks or splints, used similarly under the zootheistic imputation of animal powers to plants; also carapaces and pelts, used as shields combining actual and symbolic protective functions. While this class of devices is well displayed by the Seri, it is by no means peculiar to them; clear vestiges of the devices have

1; McGee E-5 (1894-1895)1898 NU31 Seri NU31

is an infallible remedy. On the whole it seems probable that the yerba mala (*Sebastiana bilocularis?*), or yerba de flécha, or mago, or magot, yielded or formed the standard arrow-poison of the Opata and perhaps of other Indians, and that the ill-repute of the shrub survived and spread throughout Mexicanized Sonora in such frequent repetition and common belief as to affect the ideas of residents and travelers alike; but it seems equally probable that the magic-inspired brew of the Seri is entirely distinct.[1]

As suggested by widespread primitive customs, and as illustrated specifically by the arrow-charming, the warfare of the Seri is largely sortilegic, this feature being but an extension and magnification of a corresponding feature of their hunting customs. The economic object of the chase is, of course, the flesh of the quarry; but the hunt normally begins with invocatory or other fiducial ceremonies, culminates in a feast opened with oblations, and ends in the use of horns or hoofs, teeth or bones, mane or tail, as talisman-trophies—primarily pledges of fealty to the favorable potencies, only secondarily symbols of success. The observances illumine the ever-present esoteric object of the chase, which is to gain the favor or overcome the power of the beast-god represented by the animal hunted; in general, this is sought to be effected through mimetic movements, or symbolic objects, associated with that animal-kind, and the retained charm-trophy is valued as a symbol of the placation or outwitting of a particular deity. Similarly, the Seri warrior strives for the supposed deific symbols of the enemy—the scalp or headdress or arrow of the alien tribesman, the fire-breathing and echo-waking (as well as death-dealing) wand of the Caucasian; and the Papago arrows, Yaqui scalps, and white man's firearms are sought avidly, treasured as fetishes, and often carried conspicuously as badges of borrowed prowess.[2] So the Seri are never without alien insignia in the form of weapons. The day before the 1895 expedition entered their stronghold, a band of warriors and women were frightened from a freshly slaughtered cow by a party of vaqueros so suddenly that their arms were left behind—and these

[1] It should be noted that the actuality of the poisonous property ascribed to the yerba mala is in some degree questionable; the plant is the only one of southern Papagueria yielding suitable material for arrow-shafts, and it is possible (if not probable) that it was consecrated to this purpose by the aboriginal Opata and protected by taboo in such wise as to become a sacred and fearsome thing. It is accordingly by no means improbable that the reputed poisonous property is but the product of generations of association, and that the plant is really harmless—an inference supported by experiments on the part of the leader of the 1895 expedition, who swallowed the juice of stem and leaves in two or three minute but increasing doses without perceptible effect. On the other hand, it should be observed that the region is one abounding in toxic juices, and that this shrub is so luxuriant and so free from thorny armament and other protective devices of a mechanical sort as to raise the presumption that it must be protected against herbivorous animals, at least, by chemical constituents of some kind (cf. ante, p. 35).

[2] These motives on the part of the Seri were misrepresented by their tribal comrades: a Papago fetish in the form of an Apache arrowpoint, long worn by an aged warrior as a protection from Apache arrows, was among the spoil of the 1894 expedition; and a "poisoned" Seri arrowhead and foreshaft, worn by a superannuated Papago "doctor" as a badge of invulnerability to similar missiles, was confidently shown to the 1895 expedition, but was held above price by its wearer—and this despite the fact that he had been christianized for decades, and retained no other pagan symbols.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

177 included a heavy Springfield "remodeled" rifle, lacking not only ammu-
411 nition but breechblock and firing pin; while Don Andrés Noriega, of
726 Costa Rica, and L. K. Thompson, of Hermosillo, described a rifle of modern make captured similarly two years before, which was in good working order and charged with a counterfeit cartridge ingeniously fashioned from raw buckskin in imitation of a center-fire brass shell and loaded with a polished stone bullet.[1] The finders opined that the rifles were carried to bluff the enemy, and even that the counterfeit cartridge was designed to do deadly execution; but it would better accord with Seri customs, and with the law of piratical acculturation which they typify,[2] to infer that the weapons were regarded rather as symbols of mystical potencies than as simple scarecrows. Of related import were two or three pseudomachetes made from rust-pitted cask hoops, reported by the majordomo and several vaqueros at Costa Rica; and of still greater significance was a machete picked up in a just-abandoned jacal by Don Ygnacio Lozania—veteran of the Andrade expedition and the Encinas conquest—which was laboriously rasped and scraped out of paloblanco wood, colored in imitation of iron blade and mahogany handle by means of face-paints, and even furnished with "eyes" replacing the handle-rivets, in the form of embedded iron scales. Some of the Seri are familiar with the normal use of firearms, as was demonstrated by the Robinson and other episodes, and many of them modernly make some use of machetes or other knives, as shown by various rudely whittled wooden artifacts; yet the burden of proof indicates that the chief use of the Caucasian's weapons in the heat of actual warfare is shamanistic and symbolic. This interpretation is, in fact, practically established by the experience of the frontier; for the vaqueros and local soldiery have little fear of the ill-understood firearms and clumsily handled machetes occasionally seen in Seri hands, though they dread unspeakably the necromantic arrows and flesh-rending teeth with which the agile foes are credited.

174 The mystical potency ascribed to Caucasian firearms and cutlery by
324 the zoomimic tribesmen is of interest as a reflection of motives and methods pervading the entire range of their activities; at the same time it suggests the genesis of the aberrant technolithic craft displayed in arrow-chipping. The information obtained from Mashém and his mates concerning chipped arrowpoints implied that the process was hieratic and little understood by the body of the tribe, its place in the tribal knowledge, indeed, being similar to that of the brewing of the arrow "poison", which is the special work of shamans; and this information, comporting as it does with the rarity of the chipped points and

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[1] The imitative skill of the Seri was illustrated at Costa Rica some years ago, when the petty accounts for labor, etc., were kept by means of tokens stamped from sheet brass. While a Seri rancheria was maintained near the ranchu, the storekeeper detected a number of counterfeits of his tokens, so well executed as to pass readily over the counter in ordinary exchange—and after extended detective work the counterfeiting was traced to the rancheria.

[2] American Anthropologist, vol. 11, August, 1898, pp. 313-315.

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000 and groups; the linguistic activities serve to extend social relations in space and time, and the sophic activities to integrate and perpetuate all relations; but it is through the industrial activities that human intelligence interacts with physical nature and makes conquest of the material world. Accordingly, industries act as a steady and never-ceasing stimulus to intelligence; accordingly, too, the industrial activities afford the simplest and surest measure of intellectual advancement.

Under this view of the place of industrial activities in human phylogeny, certain phases of Seri technology acquire importance and especial significance.

105 177 1. One of the most conspicuous features of Seri craft is its local character. The foodstuffs, the materials for apparelling and habitations, and the substances utilized in the several lines of simple handicraft are essentially local; moreover, the characteristic methods and devices evidently reflect local environmental conditions. There are, indeed, a few phenomena suggesting, and a still less number demonstrating, extraneous origin; the balsa and the kilt are sufficiently similar to devices of other districts to suggest, though not to prove, genetic identity (indeed, the sum of indications of local origin is much weightier than the several suggestions of extraneous derivation); the iron harpoon-points and arrow-tips are mainly of local flotsam, and are essentially provincial in modes of employment; the chipped stone arrow-tips, though local in material, are foreign in motive; but on summarizing the industrial phenomena, it would appear that by far the greater share are essentially local, while the few of exceptional (and extraneous) character can be pretty definitely traced to importation through the social interactions of recent centuries.

105 182 13 2. An equally conspicuous feature of the industrial craft of the Seri is the dominance of chance in both processes and devices. The traditional "fisherman's luck" is made exceptionally uncertain by the sudden gales and shifting currents of Seriland shores, while the absolute necessaries of life on land are still more capricious than those along-shore; this uncertainty of resources has profoundly affected the somatic features of the tribesman, as indicated elsewhere (ante, p. 159); and that the mental attributes of the folk are even more profoundly affected is attested by the rôle played by chance in the selection and shapement of the prevailing tools of stone and shell. The large rôle of chance in Seri life is also revealed, though less directly, in the overweening [771] mysticism of zoötheistic faith, with its material reflection in zoömimic craft.

3. When the local and fortuitous features of the Seri industries are juxtaposed they are found to express a notably inchoate or primitive stage of industrial development. In both the local and the fortuitous or accidental aspects, the activities are so closely adjusted to the immediate environment as to approach the instinctive agencies and movements of bestial life, and correspondingly to diverge from the composite

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

and cosmopolite characters of higher humanity; the dearth of extraneous devices denotes absence or intolerance of that acultural interchange accompanying and marking the progress of peoples; and the dearth of inventions denotes feebleness of creative faculty and absence of that self-confidence which accompanies and measures progress in nature-conquest. 105 13 182 [177]

4. When the local and fortuitous features of the Seri craft are viewed in their serial or sequential relations, they are found to reflect and attest autochthonal development. Excepting the few acultural processes and devices whose acquisition may confidently be traced to certain social interactions of the historic period, the Seri technic is too closely tied to local environment to warrant any supposition of importation from other districts. The question of the birthplace of the people may be left open in this case as in every other; but the birthplace of practically all those activities and activital products which define the folk as human was manifestly Seriland itself—so that the tribe, considered as a human folk rather than as a zoic variety, must be classed as autochthonous. 105 177

Summarily, then, the Seri industries are significant as (1) local, (2) fortuitous, (3) primitive, and (4) autochthonous; and these features combine to illumine a noteworthy stage in primitive thought. 105

5. On juxtaposing these significant features of Seri technic, they are found to reflect the tribal mind with noteworthy fidelity, and hence to indicate the sources of Seri mentations, and of the local culture in which these mentations are integrated. The local foodstuffs—especially that vital standard of values in arid regions, water—are periodic sources of the strongest aspirations and inspirations of industrial life, and the methods and devices for food-getting are but the legitimate offspring of the inevitable relation between effort and environment; the conspicuous rôle of chance is but the composite of the hard and capricious environment on the one hand, and of the lowly thought reflecting that environment on the other hand; the zoic faith into which the magma of recurrent chance has semicrystallized finds carnate symbols either in local beasts or in fantastic monsters suggested by those beasts; even the mating instinct, second only to thirst among the impelling action-factors of the folk, is so profoundly and bitterly provincial as to exclude foreign ideals to a degree unparalleled among known peoples. The industrial materials are local—but not more local than the thoughts in which they are reflected; the technical methods are unmistakably the offspring of the environment—but they are equally the offspring of minds reflecting that environment and no other; the few and simple devices stand for integrations of experiences, instinctive rather than ratiocinative, the germ of invention rather than even its opening bud—but the experiences bear the marks of that environment and no other. Accordingly, the mental side of Seri industry, and, indeed, of all Seri life, appears to be the counterpart of the physical side. 13 181 182

2: Kroeber E-5 (1930) 1931 NU31 Seri NU31

[p.3]

THE SERI

By A. L. Kroeber, *University of California*

Introduction

The present paper is the first product of field studies made between January and March, 1930, in Arizona, Sonora, and Sinaloa, under a joint expedition of the Southwest Museum, Los Angeles, and the University of California. The financial contribution of the University was the gift of Mrs. Ethel W. Crocker. While the purpose of the trip was to define rather than solve problems, the following pages contain part of the positive observations obtained.

The Seri, who live on Tiburon Island, Sonora, in the Gulf of California, are often considered the wildest and most primitive tribe surviving in North America. They owe this repute partly to McGee's monograph about them, in the Seventeenth Annual Report of the Bureau of American Ethnology. It is easy to read between the lines of this description that McGee leaned toward a romantic and imaginative interpretation of the Seri. Also, his actual contacts with the people themselves were brief, and hampered by imperfect communication. Moreover, the Seri have been for three hundred years in contact with Spaniards and Mexicans, part of the time even under direct mission control. It therefore seems doubtful whether their backwardness could be the result wholly of preserved primitiveness, and may not rather be attributable to a recalcitrant degeneration. In order to answer this question, and to place Seri culture at least tentatively among the other tribal cultures of the Southwest instead of leaving it as an unexplained and lurid abnormality, a brief visit to them was undertaken.

The success of this visit was due wholly to Sr. Roberto Thomson of Hermosillo and Rancho San Rafael, who is now the Mexican Government's *Jefe de Vigilancia* for the Seris, and in effect what in the United States would be known as Indian Agent for the tribe. He has protected and befriended them, kept them in turn in bounds, and secured some governmental assistance for them, under which they are making a beginning of adaptation to the modern world. At any rate, the mutual raidings and killings have stopped, and the Seri, though still very suspicious of most of the neighboring settlers and of strangers, look upon Sr. Thomson as their protector and friend. Without his introduction and experience, many less data could have been collected in a longer stay.

The Seri now live wholly on Tiburon Island. I was with them six days, half of them on the island. This is about as long a time as McGee spent with them—all of it at the cattle ranch of Costa Rica. McGee also explored the island and its camps at some length, but without encountering any Seri, who eluded his party.

Inasmuch as Mr. Edward H. Davis of Mesa Grande, California, has three times visited Tiburon to form an ethnological collection for the Museum of the American Indian, Heye Foundation, I attempted no examination of Seri material or economic culture, which Mr.

3:Davis & Dawson 2-8 (1933-1960) 1945
MU31 Seri MU31

THE SAVAGE SERIS OF SONORA—II*

By EDWARD H. DAVIS AND R. YALE DAWSON

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After the Seris' first contact with the invading white man through Coronado's soldiers in 1540, they lived for nearly another century outside the influence of the civilization that was eventually to engulf them. By the early 17th century, however, pearls were discovered in the Gulf and the sailing ships that began to ply the waters introduced the first great innovation into Seri culture. The Indians found on their beaches boards from these ships and, most important, flotsam hoop-iron and nails. One of the great difficulties in constructing arrows and harpoons had been the fashioning of the point. The stone, tooth, or bone points were difficult to make and more difficult to attach securely to the shaft. The more easily worked iron proved a boon to their hunting and fishing, and later made a more satisfactory weapon of war than they had hitherto possessed.

000 The beginning of Seri wars was the year

* Continued from page 202 of preceding issue.

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648 726 on the settlements of Sonora. Many expeditions, fitted out at great expense, were sent against them, but in that barren land, destitute of water, the military parties suffered greatly in their campaigns, and succeeded little in their efforts to conquer the wary natives.

177 648 By 1850 probably every Seri between infancy and decrepitude had seen the proprietor and other inhabitants of the rancho of Don Pascual Encinas at Costa Rica where the Seris were abnormally tolerated and even encouraged to make themselves useful and unobjectionable. They yielded to indolent scavengering more than ever before; they substituted cast-off rags and barter-bought cotton cloth for their pelican robes and other primitive garments. They ate cooked food when it fell their way; half heartedly they adopted metal cutting implements and sought or stole nails and hoop-iron for arrow [191] points. Some acquired a smattering of Spanish and many came to sport Spanish names. Never, however, did more than one or two Seris come to live in a house, nor even to encompass the idea of making adobe. They had not learned to ride horses nor to burden them, but only to use them for immediate slaughter and consumption. They were acquainted with firearms, but it was not until years later that they learned to use them. In and about Rancho Costa Rica the Seris and the Mexicans lived for a time in mutual tolerance, certain depredations being allowed the Indians just as were the rodents of the rancheria.

648 721 When, in 1855, Don Pascual Encinas experienced the loss of unusually large numbers of stock from Seri raids, he was aroused into announcing that a Seri head would be taken for each head of stock stolen. For a while the Indians seemed to acquiesce, but within a few days a group of Seri women "milled" a band of horses, caught and threw one so that its neck was broken, whereupon [252] they immediately sucked its blood, gorged on its intestines, and buried its quarters to "ripen" according to their custom. The vaqueros of the settlement were instructed to shoot the first Seri seen on the llano. Within two days the tribe was on the war-path and the war raged for a decade.

[p.262(B)]

825 ascribed to whales. Some of the birds are supposed to be migratory, but the direction of their migration is a mystery to the Seris. The swallows "pass in great numbers" but that is all that was known about them. The ducks winter on Isla Patos and then depart for the north in the spring without ever laying any eggs. Hence, their eggs were totally unknown to the informants. Egrets are said to remain in Estero Sargento for the winter.

Sometimes seasonal differences in the appearance of an animal were noted; for example, the loss of horns by the male mule deer during the winter. Seasonal differences are more sharply impressed upon the Seris than on either the Cora or the Sumu. This is not surprising because seasonal changes in Sonora are more contrasting than in either Nayarit or Nicaragua.

Age

The Seris find this feature of animal life the most difficult to ascertain. Hardly any responses were given that could be correlated with the actual length of life. Most replies were standardized according to the individual notions of the informant, such as "4 or 5 years", "about 6 months", and so on. In general, the larger the animal the greater the longevity attributed to it. In many cases it has been suggested that "perhaps the animal dies with the beginning of the cold season". This was frequently said especially in regard to reptiles. There is very little understanding of reptile hibernation through the winter.

Transformation and Immature Stages

No generalized idea of the transformation or metamorphosis of one kind of animal into another has been discovered, with the exception of two instances among the insects. Maggots are correctly associated with flies, but this is not surprising in an encampment where untold millions of them infest offal and other remains. It is also possible that this idea came to the Seris by way of [77] the more sophisticated Mexicans. A hawk moth larva, found in great numbers on the jimson weed, was said to turn into a butterfly within 10 to 20 days if it rained, but if the rains failed, it would continue in its larval stage. These two unconnected cases represent the total knowledge of insect metamorphosis discovered in the course of my field work.

In other animals, the immature individuals are always described as being similar to the adults except for their smaller size. In addition to this, the young of several of the birds were supposed to have differently colored plumage.

Nocturnal and Diurnal Variation

As expected, there is very little knowledge of the activity of fishes, but there is a great deal of accurate knowledge of these phenomena for the mammals, many birds and reptiles. By way of illustration, rattlesnakes and most other snakes are reported as coming out at night and resting in the ground during the day, whereas the opposite is noted for the lizards. They are most active in the brilliant sunshine and go into hiding at night. For many mammals, decreased activity was noted during the day. Peccary, coyote, deer and cottontail were some of the mammals listed.

Class	Species Reported	Species Exploited	Percentages
Mammals	21	9	43
Birds	28	6	21
Reptiles and Amphibians	25	11	44
Fish	43	23	53
Molluscs	36	21	58
Crustaceans	10	2	20
Total:	160	72	45

These figures show clearly the dependence of the Seris on marine life for a major source of their diet. Today, pinta, baya, cabon and sardineta are their primary source of income with meat and sea-turtles ranking second in importance. Several species of clams, limpets and gastropods supplement this diet.

All other animals represent only incidental additions to the menu. During the last war, sharks and mantas were hunted extensively for their liver, then a source of vitamin D. But since the war, the demand for shark liver has declined and because of this, a considerable income for the Seris has been lost. Shark and manta fishing have been abandoned for these fish were taken only for the commercially profitable liver and not for their flesh.

Fishing and Hunting

Seri fishing techniques are simple. In the past they used double-pronged spears and for the larger fish, harpoons. Today the spears are employed chiefly in fishing while the harpoons are reserved exclusively for sea-turtles. Hook and line fishing was introduced after 1930, as Kroeber (1931) saw none during his visit to Kino in 1930, and it is now the standard method of fishing. An abortive and unsuccessful attempt was made several years ago with net fishing. Another change has occurred within the past fifty years. The old balsas have been replaced by flat-bottomed plank boats outfitted with five-horsepower motors or sails. These motors, incidentally, are leased from the Mexican fish traders because none of the Seris are rich enough to own one.

Bait is obtained by dynamiting schools of small fish in coastal waters or by collecting them at low tide in the tidal pools and from under rocks. Fishing usually begins at dawn and lasts until noon when, as a rule, all of the "pangas", as the boats are called, return to Desemboque. In stormy weather no fishing expeditions are made and when this occurs, starvation becomes a real menace. Harpooning of sea-turtles takes place far out in the Gulf. It is done only at night in exceptionally calm weather by the light of torches or Coleman lanterns.

Hunting as it is done today has changed from the time of McGee's visit in 1894-95. The bow and arrow has disappeared completely except for a crude and diminutive form used as a toy by small boys. Iron spears once used in shark and manta hunting are now carried primarily as a weapon against the numerous and much feared rattlesnakes. They are said to be used occasionally in the peccary hunt. Old .22s or 30/30 rifles are owned by several of the men, some of whom specialize in hunting.

825 other snakes are also viewed as venomous but are claimed to be of mild disposition and do not bite people.

Among the lizards, curiously, the one feared most is not the highly poisonous Gila Monster, but the harmless little gekko, Coelonyx variegatus sonorensis, which lives in fallen and dried-up saguaros. The informants could not even be induced to touch specimens killed in alcohol. It is believed [753] that this creature could kill humans either by contact or by allowing them to inhale its vapors which causes a fatal lung illness. This little lizard is reminiscent of the European salamander in some ways. The Mexicans call it ● [771] locally "salamanquesa", and attribute to it the same unpleasant traits which the Seris do. Since this little lizard does resemble the European salamander and the beliefs about it are quite similar to those in European folklore, it is possible that here is a case of a transfer of this folklore upon an animal of a different kind. These beliefs eventually perhaps diffused to the Seris.

A small desert night lizard, Xantusia vigilis, is also very much feared and is frequently confused with the gekko. It lives in an identical habitat. A toad, Bufo alvarius, is said to bite with its tongue and is supposed to be able to inject venom with it. Its blood and "milk" are also very toxic.

Several of the arthropods are believed to be dangerous. The Seris claim that the blood sucking cone-nosed beetle, Triatoma rubida, stings with its mouth parts and also causes an illness called ezxahil i ta hapxa, which can be fatal to children. This bug actually is a vector of the Chagas disease and its repeated bites may cause a sensitization to them. But in this case it is impossible to tell which is the situation without a clinical analysis. Scorpions, which sting with their tails, are considered to be very dangerous. The Black Widow spider, which is very numerous in the locality, is also viewed as very toxic and is said to be sometimes fatal, although a few days' illness is all that its bite usually causes. The tarantula spider also bites but its venom is never fatal. The Sun spiders, Solpugida, are venomous but their venom supposedly kills horses but not people. All of these spiders and their relatives, according to the informants, sting with the rear end of their body in wasp-like fashion. No medicant is applied on the bite, nature being allowed to take its own course in the recovery.

Concerning other animals, the sting rays are much feared because of the venom in their thorns and their ability to inflict a nasty wound. The bats, according to some informants, can cause disintegration of the body by spitting on it and they also have venom in their tongues, although this belief was not shared by one of the more sophisticated informants.

Only a few animals are considered to be dangerous to eat owing to their toxicity. The toad is one and a little fish, Rhoecredius atrilatus, is another. [762] Of this fish it is said that "one hundred years ago, a man ate one; he died", hence the avoidance. However, rattlesnakes are eaten with relish; only the head and the part of the body where venom is believed to be located being discarded.

771 The above discussion suggested some of the differences in the attitudes 825 toward animals between the Mexicans and the Seris. While the former fear many,

252 of nutritious material which was ground to powder on their stone ahsts, winnowed in shallow baskets and made into a meal or paste.

764 824 The abundant cacti of many species served several other functions in the domestic economy of the Seris. The thorny cholla whose insipid fruits were not fit to eat and whose spines were a constant threat to the unprotected bodies of the Seris, found one use, nevertheless, in the burial procedure. After a body was partly covered with earth in the three foot deep grave, it was densely overlaid with chollas before leveling, to discourage the coyotes from digging for the body.

396 824 The dry skeletons of the giant cacti provided the long, cylindrical poles used in knocking off ripe pitahayas as well as in all other instances in which a straight, slender pole was needed. Since the advent of the open boat in modern times, the cactus skeleton has come in for a new use, for after trituration between stone ahst and hupf, it was found to yield a satisfactory caulking compound when mixed with sea-lion oil.

312 824 The barrel cacti, *Ferocactus Wislizenii* and *F. Coulteri*, though ordinarily abundant on the Sonoran desert are rare in Seriland and practically absent from Isla Tiburon where they may easily have been exterminated by the improvident Seris during their centuries of occupancy on account of their recognized value as water providers on the wastelands over which the Seris so frequently ventured.

342 [132] 824 These Indians found housing no problem, for, living under a climate in which frost is rare and rain infrequent, they found little need for shelters except for protection against the blazing desert sun. Camps that were occupied for more than a day or two, however, usually saw the appearance of a group of crude sun shelters. These were usually made of long, flexible ocotillo branches, *Fouquieria splendens*, stuck in the sand and fashioned into an arched framework over which a more or less complete covering of brush was piled. If, by the sea, a windbreak were desired, the brush top and siding were usually augmented by the addition of several empty turtle shells.

262 824 On the delta plain of the Rio Sonora, the mesquite, *Prosopis juliflora*, grows in remarkable luxuriance, these gnarled, spiny trees forming an almost continuous open forest 20-40 feet high. Its fruit, consisting of small, hard beans borne in slender, woody pods forms a concentrated, starchy food that the Seris found highly nutritious if not appetizing. In late summer when all fresh vegetable food had withered and disappeared, provided the turtle fisheries had not yet attracted them back to their island, they often spent [252] some weeks gathering the beans and grinding them into a meal which was eaten as a watery atole or as a paste mixed with sea-lion oil. The more straggly and thorny cat's claw mesquite, *Acacia Greggii*, and the ironwood, *Olneya tesota*, also yielded woody beans in limited quantity.

[518] In the deeper gorges of the mountains the Seris found *Guaiacum Coulteri* yielding a berry of medicinal properties and also *Jacquinia pungens* which [534] produced a nut, edible when not quite ripe, and forming a favorite rattlebead when dry.

Along sandy washes, particularly on the lower flood plain of the llano grows a low, shrubby weed, *Hymenoclea monogyra*. Although during times of drought it shrinks to stunted tussocks, after periods of heavy rain its flourishing fens produce abundant seeds eaten both by the beasts of the plain and formerly by the Seris.

385 [771] Before the advent of the tin can and the cardboard carton, basketry was an important handicraft among these Indians.

[TEXT CONTINUES ON P. 138--ANALYST]

5:Dawson N-5 (1940) 1944 NU31 Seri NU31

an important handicraft among these Indians. They made a shallow, coil type basket such as is characteristic of many southwestern tribes. The Seri basket, however, was remarkable for its extreme lightness in proportion to capacity, a quality due to the spongy character of the coil made of a whisp of splints of the torote. Several torotes are found in the region, the commonest species being *Jatropha cardiophylla*. Also used were the torote amarillo, *Jatropha spatulata*, torote blanco, *Bursera microphylla*, and torote prieto, *Bursera laxiflora*. The woof consisted of splints of palo blanco, *Acacia Willardiana*, or of baraprieta, *Caesalpinia gracilis*, deftly interlaced by means of a bone awl to form a smooth, practically waterproof utensil.

In pre-Columbian times the Seris commonly sought wild game, mostly deer, without the aid of weapons, using only their tremendous physical endurance against their prey, chasing the animal until it was exhausted and could be thrown to the ground. With the introduction of iron, however, the development of the bow and arrow achieved prominence, for the shaping and fastening of points had long retarded the exploitation of these implements. Few straight stemmed or straight grained plants grow in Seriland suitable for making arrow shafts, but on the flanks of the deeper gorges of Sierra Seri and Sierra Kunkaak on Tiburon Island, the Indians found one leafy shrub that filled the need, *Sapium biloculare*. The juice of this plant is also said to have been used for arrow poison. The bow was preferably of palo blanco, wrapped and strung with mesquite fiber cord.

The modern Seri tribe consists of barely more than 100 souls, with early extinction threatening from imported diseases. Their natural habits are now vastly modified and they live a comparatively sedentary life near the village of Kino, scavengering for fish heads and other refuse discarded by the fishermen, now and then fishing for themselves when in need. Every year, however, they trek off to the cactus forest for the annual feast, and in late summer many may be seen camping among the mesquite groves near the Kino well where an abundance of both mesquite beans and water makes for easy living.

[89 cont.]

000 abundant flying and, especially, marine fauna.

For a modern technology, their region has great resources,
511 but for the culture of the Seri it is frankly inhospitable. The standard of living is exceedingly low, as is proclaimed by natives and foreigners and as is demonstrated by the illnesses and hunger that weaken the population.

[90] The Seri truly form part of our Western society, in
226 so far as they catch fish, with fishhooks and motorboats, to sell
439 in the markets of Hermosillo, Nogales, and Tucson, and they
● [177] obtain payments in national specie and coin. The part that
182 they form, however, has its own internal structure, which regulates the relations with the environment and among its mem-
[161] bers, even though a group of 218 persons, which suffers severe alterations in percentages from disasters like the sinking of a boat or strokes of good luck like the establishment of a prosperous fishing camp, is almost insignificant for the nation.

Most probably they have never been much more numerous, and they must not have had great cohesion in the past, a situation explicable in view of their nomadic gathering economy.
621 Toward the close of the 18th century they were divided into bands, of which it is known that the most important were the Guaymas, Upanguaymas, Tepocas, Tiburones, and Salineros.
[648] They banded together at various times in order to defend themselves and to attack the nuclei of Mexicans of the zone, achieving combined action, but without effective political unity.

At present they seem to form a single group without marked
619 subdivisions, although they recognize affiliations like that of "Tiburones," "half-Papago," etc., which appear to have little real classificatory significance.

There is great uniformity: they speak a single language
184 incomprehensible to the rest of humanity; they have a relatively
619 uniform culture, and there is tribal unification for matters involving sexual exchange.

The most obvious relations are spatial; they have important
361 settlements that sprung up around the fishing establishments and are more or less permanently occupied. Of these, "El Desemboque," close to the mouth of a river from which they have been displaced, is the most important, with 80 per cent of the Seri

In general, the Seris have a healthy appearance; the most frequent complaints are gastro-intestinal and visual defects due to avitaminosis. It is very possible that given the difficult living conditions resulting from the desert environment, a rigorous selective process among the newborn takes place so that only those who possess exceptional physical qualities survive. This explains why the majority of them retain the physical characteristics described by Hardy more than a century ago: "the Indians of Isla Tiburón are tall, healthy and well built". 164 147 142

In spite of attempts at education, the Seris do not practice the elemental rules of hygiene; their way of life, neglecting this aspect, contributes to increase the unhealthy foci which exist in the places where they have established themselves. 515 751

Dwellings.—The Seris retain many vestiges of their nomadic life, among them the hut which serves as their living quarters; many of them are simple provisional arrangements for sheltering themselves from wind and sun, and they bear no relationship to the stability and durability of our dwellings. The Seri hut was made to meet the necessities of a nomadic people who had no reason to spend much time nor work on making a dwelling which would only be used for a season (one, two or at the most three months). Nevertheless, some innovations have been introduced in the last 20 years, so that we must distinguish between two types of houses. The primitive model consists of a series of scrub pine arches interwoven with branches from the same shrub almost totally covered by foliage, tortoise shells, *zacate*, etc., with only a small hole in one of its ends as an entrance (this type of hut is the same that McGee saw in 1894 when the Seris still led a nomadic life). 342 [221] [177]

In the new model more resistent woods are used, like *sahueso*, *torote*, etc., and poles, between which is laid a layer mud. The house is rectangular, without windows; with only one entrance, but always larger than the entrance to the brush hut. Other models would have to be added to these two, due to the incorporation and utilization of tents made in the United States which some U. S. tourists or the Society of Friends have given them. The tent is used as permanent living quarters; or sometimes combined with branches to cover the primitive type huts. 342 178 [177]

Domestic Animals.—The Seris are very fond of domestic animals like the dog, cat, and finally, the chicken. For all practical purposes these animals live together with the family; they rest on the piles of rags and sand which serve the Indians as beds; lick the plates and cooking utensils; dirty the house; increase the household fauna with their fleas and other vermin thus contributing to create and unhealthy atmosphere in the home. 231 [136]

Problems of Intoxication.—Their dealings with the fish buyers, in whose stores are sold beer, mezcal and tequila, has turned them to the consumption of these drinks. The Seri drinks liquor in an uncontrolled 273 [275]

8: Ascher E-5 (1960) 1962 NU31 Seri NU31

Elsewhere (Ascher 1961) I have disputed this portrayal of the potential of existing ethnography, citing examples where qualitative and quantitative models have been constructed from ethnography and suggesting that one task for archeology is to codify the literature in a manner useful to itself. Regardless of doubts about existing ethnographies for archeological purposes, the worth of future ethnography for archeology will depend on the acquisition of the relevant kinds of information. Although discussion on the subject has been recorded (Tax *et al.* 1953: 229-232), no specific guides have been produced. This paper provides and discusses an example, which can be used as a paradigm, model, or guide of the kind of information to be collected from ongoing communities which would be of general value for archeology. The subject culture is that of the Seri Indians of Sonora, Mexico; the example describes a persistent trait complex associated with fishing for the Pacific green turtle, with particular emphasis on one trait in the complex, the harpoon foreshaft.

Example from the Seri Indians

The Seri, who numbered approximately 200 individuals in 1960, occupy a band of coastal desert about four miles wide and seventy miles long in the state of Sonora in western Mexico. The band extends along the Gulf of California from Kino Bay in the south to Desemboque in the north, opposite the largest island in the Gulf, Tiburon. Although the region is desert, with an estimated average rainfall of less than eight inches per year, falling mostly in July and August, it is comparatively rich in succulents and small land mammals. The Gulf forms a natural trap for large fish and marine mammals and is a breeding ground for the Pacific green turtle. The scantiness of fresh water has constituted, in the past and present alike, the single crucial limiting factor to agriculture and human occupancy.

In the past the Seri may have comprised from four to six tribal groups, and they were certainly numerically larger, with a maximum estimated population of 2,000 (Kroeber 1931: 53, 30). Until very recently they also occupied Tiburon Island, and at some more remote period they extended south, north, and east over a territory whose bounds are uncertain (Kroeber 1931: 5). On the basis of linguistic change, Kroeber (1931: 54) calculated that the Seri could have inhabited this general region for 1,000 years. It is uncertain whether the original occupation stemmed from Baja California via the Gulf of California or from the north and west via an overland route or routes (Kroeber 1931: 39-51). The first contact with Europeans occurred as early as 1540 (McGee 1898: 51).

In culture content the Seri are most closely affiliated with the Pima (Kroeber 1931: 51), but they do not share the practice of agriculture with them or with their western neighbors. The Seri are primarily fishermen; secondarily they gather the fruits of succulents; and to a still lesser extent they hunt game. McGee (1898: 214)

225 In fishing for turtle, one man stands at the bow of the boat, holding the mainshaft and extension cord in one hand. When he sights a turtle, he propels the mainshaft at the animal's carapace, retaining a firm grip on the mainshaft and the extension cord. If it is struck, the turtle lurches away, loosening the foreshaft and unplugging it from the mainshaft. Tired eventually by the tension [411] applied by the fisherman on the extension cord, the turtle is finally stunned by a wooden club and lifted into the boat.

225 There is evidence that the turtle-fishing complex has consider-175 able time depth and stability. The Seri were using similar apparatus and methods at least as early as 1825 (Hardy 1829: 296-297). At [501] this time they employed balsa boats rather than wooden boats with outboard motors and torches of cactus fibers instead of kerosene lamps. The complex continued, apparently with little change, through 1896 (McGee 1898: 187-193). Wooden boats and kerosene [177] lamps began to be adopted during the 1920s, and outboard motors were introduced in the 1940s.

411 During the entire period of 135 years (1825-1960), however, the harpoon tackle underwent only one important innovation. The 225 gasket on the foreshaft was introduced by a Seri Indian about the 176 year 1935. The addition of the gasket was related to, and coincided [439] in time with, the first attempts of the Seri to supply turtles to the commercial market. When they caught turtles solely for their own use, they did not need to keep the animals alive for very long, but when they began to sell them it became important to preserve them alive until they reached the market. The gasket acts like the hilt on a sword, preventing the entrance of the foreshaft hafting into the turtle's body. Through its contact with the carapace, it restricts the rotation of the point within the animal's body and provides a seal which inhibits the loss of blood, and thus prevents early death. After the turtle is stunned with a club and lifted into the boat, the foreshaft is removed and the hole which it made is stuffed with a piece of cloth.

124 Seri men were shown a harpoon foreshaft from a museum archive and asked what it was for and whether they themselves made similar 411 ones. If an informant acknowledged that he made them, he was asked, at the minimum, to detail the materials he used, the procedures he followed, and the approximate amount of time it would take him to produce one. Later he was requested to show the field worker examples of the foreshafts he had made. Of the approximately 40 adult Seri males, about 25 were available for questioning. Of these, approximately ten did not make foreshafts or had made them in the past but did so no longer; they were mainly older men and those [474] engaged in the administration of the Sociedad Cooperative de Pro-[887] duccion Pesquera Seri. Five men either would not or could not volunteer information. Data were obtained from the remaining ten adult men and from one eight-year-old boy; they include 21 foreshafts made by these eleven people.

411 The materials from which a foreshaft can be shaped and as-325 sembled vary within what is available in the Seri environment. Iron

262 178 I have no idea, of course, what the diet may have been in the past since only archaeology can suggest the answer. But I am sure that there has been much change in their diet since Kroeber saw them, not in the basic pattern but in the composition. With the introduction of hook and line [177] fishing, the percentages swung in favor of fish, [226] while decimation of the marine turtle cut down the importance of this animal. Simultaneously, 262 the Seris now have available manufactured or [177] imported Mexican food items: flour, sugar, rice, [439] potato (when no one is looking; potatoes are not supposed to be sold to them because they make *tepache* from them which makes them grossly fish in cans, coffee and tea. Dependence on the products of the desert has dwindled. Rattlesnakes, desert turtles and chuckawalla still find their way to the Seri kitchen but not too frequently. Pelican and sea gull will be eaten only when rough times beset them but are disdainfully refused at other times. My own estimates, impressions not supported by any attempt to measure their diet, are as follows:

fish	50+%
turtle	8
Mexican import	20
desert plant	7
desert land animals incl. stock	5
shellfish	10
total marine origin	68+
total desert origin	12
imported origin	20

224 178 [685] Another important change in the pattern is the unquestionable decrease of hunting (other than marine animals) in Seri life, as of the domestic stock stealing, the place of which has been taken in a way by the dependence on manufactured foods and items. Hunting nowadays is done rarely and only few individuals will devote some months out of the year to it. Stealing of domestic stock [685] has ceased for practical purposes, since in the past it lead to virtual extermination of these Indians. Occasionally the Seri kill off a semi-wild burro, herds of which run about loose in the desert or they'll get leavings off one, hunted down by a Mexican trader or fishermen.

411 224 [857] The Seris' basic tools of game procurement have changed. Bow and arrow were still much in evidence and in use in McGee's time but seem to have gone out soon after. Kroeber did not mention them and by now they are quite extinct, except as clumsy toys little boys use to play with. The throwing stick is still used on rabbits—any stick one can scrounge on a moment's notice will do for the purpose. If any traps or falls had been used we do not know of them. Accidental stones may be used much in the same way as throwing sticks. In general, various sorts of fire arms, mostly .22 and .38 [177] caliber are owned by a good many Seri men and have replaced other weapons in the terrestrial hunt.

226 411 177 More important are changes in the fishing procedures. Formerly spear and detachable harpoon were their only marine weapons. Even as late as 1930, during Kroeber's visit, the Seris made no use of hook and line. But now, hook and line of

[p. 7A]

[apparently a line of type has been omitted here-Analyst]

226 411 177 commercial origin are their main instruments of fishing. To this they added dynamite, sometimes with disastrous results to themselves, mostly as a way of securing bait. Single-pointed fish-spears which loomed so importantly in McGee's account have gone the way of the Dodo for its original purpose and transformed into iron bar lances, now used largely as weapons against rattlesnakes that men encounter in their desert roamings. However, in the forties, when the Seris spent a great deal of time getting sharks and huge rays, they killed them with these weapons.

226 411 What retain some importance are the harpoon and the two-pronged spear called "puiero." The two-pronged spear is one of their oldest weapons. The construction is much the same as when McGee visited them. The spear is used mainly to stab large-size fish, the giant *bais* or *mero* for example, after it has been brought up on the line. The [225] harpoon is now exclusively a weapon for the turtle hunt.

226 177 [157] An interesting fate met an effort to teach these Indians net fishing in 1947. They tried, ruined the nets and never took it up since. The instigators were Mexicans, the fish traders. I suspect that Seri individualism had a great deal to do with their lack of interest in net fishing which after all demands a certain amount of cooperation. With the hook and line fishing, men can have much more their own way.

501 177 648 An added "tool" of the Seris is the plank boat. The balsa which McGee still observed during his visit, had already vanished by the time Kroeber came to the Seriland and had been replaced by these boats. The boats are flat bottomed but good sized. The material was provided by the Mexican government. Boats are usually propelled by 5 hp. motors leased from the Mexicans (no Seri is rich enough to purchase [439] one) who also sell them gasoline and oil at exorbitant prices and in return buy Seris' catch of fish and sea turtle for low prices. At the time of my visits these amounted roughly to less than a peso [435] per kilo of the flayed, degutted and cleaned fish (less than 8 cents) with fluctuation up and down the scale depending on the kind of the fish, and to about 30-50 pesos for medium to large size "cahuama," the live marine turtle.

501 648 The Seri boats are also propelled by paddles and sail—this is always the case with the families who wish to stay away on Tiburon for some time. The Mexicans will not lease them their motors for such trips even if the Seri, some of them at least, have enough knowledge of the motors to repair minor stoppages—a demonstration of the fallacy [114] of McGee's idea that they are genetically unable to handle tools. In this respect, Kroeber's (1930: 25) estimate of them is closer to the truth.

462 Sexual division of labor in procuring food goes on, much the same as it had 70 and 30 years ago, with the sole exception of the imported goods. [439] Here purchases are made either by men or women or by children, depending on who at the time has the cash and what one wishes to buy.

Fishing is still done by men and so is hunting. Women still concentrate on gathering, whether of

[P.7B]

9:Malkin F-5 (1953-1955)1962 NU31 Seri NU31

III

MAMMALS

262 water for a week until it escaped. There was
[231] no intent to do away with it and serve it up for dinner later on.

The 3 species reported as eaten in the past are kangaroo rat, sea lion and the ringtail cat or
[252] cácomistle. Of these the little rodent had been supposedly "boiled in hot water with salt" which
[261] method of preparation may indicate that it happens quite recently yet. It is quite possible that in times of famine this animal is still used. The sea
[432] lion has been reported as "eaten once a long time ago. All of it. But not now. Its hide was once sold
[114] also but now it isn't used at all." This conflicts with McGee's statement (McGee, 189:202) that there was a taboo on eating sea lions among the Seris and there is no way to reconcile the information.

[114] McGee's report may be as truthful as are the uncertain and hazy comments of the present day Indians.

224 On the other hand, the cougar belongs to a very dubious category, unless we can rely on Miguel Barnett's memory. All 4 of the younger informants emphatically deny that the cougar has ever been hunted for meat. But Miguel Barnett claimed that this has been done in the past, although he could not tell how long ago. Kroeber says nothing about this animal and this makes it difficult to date the events. At the time of Kroeber's visit, Miguel was at least 25 years old and the cougar could have been hunted either
[262] then or earlier. But today the Seris do not eat the flesh of the big cat and their abhorrence of it has been confirmed by the Mexicans to whom I talked about the subject, and who relish cougars' meat. This apparent distaste for the *el tigre's* flesh may
[178] well be a recent development quite unconnected with the lack of weapons. McGee (1894: *loc. cit.*) casually mentions that the Seris hunt both cougars and the jaguars but cites no evidence for it. Yet
[411] in his time Seris' almost only weapons were the
[177] bow and arrow and a lance which today has been replaced by firearms. I am unable to explain this contradictory behaviour.

262 Finally, there is the Ringtail cat or cácomistle. Although this beast has been reported as part of the diet, the information isn't too reliable. I had
[124] no way of checking whether this was the animal the Indians had in mind. Their description of it seemed to answer some other unspecified animal and their answers were confused. The fact is that the Ringtail cat does occur in the Seri territory and they are surely familiar with it.

Of the remaining 11 species none were ever mentioned by any of the informants as having been ever eaten. Their denial of eating the coyotes were most vehement. Coyote figures out probably

[P.98]

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Age

*825 Some information concerning the hypothetical length of life of the mammals has been obtained for the majority of the species. The results show conclusively that the Seris have little knowledge of the subject and indeed no way to estimate what it is. In more than half of the species they simply didn't know what the answer was. In several others, their uncertainty was only too clear from the hesitant answers. I had an impression that here we deal mostly with guesswork, not based on any observation or even perhaps any forethought. Such replies as were given also varied greatly from species to species and also within the species depending on the particular informant. The mule deer may live then a year and a half or ten or fifteen years depending on the answers to the question; the peccary is said to live a year only, but the jaguar twelve and the whale and the dolphin, according to those at least who ventured to say something on the subject—25 years.

These answers at once show two things. First, there is little knowledge of the subject and second, there is a certain gradation of longevity proportional to the size of the animal. On the other hand, these answers are in no way correlated with the ecology and they can't be. The mammals are present throughout the year without regard to the seasonal changes, and with the exception of the bat, the whale and perhaps also the killer whale, they are not migratory.

Size and Weight

A contrast to the nebulousness of the Seri knowledge of the age of mammals is their responses to the questions of weight and size. They showed none of the hesitancy and indecisiveness. Some of the detailed differences concerning sexes (on this subject) have already been mentioned. As a matter of fact, the Seri gave readily exact figures for all but two species of mammals, the exceptions being the jaguar and the bat. Jaguars are so rarely seen by them that some of the informants had an exaggerated notion about the *el tigre* giving quite extra-ordinary figures for its size—quite certainly from hearsay. Of the remaining 19 species all but two were described in the figures both for the weight and for the size which are very close to the actual size or weight of the animal. The two exceptions are killer whale and grey whale. Here the informants guessed and in the case of the California grey whale gave the following figures: 35 meters long, four meters high and weight four tons. The size, of course, is very much more than the actual size, the weight quite a bit less—both obviously subject to guessing. But it is interesting that the dolphin has been correctly described in both respects, which only indicates the opportunity to take close look and lift the animal.

Seris' ability to estimate correctly the weight of an animal is not surprising but it must be a fairly recent development, ever since scales for weighing fish were introduced. The Seris do

Pr:Malkin E-5 (1953-1955)1962 NU31 Seri NU31

*825 are rocks but never on sand, and this, of course, explains its absence or presence in various localities as the Indians were prompt to point out. The kangaroo rat is said to live in the desert, sand or rock, but is never found on the sea beach —the later statement is particularly true. Coyote is supposed to be especially fond of the marine beaches where the Seris asserted "it eats dead marine animals and live crabs, or even catches fish if he can." Finally, the favorite resting place of the bats are said to be "caves" (cave shelter) and cracks in rocks but "not human houses." In fact, the informants denied that the bats ever lived in the human habitations. While this is surely true of their own houses it is not so when it comes to the Mexican habitations. I had numerous bats living under the roof of my own household. The probable explanation for this will be taken up later on.

In any event, there are only a few cases showing ecological preferences of the mammals and except for the obvious distinctions between the terrestrial and the marine animals—they do not form any particular pattern, at least from the available data.

Toxic Animals

The only mammal which some of the Seri consider toxic is the bat. But even here the ideas of the informants are conflicting.

The differences seem largely between the older and the younger informants. Miguel Barnett believes that the bat is venomous, that the venom is located in the tongue and that it can be also dangerous by spitting the venom out, which saliva having landed on the flesh may cause disintegration of it. He also thinks that there is no cure for this bat affliction. Not so with the younger informants who thought that bats could bite all right with their teeth when captured but otherwise were perfectly harmless. It may be also added that the only other mammal considered on certain occasions as toxic by the Seri is the coyote—when rabid. Here again they have no cure but they do know that a cure for the rabies can be obtained in the Hermosillo hospital.

● [177]

The belief concerning supposed toxicity of the bat seems to be associated with the older Seri concepts, so to speak. The younger men, those who know how to read and write Spanish and who had been around, are apt to disregard the idea. But even so, the belief in the toxicity of the bat is one of the few such notions held about the animals without any supporting evidence from nature.

Miscellaneous Attitudes Toward Mammals

The Seri have, in general, very little fear of mammals. Such as they do have concerns mostly large animals which can become dangerous under certain circumstances. Both the cougar and jaguar are considered dangerous to men and quite capable of killing them. But they are not apt to attack unless in defense of the young. Also the coyote, the badger, sea lion, as well as the bat, are considered dangerous owing to the bite they can inflict. The badger is especially combative,

[P. 158]

*825 the Seri think, but the captive badger held for a week certainly did not fit this description. Finally, the peccary is held in great respect by the Seris owing to its combativness, nastiness and aggressiveness while in the pack. For this reason peccary hunting is done only by the adults, the Seris said. [224]

Other than this and with the exception of the bat, the Seri do not particularly fear mammals. Their attitudes may be best described as being very much matter of fact and pragmatic.

The situation is slightly different with the bat. The older ones surround it with a great deal of folklore, possibly related to or originated from [77]

[P. 16A]

825 [77] the Mexican, since it includes such well known European beliefs as making deliberate efforts to get itself trapped in the hair and biting with the tongue. The younger ones discarded these ideas. But the residue of them or, at any rate, an afterfeeling remains. The bats are somehow regarded with disgust. It is this attitude which may well account for their denials that it lives in the human homes and it may represent a conscious or unconscious effort to cover up a disreputable fact (to them). [124] There had been some other occasions where the informants denied, for example, eating certain animals or else the knowledge of certain matters which were both later exposed by the sequence of events.

[P. 168]

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262 pelicans are not; they are regarded as "bad food," unfit for eating. No further explanation has been offered here and it might be that the same sort of prejudice works here as in the case of the adult birds. Otherwise, reasons for rejecting eggs for food are probably a matter of mere customary attitude without any particular rationalization. In a few instances, the dove being one example, the eggs were said to have been rejected because they were "too small to bother."

237 291 Other economic uses made of the birds are extremely few. At one time, the pelican skins were used for clothing and, in fact, in McGee's time they represented, perhaps, the most important item of clothing for the Seris, having been worn in shape of wrap-around robes, usually covering the lower part of the body. Moreno reported these robes as still is use "30 years ago or more," in the early twenties, but in Kroeber's time these robes were already discarded in favor of the European garment. The Seri, nevertheless, still preserve skins of these birds—the white pelican, larger of the two, always had been favored here—and occasionally sell them to the visitors. Another use made of the feather is in the arrows. The cormorants, heron and the owls had been especially mentioned in this connection. But it is certain that they were not the only birds so exploited and also that this particular use went out of business along with the disappearance of the bow and arrow as the principal weapons. The use of feather for arrows may well continue into the present in a somewhat degraded form. The Seri boys play a great deal with bows and arrows, shooting them at any moving available target. They'll pick up any available feathers.

[177] [439] 237 411 [857]

Pets

231 Somewhat desultory use is made of birds as pets. During my visit I have seen doves and an egret kept in houses as pets by the adults and fed quite frequently. The number and variety of birds which may become pets in households may well be larger. Pelicans and sea-gulls are less fortunate. They are often shot at and over-powered by the boys. But instead of taking them to the households, the boys stage games, shooting them at point blank from bows and arrows and pea- shooters. These somewhat bloody executions take place almost every day. The pattern is the same. Only the subject of the game changes, depending on the available species of bird or animal.

* 825 857

Hunting

223 It is hard to speak of hunting in connection with birds, because there is so little effort made to go out and get them. The main exception is the duck and this, as I already mentioned, is hunted on Isla Patos and clobbered at night with sticks and stones in great numbers. This is one of the few instances in which the Seris will go out of their way to get a bird. Sea-gulls and cormorants and, more rarely, pelicans are dispatched by pea-shooter (stone), sticks, small clubs and, on occasion, with a shot from a .22 caliber rifle.

[411]

[P. 18A]

9:Malkin E-5 (1953-1955)1962 NU31 Seri NU31

V

REPTILES AND AMPHIBIANS

136 fore it was impossible to check the Seris' ability
* [825] to distinguish between these.

As for the marine turtles, there are several possible species in the area. There is no mistake about the loggerhead. I have seen one carapace and bones taken at Campo Vivora, while with the Seris. The others could be any two of the several species common in the Gulf.

Economic Uses

* 825 In 1956 I published data concerning economic
114 exploitation of the reptiles by the Seris which need correction. Eleven species out of 25 had been reported as used economically. Additional work done in 1955 and after the completion of the MS. indicated a much higher percentage: 17 species out of 26 are used. Thus the percentage increases from 44% to 65%. The percentage of the species actually used will probably rise with additional
[262] field work because some of the informants are dis-
[124] inclined to admit eating certain animals or will simply say, "these had been eaten in the past but not now." However, close inspection and observation often contradict these statements.

262 The list of species reported as eaten is as follows:

Turtles and tortoises: all species
Snakes: both racers, patch nosed snake and both rattlesnakes
Lizards: both chuckawallas, Gila monster, race runner, northern crested lizard

This listing shows how much dependent are the Seris on the desert habitat for food. Even today, with all the available ready-made manufactured
[178] food or imported food from the *tienda*, they gather evidently most of the common reptiles to increase their menu.

Of the species in the list, only two, both smaller species of sea turtles, figure as really important items. McGee believed that here was by far the most important part of the Seri menu, with the marine birds running second.* Now, the importance of the sea turtles has declined, no doubt through a variety of outside influences. I doubt (on the basis of my observation) if altogether it comes to more than 10% of their total diet. The turtles had been replaced as number one food by
● [177] the fish (with the introduction of hook and line fishing). But another factor evidently is the depletion of the turtle population. The third species, the huge loggerhead, is so rare that during the entire
[225] summer of 1953, only one of them had been harpooned and that at Camp Vivora away from Desemboque. The two smaller species have also become very rare and hardly ever show up near the village. They can be taken on more distant expedi-

*Eggs of the turtles are considered a delicacy, especially of the smaller of the two. The Seris say that the loggerhead has been eaten once but now almost never, because it became so rare.

[P.22B]

Spicer E-5 (1953-1955)1962 MU31 Seri MU31

*825 In the northern chuckawalla, the female is supposed to have lesser ridges than does the male but this is an exception. In all other cases, the sole possessor of this characteristic is the male. This, of course, is not so in nature, but it shows that certain structures are supposed to indicate male sex. It is also clear that this particular trait is associated with the lizards and in a way represents a kind of taxonomic character the Seri tend to associate with the male lizards.

The only other trait employed exclusively refers to the toad. Here the male is supposed to have "dos huevos," two eggs, outside, the same feature the Seris associate with the male of the mammals.

It is interesting that no structural differences were suggested for the side-winder.

Age

The age of reptiles and amphibians is really a great mystery to the Seri. Although they have given some sort of answer for 19 species in the list and for 16 they suggested definite length of life for the animal (for the other three they didn't know), no reliable replies suggesting anything else than the individual idiosyncracies of the informants could be established. The informants showed a distinct tendency to provide pat answers for all sorts of creatures. This tendency appears to be associated with the age. The younger informants usually gave brief prospective age of various species; the older ones gave longer age. Thus, Moreno, for example, usually gave hypothetical age of larger species as say 5-6 years while Chico Romero or Ramon Montanyo for the same species gave 70 or 80 years respectively. It is interesting that the two last men are close to the age indicated for the animals.

The only general tendency that could be established is a gradient of relationship between the size and longevity of the animal. The larger the beast, the longer it lives.

Seasonality to some extent enters here. Thus two of the informants said of the side-winder that "perhaps it dies with the cold season" although others thought it lived a long time. Similar suggestions had been made for a couple of species of lizards. It is clear that absence of such small creatures during the cold season must suggest to the Seri their early demise.

In one case, a definite manner of establishing age of an animal has been suggested. In the western diamondback and the side-winder, the age, the Seris think, can be established by counting the rattles on the tail. This belief is widespread among the Mexicans and it may well be that it represents an increment from the influence of the Spanish-Mexican culture. [177]

Size and Weight

Seris' ideas of the size of reptiles is remarkably accurate. Time after time they made very correct estimates of the size which the animal can reach. They expressed this as a rule with a hand motion indicating the size of the animal. The accuracy is not surprising, because they see these animals [804]

[P. 25A]

9:Malkin E-5 (1953-1955)1962 NU31 Seri NU31

VI

FISHES

Taxonomy

* 825 The Seri have considerable skill in differentiating between different species of fishes. There are two main groups which they recognize but which in their own mind are entirely unrelated, the fishes and the sharks. It is also certain that they consider the mantas and sting rays as creatures allied to the sharks and not to the fishes. To the Seri sharks and mantas are not fishes at all but entities of their own. It appears that there are two bases for this distinction. Fishes, as Seri see it, always lay eggs; sharks and mantas do not but instead deliver young alive (in fact some do and some don't). Secondly, the peculiar dimorphic structure in the sharks and mantas, the claspers present in the males of both, not only suggest to the Seri the male sex but also an association with another group.

On the whole, the Seris were able to distinguish as separate species almost all of the fishes for which they were questioned. There is confusion in a few instances. Although *Totuava* and the *Pinta* they think are separate, the evidence suggests that here they actually distinguish merely individuals of different age that belong to the same species *Epinephalus analogus* and that the mature individuals are called *Totuava* and the immature *Pinta*.

An interesting situation arises with the *Myrichtys tigrinus*. This peculiar and remarkably snake-like fish is considered not a fish at all but a snake. The Seri know nothing more about it, and this is where the association ends in their mind. For taxonomic purposes, this fish is included among the fishes but it should be remembered that this is not what the Seris think.

With the exception of three more species of fishes, *Ogilbia*, *Lutjanus argentiventris* and *Conodon serifer*, the Seris had at least some knowledge of the natural history of each species. But in these four cases they could say nothing, nor have they recognized the last three.

Economic Uses

226 ● 177 According to McGee, the sea turtles and the marine molluscs are most important in the Seri economy, with the fish coming in the third place perhaps. Today the situation has changed radically. The fish became the very basis of the Seri subsistence, with the marine molluscs falling into third or fourth place in order of importance. One good reason for the change has been the revolution wrought in their fishing method with the introduction of the hook and line. This must have come into the fore after 1930 and became the dominant method of fishing after 1940. The Seris did learn to use hook and line from the Mexicans

[P. 31 B]

226 and, from all accounts, also from the Japanese
●177 whose trawlers worked in the Gulf in the late
1930's. Today, hook and line fishing from plank
[411] boats almost completely replaces earlier methods,
[225] the spear (pueiro) and the harpoon (barilla).
Harpooning is still done in hunting marine turtles
while spears are occasionally used on larger
groupers and also on sharks and mantas. Harpoons were also used in connection with the latter. But since World War II the shark fishing has declined, owing to the development of synthetic vitamins and abandonment of sharks and mantas' liver oil as a source of vitamins. In these operations, the Seris were for a while involved to a considerable extent. But now they have completely switched to commercial fishing which supplies not only food but also ready-made cash from
[439] the Mexican traders, and with it the Seris can purchase luxuries of life in the Mexican *tienda*.

262 Altogether, out of 42 species listed here, the Seris reported taking for food 20 species which are as follows:

Malacosteuus zonifer
Firella simplicidens
Anisostremus davidsoni
Paralabrax maculofasciatus
Lythrulon flaviguttatus
Mugil sp.
Cynoscion parvipinnis
Anchovia macrolepidota
Bairdiella icistius
Stereolepis gigas
Mycteroperca jordani
Cynoscior macdonaldi
Epinephalus analogus
???? (Pescara)
Trachinotus paitensis
Verruculus polylepsis
Gymnothorax castaneus
Hypsoblennis gentilis ricketti
Abudefduf saxatilis

The most important of these are the groupers, the *baya, pinto, totuava* and *mero*—the latter a giant fish often in excess of 150 kg. and nearly three meters long. The most important of these is the *baya*, a medium size fish taken daily in varying amounts. I suspect that this fish accounts for
[226] more than half or maybe even 2 3 of the total Seri catch, weight-wise. Of others, none is of any importance except seasonally.

* 825 Another sort of use is made of the sharks and mantas in connection with the already mentioned exploitation for liver. Five species of sharks and the horned manta were listed by the Seris, with *chata, gato* and *composo* most frequent and perhaps most important.

Trading, as already mentioned, is of considerable importance to the Seris. Some fish are eaten
[439] only occasionally, but they may be traded off to the Mexicans.

262 Not all fish are eaten. In most cases no particular explanation had been offered for the rejection. But, in some, specific reasons were mentioned. The *Scorpaena sonorae* and *Cetengraulis mysticetus* are so rejected because they "are too bony to eat." *Gillichthys seta* are considered unfit to eat because of its tiny size while *Sphoeroides annulatus* is refused because of its supposed toxicity, of which more later. Finally, the sharks are not eat-

* 825 quite possible but I couldn't substantiate the story
237 from contemporary evidence. Perhaps during the
height of the shark hunting for the liver oil, the
[322] Seris used the oil also for wood polish, although
it isn't very clear just what sort of artifact they
make would require such treatment. The wooden
tools or artifacts among them are in short supply
at all times. Finally, the huge horned manta was
supposedly hunted also for its hide but just in
what circumstances it was not explained. It is the
only fish which the Seri ever mentioned as having
been put to such use.

Fishing

226 As already mentioned, fishing nowadays is
largely accompanied from flat-bottomed boats
with hook and line. The old ways of getting fish by
spearing are almost gone for good. Recently, an
[177] attempt has been made to teach the Seris siene
fishing, but 10 years of these endeavors accom-
plished only ruination of a number of expensive
nets and of much fishing gear and the desertion
[157] of the project by the Indians. It may be that their
individualistic and almost anarchistic attitudes
preclude cooperation, essential in this type of
fishing.

The bait is obtained in any one of the three
ways: by dynamiting fish in tide pools or
along the shore, or by catching small fry with
small hook and line, or finally by collecting small
fishlets in the tide pools, prying them out from
[857] under rocks or simply—and here the Seri boys ex-
cel—by shooting them in the tide pools with tiny
toy arrows or simply spearing them with a stick.
[177] The dynamiting is done with the purchased sticks
of dynamite which the Seris obtain in the tiendas.
The procedure is often risky and down right dan-
gerous. Some of the Seris have blown themselves
up with dynamite. I have seen one of them, who
lost both arms and had a jaw broken during a
dynamiting trial. He went about with a dirty rag
tied up over his head to support the wrecked
[164] jaw-bone. He was carried off by measles two years
later in the 1955 epidemic.

226 The Seris' commercial fishing is pretty much
648 controlled and exploited by the two or three Mexi-
439 can fish traders from Nogales and Hermosillo.
These have their tiendas in Desemboque, which
443 at set price sell things to the villagers. They also
provide the Indians with the five horse-power mo-
[501] tors for fishing trips and pleasure cruises and with
the oil and gasoline essential to run these—also
at set price. They finally purchase the fish—at a
set price—and from the proceeds the Seris pur-
chase goods at the tiendas, completing the cycle.
Not all Seris are compelled to work for the Mexi-
cans, and, in fact, they do not always do so. Some
[501] families stay away from Desemboque and depend
on the sail and oars for propulsion. They come to
the village only once every few months to obtain
supplies. Even when in the village, the Seris make
little effort to fish for more than they wish to get
in order to satisfy their immediate needs.

226 Fishing expeditions usually take place in the
morning. Most Seris will set off before daybreak
and will return with the catch by 11 a.m. or noon.

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301 worn. I have observed women wearing necklaces
+825 of the former and women and very young boys of the latter. The olive shell, incidentally, is made into two sorts, the natural, unroasted shells which retain a greenish-purple, mottled color and the white. The white pallid color is achieved by roasting the shells over fire. The necklaces are mostly made up of either colored or white but occasionally they may be made of mixed shells and then they are usually alternately interlaced, now with one, now with another.

+825 b) *Utensils:* Two species had been reported used as occasional drinking or dipping cups and spoons. *Lavicardium elatum* and *Ficus ventricosus*. *Ficus* is presently discarded, but the *Lavicardium* is still occasionally used so. There is no doubt that the incidental use of these shells increases during longer fishing expeditions when the Seris are apt to lose some of their gear.

[412] [415]

[436] c) *Money:* Interestingly, the brown cowry was supposed to have been used as a means of exchange, as money—in the past. If this is so, then the selection of this shell for such purpose is not surprising considering its widespread use throughout the world.

[171]

439 d) *Trade:* Altogether 12 species had been re-
+825 ported as traded off either in the past or present. The trade importance of various species of shells varies with the demand of the market and sometimes may be only sporadic and short-lived. Only a few of the species had been indicated as having been of any trade importance in the past, and it may well be that the Seris did not register the species which may have been briefly sold to and outsiders during the short-lived fads of demand. It may be said in general that the trade importance of the shells increases and that greater variety of them are exploited now than formerly. This is surely owing to the increasing accessibility of the Seri country and the increasing tourism, not only visitors from Hermosillo, but also from such far flung places as Tucson, Phoenix and even Los Angeles.

●[177]

In some instances, the Seris had no idea what the shells were sold for. The augur shell is on and off sold to some American traders who show up in Desemboque once in a while and for whom the Seri women accumulate these shells. But what uses were made of these, the Indians surely didn't know. Neither did they know what uses were made of the *Murex* shell and the *Turbo*, both of which were periodically sold in bulk to Hermosillo. On the other hand, they had some idea what uses were made of some other shells. *Pteria* and *Atrina* contain pearls and these are much desired. Especially the pearls of *Atrina* which are sold to the Mexicans or to the visitors for 25-50 pesos each and therefore have immense value, for the local market. The *Pteria* shells are said to be used for button making, and the Seris themselves claim that they make buttons of this shell. The most important of all, however, at least at the time of my visits in 1953 and 1955, was the olive shell. It was easily the most commonly and most numerously collected shell of all that the Seris ever collected. Owing to the scarcity of it in Desembo-

[435] [237] [226]

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X

INSECTS AND ARACHNOIDS

114 Altogether information has been collected concerning 92 species of insects, scorpions, ticks, myriapods and arachnoids.

Economic uses

262 [114] McGee says that "good many insects" are part of the Seri diet, although he does not specify just which they were nor how significant. There is no doubt that in his days, the insects played some role in the Seris' food and that they were probably far more important in the distant past, in the XVIII and early XIX centuries, before large flocks of livestock, horses and cattle of the Spanish rancheros offered excellent opportunities to supplement the usual diet.

● [177]

Of all this but minor traces remain today. The Seris even have forgotten which insects had been eaten by their ancestors. Apart from the bees, only the Sphingid caterpillar has been indicated as "eaten in the past, but not now." As for the bees, [263] their honey still is part of the Seri diet. But with the availability of sugar, even this addiction dwindles.

† 825 857 Other than this I have been unable to discover any uses whatever, except perhaps as playthings of little boys, with the usual torture in view. The *Cicada* is most significant of these, of which more later.

Pets

231 [171] The only insect pet is a *Cicada*. This insect is usually tied to a long thread, its forewings partly clipped off and then released into the air like a kite. Local Mexicans also provide their own boys with a similar kind of toy.

Hunting

222 Only bees are hunted. They are usually flushed out of the cave shelters in the mountains. The operation is accomplished without the use of smoke. The honey is cut out with a knife.

Taxonomy

* 825 Seris' ideas of association of various insects are very loose. Few insects are recognized to form natural groupings; bees, butterflies, wasps, spiders are most distinct. However, there are all sorts of gradations blending confusedly with each other, often dependent on the knowledge and interest of particular informants.

Simple recognition is not always present. Out of 92 forms, 13 the informants could not identify, simply saying that they didn't know them. *Cicindela lemniscata*, *Melanotus cribricollis*, *Horistonotus*, *Meloid*, *Oxacis*, both species of *Cymatoderu*, *Photopis*, *Scolopsella*, tiny Scarab, *Leptoremus*, *Homolocorus*, and *Reduviid*—all these were in the

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* 825 [753] to the belief that the spider stings with the rear of the body) may cause death in 2-3 hours. It may also kill chicks and one of the informants, Jose Juan Moreno, claimed to have been paralized by the sting of the Black Widow for eight days . . . . [158] However, Juan is a good hypochondriac, and even when not apt to exaggerate, he may have suffered a genuine trauma owing to an encounter with this spider. While smaller spiders are not considered too dangerous, the *Tarantula* is. It can both bite with its jaws and sting with the rear end of the body and it is said to be more dangerous to children—it may cause their death at times. [753] The adults will weather its attack but will become quite ill. [752] As remedy for its bite, a plant *quivira* is used as a hot extract taken in a small glass for 2-3 days.

Almost all of the animals closely related to the Arachnoids, the scorpion, the Sun spider, *Scolopendra* and the tick, are also venomous in the Seri view. Of these, the scorpion is most feared, and in adults it will cause illness lasting up to a week while to very small children it may be fatal. As a proof the informants mentioned a six months old girl recently stung by a scorpion who died in less [165] than six hours—the fact confirmed by the Mexicans in the village. Remedy for this is similar to others—a plant called *amx.xuhây* is drank with [762] hot water for three days, a glass per day.

The Sun spider, also armed supposedly with a sting at its rear, is said to be fatal to horses for whom there is no remedy. This is a pure fiction, [177] but the belief is common among the Mexicans and the Seris certainly took it up from them. But no one suggested that the Sun spiders are in any way harmful to men although they are avoided, just in case.

The *Scolopendra* is considered very dangerous, much like a viper. It bites badly but is not fatal. Actually, the story probably concerns another species, for *Scolopendra malkini* has only recently been described and is rare in Desemboque.

The tick's unpleasant traits had already been discussed under another heading. All that is essential to add is a belief that in addition to other exploits it can enter a person's ear causing much [753] pain and that for this reason it is particularly bad for the children, as there is no remedy.

There remain three more species of various degree of toxicity. Of these, the *Triatoma* is most conspicuous both for its effects and factual observation. This blood sucker bites with its mouth parts [753] and introduces illness called by the Seri *syexkis. ?e . kemep* which may end fatally. People of all sexes and ages are subject to it equally, and the illness may last three months, and there is no

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XI

SUMMARY

* 825 [114] In 1956 (Malkin 1956:74) I published tables indicating the degree of economic exploitation of the animal world by the Seris. These tables were incomplete and also need corrections. Therefore below I am reproducing the revised version.

Class	Species Reported	Species Exploited	Percentage
Mammalia	21	9	40
Birds	24	6	25
Reptiles and Amphibia	25	17	68
Fishes	44	23	52
Molluscs	37	27	70
Crustacea	10	2	20
Insects	92	—	—
Miscellaneous	9	—	—
Totals	262	82	30

These figures show as yet remarkable degree of exploitation of the products of the sea and also of the reptiles with correspondingly lesser interest in the terrestrial animals in general. Of course, mere listing of animals does not tell the whole story. In the first place, it does not indicate the changes that took place nor does it suggest the relative importance of any group or species. Historically, the situation is different now. Out of nine species of mammals reported as eaten only six still figure out in the diet. The reduction is even more striking in birds where only three are admittedly eaten and two of these only furtively. More yet, only 12 species of marine molluscs out of 27 are eaten while the rest get discarded. All this is tied up then with the changes in the economy, with the importation and increase of the trade foods and goods and also with increasing preoccupation with the commercial fishing at the expense of hunting and gathering.

262 Individually, by far the most important in the Seri diet and economy are the fishes with half a dozen large commercially lucrative species leading the list. Next come the marine turtles and following these for the third place tie the molluscs, the mammals (lagomorphs, bighorn and peccary) and probably the rest of the reptiles of which the rattlers are probably most important by volume. Insects do not figure any longer in the Seri economy in any way, although at one time they probably had some significance. On the other hand, while the food importance of the molluscs decreased immensely, their trade importance is on the upswing owing to the demand from the outside. Thus the basic changes in the Seri patterns of exploitation of animals has been a result largely of an outside stimulus.

Fishing and Hunting

226 185 Fishing is practiced mostly to satisfy the immediate needs, of petty cash and food. Once these are satisfied, there is no incentive to fish until the need arises again.

[P. 54 A]

* 825 it is said to live "in refuse, fish and fish offal and only in the fishing camp." This is one that one must reconcile with the Seris' simultaneous belief that it is parasitic on dogs and that it sucks human blood as well. More difficulty here creates their belief that it is found only in the camp but that the dogs on Tiburon are free from it.

The Phasmids interestingly are associated with trees and sticks, a very correct notion and the Mantids also with the trees.

However, the information is incomplete and apart from the few cases cited above usually contradictory and hazy.

Toxic Insects

Only 19 species out of 92, or little more than 20% of the total, are considered toxic in anyway. Unlike in most of the other phases of the Seri knowledge of the natural history of insects, the natural groupings are quite clear. The three main groups the Seris consider toxic or harmful are the Arachnids, the Arachnoids (*Acarina* included) and the *Hymenoptera*, all very much as one would expect. In addition few beetles and bugs complement the list of the dangerous creatures. tures.

Among the *Hymonoptera* are all of the species listed, with the exception of the bee. This may be due to the fact that the bee in the Seri country is the stingless Melipoind (?). Of the toxic kind, *Pepsis* (the Tarantula hawk) is probably most feared. The sting the Seris think is very painful but disappears after a few minutes as it contains little venom. A plant is applied to the bite and also [752] taken internally with hot water. The *Pepsis* must [857] be really feared because the informants assured me it was one insect the children preferred not to play with—an excellent confirmation of the caution. *Chlorion aeriatus*, the Sphecid wasp, induces [752] similar symptoms by its sting. Here as a cure, Vic's mentholate tablets were said to be used, smeared on the injured spot. This cure is also [177] applied by the Mexicans and the Seris probably adopted it from them. The sting of this wasp is [753] considered more dangerous to children than to adults. The Velvet wasps[12] (Multillids) are also supposed to sting with the rear of the body causing some pain. Finally the *Hemisia*, and Anthrophorid bee inflict a good bite but otherwise are harmless.

Arachnids on the whole are more feared than the *Hymenoptera* and include what the Seris believe to be the most dangerous of all terrestrial arthropods, with a very good justification. The effects of the damage inflicted by these creatures is more lasting and overpowering. The Black Widow easily takes first place and is feared as much as the gecko or the rattler. Some Seris even claim it is the most dangerous of all creatures. It [753] may cause death, they say, although usually one can do with a 2-3 day illness. However, to small children the bite (or as they say "sting" owing

[12] *Ptiloglossa mexicana* causes swelling and much pain lasting 2-3 hours and is considered most unpleasant of all Hymenopterans.

262 The Seris also eat the fruit of the *cholla* cactus, *pitahalla* and *sag-*
222 *uaro*, and probably many other plants in season, but they are wild to get flour. But the principal diet is *cahuasa*, or sea turtle.

225 After a day or so with the Seris, their food supply became exhaust-
123 ed and they made arrangements to take our boat (all they had was a
• [177] *balsa*) and get a sea turtle. So at four o'clock in the morning, with Roberto and Nene, his brother, and myself, they shoved off for the fishing ground. It took two hours of hard rowing to reach the Sonora
[133] side, as the tide was racing up the *Infernillo*. Most of the waters are shallow, with patches of dark and light sandy bottom, with seaweed or grass. On this green grass the turtle feeds; it is their alfalfa field, and it takes a keen-practised eye to see a turtle at the bottom and harpoon him before he escapes.

225 Once on the hunting ground, water, one of the Seris stood in the
[411] bow with a harpoon twenty feet long, a detachable barb on the end of it, and a heavy line attached. The Seri in the bow motioned with his hand this way or that, slow or fast, and watched the bottom. At last he plunged his spear and withdrew the pole. The turtle swam awhile
[411] until exhausted, and then he was drawn alongside, his head pounded with an ironwood club, and then he was turned on his back and drawn on board. This called for great skill in balancing the cranky, smooth-bottomed boat to keep it from shipping a wave.

225 When a Seri goes in his native *balsa*, which only holds one man, he
501 straddles the middle part on his knees, resting them on seaweed. The craft is light and is a good sea craft, but it is low in the water and the man is wet all the time. He uses a double-bladed paddle, and his harpoon rests against pegs set in the *carrisos*. A rock which serves to quiet the turtle, two pointed stakes and a heavy fish line complete the equipment. He has to paddle across to the other side in that cramped position, say eight or ten miles, very early in the morning, then watch his chance to harpoon. If successful he brings up the turtle, knocks him on the head with the rock, pulls him on the end of the craft by skillful manipulation, cut slots in the front flippers, put stakes through and into the *carriso*, pinning him firmly in place, then paddle back.

225 The wind came up strong when we started to return from our turtle
123 hunt and with wind and tide against us we rowed across the Island. Bob and his brother disembarked and took it afoot for camp, a distance of ten miles, reaching there at two p.m. The Seris made a tump line and towed the boat, one towing and two warping off-shore until we arrived at camp about four p.m.

When the bow was run up on the shore everybody came down, the women and children talking a steady stream in their strange jargon.
123 They soon jerked the heavy turtle out, dragged him up the beach on
262 his back, and began immediately to cut him up. Bob spoke for the breast, which is a white plate on the underside of the turtle with

[text continues on p. 168]

242 Burro meat comes first in their estimation, then mares, then steers, but they take what they can get and no questions asked. Burro deer or black tail is a great article of diet, and these deer are on the Island. Wolves and coyotes are on the Island also. I do not think they eat them.

266 As I have said, the Seris are reputed to be cannibals, or to have been. Since those who furnished the meals cannot speak, it is a matter not entirely proven.

648 177 There is a war on between Mexican fishermen and the Seris. The Seris are wild for boats and will do almost anything to get one, so two years ago a chance occurred and they killed seven drunken Mexican fishermen and seized their boat. Last summer, some fishermen surprised the Seris, killed one, and recovered the boat. They mourn this boat a lot more than they do the dead man.

648 Twenty or thirty years ago, Governor Ysabel came here with some troops to capture some Yaquis who had joined the Seris. The Governor told the Chief he would have to give up the Yaquis, as they were outlaws. The next day the Seris brought in six right hands. They said they had killed the Yaquis. Asked how and why, they said they had killed them while they slept and they wanted their guns. They cut off the right hand of each as proof.

With all their apparent friendship, we never go without arms. When we sleep our rifles are alongside of us, and we wear our revolvers with us. Sometimes we roll in with our clothes on. But they have never, by sign or act, shown anything but friendship.

851 123 177 A baby boy about four months old was in camp, so Rafael Ysabel baptized him and gave his name Rafael, and presented him with a little gold cross of which his mother was very proud. She held the baby while he poured a little precious fresh water over its head and repeated:

"In the name of the Father, Son and Holy Ghost, I name thee Rafael. . ."

123 Curious black eyes follow us always. When we eat, the Seris often squat around us and watch every mouthful. If there is any bread, gravy, grease, beans or meat left over, we pass it on and they certainly clean up.

While we eat, the waves are always lapping on the shore upon which many pretty shells are thrown by the tide, besides water-worn pumice stone in all sizes down to a small marble.

Our meals are very simple. We bake biscuit in the dutch oven for every meal, cook turtle meat, if we have it, or beans or rice or spuds.

[text continues on p. 171]

ever washed; it is licked clean.

415 One time a bunch of Seris camped near a ranch and spied a white
• 177 porcelain chamber pot sunning itself. They immediately secured it and began cooking in it, without washing it first. The rancher saw them and told them that it was dirty and told them not to cook in it. They said they would clean it up after they got through and leave it as it was before they finished with it. When they come to Hermosillo they get pots from heaps of city refuse and carry them back as prizes to the Island.

123 We made smokes to attract attention, but all to no purpose, until
504 about three o'clock the car appeared. It could not come close to the beach as the sand was too soft, so we had to pack everything two hundred yards in soft sand. The *balsa* was very heavy and some distance away. It also had some things tied on it, so Bob pulled off his pants and we pushed it into the surf. Bob first stood up, but it rocked so he got on his knees and pushed out with a pole and got it headed to the rollers, after which it rode easier. He then lost his pole, and in struggling to recover it the *balsa* rolled over with him and dumped him in the surf, but he grabbed the side and rolled it right again. He could then touch bottom, so he came in through the surf with it and we dragged it up and unloaded three turtle shells and a few other things. There were four of us and we put oars under it and gradually lifted and carried it to the truck.

It must have weighed six hundred or seven hundred pounds, a good part of which was water. I must say I was glad to see it started on its long land-journey.

123 The Indian messenger had arrived with my note which brought the truck. Bob, Luis and the Mexican took the boat and tried to go into the place where they hid it, but it was low tide and the boat could not enter, so they beached it and walked to Agua Sarco where we had preceded them by two or three hours. We had, over the last of our grub, a little rice and beans. As many doves were flying about the water, I shot fifteen or twenty. One of my shots brought down seven doves.

439 Before night all the Seris were camped near us, and when Bob came,
123 Louis had brought all our trade stuff, so I began bartering right away.

As all were hungry we gave each man and woman three cups of flour, and three pieces of *panoche*, cakes of coarse brown sugar. They were wild for this, so when they had finished they were well disposed.

On the Island I had been called a cheerful liar for promising things, but now it was different. Three new butcher knives, all bright and shiny, I traded for three rusty homemade affairs. Two were made of barrel hoops and one from the piece of a shovel. This was a way-up knife. For the violin I traded a harmonica, and for three carved

(text continues on p. 187)

123 [361] [312] [342] Clustered near this well were brush windbreaks joined together, divided by brush partitions all open on one side. Here were gathered several Seri families. There was no such thing as privacy or seclusion.

As soon as we stopped and unloaded we were immediately surrounded by a curious, half-starved mob of forty men, women and children, about fifteen to twenty children. All dirty, all ragged, all hungry. Some of them I recognized: others were new to me.

While preparing and eating our supper this motley crowd formed a circle about us and hungrily watched every mouthful. We gave them a little food and an orange all around, and they finally left. By that time we had also finished our bread and coffee and followed to the brush shelters.

535 123 [523] A dance was immediately started. A place was hollowed in the sand, a few short planks placed over it, and the dance was on. Music was furnished by men tapping on an inverted basket and chanting. Only one man danced at a time. Sand was thrown over the planks and the Indian danced a shuffle, scraping his bare feet on the boards. He held a staff in his right hand and danced to a song called in Spanish *El Toro*. Later on other dancers performed, then gave us the *venado* (deer) dance, taught them by the Yaquis. [171]

This dancer represents a timid deer, hopping up and down to the time of a rattle held in the right hand, and the chanting of the singers. The *venado* dancers stooped over frequently, turning first to one side and then the other to look behind. Manuel Encina was the *venado* and Chico Romero, a very large young Seri, acted the part of a coyote, crawling and jumping on all fours and barking and every once in a while biting the calf or thigh of the *venado*, then jumping back and barking. It was acted with great realism, and the onlookers, especially the children, enjoyed it immensely.

A wilder, more barbaric scene was probably seldom witnessed in America than this gathering of Seris on the shores of the Gulf of California, dancing the *venado*. The camp fire threw a flickering light over dark fierce faces with low foreheads and frowsy unkempt hair. [302] One man, Luis Torres, the head "ship carpenter" with a moustache and chin beard, his hair low-down framing his dark face, looked like a savage from the wilds of New Guinea. Another, Santo Blanco, a secondary chief below Juan Tomas, has a straggling moustache curling over cruel projecting lips which rarely smile, while his fierce black eyes peering through his black thatch of hair, have a perpetual scowl. The monotonous sing-song chant accompanied by the soft roar of the surf added an indescribable eeriness and weirdness to the dark night.

123 We soon turned in as it was then eleven o'clock, and we all fell asleep lulled by the waves of the sea.

123 and on our way, headed south, rounding the point with the tide in our
484 favor. It was a rowing proposition. During mornings the sea is calm and the swells glassy. Usually at noon the wind comes up, mostly ahead and against us. Last night we could see the light of a camp fire on the point opposite us, and soon we spied a boat headed for the Island. We had left the women and older children to walk and they met us where we landed. At noon we camped for dinner in a lovely cove, and soon three other boats joined us with their cargoes of women, children and dogs. We ate quickly and got under way again as soon as possible, and even then we were the last boat. The trip was bad, as all the people were loaded in the boats which made them low in the water.

123 It was a pretty sight to see the Seris in their *pangas*, boats
484 shaped like dories, graceful, narrow and swift, kneel in the bottom
504 and dip their broad paddles into the waves and shoot into the open sea like dark-skinned Vikings, wild hair flying.

As soon as we emerged from the cove the wind and tide struck us dead ahead, and progress was slow although the swells were behind us. After rounding a point the wind blew on the forward quarter and all the boats, now increased to five, hoisted their sails. We also stepped our mast, sheeted our flour-sack sail, and bowled through the sea, carrying a bone in our mouth.

Chico's boat ahead had no sail and when we neared it, steered with superb skill by the wild-looking Seri, Luis Torres, he had a tow line aboard and thereafter we held him in tow until finally the wind shifted dead ahead and all the boats lowered their sails, unstepped their masts and began paddling. One *pangah* had a sail with part of it loose and flapping at the top like a flag. Roberto said the Seris did not want to cut off this useless piece for fear of spoiling the sail, so there it flapped whenever the sail was sheeted home.

123 About three thirty in the afternoon we rounded a bold rocky point
484 and entered a beautiful curving bay of quiet water, and here we landed for the night camp. Soon all the boats were unloaded. Men and children hunted driftwood for camp fires, two boats at our insistence set off fishing, and Stan and three Seris took their rifles and went hunting. All parties later returned without fish or game, so, as our meat had disappeared like a beautiful dream, we had to dig into our corn and flour to feed thirty or forty hungry Indians. The children stood about like a bunch of hungry cormorants and we promised them *pinole*, or flour paste.

123 Looking at these half naked children with their swarthy little
177 bosoms bare and most of them bare from the waist down, I dug out some safety pins and began with the little girl Luz, who was vigorously stirring the paste mass and pinned her waist over her bare breast and tummy with two bright safety pins. She never ceased stirring. Each bare breast I pinned the shirt over as the night was chilly. The children quick to catch on and keen with desire born of privation, each pulled his or her shirt open even when it had a button, or had

177 123 been fastened with a string---each child eager for a safety pin. A little child two and a half years old was shoved forward for a pin, its round black eyes dancing with anticipation, but its dress had no opening in front, so I laughed and shook my head and everyone appreciated the joke. But, not to be defeated, a little girl untied the child's waist from behind and spread it open, exposing its little brown body from head to feet, and called my earnest attention to it. I then pinned up the dress. Then the older ones crowded around me, but I had used up a whole paper of pins, so I shook my head. I gave the empty paper to an eager child, although a dozen hands were outstretched for it. By making the children happy I pleased the parents.

123 By this time the flour soup was thick and ready, and Roberto baled it out with a cup into the various vessels eagerly outstretched to receive it. As the cup would drip, little hands caught the priceless drops before they reached the sand. As each got his proportion he began sticking his fingers into the mess and licking them off. Many took their *pinole* to camp and the others secured a taste also. A small piece of bread dropped into the sand was snatched up, by a child, from under the nose of a dog. She rubbed off the sand and devoured it.

When all had vanished to their various camps I opened the box of candies---small round drops of green, red and yellow. I filled our coffee pot and went to each camp and gave each man, woman and child about ten candies.

439 123 Since I wanted shell necklaces, the women had combed the beaches and gathered plenty of shells, and strung them while resting. This evening they were draped about their necks, and they wished to trade, so I traded for about a dozen---one small round mirror for one, five needles for another, five safety pins for another, blue face paint for another. Mirrors were most in favor.

291 302 142

206 *Seri outside beauty parlor*

291 The Indians made a mound of sand full length of the robe and amply wide rounding off the top. On this the robe was spread, flesh side up, and pinned to the mound by slender slivers of *carriso* and left exposed to the sun. The skins were singularly free from oil or fat and in a few hours, the robe was cured. The pins removed, the sand shaken from the plumage, and it was ready to use as a blanket covering at night or in old times, as clothing wrapped around the body.

The robes of silvery gray are from male Pelicans and are larger and more attractive than robes from the female birds, which have white breasts, edged with gray.

291 Before the garments and costumes of civilization encroached on the
• 177 Seris, Pelican robes and deer skins were the only clothing worn by the natives, but now they have adopted civilized ways to a great extent, Pelican robes as clothing became obsolete.

SERI BLUE

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ABSTRACT

The blue which the Seri Indians of Sonora, Mexico, use in face painting is not the mineral dumortierite, as previously believed, but is a prepared pigment. This paper is a description of the process in which three elements are combined to produce this pigment.

McGee and Kroeber reported the mineral dumortierite as the source of the blue pigment used in Seri face painting (McGee 1898: 165-6; Kroeber 1931: 27). Coolidge described two blues, one a mixture of gypsum and a boiled root, the other a blue stone found on Tiburon Island (Coolidge 1939: 200). Xavier mentioned dumortierite and commercial bluing. She also referred to a third blue obtained from a plant on Tiburon (Xavier 1946). Present investigation has shown that as far as the Seri know, the only blues they have ever used are *ika?óil* "to cause to be blue" (commercial bluing) and the highly prized *?antezj kóil* "blue clay" of their own manufacture.[1]

The components and the method of manufacture of *?antezj kóil* are said to have been taught to the women long ago by *?ant i?akímxoj* "they who tell the things about the earth." The actual color transformation is veiled in mystery to the Seri who say that if the process of making the clay is observed by any girl who has not passed the menarche, the blue will not appear. Its appearance is not attributed to shaman power, however.

?antezj kóil has been in less demand during the last few decades since commercial bluing has been readily available. Nevertheless, *?antezj kóil* is the blue preferred by those women who continue to adorn their faces in the traditional manner.

The three ingredients used in making the blue clay are the root bark of *xkoktz (Franseria dumosa)*, *ikí kóizj* "to grind with" (a mixed clay in which montmorillonitic layers predominate), and *mokni óoxW* "excrement (sap) of *mókni (Guaiacum coulteri)*." The Seri say that the *ikí kóizj* and the *mókni* are found only on Tiburon Island. The root bark of *tinkl (Franseria ambrosioides* Cav.) or of *xneejan síiktoj (Stegnospermum halimifoliam)* can be used instead of *xkoktz*. *tinkl* gives a distinct aroma to the clay. The plants mentioned are fairly common along the Sonoran coast.*

*EDITOR'S NOTE: It is interesting to note that none of the ingredients is blue in its unaltered state.

2: Kroeber E-5 (1930)1931 NU31 Seri NU31

114 Davis has had fuller opportunity to investigate, but confined my
121 attention to the social and religious sides of their life. There was the more reason for this since it is in dealing with these latter aspects, where verbal communications are as important as observation, that McGee's monograph is most tenuous and dubious. I also secured linguistic notes for the preliminary placing of the curious tonal speech of the Seri.

178 Seri culture in its present form is a fragmentary thing such as
182 could hardly have existed under purely native conditions. Religion especially has suffered, no doubt under Christian influence, without many elements of Christianity having been taken over in exchange. Of mythology, only tatters seem to remain; of ritual, little more; only shamanism seems to be fairly well preserved. Nor, beyond the Spanish names for God and the cross, do the Seri give evidence of being or having been Catholics. The result is that they seem remarkably religionless. I do not know of a native people that appears so free from superstition and so unspiritual in its attitudes. Possibly I conferred with the wrong informants; but those I talked with seemed unsecretive. Social culture is better preserved, as is evident from a set of kinship terms that are numerous, precise, and untouched by Spanish concepts. On the other hand, there is little formal social organization. Whether this is also the result of a loss, is hard to say. The Seri may never have had sibs or clans; but the fact that they appear to lack them now is no positive evidence that they were without them three centuries ago. Shifts of residence, contraction of territory, shrinkage of numbers, amalgamation of distinct bands, may well have obliterated much of such social fabric as they once possessed. Games and the calendar are wholly native and intact, but taboos connected with sex, age, food, and the like seem fewer than among the backward tribes of the southwestern United States. It seems reasonable to construe this condition as the result of varyingly hostile, parasitic, and missionizing Spanish-Mexican contacts; especially when one realizes how overwhelmingly, though also spottily, this influence has affected the other tribes of Sonora—the Yaqui, Mayo, Pima, and Opata.

101 Historically the Seri are not a tribe but the consolidated rem-
131 nant of a series of dialectically distinct tribes that once held the barren coast of Sonora from Guaymas to Puerto Libertad. Tiburon
174 Island is the stronghold in which the mixed survivors, probably now numbering less than 200, have taken refuge, and, owing to its inaccessibility, drought, and poverty, have succeeded in maintaining themselves and their blended and reduced culture. Toward the interior, it is doubtful if they ranged beyond the present line of the Southern Pacific railroad, if that far. Orozco y Berra indeed assigns them territory up the Sonora River to Ures, on his famous map, which is still basic to all other ethnic maps of Mexico. But from Hermosillo

3:Davis & Dawson E-5 (1922-1940) 1945
NU31 Seri NU31

114
648 their midst and to live among them without undue fear of losing his life. Through the kindness of Señor Thomson the senior author succeeded in making himself a friend of the [123] Seri and, enlarging upon this friendship through long periods of living and traveling among them, has acquired an intimate knowledge of these strange people.

105
178 In 1922 the fishing industry of the Gulf of California was not yet well developed, and it was to be ten years before the village of Kino should appear on the maps of the Sonora coast. The Seris were still isolated in their desert domain and their numbers, then about [161] 250, were maintaining themselves out of reach of the infectious diseases of the white man. The clan life had disappeared, and the people lived as a single tribe with their old chief, Juan Tomas, 90 years old at that time

[291]
[481]
[482]
[415]

FIG. 15. MOVING DAY AMONG THE SERIS
THESE BURDENS, BORNE FOR MANY MILES OVER ROCKS, THROUGH CACTUS AND DEEP SAND, CONTAIN UTENSILS FOR HOUSEKEEPING WHEREVER THE SERIS MAY STOP.

[p.263(B)]

105
178 and a veteran of nearly a century of warfare against the soldiers of Sonora. The turtle remained their most important source of food, and the pitahaya harvest the most enjoyed. The crafts of their old culture were largely gone, however. Hoop-iron had come in for many uses: harpoon points, scrapers, and knives. The bow and arrow had been almost entirely supplanted by rifles of which the tribe possessed more than thirty. The handmade olla was fast disappearing in favor of the five-gallon tin can, and water
[482] carrying, now much done by the males, was accomplished by means of a palanca, borne on the heavily calloused shoulder, to which a can was suspended from each end.

It seemed that the balsa building art was
178 encountered barely as it passed into extinction, for the last balsa known to have been
396 made by the Seris was found in use near Kino, in 1922. This rare prize was immedi-
[126] ately bargained for and in exchange it was agreed that the tribesman should have lumber to build a boat large enough for all the people of his family. A few months later the finished craft, caulked with a "pitch" made

[p. 264(A)]

S.Davis & Dawson E-S (1922-1940) 1965
HU21 Seri HU21

178 396 of sea lion oil and powdered cactus skeleton, was launched. It was the largest craft they had ever possessed and came to be called the "battleship," for its size.

114 221 After having established firm friendship with the tribe in 1922, it was possible two years later to carry out an extensive plan to learn the habits of the Seris by living among them, sharing their comradeship along with their privations. At this time they still had no homes that could even be called semi-permanent. Moving here and there in response to fluctuations of their precarious food supply, household things were not accumulated, and life continued to be reduced to its very simplest elements and absolute necessities. Baskets made of fiber from the torote tree, some tin cooking and water vessels [415] (the handmade olla was seldom any longer made), some patched and filthy rags which served as blankets to the fortunate few, constituted the family possessions (Fig. 15). Starved, bony family dogs were abundant, as always, every Indian having one or 231 two (Fig. 16). Each day they could be seen gnawing on some old fish head long since

[p. 264 (B)]
[Text continues on p. 265(N)]

7: Marroquin E-5 (1955) 1957 NU31 Seri NU31

In general, the Seris have a healthy appearance; the most frequent complaints are gastro-intestinal and visual defects due to avitaminosis. It is very possible that given the difficult living conditions resulting from the desert environment, a rigorous selective process among the newborn takes place so that only those who possess exceptional physical qualities survive. This explains why the majority of them retain the physical characteristics described by Hardy more than a century ago: "the Indians of Isla Tiburón are tall, healthy and well built".

In spite of attempts at education, the Seris do not practice the elemental rules of hygiene; their way of life, neglecting this aspect, contributes to increase the unhealthy foci which exist in the places where they have established themselves.

Dwellings.—The Seris retain many vestiges of their nomadic life, among them the hut which serves as their living quarters; many of them are simple provisional arrangements for sheltering themselves from wind and sun, and they bear no relationship to the stability and durability of our dwellings. The Seri hut was made to meet the necessities of a nomadic people who had no reason to spend much time nor work on making a dwelling which would only be used for a season (one, two or at the most three months). Nevertheless, some innovations have been introduced in the last 20 years, so that we must distinguish between two types of houses. The primitive model consists of a series of scrub pine arches interwoven with branches from the same shrub almost totally covered by foliage, tortoise shells, *zacate*, etc., with only a small hole in one of its ends as an entrance (this type of hut is the same that McGee saw in 1894 when the Seris still led a nomadic life).

In the new model more resistent woods are used, like *sahueso*, *torote*, etc., and poles, between which is laid a layer mud. The house is rectangular, without windows; with only one entrance, but always larger than the entrance to the brush hut. Other models would have to be added to these two, due to the incorporation and utilization of tents made in the United States which some U. S. tourists or the Society of Friends have given them. The tent is used as permanent living quarters; or sometimes combined with branches to cover the primitive type huts.

Domestic Animals.—The Seris are very fond of domestic animals like the dog, cat, and finally, the chicken. For all practical purposes these animals live together with the family; they rest on the piles of rags and sand which serve the Indians as beds; lick the plates and cooking utensils; dirty the house; increase the household fauna with their fleas and other vermin thus contributing to create and unhealthy atmosphere in the home.

Problems of Intoxication.—Their dealings with the fish buyers, in whose stores are sold beer, mezcal and tequila, has turned them to the consumption of these drinks. The Seri drinks liquor in an uncontrolled

7: Marroquin E-5 (1955) 1957 NU31 Seri NU31

with this problem is the lack of legal title to the lands which the Seris own in fact but which legally belong to the nation.

Insofar as the economic problem, it is necessary to better the fishing techniques, doing away with old process of obtaining the catch through dynamite explosions. Finally, as Dr. Marroquín says, the fact should be noted that the Seris on passing from the nomadic economy to exchange economy lack the necessary knowledge to achieve success in their operations within the national and international market.

It is thus necessary to take care of these and other problems, to save this Indian group from complete extinction, succeeding on the other hand in raising their living conditions, making of them citizens capable of contributing to the progress of the State of Sonora and the Republic of Mexico as a whole.

NEW DIRECTOR OF THE SUMMER INSTITUTE OF LINGUISTICS IN MEXICO

For the next two years the Director of the Summer Institute of Linguistics in Mexico will be Dr. Benjamin Elson. Dr. Elson first came to Mexico in 1942 and began linguistic field work among the Sierra Popoluca Indians of the State of Veracruz. Sierra Popoluca has been the principal object of his linguistic studies since that time, and various articles have resulted from these researches. He took his degree from Cornell University with the thesis "Sierra Popoluca Morphology". He has on other occasions served as Associate Director of the Institute in Mexico.

The Associate Director will be Mr. H. J. Klassen. Mr. Klassen has done linguistic field work on Lowland Mixteco in the State of Oaxaca. He has served as Interim Director of the Institute on previous occasions.

VII ROUND TABLE OF ANTHROPOLOGY HELD IN THE CITY OF OAXACA FROM SEPTEMBER 1ST. TO 7TH.

During the month of September, the VII Round Table of Anthropology, dedicated to the study of the Indian cultures of Oaxaca, was held in the city of Oaxaca, capital of the state of the same name. Since at the present time there exists in this state a large proportion of Indians, and since during its pre-Hispanic past such important cultures as the Zapotec and Mixtec flourished there, the interest of this Round Table is evident.

Lack of space makes it impossible to present here a complete report of this anthropological meeting: therefore, we will limit our coverage to a summary of the most important points, taken from the Report of the recording secretary, Prof. Wigberto Jiménez Moreno. This report was made available to us through the kindness of Mrs. Carmen Cook de Leonard, Vice-President of the Center of Anthropological Investigations of Mexico. The complete version in English may be seen in the *Boletín* of the Center of Anthropological Investigations (Nº 4, Oct., 1957, pp. 43-49).

I have no idea, of course, what the diet may have been in the past since only archaeology can suggest the answer. But I am sure that there has been much change in their diet since Kroeber saw them, not in the basic pattern but in the composition. With the introduction of hook and line fishing, the percentages swung in favor of fish, while decimation of the marine turtle cut down the importance of this animal. Simultaneously, the Seris now have available manufactured or imported Mexican food items: flour, sugar, rice, potato (when no one is looking; potatoes are not supposed to be sold to them because they make *tepache* from them which makes them grossly fish in cans, coffee and tea. Dependence on the products of the desert has dwindled. Rattlesnakes, desert turtles and chuckawalla still find their way to the Seri kitchen but not too frequently. Pelican and sea gull will be eaten only when rough times beset them but are disdainfully refused at other times. My own estimates, impressions not supported by any attempt to measure their diet, are as follows:

fish	50+%
turtle	8-
Mexican import	20
desert plant	7
desert land animals incl. stock	5
shellfish	10
total marine origin	68+
total desert origin	12
imported origin	20

Another important change in the pattern is the unquestionable decrease of hunting (other than marine animals) in Seri life, as of the domestic stock stealing, the place of which has been taken in a way by the dependence on manufactured foods and items. Hunting nowadays is done rarely and only few individuals will devote some months out of the year to it. Stealing of domestic stock has ceased for practical purposes, since in the past it lead to virtual extermination of these Indians. Occasionally the Seri kill off a semi-wild burro, herds of which run about loose in the desert or they'll get leavings off one, hunted down by a Mexican trader or fishermen.

The Seris' basic tools of game procurement have changed. Bow and arrow were still much in evidence and in use in McGee's time but seem to have gone out soon after. Kroeber did not mention them and by now they are quite extinct, except as clumsy toys little boys use to play with. The throwing stick is still used on rabbits—any stick one can scrounge on a moment's notice will do for the purpose. If any traps or falls had been used we do not know of them. Accidental stones may be used much in the same way as throwing sticks. In general, various sorts of fire arms, mostly .22 and .38 caliber are owned by a good many Seri men and have replaced other weapons in the terrestrial hunt.

More important are changes in the fishing procedures. Formerly spear and detachable harpoon were their only marine weapons. Even as late as 1930, during Kroeber's visit, the Seris made no use of hook and line. But now, hook and line of

[P. 7A]

apparently a line of type has been omitted here-Analyst]

462 desert plants or littoral fishlets from tide-pools or of the shellfish. Both men and women will [224] bring in an occasional rattler, although women are more likely to do this because they spend more [857] time in the desert. Children of both sexes are engaged in the female occupations here, but ado- [883] lescent boys already join in their fathers' hunts on land or sea.

342 Housing has undergone some changes. In the 184 desert or on Tiburon the Indians construct the kind of shelter they did in the recorded past, an ocotillo frame, bent over in the middle and covered up with dried plant debris and twigs from the desert, or with the sail cloth. But in Desemboque they have more substantial houses— of wattle and adobe, with flat roofs, rectangular or square, often with corrugated tin or drift planks and other debris piled up on top, or along the walls.

●178 In the remainder of their material culture, not much has been left from years past although one must remember that from the very beginning of recorded Serian history it has been of a most [291] meager sort. Pelican robes, which some Seris ap- [412] parently still wore in 1930 are gone for good. So are the stone tools. So is the pottery which had [323] probably disappeared in Kroeber's time. The hu- [301] man hair necklace with rattlesnake rattles is also a thing of the past. The rattlesnake skin belts [291] McGee (1898:170) described and figured are probably all gone. I havn't seen or heard of any.

412 But what remains much as they had been in 285 1894 are the bone-awls. These are made of burros' carpals and the blossoming of basketry, owing to

[P. 8A]

9:Malkin E-5 (1953-1955)1962 MU31 Seri MU31

III

MAMMALS

262 water for a week until it escaped. There was
[231] no intent to do away with it and serve it up for dinner later on.

The 3 species reported as eaten in the past are kangaroo rat, sea lion and the ringtail cat or
[252] cácomistle. Of these the little rodent had been supposedly "boiled in hot water with salt" which
[261] method of preparation may indicate that it happens quite recently yet. It is quite possible that in times of famine this animal is still used. The sea
[432] lion has been reported as "eaten once a long time ago. All of it. But not now. Its hide was once sold
[114] also but now it isn't used at all." This conflicts with McGee's statement (McGee, 189:202) that there was a taboo on eating sea lions among the Seris and there is no way to reconcile the information.

[114] McGee's report may be as truthful as are the uncertain and hazy comments of the present day Indians.

224 On the other hand, the cougar belongs to a very dubious category, unless we can rely on Miguel Barnett's memory. All 4 of the younger informants emphatically deny that the cougar has ever been hunted for meat. But Miguel Barnett claimed that this has been done in the past, although he could not tell how long ago. Kroeber says nothing about this animal and this makes it difficult to date the events. At the time of Kroeber's visit, Miguel was at least 25 years old and the cougar could have been hunted either
[262] then or earlier. But today the Seris do not eat the flesh of the big cat and their abhorrence of it has been confirmed by the Mexicans to whom I talked about the subject, and who relish cougars' meat.
[178] This apparent distaste for the *el tigre's* flesh may well be a recent development quite unconnected with the lack of weapons. McGee (1894: *loc. cit.*) casually mentions that the Seris hunt both cougars
[411] and the jaguars but cites no evidence for it. Yet
[177] in his time Seris' almost only weapons were the bow and arrow and a lance which today has been replaced by firearms. I am unable to explain this contradictory behaviour.

262 Finally, there is the Ringtail cat or cácomistle. Although this beast has been reported as part of the diet, the information isn't too reliable. I had
[124] no way of checking whether this was the animal the Indians had in mind. Their description of it seemed to answer some other unspecified animal and their answers were confused. The fact is that the Ringtail cat does occur in the Seri territory and they are supely familiar with it.

Of the remaining 11 species none were ever mentioned by any of the informants as having been ever eaten. Their denial of eating the coyotes were most vehement. Coyote figures out probably

9:Malkin E-5 (1953-1955)1962 NU31 Seri NU31

Coyote figures out probably

as an important and perhaps disreputable figure in the mythology although nothing but scraps and bits of information suggest this. It is possible that there is actually a taboo on eating this animal or perhaps it is so disreputable that eating its flesh would put a gourmant in an inferior position.

How important is the Seri mammalian diet is hard to tell. It certainly looms more heavily during the winter, because in the cool season hunting is easier than during the heat of the summer and in fact this is when most of it is done by the ardent hunters. Too, winter subjects the Seris to greater hazards and is apt to increase their dependence on the desert resources over that during the summer, even if these resources are scantier at that time.

To all of these animals one should add the semi-wild burros running about the extensive Mexican rancherias. The Indians poach on them frequently using their fire arms, usually the .22 caliber rifles. In any case, it appears that during the summer when the field work was carried out, the mammalian diet figures quite lightly on the Seri table.

Food preparation: Very little is done in the preparation of the mammalian meat. All that I could observe was the boiling of it in hot water spiced with salt. The Indians were saying that in order to have the meat of a peccary, deer or bighorn ready to eat one must boil it 2-3 hours. The same procedure is followed with the meat of the burros. In contrast to this, as shall be seen later, fish are boiled as well as roasted while the turtles are also dried and salted. Preparation of meat is done by women, certainly at least in the encampments when they are present.

Food preferences: Some of the Seri food preferences have already been mentioned. At the top of the list as the desirables are the peccary, the deer, the bighorn and the blacktail jackrabbit; at the bottom is the badger, whose meat "is not much good." There is also preference by sex. Females of both the bighorn and peccary are preferred over the males "because they do not have the bad odor like the males." This sort of favoritism also occurs among the Mexicans. However, the Indians did not elaborate beyond this point.

Other economic uses: Apart from meat, hides are also used. The hides of the deer, bighorn and peccary had been used for sleeping mats although this matter has been expressed in the past tense. Miguel Barnett also suggested that the bighorn hides had been used for clothing by the Indians in the past—but he neglected to say how long ago. During Kroeber's stays, no Seris went about in the animal or bird (pelican) skins but earlier when McGee visited them they went about in these simple garments. Judging then by Miguel's memory, the use of the bighorn hide for clothing must be pushed back to the period of World War I or even earlier.[1]

[1] Miguel Barnett indicated that the "fur" of the bighorn had once been worn for the cold season "but not now."

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9:Malkin E-5 (1955-1956)1962 NU31 Seri NU31

V

REPTILES AND AMPHIBIANS

136 fore it was impossible to check the Seris' ability
* [825] to distinguish between these.

As for the marine turtles, there are several possible species in the area. There is no mistake about the loggerhead. I have seen one carapace and bones taken at Campo Vivora, while with the Seris. The others could be any two of the several species common in the Gulf.

Economic Uses

* 825 In 1956 I published data concerning economic
114 exploitation of the reptiles by the Seris which need correction. Eleven species out of 25 had been reported as used economically. Additional work done in 1955 and after the completion of the MS. indicated a much higher percentage: 17 species out of 26 are used. Thus the percentage increases from 44% to 65%. The percentage of the species actually used will probably rise with additional
[262] field work because some of the informants are dis-
[124] inclined to admit eating certain animals or will simply say, "these had been eaten in the past but not now." However, close inspection and observation often contradict these statements.

262 The list of species reported as eaten is as follows:

Turtles and tortoises: all species
Snakes: both racers, patch nosed snake and both rattlesnakes
Lizards: both chuckawallas, Gila monster, race runner, northern crested lizard

This listing shows how much dependent are the Seris on the desert habitat for food. Even today, with all the available ready-made manufactured
[178] food or imported food from the *tienda*, they gather evidently most of the common reptiles to increase their menu.

Of the species in the list, only two, both smaller species of sea turtles, figure as really important items. McGee believed that here was by far the most important part of the Seri menu, with the marine birds running second.[1] Now, the importance of the sea turtles has declined, no doubt through a variety of outside influences. I doubt (on the basis of my observation) if altogether it comes to more than 10% of their total diet. The turtles had been replaced as number one food by
[177] the fish (with the introduction of hook and line fishing). But anther factor evidently is the depletion of the turtle population. The third species, the huge loggerhead, is so rare that during the entire
[225] summer of 1953, only one of them had been harpooned and that at Camp Vivora away from Desemboque. The two smaller species have also become very rare and hardly ever show up near the village. They can be taken on more distant expedi-

[1]Eggs of the turtles are considered a delicacy, especially of the smaller of the two. The Seris say that the loggerhead has been eaten once but now almost never, because it became so rare.

[P.22 B]

262 them to their shelter and held them there for several days before they and their families finally ate them up. The turtles are also a well-liked item.

As already indicated in some instances there exists preference for a particular part of an animal. Of the Gila monster only the fat tail was said to have been eaten, and of both rattlers, the head and the tail are discarded on the grounds
* [825] that they contain toxin. Finally the toad and the gecko and *Xanthusia* are all rejected as completely venomous.

● 178 262 It is also evident that changes in the Seri taste have occured in the course of the past several decades. Some animals are on their way out as food, and here we have the Gila monster, the whipcoach, the red racer and smaller lizards. In several cases, and this includes the Gila monster, the responses indicated that the animal had been eaten in the past. I also observed that on the sly, the Seris would eat them when other food was in short order. But they are reluctant to admit this and often altogether denied it.

Hunting

224 [225] Most reptiles are captured by hand or else killed with a stick, stone or pea-shooter. Except for the turtles, the Seris will not make special expeditions. But it is certain that if they find themselves on any of the islands near the shores of Baja California they will go ashore deliberately in search of the chuckawalla.

225 The turtles are another matter. Here now, just as in the past, special expeditions are made in order to get them. These expeditions take place
[501] nowadays in the usual flat-bottomed plank boats, either motor or oar propelled. The hunt takes place only during unusually quiet and dark nights, when the Gulf is smooth and calm and there is neither wind nor ripple. With the slightest disturbance,
[354] [411] turtle fishing is impossible. It is all done with the torch lights or Coleman lanterns. The principal and only weapon is the harpoon, identical with that described and illustrated by McGee. The turtles are then harpooned, dragged into the boat and either left alive, when the hunters have a sale of live ones in mind, or pounded to death with a
[251] club or oar, quartered and then either consumed on the spot or else dried and salted."

[224] [462] While the collecting of the smaller animals usually falls to the children or women, turtle hunting is men's job. Men, too, usually get the chuckawalla because they usually visit more distant islands.

Pets

231 None of the reptiles are pets in a real sense. Those few that might be kept are only held until the day when they are butchered and eaten. It is motivated more by the wish to preserve fresh food than by any affection for the animal. The turtles, the tortoises and the chuckawalla belong here. Occasionally a Seri boy will string a lizard, a *Sceloporus*

"The loggerhead is hunted in the daytime because, owing to its great strength, night hunt would be too dangerous. Two harpoons are always used on it, while for the smaller species, one harpoon usually suffices.

9:Malkin E-5 (1953-1955)1962 NU31 Seri NU31

262 en simply because their flesh is disliked and unfit for human consumption. But it may also well be that some of them, especially of the giant variety, are not eaten simply because they are far too large to tackle and the Seris fear hunting them.

The Seris indicated also in some cases that larger specimens of fishes are eaten when they reach the size which would justify the effort. This is true of *Malacoctenus zonifer* which they indicated is "eaten when large," that is when at least 10 cm. long.

[226] Although only sometimes did the Seris specifically indicate that certain fishes are used for bait, it is very likely that almost all small or lesser fishes are so used.

262 In some cases the Indians indicated changes in preference for given fishes, with the time. For
● 178 unexplained reason *Gymnothorax castaneus*, the morene, has been claimed to have been eaten in the past but not for the last 11 years. It isn't clear why the figure of 11 had been used and why suddenly in the early 40's they should stop eating it while the Mexican drool over it. But it may be also that here we have merely personal preference of the informants, as so often happens. As for the *pescara* it was formerly taken for food
[439] but now it is merely sold to the Mexicans. This practice is increasing also to include the immense *meros*, even larger than the *pescara*. The fish is mainly sold but rarely eaten by the Seris themselves.

Food Preparation and Preferences

252 Food preparation is simple and in the main differs not at all from the preparation of other animal diet. The fish are either boiled whole or in part or else are roasted over slow fire on a grill. The entrails are usually discarded, but otherwise the beasts are eaten entire, eyes, brains and the rest, while the tiny fishlets are eaten complete with the scales and guts.

262 As for the preferences, as expected, there are some fishes that the Seri like better than others. The *bana* in the first place and the *pinto* in the second lead the list. The Seri prefer them to all others and consider them a real delicacy. On the other hand, there are some fishes that they'll eat only under protest, meaning when times are hard. *Girella simplicidens* is one such creature. The *Puerco* or *Cochi* is another. I have seen boat loads of puercos brought in with the other fish and un-
[231] ceremoniously dumped out on the beach to the dogs. Literally! The Seris took to this fish only when fishing was poor during the wintry days
[183] when they were held ashore by the weather. Even then, they tried to eat the despised creatures on the sly, avoiding being seen doing this, and when I or the Mexicans picked up fresh fish from the beach to take home they laughed saying that we acted as a *cochi* (pig) would!

Other Economic Uses

* 825 One use made of fish concerns two species of
237 sharks, the *chato* and *camposo*. Here, the inform-
322 ants claimed, the oil from their liver had been used in earlier times for polishing wood. This is

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MOLLUSCA

VII

Species	USES: Food Prep.	Food Past	Decoration Prep.	Decoration Past	Trade Prep.	Trade Past	Bait
Octopus bimaculatus	x	x				x	x
Codakia distinguenda		x					
Laviecardium elatum		x			x[1]		
Carditamera affinis	x	x					
Acmaea dalliana			x	x	x		
Crucibulum spinosum		x	x	x	x		
Chione undatella	x	x					
Chione californiensis	x	x					
Pteria peruviana	x	?	x	?	x		
Volsella capax	x	x					
Olivella dama			x	x	x		
Cypraea annettae				x[2]			
Tegula rugosa		x		x		x	
Conus regularis		x[3]		x	x	?	
Phyllonotus erythrostomus		x				x	
Turritella bradeifiana		x[3]			x	?	
Polinices reclusiana	x	x					
Chlamys subnudosa	x	?					
Atrina maura	x	?			x[4]		
Navicula pacifica		x					
Turbo fluctuosa	x	?			x		
Solenosteira pallida			x	?	x		
Ceritium stercusmuscarum			x				
Trivia radians			x				
Ficus ventricosus	x						
Niacke bistrinosa	x	x					

[1] Occasionally used as dip spoon

[2] Supposedly used in the past for money

[3] In the past "giants of 300-400 maybe years ago have eaten it."

[4] Only pearls

These figures show then 26 out of 37 species exploited economically in some way, that is 70%. These figures show increase over the figures I have published previously (1956) which were 21 out of 36 species and 58% respectively. The corrected figures are the result of brief additional field work in 1955.

Food

A good part of the molluscan forms are used as food. Altogether 19 species are listed as such, although out of these, only 11 were reported as being part of the diet today while the remainder only in the past. It is obvious that there has been progressive decrease in the Seris' dependence on the molluscan diet within the past few generations.

Four of the species reported as part of the Seri diet at various times had been collected from the kitchen-middens. There are: *Pteria peruviana*, *Chlamys subdudosa*, *Volsella capax*, and *Navicula pacifica*. Of these four, *Navicula* has been reported as eaten in the past "maybe 100 years ago, but not

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XI

SUMMARY

224 Hunting is very decidedly secondary to fishing, although it is still much practiced by certain individuals and in a desultory way probably by all.

462 There is a clean cut division of labor in all these occupations. Fishing and hunting are men's occupations, gathering of the desert animals and beachcombing for the intertidal animals is largely the job of women and children. Boys get broken [868] into men's occupations in adolescence, girls into women's jobs very much earlier.

224 Avoidance of fishing or hunting certain creatures appears much more a matter of custom than of well defined and socially rationalized attitude. Frequently an animal is not hunted simply because the Seri feel it is too big and too strong for them to tackle.

157 Through all these activities, Seri individualism is curiously woven and accounts for the failure of anything that might resemble a collective effort.

Food Preferences and Preparation

252 Seri food is prepared in a simplest sort of way. [263] Boiling in water is usual with salt and sometimes a few other spices added. While most food is prepared that way, snakes and fishes are usually fried, without any ingredients. There has been a [178] notable shift toward greater fanciness in the ingredients, as they have become more readily available.

262 There are many preferences. Animals are scaled in desirability. Some fishes, marine turtles, chuckawalla, deer and peccary and duck are at the top of the list; lower animals, smaller fishes including puerco in the middle, while the sea gull and the pelican are probably at the very bottom of the pit. This again reflects temporal changes in tastes [178] although not necessarily a direct influence from the Mexicans.

Pets

231 Few pets are kept, other than dogs. Such animals as come are those captured accidentally. In most cases they are bird nestlings.

Taxonomy

* 825 Differential criteria are applied in the classification of different groups. There is less tendency to group birds than to group different mammals and classificatory ideas break down almost completely in smaller animals, especially insects and molluscs. Considering the economic importance of the molluscs, poor ability to distinguish the Gastropods from the Pelecypods is striking.

The classificatory criteria differ for different groups. Mammals are generally recognized by the furiness, birds by the ability to fly and the pres-

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9:Malkin E-5 (1953-1955)1982 NU31 Seri NU31

*825 or toxic contrary to their genuine nature. When such contrasts exist, the beliefs cannot always be explained as a matter of the influence from the Mexican folklore. The reasons for this I discussed in the chapter on the reptiles and amphibians. The explanation for such beliefs depends mostly on additional field work. It is also interesting that in some of these instances (bat for example) there is a suggestion that the belief in the toxicity or other unpleasant traits not only is not associated with the Mexican folklore but is basically aboriginal, and it is on the way out among the younger men.

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Attitudes

*825 182 With rare exceptions Seri attitudes toward animals are remarkably sober, pragmatic and matter of fact. This is evident in how little folklore or irrational fear is connected with the animals. It all runs pretty much along the line of their generalized attitudes, world view and religion as suggested by other investigators (Kroeber 1930:4; This is also the opinion of Spicer, personal communication). Elements of mystery are almost completely absent and this is probably not entirely due to the disintegration of their religion and culture as Kroeber (*Ibid*) thinks.

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*825 171 In other ways, their attitude toward animals ranges from indifference (adults) to downright deliberate cruelty (little boys). In this, the Seri boys differ markedly from the boys of some of the other groups I studied (Malkin 1958:89).

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11: Moser L-5 (1956-1961) 1963
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SERI BANDS

EDWARD MOSER

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ABSTRACT

In previous publications on the Seri, frequent reference to distinct Seri groups points to historical tribal divisions at some level. Recent research among the Seri has determined the former existence of six bands which included three dialect groups. Three of the bands were subdivided into clans. These six bands, whose formation may have been caused largely by internal struggles, were eventually crushed and reduced to a single group by the devastation brought about by external conflict.

INTRODUCTION

The Seri tribe is located in Mexico along the coast of Sonora between Bahia Kino and Puerto Libertad, and on Tiburon Island (Fig. 1). Today it consists of approximately two hundred and eighty persons who call themselves *kongkaak*[1] "the people." Although at one time it was comprised of six distinct bands (Fig. 2), the tribe has now lost its band organization. However, much of the late history of these now-defunct tribal units remains vivid in the minds of the Seri. The purpose of this paper is to present some of the salient features of these former bands, to discuss certain interrelations between them, and to recount the Seri version of the disintegration of the band system.[2]

Three published studies on the Seri should be mentioned.[3] Of these, the reports by Kroeber and by Griffen are the more reliable. All three investigators mention tribal divisions which Griffen rightly designates as bands.

BANDS

BAND I *xika ʔai kkoii* "they who live toward the true wind"

This group is commonly referred to in the literature as the Tepoca or Salinero. As shown on Fig. 1, they inhabited an area which extended from a point slightly north of Puerto Lobos to Punta Tepopa on the south. The territory extended inland, encompassing the general area delimited by the San Ignacio River.

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the vessel to Guaymas. With the aid of a group of Yaqui, some of these women were said to have been permitted to go to Hermosillo and eventually to return to their home on Tiburon. Others of their group are said to have remained near Guaymas. The women who returned to Tiburon reported that the San Esteban women and children were put aboard another ship which sailed southward.

BANDS I, III, AND IV

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As opposition from the Papago and government forces increased, the members of Band I were forced to seek refuge on Tiburon Island. The mainland members of Band III (subdivisions 11 and 12) were also forced, especially during the Encinas Wars, to flee to Tiburon. There the combined forces of Bands I, III, and IV sought to cope with the military expeditions sent out through the years to exterminate them. Tiburon Island is an adverse battlefield for the uninitiated; some expeditions were turned back due to lack of potable water or because of failure to make contact with the enemy in the mountainous terrain. Some expeditions did encounter the Seri, however, and many natives were either killed or captured.

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Through the years, then, these military encounters, along with smallpox and measles epidemics, were responsible for reducing the Seri tribe to a small remnant. The band and clan systems lost their functional relevance as the people continued to live together for mutual protection. Shortly after the turn of the century, the expeditions and raids had practically ceased.

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SIGNIFICANCE OF BANDS TODAY

With the dissolution of the band system, the rule of descent shifted from patrilineal to bilateral, and the rule of residence shifted from patrilocal to neolocal.

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Although the substance of the band system is no longer a reality, the concept of land ownership still remains. A young Seri of today may choose to be associated with either the i?iziiting of his father or that of his mother. He is said to inherit part ownership of the area. It is recalled by one informant that in former times ownership of a mountain was especially important. Sometimes ownership of a mountain was included as part payment for a bride. Thus a person might 'own' a mountain in a subdivision other than his own.

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A custom exists even today whereby a person names his dog after a mountain or other geographical point located in his subdivision. Although the person may re-use the name, each dog so named must be of the same sex as the first.

SERI BLUE

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ABSTRACT

The blue which the Seri Indians of Sonora, Mexico, use in face painting is not the mineral dumortierite, as previously believed, but is a prepared pigment. This paper is a description of the process in which three elements are combined to produce this pigment.

McGee and Kroeber reported the mineral dumortierite as the source of the blue pigment used in Seri face painting (McGee 1898: 165-6; Kroeber 1931: 27). Coolidge described two blues, one a mixture of gypsum and a boiled root, the other a blue stone found on Tiburon Island (Coolidge 1939: 200). Xavier mentioned dumortierite and commercial bluing. She also referred to a third blue obtained from a plant on Tiburon (Xavier 1946). Present investigation has shown that as far as the Seri know, the only blues they have ever used are *ika?óil* "to cause to be blue" (commercial bluing) and the highly prized *?antezj kóil* "blue clay" of their own manufacture.[1]

The components and the method of manufacture of *?antezj kóil* are said to have been taught to the women long ago by *?ant i?akimxoj* "they who tell the things about the earth." The actual color transformation is veiled in mystery to the Seri who say that if the process of making the clay is observed by any girl who has not passed the menarche, the blue will not appear. Its appearance is not attributed to shaman power, however.

?antezj kóil has been in less demand during the last few decades since commercial bluing has been readily available. Nevertheless, *?antezj kóil* is the blue preferred by those women who continue to adorn their faces in the traditional manner.

The three ingredients used in making the blue clay are the root bark of *xkoktz (Franseria dumosa)*, *iki kóizj* "to grind with" (a mixed clay in which montmorillonitic layers predominate), and *mokni óoxW* "excrement (sap) of *mókni (Guaiacum coulteri)*." The Seri say that the *iki kóizj* and the *mókni* are found only on Tiburon Island. The root bark of *tinkl (Franseria ambrosioides* Cav.) or of *xneejan stiktoj (Stegnospermum halimifolium)* can be used instead of *xkoktz*. *tinkl* gives a distinct aroma to the clay. The plants mentioned are fairly common along the Sonoran coast.*

*EDITOR'S NOTE: It is interesting to note that none of the ingredients is blue in its unaltered state.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

Seri race-sense and Seri race-type no less delicate than that between the stressful action and the stress-shaped structures of the tribe, and while the inception of both type and feeling may be ascribed to the isolated environment, it seems manifest that both have interacted constructively and in cumulative fashion through a significant process exemplified more clearly by this tribe than by others thus far studied. At the same time, analysis of the harmony between type and sentiment indicates that the lowly Seri are actually, albeit unconsciously, carrying out a meaningful experiment in stirpiculture—an experiment whose methods and results are equally valuable to students. The Seri gymnastic and the Seri stirpiculture are in close accord, in that both are conditioned by initially dilatory yet ultimately intense action; the results are equally accordant in that the one conduces toward individual vigor and the other toward a vigorous and distinctive stirp; while the excellence of the methods (viewed from the somatic standpoint) is attested by the magnificence of the product. Now, comparison of the stirpicultured Seri with contemporary tribes shows that the desert-bound folk have attained unequaled somatic development, and suggests that the intuitive stirpicultural processes have been rendered peculiarly effective through the persistence of that tribal isolation in which the processes apparently took rise; so the race-sense of the Seri may be regarded as the product of long-continued stirpicultural processes, initially shaped by environment, yet developed to unusual degree by somatico-social habits, kept alive largely through continuous environmental interaction.

Summarily, the Seri are characterized by noble physique, by peculiarly swift and lightsome movements, by great endurance coupled with capacity for vigorous action, by animal-like symmetry and slowness of maturation, and by various minor attributes combining with the major features to form a distinctive race-type; and they are still more conspicuously characterized by an acute race-sense which holds them apart from all aliens. At first sight, several of their somatic attributes seem incomparably primitive, yet analysis of the attributes in the light of certain laws which they exemplify better than other peoples thus far studied indicates not so much a lack of development as an excess of growth along purely somatic lines, with a correlative defect of development along demotic lines; and when the lines of growth are traced to the sources and conditions, it becomes fairly clear that the aberrant development of the tribe is merely the reflection of a distinctive environment operating (evidently) throughout a long period. In brief, the somatic interest of the Seri seems to center in the remarkable adjustment of the tribe to a peculiar environment—an adjustment of such delicacy as to imply interaction throughout many generations.

h: McGee E-5 (1894-1895)1898 NU31 Seri NU31

them killed him with stones. This modified account, also, Señor Encinas duly conveyed to me. 124

Still later, in collecting linguistic material through the Seri interpreter with the assistance of Señor Alvarez-Lane, I recurred to the subject incidentally (or at least ostensibly so) on two or three occasions, partly with the view of verifying or disproving the current report that the men were eaten by the Indians; and since the first distrust on the part of the interpreter and the companions (by whom he was commonly surrounded) had worn off, the questions were answered freely and with apparent truth. In brief, the information gained in this way was a repetition in general terms of the statement of the killing of both men; but the responses indicated (1) that the Indians are not cannibals, (2) that they do not eat any portion or portions of the body of an enemy slain in war, (3) that they do not eat human flesh in a sacrificial way, and (4), specifically, that they did not eat the flesh of the two white men killed last spring. I am disposed to give credence to all of these statements. 648 [266]

Señor Encinas informed me that for a long time after the reputed killing of the two Americans on the island the Seri were exceptionally shy and were seldom seen on the mainland; that the first representatives of the tribe to appear were one or two old women who came to his rancho with much trepidation; that these representatives being not ill-treated, a man appeared, who was also well treated, and that still later other members of the tribe appeared, though it was only a few days before our visit that any considerable body of the Seri Indians showed themselves at their favorite mainland haunt on his rancho. It was his first communication with the Indians since the killing, and, both he and they agreed, the first confession of the crime outside of their own tribe. 648

While in Sonora various conflicting accounts of the affair were given me. One, to which I was disposed to attach credence by reason of the character of my informant and his explanation of the circumstances under which the information was gained, was given me (just before the visit referred to above) by ex-Consul Forbes, of Guaymas. This account corresponds in all essential details with that conveyed to my party by the Indians, except that, according to Mr Forbes' account, the survivors were altogether unarmed after the borrowing of the rifle by the Indians, and that when the man in the boat arose suddenly and shouted he pointed at the Indians not a gun but a stick, in the hope of deceiving them thereby, as he was fortunate enough to do. 115 124 648

It may be added that the Seri Indians are at the same time the most primitive and the most bloodthirsty and treacherous of the Indians of North America, so far as my knowledge extends; also that their character is well known throughout Sonora, and indeed generally throughout Mexico, Arizona, and the southern part of California. I was assured by the acting governor of Sonora and by the prefect of Hermosillo that it would be little short of suicide for even a Mexican official to visit these Indians or land on their island without an armed guard. Through conference with the Indians, also, I learned that any white man, Mexican, or Indian of another tribe coming in contact with them is killed without the slightest compunction, unless they are restrained by fear. Accordingly I am satisfied that the character of the Seri Indians is quite as bad as the unsavory reputation they have acquired throughout the Southwest. 181 648

It should be observed that while the Indians were unable to give the names of the men killed, their description of men and vessel agreed exactly with those of the newspaper correspondent Robinson and his companion, and with the sloop *Examiner*, and Mr Forbes' information was obtained direct from the survivors of the expedition of which Mr Robinson had charge. There can thus be no doubt that it was Mr Robinson and his companion who were killed by these Indians, and whose killing was confessed by them, as set forth above. 124 648

With great respect, your obedient servant,

W J McGee,
Ethnologist in charge.

Honorable S. P. Langley,
Secretary of the Smithsonian Institution.

1: McGee Σ-5 (1894-1895)1898 NU31 Seri NU31

and cosmopolite characters of higher humanity; the dearth of extraneous devices denotes absence or intolerance of that aecultural interchange accompanying and marking the progress of peoples; and the dearth of inventions denotes feebleness of creative faculty and absence of that self-confidence which accompanies and measures progress in nature-conquest. 105 13 182 [177]

4. When the local and fortuitous features of the Seri craft are viewed in their serial or sequential relations, they are found to reflect and attest autochthonal development. Excepting the few aecultural processes and devices whose acquisition may confidently be traced to certain social intersections of the historic period, the Seri technic is too closely tied to local environment to warrant any supposition of importation from other districts. The question of the birthplace of the people may be left open in this case as in every other; but the birthplace of practically all those activities and activital products which define the folk as human was manifestly Seriland itself—so that the tribe, considered as a human folk rather than as a zoic variety, must be classed as autochthonous. 105 177

Summarily, then, the Seri industries are significant as (1) local, (2) fortuitous, (3) primitive, and (4) autochthonous; and these features combine to illumine a noteworthy stage in primitive thought. 185

5. On juxtaposing these significant features of Seri technic, they are found to reflect the tribal mind with noteworthy fidelity, and hence to indicate the sources of Seri mentations, and of the local culture in which these mentations are integrated. The local foodstuffs—especially that vital standard of values in arid regions, water—are periodic sources of the strongest aspirations and inspirations of industrial life, and the methods and devices for food-getting are but the legitimate offspring of the inevitable relation between effort and environment; the conspicuous rôle of chance is but the composite of the hard and capricious environment on the one hand, and of the lowly thought reflecting that environment on the other hand; the zoic faith into which the magma of recurrent chance has semicrystallized finds carnate symbols either in local beasts or in fantastic monsters suggested by those beasts; even the mating instinct, second only to thirst among the impelling action-factors of the folk, is so profoundly and bitterly provincial as to exclude foreign ideals to a degree unparalleled among known peoples. The industrial materials are local—but not more local than the thoughts in which they are reflected; the technical methods are unmistakably the offspring of the environment—but they are equally the offspring of minds reflecting that environment and no other; the few and simple devices stand for integrations of experiences, instinctive rather than ratiocinative, the germ of invention rather than even its opening bud—but the experiences bear the marks of that environment and no other. Accordingly, the mental side of Seri industry, and, indeed, of all Seri life, appears to be the counterpart of the physical side. 13 181 182

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

● 181 153 side. The Seri mind is (1) local, (2) chance-dominated, (3) exceeding lowly, and especially (4) autochthonal in its content and workings.

000 There is an aspect of the inference as to the local and autochthonal character of the Seri mind which is of wide-reaching application. As indicated by many tribes, though most clearly by the Seri, there is a definite relation between the somatic characteristics of primitive folk and their environment; the indications are that the relation is inversely proportionate to development, the lowliest tribes reflecting environment most closely, and the higher peoples responding less delicately to the environmental pressure in the ratio of their increased power of nature-conquest; and the relation is essentially phylogenetic, in that it sums and integrates the innumerable interactions between organic kind and environment during generations or ages. It is to be realized that the relation is not simple and direct or physiologic merely (e. g., like that between climate and the pelage of an animal), but that it is linked through the human activities; for, as is conspicuously the case in Seri-land, the environment prompts exercises of particular kinds, and it is these exercises that shape the somatic features, such as strength of lung, length of limb, and the soundness of constitution displayed in physical endurance; yet the relation is none the less real, in that it operates through the activities rather than directly. The relation may be characterized with respect to mechanism as bodily responsion, or with respect to capacity as *responsivity of body*. Now, as is well illustrated by the provincial ideation of the Seri, the relation between environment and physique is accompanied by a corresponding relation between environment and thought. This relation, too, varies inversely with development, the connection being closest among the most primitive tribes, and growing less and less close with maturing mentality and proportionately increasing power of nature-contest; and the relation is still less direct (or physiologic merely) than that between the human body and its environment, in that not only the bodily activities but the instinctive and nascently ratiocinative processes are interposed. This relation between mind and environment may be characterized as mental responsion in its mechanical aspect, or as *responsivity of mind* when regarded as a psychic property.[1] Accordingly, the relation between the tribal mind and its environment, as illumined by the peculiarly delicate interactions observed among the Seri, seem to indicate the genesis and earlier developmental stages of mentality in its multifarious aspects.

The specially significant feature of the relation between environment on the one hand and body + mind on the other is its diminishing value with general intellectual advancement. Viewed serially, the

[1] The responsivity of mind has been defined elsewhere as the basis of knowledge, and as one of five fundamental principles of science (The Cardinal Principles of Science, Proceedings of the Washington Academy of Sciences, vol. II, 1900, pp. 1-13).

2: Kroeber E-5 (1930)1931 NU31 Seri NU31

to prepared defence or attack. The Seri mode of life and induced temperament must have led to many instabilities, with make-shifts often actually more in use, but finished or efficient types of artifact seemingly latent and sporadically emerging in the stream of their culture. Thus, the shell alongside the double-bladed paddle; plain baskets seen in use, but a series patterned in a definite style being produced as soon as their manufacture was profitable; unroofed and roofed houses. Similarly, the two-pointed fish-spear and olla carrying-net, which neither McGee nor I saw, but which may persist in memory in the culture ready for revival on occasion.

Somewhat similar, perhaps, is the status of polygyny, which prevailed in McGee's day (p. 279) a half generation after a disastrous war, but was not the rule, or was successfully disavowed, in earlier times and to-day.

Errors and Misconstructions

McGee dwells at length (pp. 152-156) on three strong trends of Seri life and culture: the pedestrian habit, accompanied by quite exceptional fleetness; a hand and tooth sense with corresponding absence of tool sense; and a race sense unalterably opposed to mixture with alien blood.

All the Sonora and Southwestern Indians were and largely still are fast and sustained long-distance travelers on foot. There is nothing to show that the Seri were superior to the others. The one time they remember having met the Papago in a foot-ball race, they were beaten. Yaqui warfare is a record of at least equal endurance and ability to evade superior civilized forces. In fact the faculties of the Yaqui are the more remarkable in that they have always been settled farmers and often moved in larger bodies. The incredible fleetness of the Seri was probably most manifest in mesquite thickets and on rocky ground. That they should outrun a horseman on an open plain is the sort of tale that one hears on every frontier and which the more intelligent frontiersman does not take seriously.

Hand and tooth sense was undoubtedly strong among the Seri. The same thing, especially as regards food, is reported for the Lower Californians. But the inference of lack of tool sense is erroneous. Knives are prized by the Seri, and, along with nails, axes, and the like, are handled with a direct, crude effectiveness. The crudity is due to the lack of standard, order, and interest in finish which pervades all Seri cultural manifestations and which rests ultimately on their essential isolation and self-sufficiency in an unusually forbidding environment. What a Seri is interested in is not a neat job but one that will substantially meet his immediate need. Their modern plank boats are weak in plan, badly joined, and always leaky; but they serve. A structurally stronger boat would probably profit noth-

2: Kroeber E-5 (1930) 1931 NU31 Seri NU31

ing, because it would be swamped in a sea which it could resist. The joining and calking are always carried far enough that the boat can be bailed faster than it leaks. That the Seri prefer to bail rather than to finick over joints, is a matter of preference. Most of our real frontier life runs on much the same plan, though sprung from a tradition of intrinsic standard and provided with a superior tool equipment. Tribes like the Walapai and Papago, who live in nearly the same desert, show much of the Seri combination of technological crudeness and effectiveness. They do make an exception in basketry, which is what has chiefly reached our museum cases from their culture; but the Davis-Heye collection shows that the Seri too can make baskets of unsuspected quality. My impression, based on the way the Seri handle their knives, boats, bows, and the like, is that they have excellent practical mechanical sense, but that their standards are astonishingly different from our own. Most people that depended so much on sailing their boats as the modern Seri do, would not be content with two sticks, a blanket, and a harpoon line. But, given the willingness to operate with this equipment, very few would be as successful in quickly rigging and skilfully handling the sail. And sailing is something the Seri have recently learned or evolved. They are the frontiersmen of native culture: hardy, rude, unorganized, practical, efficient; but, like our own frontiersmen, in no sense only half emerged from the tool-less animal. McGee was so inspired by the desire to find ultimate "primitiveness" among the Seri that he often ignored the tremendous effect of their habitat which he so well observed and described. After all, in his day cultural evolutionism was still in vogue.

As to race sense, McGee seems partly but only partly right. Chico Romero of his own accord asked me if other Indians had venereal diseases, and on the return question replied that the Seri were entirely free from them. I also saw and heard of no half-breeds. On the other hand, Chico's historical tradition told of the violation and keeping of captive Tepoca women, and since his own son was descended from one of them, in the second generation, Chico's mother-in-law must have been a Tepoca. McGee's "alien conjugal union" as the "blackest crime" (p. 11) is therefore an exaggeration, and his informant's statement that a Papago woman captive among the Seri never could have had children because she was an alien slave (p. 278), must rest upon a misunderstanding.

The groom's continence for a year after marriage as a moral test before admission to full husbandly status (pp. 280-3), is probably a matriarchally colored fantasy based on another misunderstanding. As already mentioned, Chico was interested, but mildly ribaldly amused, at the idea when it was put before him as a foreign Indian custom. He reacted like the average white man under the circumstances, not in the least like an actor skilfully feigning ignorance.

2: Kroeber E-5 (1930) 1931 NU31 Seri NU31

by them at times. This raises the question of whether the Seri may not have reached their habitat from the peninsula, or possibly the reverse. The solution of this problem depends on an analysis of full data on physical type, speech, and culture content, and only a partly conclusive answer, discussed below, can as yet be given. In general behavior and temperament, Seri and peninsular Californians seem to have been strikingly alike; but this fact can not in itself be construed as evidence of common origin, because the similar psychology may be largely determined by similar residence and subsistence habits resting in turn on almost parallel environment; much as pastoral nomads or mariners in whatever part of the world, and with or without historical connections, are likely to exhibit analogous mental attitudes in contrast with rural or urban populations.

In any event, it is wholly unproved that the Seri possess a native endowment which is more animal-like, more dominated by instinctive impulses and less capable of cultural development, than other peoples'. In fact the improbability of such an assumption is indicated by their possession of culture traits, like certain games and their kinship system, which they either share with neighboring tribes or have developed into rather high specialization. The meagernesses of their culture are therefore evidently due to factors in their particular history or geography rather than to congenital deficiencies or abnormalities. This does not mean that it would be easy to convert the Seri to the mode of life of Pima or Mexican. Habits of irresponsibility and unsettlement once established, even through part of childhood only, are notoriously difficult to alter. Witness the Gypsies. However, such practical habit difficulties are of course no evidence as to quality of endowment.

The modern Seri are the amalgamated remnants of some three or four of a half dozen closely related Serian groups formerly recognized. The preponderant one in the fusion of these groups is likely to have been that which held Tiburon and the fronting mainland, on account of better preservation of their numbers and habits in the relatively inaccessible island refuge.

Seri physique is distinctive in physiognomy, expression, and habitus, as would be expectable in a people sharply set off from its neighbors in practises and attitudes. The measurements available show no very marked differences of gross anatomy from neighboring tribes, either in stature, head shape, or nose proportion. The head may be somewhat rounder than among Pima and Yaqui; the difference in body seems more to be one of greater slenderness than of greater height. The Seri abilities to endure hunger and fatigue and to run great distances are faculties possessed by nearly all tribes of the southwest United States and northwest Mexico.

The Seri language is intrinsically and markedly tonal, more given to consonantal accumulations than the neighboring Uto-Aztecan and

3:Davis & Dawson 1-5 (1932-1940) 1945
MU31 Seri MU31

THE SAVAGE SERIS OF SONORA—I

By EDWARD H. DAVIS AND E. YALE DAWSON

WHEN the Seri Indians pass into extinction, "good riddance" will be voiced by many a Mexican, for centuries of warfare against the invaders of their inhospitable lands have made this small tribe notorious among the aborigines of Mexico. Many people will be ignorant of their passing, but a few of us even now watch with some regret the losing struggle of their diminishing numbers against the spreading civilization that tramples out the wild things and destroys the natural features of the earth. With the Seri goes a link with a past, primeval age of nature in America, for these are a strange and primitive people, a people whose lives and habits assign them to the initial place in the scale of cultural development among American Indians, and hence to the lowest recognised phase of savagery.

In 1540 one of Coronado's officers was the first to capture and bring into the army encampment in Sonora a Seri warrior, an Indian so large and tall that his stature created a sensation among the Spanish soldiery. It was three and a half centuries, however, before the Seri tribe was finally subjugated by an invading force, and then only after the slaughter of nine-tenths of its population.

In modern times, though the encroachment of settlements has forced the Seris into domestic contact with the Mexican people, few outsiders have ever come to know them. Until the fishing village of Kino was settled some ten years ago, there were only two men they counted real friends among aliens. The senior author was one of those. Today the Seri not only must tolerate the encroachment of the Mexican, but must suffer from imported diseases which are gradually destroying him. The present life of the Seri is but an echo of its past, but in this modern world the habits of the survivors of America's most primitive people are none the less astonishing. Their gradual acquisition of modern implements and materials has gone along with centuries of warfare and bloodshed, and their submission to law entails a long story of violence. Before considering these more recent phases of their history, however, let

[p. 193(A)]

9:Malkin E-5 (1953-1955)1962 NU31 Seri NU31

237 On the other hand, the hides of all of these three animals had been traded off to the Mexicans, [439] but this again was now discarded. This would [182] merely indicate the fluctuation of collapse of the demand from the outside rather than any intrinsic change in the Seri values.

Incidental use of the horns of the bighorn had been denied by all of the younger informants although admitted by Miguel Barnett. However, as I observed, the horns of this sheep are sometimes [415] used as drinking cups. Several of them were [181] lying around in the usual disorderly way of the Seris, now and then picked up for drinking and then again discarded. But the use of them struck me as most casual.

224 411 *Hunting:* Hunting takes a variety of forms and includes a variety of weapons, from .22 caliber and .30/.30 caliber rifles to spear, stone and throwing stick. Bighorn and deer are followed on foot but without dogs, probably because without dogs they may be easier to surprise. This hunt takes place in daytime. But the peccary is hunted with both the spear and the rifle and with a pack [231] of dogs, and only by the adult men. There is an [885] emphasis on the "adult," this surely owing to the certain amount of danger connected with the chase of the peccaries. The weapons of the chase dwindle to the throwing stick or a stone when it comes to the jackrabbit. Badgers, I was told, are also killed with the same weapons. But formerly, the informants said, bow and arrow was much instrumental in hunting the smaller beasts.

* 825 Other animals, according to the Seris, are not [224] hunted now, nor had they been in the past. Justification for this ranged from the usual "because it isn't done" to the more specific reasons. The skunk is "neither hunted nor eaten because it [225] stinks." The whale is considered "too big to kill" while the killer whale is "too fierce." The harmless *tonita* (dolphin)[1] was reported somewhat hazily as "sometimes killed" but the comments were inconclusive and were denied by other informants.

[224] Two other species had been reported as hunted in the past but not at the present time. The Ringtail cat was supposedly hunted with the slings [225] while the sea lion was hunted down "with a rifle or rock but not with the harpoon because of its great strength, it would break the harpoon." This, however, was "perhaps 25 years ago." Why the sea lion is no longer pursued is uncertain, unless there is again a lack of demand from the outside while the Serian economy is so much centered on fishing.

231 *Pets:* How many species of animals are kept as pets on and off is difficult to say. Like most hunting and gathering groups the Seris are fond of pets but their interest in them depends entirely on an accidental capture. Among the wild mammals of the region there are few that could be captured and tamed easily. The badger which I mentioned already was the only mammal I saw

[237] [363] [1] I have seen bones of beached whales used for stools and also the skull of the *tonita* used as a chair. But it must be remembered that these animals got stranded on the beach. They were not deliberately hunted down.

[P. 10 B]

½ [i.e. - deer, bighorn and peccary - Analyst]

123 As a concrete result of that first trip to Tiburon, I secured a
115 *balsa* (boat) made of *carrizo* canes lashed together with native fibre,
501 which *balsa* Mr. Heye said it was the finest one in North America.

[226] This *balsa* was given to me without hesitation, although it furnished one or two families with sea food.

115 I wish to pay tribute to Senor Roberto Thomson who has been my constant companion, friend, guide and interpreter during the past twenty years, on all my trips to Tiburon and various parts of Mexico. I found him absolutely dependable, using excellent judgment in critical situations. He was honest, fair, intelligent, looking out constantly for my safety and comfort always, enduring hardships cheerfully. A better all-round out-door man I have never seen equaled. In short, he is a real *hombre*, and muy *simpatico*.

13 Tiburon, or *Shark Island*, long noted for its evil reputation as
181 the home of the most savage and treacherous Indians of North America,
193 lies in latitude 29°north and 112°30' west longitude, in the Gulf of California. It is shaped like a parallelogram about thirty-five miles long and eighteen to twenty miles wide, and lies parallel to the coast of Sonora, Mexico, of which, no doubt, at some remote period, it once formed a part.

It is separated from the mainland, for the most part, by a strait
[127] called *El Infernillo*, or The Little Hell, through which the rising tides pour a resistless flood. It is a desert island and supports a desert arboreal vegetation which includes several varieties of the cactus family and the *mesquite, palo verde, palo fierro, torote, palo blanco, ocotillo* and others. The giant *saguaro, barbueso* and *pitahalla (pit-a-haya)* cactus are found here also.

Two desert ranges run lengthwise of the Island, which, on its westward or windward side, terminate in sea-worn cliffs against whose ramparts dash the heavy breakers of the Gulf, and on its eastern side, by long alluvial aprons from the foot of the mountains, sloping gently down to the lovely shell-strewn beaches. From this side the foot of the mountains lies from two to five miles distant. On this, the leeward side of Tiburon, the sea is much calmer, and often, in the early morning, it is as smooth and placid as a lake, reflecting each rosy, lavender and purple tint of the rugged Sierra Seri along the Sonoran coast, as in a mirror. The exquisite loveliness of marvelous sunrises over the pure limpid waters of the *Estrecho Infernillo* is mystical.

134 The soil is loose and sandy, unsuitable for cultivation, and im-
241 possible for producing domestic crops of any
142 kind.

000 possible for producing domestic crops of any kind. There is no water
312 for irrigation, and drinking water is very scarce, rising in only a few parts of the Island in places known only to the Indians.

648 For centuries these nomads of the wastes have borne an evil repu-
• [10] tation as killers and cannibals, and many an expedition to the Island for trade or exploration has never left its beautiful shores. Lured away from their boats by friendly gestures of the Indians, every last man has been killed by arrow or rifle and the expedition never heard from. No survivor has ever returned to relate his experience and, up to the time of my visit, a man risked his life to go among the Seris on their Island.

Time after time, for four hundred years, the Spaniards, and later the Mexicans, have tried to exterminate them. They have been ambushed, hunted, killed on sight for years; diseases have decimated them: they have been the Ishmaelites among the native tribes of Mexico, with every man's hand against them. Now only a small remnant survives.

[13] They have also taken heavy toll of those who have invaded their territory, which at one time extended from Altar on the north to Guaymas on the south, and from Hermosillo to the coast. When hard pressed, they retired to their Island sanctuary where, deep in the rugged ranges, they have defied pursuit. They are strong, brave, neither asking nor giving quarter in battle---men of marvelous endurance, tireless walkers, swift runners, wonderful trackers.

Within the last few years the Government has definitely set aside Tiburon as their exclusive home and sanctuary, with a strip along the mainland as their hunting and fishing ground, and where they can harvest the fruits of the giant cacti without fear of being killed. No person is allowed on this Island without special permission from the Governor of Sonora, or their Superintendent and devoted friend, Roberto Thomson. The Government has declared a permanent closed season on Seris.

175 As to the reputation of these nomads of the wastes of being can-
648 nibals, I quote the following extract from the *Life of Bill Fain:*
266

After I had been in Yuma some time, a Yuma school teacher asked what I knew about Tiburon Island and the Seris. He said he had heard there was gold on the Island and he in company with a sailor intended to go down there. I said "Partner, I have been at the head of the Gulf several times, and interviewed many Mexican sailors and fishermen. These Seris are murderers and cannibals and my advice is, don't go, for as sure as God made little apples, you and your friend will make a fine feast for the *Tiburones.*"

He said the sailor would manage the boat and they would prospect on the Island and pack the gold out. And besides, they were going unarmed and trust themselves to the tender mercies of the most treacherous Indians in North America. I told him, "My advice is to stay just as far away from that Island as you can, if you want to teach school any longer." My advice was thrown away.

Some weeks later several mining men in skirting the coast opposite Tiburon, came across a place where the Seris had evidently been feasting on human flesh,

175 Indians. Dr. McGee, confirming Bill Fain's story of the disappearance
698 of Robinson and Logan, the San Francisco newspapermen, secured the
266 facts from a Seri who spoke Spanish, as follows:

> On reaching the Island, Robinson and Logan asked the natives if there were any deer to be shot and receiving an affirmative reply, they started for the interior toward the mountain with several Seris as escort, leaving the two other men with the boats. On the face of it, this was a most foolhardy performance and Robinson actually loaned his rifle to one of the Seris, who accompanied him. The Seri shot Logan in the back and wounded Robinson who called for help. In trying to escape he stumbled and fell and the Indians beat his brains out with rocks.

On the Gulf Coast, this list of killed and of course eaten, could be greatly enlarged and leads to the fact that, up to recent years, no stranger---American, Mexican or Indian---could land on Tiburon and live. Ever since Sonora was settled, two or three hundred years ago, the Island has borne a sinister reputation and up to recent years, it has lived up to its reputation. Even now, no one is allowed to land on the Island without permission of the Governor or the Superintendent.

• [181] The Island of Tiburon is isolated, its approaches guarded by deserts and sea, and its people the wildest and most primitive race in North America---every man's hand against them, and they against every body.

175 Dr. McGee's investigations in 1895 failed to convict the Seris of
648 cannibalism or of eating any part of either whites or Indians, killed
266 on the Island or killed in battle. This reputation of cannibalism is
114 prevalent in Mexico as well as in the United States, but the charge has never been proven.

It is true, they eat the flesh of animals raw as well as partially cooked, and that may have given rise to this gruesome reputation, but my own investigations covering several visits on the Island and on the Sonoran coast, failed to convince me that they had eaten human flesh. They told me themselves they had not, and if all reports of cannibalism by the Seris were traced back to their source, they would end in surmise or guesswork. No one, so far as I have been able to find, has actually seen a Seri eat human flesh. Until such a witness, can be produced, the Seri remains unconvicted.

Let us examine the so-called evidence of the mining men, as quoted by Bill Fain: the finding of a white man's hands spiked to a cross, and the schoolmaster's papers scattered on the Gulf Coast of Sonora. This evidence is too circumstantial. The discs of leather even fitted the holes in the bag.

In the first place, nails are scarce in Sonora, and no Seri at that time would risk his life to procure nails or spikes at any ranch. Nearly all woods in that region are hard and would almost certainly turn a nail. The Seris had no axes to chop trees to make crosses, and

1: McGee E-5 (1894-1895)1498 NU31 Seri NU31

is at least partially countervailed by conspicuous biotic characters, such as color, stature, etc., so distinctive as almost to seem specific: the Seri are distinctively dark-skinned, their extreme color-range (so far as known) being less than their nearest approach to any neighboring tribe; they are nearly as distinctive in stature, the difference between their tallest and shortest normal adults being apparently less than that between their shortest and the tallest of the neighboring Papago—though they are not so far from the more variable and often tall Yaqui; and they appear to be no less distinctive in such physiologic processes as those connected with their extraordinary fasting habits. Still more distinctive are the demotic characters connected with their habits of life and modes of thought; and when the sum of biotic and demotic characters is taken, the Seri are found to be set apart from all neighboring Sonoran tribes by differences much more striking than the individual range among themselves.[1]

It is especially noteworthy that the Seri have held aloof from that communality of the deserts which has brought so many tribes into union with each other and with their animal and vegetal neighbors through common strife against the common enemies of sun and sand—the communality expressed in the distribution of vital colonies over arid plains, in the toleration and domestication of animals, in the development of agriculture, and eventually in the shaping of a comprehensive solidarity, with the intelligence of the highest organism as the controlling factor.[2] Dwelling on a singularly prolific shore, the Seri never learned the hard lesson of desert solidarity, but looked on the land merely as a place of lodgment or concealment, or as a source of luxuries such as cactus tunas, mesquite beans, and tasty game; they never formed the first idea of planting or cultivating, and their only notion of harvesting and storing against time of need was the intolerably filthy one of nature's simplest teaching; they apparently never grasped the concept of cooperation with animals, and came to tolerate the parasitical coyote only in that its persistence was greater than their own, and in so far as it was stealthy enough to hide its travail and the suckling of its young against their ravening maws; and they apparently never rose to real recognition of their own kind in alien forms, but set their hands against agricultural and nonagricultural humans as peculiarly potent and hence especially obnoxious animals. Naturally their racial intolerance was seed of battle and blood-feud; and they would doubtless have melted away under the general antagonism but for the natural barriers and unlimited food of their restricted domain.

At present, as for the later and best-known decades of their history,

[1] It seems probable that the Seri were nearer to tribes of southern Baja California than to those of Sonora at the time of the earliest explorations, yet that the distinction was sufficiently strong to warrant the extension of the proposition to these tribes also.

[2] The Beginning of Agriculture. American Anthropologist, vol. VIII, 1895, p. 350. The Beginning of Zoöculture, ibid., vol. X, 1897, p. 295.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

all are at least fairly compatible with the inference that the tribe is exceptionally (if not incomparably) low in the scale of general human development, yet at the same time highly specialized along certain lines; and the inference in turn is corroborated by the coincidence between the special lines of development and the peculiar conditions of environment characterizing the habitat of the tribe.

A striking correspondence between Seri physique and Seri habitat is revealed in the pedal development, with the attendant development of muscle and bone, lung capacity, and heart power, together with other faculties involved in the pedestrian habit. Seriland is a hard and inhospitable home; sea-food is indeed abundant and easily taken, but water is terribly—often fatally—scarce, and obtainable only by distant journeying from the places of easy food supply; moreover, the monotony of the diet is alleviable only by extensive wandering for the collection of vegetal products or severe chase after land animals; while the warlike spirit, apparently inherited from a still less humane ancestry and fostered by the geographic isolation, combines to keep the tribe afoot, avoiding waters, conducting raids, and moving constantly from place to place in the endless search for safety. There is a widespread Seneca tradition that the Seri systematically exterminate weaklings and cripples; and it is beyond doubt that the tradition has a partial foundation in the elimination of the weak and helpless through the literal race for life in which the bands participate on occasion. A parallel eliminative process is common among many American aborigines; the wandering bands frequently undergo hard marches under the leadership of athletic warriors with whom all are expected to keep pace, and this leads both to desertion of the aged and feeble and to increased strength and endurance on the part of the strong and enduring; yet it would appear that this merciless mechanism for improving the fit and eliminating the unfit attains unusual, if not unequaled, perfection among the Seri. Now pedal development is one of the special processes of peripheral (or centrifugal) functioning and growth involved in the general process of *cheirization*, which, coordinately with cephalization, defines human progress;[1] and this developmental process explains the specialization of the Seri along one or more lines, and connects the special development directly with environing conditions.

A notable correspondence between structure and function, of such sort as to reflect the habit and habitat, appears in the conspicuous manual development of the Seri. Enjoying a climate too mild to make houses necessary, finding animal food too plentiful to necessitate elaborate contrivances for the chase or milling or other devices for reducing vegetal food, provided by nature with material (in the form of carrizal) for an ideally suitable water craft, barred by geographic boundaries from neighboring tribes, and having neither material nor interest in commerce, the denizens of Seriland were never forced into the way of mechanical development; yet their simple industries, involving as they

[1] The Trend of Human Progress, American Anthropologist, new series, vol. 1, 1899, p. 401.

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147 do swift stroke and strong grasp and dexterous digitation, are mainly
such as urge manual development more strenuously than would be
182 normal among tribesmen connected with their environment through
the medium of tools. The demand for manual strength and skill is
intensified among the Seri by both natural and domestic conditions;
the ever-ready (and almost the sole) material suitable for simple
adjunct to the hand abounds in the form of wave-worn cobbles; these
cobbles are easily usable in such wise as to serve all ordinary purposes,
and their abundance discourages the production of more highly differ-
entiated tools; while their habitual use promotes manual strength and
deftness, coupled with that digital freedom (required, for example, in
grasping a ball) which most clearly distinguishes the human hand from
the subhuman paw. Conjoined with these natural conditions are
domestic demands tending to cultivate manual fitness and eliminate the
manually unfit; for, in addition to the direct industrial premium on dex-
terity, through which the dexterous survive while the clumsy starve, there
is a special premium growing out of the marriage custom, through which
[143] only the manually efficient (and at the same time morally acceptable)
are put in the way of leaving lines of descendants.[1] Naturally, in view
of the combination of factors, all traceable directly or indirectly to
environmental conditions, the Seri afford a peculiarly striking example
of cheirization extended to an entire tribe (if not to a genetic stock of
people)—indeed the remarkably developed Seri hands and feet first
suggested the importance of this process of human development and
led to its formal characterization.

Accordingly, the robust-bodied and slender-limbed yet big-fisted and
143 big-footed Seri seem to be adjusted, so far as several of their more
182 striking somatic characters are concerned, to distinctive habits them-
selves reflecting a distinctive habitat; and the coincidences appear to
reveal and establish the law of interaction between the human organism
and its environment—an interaction effected through the habits and
hence through the normal functioning of the individual organisms as
constrained through their collective relations. And recognition of the
147 law of interaction opens the way to consideration of other correspond-
143 ences between structures and functions and environing conditions.
182 Conspicuous among the more strictly functional traits of the Seri is
the intensity of action characteristic especially of the warriors, though
3/2 in less degree of the entire tribe—an intensity made all the more strik-
ing by contrast with the extreme inertness between stresses. Mani-
festly the capacity for concentrated effort is in harmony with the
tribal habits, themselves reflecting habitat. The resource of prime
importance in Seriland—that which directly and constantly conditions
the very existence of human inhabitants—is potable water. This prime
source of life is too heavy to be transported and too unstable to be
stored with the facilities of primitive culture, yet it is always within
reach of an organism strong enough to journey ten or twenty or fifty

[1] The martial customs of the tribe are described postea, pp. 279-281.

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miles in search of it, and acute enough to follow trails and indications. Naturally the meager water-supply serves as a mechanism for sorting out and preserving the strong and the acute, and for eliminating the weakly and the dull; and hence the tribe have developed a faculty, or perhaps a potentiality, of distinctive sort—the potentiality of providing against thirst-death by a reserve power in the organism itself rather than in the form of mechanical devices such as characterize higher culture. Quite similar are the relations to the resource of second importance, i. e., ordinary food. Habituated to dispensing with storage and transportation of their primary resource, and accustomed to finding food whenever forced to sufficiently active effort to obtain it, the Seri have never grasped that first principle of thrift expressed in the accumulation of food supplies; and accordingly they intuitively rely on successful fishing or chase or search of vegetal edibles for sustenance, and habitually delay effort until they are stirred into activity by the pangs of hunger. Naturally this improvidence serves as another mechanism for perpetuating families of stored vitality, and especially those able to prevail over swift or strong or cunning quarry by sustained vigor and alertness after prolonged deprivation; and the effect of this mechanism, too, is to develop a reserve power in the organism itself, in lieu of the material reserve made through thrift in higher culture. Similar in their consequences are the relations of the individual organisms to the third industry of Seriland, i. e., navigation of the gale-swept and tide-troubled waters. Even the buoyant balsa can not weather the williwaws or ride the tiderips of El Infiernillo without exercise of the utmost strength and skill on the part of the navigators; while the often persistent storms may delay for days embarkation on voyages in quest of fresh water or food. Naturally, the frequent delays and not infrequent perils of such navigation constitute a mechanism for selecting navigators possessed of reserve powers adequate to meet desperate emergencies with vigor and judgment even after enervating waits for wind and tide, while those not so well endowed are either brought up to standard in their hard training school or expelled from their class by drowning or dashing on the rocks, as may happen; so that the effect of this mechanism also is to preserve individuals and perpetuate generations characterized by reserve power, and hence to develop latent potentiality in the tribe. Now, the normal product of these and other natural mechanisms immediately reflecting environmental conditions is capacity for spurts, or for intense functioning under severe stress, despite accentuation of the stress by thirst or hunger or exhaustion, or by all combined—i. e., the effect of habitat and habit is to produce precisely such a somatic regimen as that so conspicuously displayed by the Seri folk. So the intensified activity with long intervals of inertness, simulating the habits of carnivorous and some other lower animals, and hence suggesting primitive condition, would appear to be largely a phylogenetically acquired character expressing specific adjustment to environment.

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To the actual observer of the Seri in his prime there is an indefinable but none the less impressive harmony between the intense regimen and the trenchant structural development characteristic of the tribe—a harmony like unto that felt by naturalist and artist alike in viewing at once the clean-cut form and vigorously easy mobility of tiger or thoroughbred horse; and simple inspection of the lithe limbs and body-muscles stirs into living realization a half-felt inference from many facts—the obvious and indubitable inference that they are stress-shaped structures. Accordingly, the concentrated and robust bodies, the shapely jaws, the well-chiseled arms, and the statuesque legs of the Seri, no less than their powerful hands and bulky feet, direct special attention to the axiom that somatic structures are the product of exercise, and indicate with convincing clearness that the structures are trenchantly developed because of the supreme intensity of the creative exercise. It may be impracticable to outline in terms of metabolism the precise processes of waste and repair in organs and organisms, or to define the relative periods of action and assimilation (or of catabolism and anabolism) best adapted to the development of motile tissue; yet the external facts of all bodily growth demonstrate the efficiency of alternating effort and repose, while the characteristics of highly developed animal bodies (including those of the Seri) demonstrate that the most beneficial exercise is that of relatively brief but intense stresses alternating with relatively long intervals of sluggish movement or complete repose. Moreover, the facile metabolism involved in the widely alternating regimen implies exceptional somatic plasticity of the sort normally accompanying youth and attending tissue growth; and this persistent bodily plasticity is in harmony with the peculiarly dilatory maturation characteristic of the Seri tribe. So the animal-like bodies of the Seri, no less than their animal-like movements, which at first sight suggest primitive condition, may safely be held in large measure to reflect specific habits of life, themselves reflecting a distinctive habitat.

Still more suggestive to the observer than the well-molded structures and the intense functioning with which they are conjoined are those elusive yet persistent characteristics of the Seri comprised in their distinctive race sense—characteristics ranging from overweening intra-tribal pride to overpowering extratribal hatred. Even at first blush it would seem obvious that the tribal isolation, itself the reflection of environment, would necessarily tend toward a segregative habit with concomitant hostility toward aliens; yet the race-sense of the Seri so far transcends that of other segregated tribes as to suggest the existence of a specific cause. So, too, it would seem obvious that the race feeling gathers about a corporeal nucleus in the form of the race-type exemplified in the heroic stature, the shapely face, the mighty chest, the luxuriant hair, the well-modeled muscles, the powerful feet and hands, the "collected" carriage, and the stored vitality, which (as already indicated) synthesize the environmental interactions of generations; yet the actual student can not avoid the impression that the

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143 bound tribe and their alien neighbors. Yet the general application of the law leads only to a more specific application; for, just as the career of the stirp is made up of a succession of vital maxima and minima, so the lifetime of the individual, even in the median stage, is made up of a series of vital climaxes separated by relatively inert intervals; and, as recognized by every naturalist and romancist, every philosopher and poet, in every stage of culture, it is during the periods of conative domination by the master passion that the career of the individual is shaped and that the stirp-sentiment (or susceptibility to kind) culminates in intensity. It follows that the progeny of successive generations represent not merely the optimum median stage of life in which vitality and virility and multiebrity are at flood, but the very climaxes of this stage in which manhood and womanhood attain their ideals, and in which the ideals react on the physical system with unequaled intensity; it follows in turn that each generation must (in so far as intellectual tension can control long series of metabolic interactions after the manner in which short series are controlled by direct volitional exercise) incarnate the ideals of the preceding generation; whence it follows still further that in general isolated race-types tend constantly and cumulatively to increase in definiteness—at least until the somatic factors are counterbalanced by demotic relationships arising with considerable increase in population. It is true that the extent to which the incarnation of ideals is effective or even possible has not been measured; it is also true that the naturalists of the higher culture-stages commonly neglect the process; yet the occasional recognition of its positive aspect, as in Goethe's "elective affinities" and in Jacob's getting of "ringstraked, speckled, and spotted" stock (Genesis xxx, 37-41), and the practically universal recognition—more especially among primitive peoples—of its negative aspect in adverse prenatal influences, clearly indicates its importance; the fact that the ancient Greeks at once idealized in unparalleled degree, and produced unexcelled perfection in, the human form being of no small significance. Even if the measure of the incarnation of ideals be reduced to the lowest minimum consistent with common knowledge, it remains true that the progeny of successive generations are not the offspring of average parents, but of pairs at the perfection and conjugal culmination of their virile and multiebrile excellencies; so that the generations must run in courses of cumulatively increasing racial (or human) perfection, under a general *law of conjugal conation*.

143 In extending the general law of conjugal conation to the Seri, it
182 is found peculiarly applicable, in view of their distinctive marriage
186 custom, the effect of which is to intensify conjugal sentiments, with the attendant magnification, and potential if not actual incarnation, of ideals.[1] Accordingly there would appear to be a harmony between

[1] The law of conjugal conation was indeed suggested by observations on the peculiar marriage customs and peculiarly developed race-sense of the Seri tribe, and it has already been applied in certain of its aspects as an explanation of the initial humanization of mankind (The Trend of Human Progress. American Anthropologist, new series, vol. 1, 1899, pp. 625-655).

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Seri race-sense and Seri race-type no less delicate than that between the stressful action and the stress-shaped structure of the tribe, and while the inception of both type and feeling may be ascribed to the isolated environment, it seems manifest that both have interacted constructively and in cumulative fashion through a significant process exemplified more clearly by this tribe than by others thus far studied. At the same time, analysis of the harmony between type and sentiment indicates that the lowly Seri are actually, albeit unconsciously, carrying out a meaningful experiment in stirpiculture—an experiment whose methods and results are equally valuable to students. The Seri gymnastic and the Seri stirpiculture are in close accord, in that both are conditioned by initially dilatory yet ultimately intense action; the results are equally accordant in that the one conduces toward individual vigor and the other toward a vigorous and distinctive stirp; while the excellence of the methods (viewed from the somatic standpoint) is attested by the magnificence of the product. Now, comparison of the stirpicultured Seri with contemporary tribes shows that the desert-bound folk have attained unequaled somatic development, and suggests that the intuitive stirpicultural processes have been rendered peculiarly effective through the persistence of that tribal isolation in which the processes apparently took rise; so the race-sense of the Seri may be regarded as the product of long-continued stirpicultural processes, initially shaped by environment, yet developed to unusual degree by somatico-social habits, kept alive largely through continuous environmental interaction.

Summarily, the Seri are characterized by noble physique, by peculiarly swift and lightsome movements, by great endurance coupled with capacity for vigorous action, by animal-like symmetry and slowness of maturation, and by various minor attributes combining with the major features to form a distinctive race-type; and they are still more conspicuously characterized by an acute race-sense which holds them apart from all aliens. At first sight, several of their somatic attributes seem incomparably primitive, yet analysis of the attributes in the light of certain laws which they exemplify better than other peoples thus far studied indicates not so much a lack of development as an excess of growth along purely somatic lines, with a correlative defect of development along demotic lines; and when the lines of growth are traced to the sources and conditions, it becomes fairly clear that the aberrant development of the tribe is merely the reflection of a distinctive environment operating (evidently) throughout a long period. In brief, the somatic interest of the Seri seems to center in the remarkable adjustment of the tribe to a peculiar environment—an adjustment of such delicacy as to imply interaction throughout many generations.

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appear to form a fairly trustworthy basis for consideration of the Seri food habits. 262

On reviewing the constituents it would appear that the Seri must be regarded as essentially a maritime people, in that about two-thirds of their food is derived from the sea; also that they must be deemed essentially carnivorous, since fully five-sixths of their diet (84 per cent plus a share of the miscellaneous—chiefly scatophagous—category) is animal. The tabulation does not show the relative proportions of the several constituents cooked and eaten raw, but the best available data indicate that fully three-fourths of the ordinary dietary, both animal and vegetal, is ingested in raw condition, and that the greater part of the remaining fourth is imperfectly cooked.

In recapitulating the devices for food-getting, it is found that nearly all of the more distinctive artifacts and crafts are either directly or indirectly connected with that primary activity of living things, food-conquest. Foremost among the distinctive artifacts of the Seri, in its relation to daily life and in its technical perfection, is the canteen-olla; probably second in importance, and also in technical perfection, is the balsa—whose functions, however, extend beyond simple food-getting; next comes the crude and simple, yet economically perfected, turtle-harpoon, with its variants in the form of arrow (with a function in warfare as well as in food-getting) and fire-drill; while the light basket-tray, although capable of carrying ten to twenty-five times its own weight, is perhaps the least perfect technically of the artifacts directly connected with sustentation. And it should be noted that the prevailing tools—hupf, ahst, multifunctional shell, and awl of mandible or bone or tooth—have either an immediate or a secondary connection with food-getting. 182

NAVIGATION

At first sight Seriland seems an abnormal habitat for a primitive people, since its land area is cleft in twain by a stormy strait—a strait whose terrors to the few Caucasian navigators who have reached its swirling currents are indicated by their appellations, "El Canal Peligroso de San Miguel"[1] and "El Infernillo"; for such a stretch of troubled water is commonly a more serious bar to travel than any moderate land expanse. This intuitive notion of the effectiveness of a water barrier, and the correlative feeling of the incongruity of a land barrier insuperable for centuries, is well illustrated by prevailing opinion throughout northwestern Mexico; for it is commonly supposed in Sonora and neighboring states that Seriland is conterminous with Isla Tiburon, i. e., that the mainland portion of the province (including Sierra Seri with its flanking footslopes) lies beyond the diabolic channel. Yet longer scrutiny shows that the superficial impression merely mirrors Caucasian thought and fails to touch the essential conditions, 131

[1] Hardy, Travels, p. 386.

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in which men lived alongshore and adjusted themselves to maritime conditions rather than to terrestrial environments; a stage evidently but barely passed by the Seri, since they still subsist mainly on sea food, still retain their suggestive navigation, and still view their stormy straits and bays as the nucleus and noblest portion of their province. 501

HABITATIONS

Among the Seri, as among primitive folk generally, the habitation reflects local conditions, especially climate and building materials. Now, Serriland is a subtropical yet arid tract, where rain rarely falls, frost seldom forms, and snow is known only as a fleeting mantle on generally distant mountains, so that there is little need for protection from cold and wet; at the same time the district is too desert to yield serviceable building material other than rock, which the lowly folk have not learned to manipulate. Moreover, the tribesmen and their families are perpetual fugitives (their movements being too erratic and aimless to put them in the class of nomads); they are too accustomed to wandering and too unaccustomed to long resting at particular spots to have a home-sense, save for their motherland as a whole; and, just as they rely on their own physical hardihood for preservation against the elements, so they depend on their combined fleetness and prowess for preservation against enemies. Accordingly, the Seri habitation is not a permanent abode, still less a domicile for weaklings or a shrine for household lares and penates, not at all a castle of proprietary sanctity, and least of all a home; it is rather a time-serving lair than a house in ordinary meaning. 182 342

Despite the poverty of the material and the squalor of the structure, certain features of the Seri jacal are notably uniform and conventional. In size and form it recalls the passing "prairie schooner", or covered wagon; it is some 10 or 12 feet long, half as wide measured on the ground, and about 4½ feet high, with one end (the front) open to the full width and height, and the other nearly or quite closed. The conventional structural features comprise the upright bows and horizontal tie-sticks forming the framework. The bows are made of okatilla stems (*Fouquiera splendens*) roughly denuded of their thorns; each is formed by thrusting the butts of two such stems (or more if they are slender) into the ground at the requisite distance apart, bending the tops together into an overlap of a yard or two, and securing them partly by intertwisting, partly by any convenient lashing; and about five or six such bows suffice for a jacal (the appearance of the bows is fairly represented by the ruin shown in plate VII). Next come the tie-sticks, which consist of any convenient material (okatilla stems, cane-stalks, paloblanco branches, mesquite roots, saguaro ribs, etc.), and are lashed to the butts by means of withes, splints, or fiber wisps, at a height of some 4 feet above the ground, or about where the walls merge into the roof. With the placing of these sticks the conventional part 342

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mon convenience. Usually the several jacales are entirely separate; but at Punta Tormenta, Punta Narraganseti, and still more notably at Roda Ballena, individual huts were found either extended to double length or joined obliquely in such wise as to show two fronts (as illustrated in plate VI). The conventional frameworks appear to be common tribal property, at least to the extent that an abandoned skeleton may be preempted by any comer; while the addition of walls and roof appears to afford a prescriptive proprietary right to the elderwoman and family by whom the work is done—though the right seems to hold only during occupancy, or until the temporary covering is dislodged.

The jacales are without semblance of furnishing, beyond an occasional shat and a few loose pebbles used as hupfs; though the nooks behind the bows and tie-sticks sometimes serve as places of concealment for paint-cups, awls, hair bobbins, and other domestic trifles. There is no floor but earth, and this remains in natural condition, except for trampling and wearing into wallows, recalling those of fowls and swine, which afford a rough measure of the periods of occupancy; there is no fireplace—indeed, fires are rarely made in the jacales, nor for that matter frequently anywhere; and there are no fixed places for bedding, water ollas, or other portable possessions, none of which are left behind when the householders are abroad.

Little is known of the actual process of jacal building, especially in Seriland proper; but the observations of Señor Encinas and his vaqueros on the frontier corroborate Mashém's statements that the houses are built by (and belong to) the matrons; that several women customarily cooperate in the collection of the okatilla and erection of the framework; that the only tools used in the processes are hupfs and miscellaneous sticks; and that the placing and fitting of the beams and tie-sticks are accompanied by a chant, usually led by the eldest matron of the group. The same informants support the ready inference from the structure that the shrubbery and other material forming walls and roofs are gathered and placed from time to time by the women occupying the jacales.

The Seri building chant is suggestive. Neither Señor Encinas nor Mashém regarded it as religious or even ritualistic, but merely as a work-song designed (in the naïve notion of the latter) to make the task lighter; and it seems probable that the local interpretation is correct. If so, the simple chant at once offers rational explanation for its own existence, and opens the way to explanation of the elaborate building rituals of more advanced tribes. The work-song is a common device in many lowly activities, ranging from those of children at play to those of sailors at the windlass, and undoubtedly serves a useful purpose in guiding, coordinating, and concentrating effort; to some extent the vocal accompaniment to the manual or bodily action apparently expresses that normal interrelation of functions manifested by second-

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ary sense-effects (as when the sense of smell is intensified by exercise of the organs of taste), or, in another direction, by the habit of the youthful penman who shapes his letters by aid of lingual and facial contortion; yet it is a characteristic of primitive life—one doubtless due to the interrelations of psycho-physical functions—to not only employ but to greatly exalt vocal formulas associated with manual activities, so that words, and eventually *the* Word, acquires a mystical or talismanic or sacred significance pervading all lower culture—indeed the savage shaman is unable to work his marvels without mumbled incantations ending in some formulated and well-understood utterance, and his practice persists in the meaningless mummery and culminating "presto" of modern jugglery. So, viewed in the light of psycho-physical causes and prevalent customs connected with vocal formulas, it would seem probable that the conventional features of the Seri jacales are crystallized in the tribal lore quite as effectually through the associated work-chants as through direct memory of the forms and structures themselves. And the simple runes chanted in unison by Seri matrons engaged in bending and lashing their ekatilla house-bows apparently define a nascent stage in the development of the elaborate fiducial house-building ceremonies characteristic of various higher tribes; for the spontaneous vocal accompaniment tends naturally to run into ritual under that law of the development of myth or fable which explains so many of the customs and notions of primitive peoples.[1]

APPARELING

Slightly as they have been affected by three centuries of sporadic contact with higher culture, the Seri reveal many marks of acculturation; and the most conspicuous of these are connected with clothing, especially on the frontier, where women and even warriors habitually wear a livery of subserviency in the form of cast-off Caucasian rags (as illustrated in most of the photographs taken at Costa Rica). Even in the depths of Seriland the native fabrics are largely replaced by white men's stuffs, obtained by barter, beggary, and robbery; yet it is easy to distinguish the harlequin veneer of borrowed trappings from the few fixed types of covering that seem characteristic.

The most distinctive piece of apparel is a kilt, extending from waist to knees, worn alike by men and women and the larger children. Aboriginally it was either a birdskin robe or a rectangle of coarse textile fabric, secured at the waist by a hair-cord belt; aculturally it is usually a rectangle of manta (coarse sheeting) or other stuff, preferably cotton or linen but sometimes woolen, fastened either by tucking in the corners or by a belt of cord. Good specimens of the aculturel cloth kilt worn by men and larger boys are illustrated in plates XVI

[1] The law of fable in its relation to primitive surgery is formulated in the Sixteenth Ann. Rep. Bur. Am. Eth., 1897, p. 33.

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Summarily, the customary apparel of Seri men and women may be regarded as limited to three articles—(1) a kilt, normally of coarse textile fabric, which is made a prime necessity by a well-developed pudency; (2) a short wammus, also normally of coarse textile fabric, which is apparently regarded as a convenience and luxury rather than a necessity; and (3) a robe, normally of pelican skin, sometimes substituted for either or both of the other articles, but ordinarily used as bedding or as a buckler. The most valued of these articles is the robe, which in the absence of the others replaces the kilt; yet pudency demands the habitual use of some form of kilt, while both wammus and robe are held so far superfluous that they may be laid aside or bartered or otherwise dispensed with whenever occasion arises. 291

On considering the special functions and probable genesis of the Seri apparel, the student is impressed by the absence of the breech-clout, except perhaps in temporary improvisations—though the absence of this widespread article of primitive costumery need awaken little surprise in view of the environment, and especially of the abounding barbs of Seriland, which render all apparel of doubtful value save for the protection of tissues softened by habitual covering. The prevailing thornliness of the habitat renders the free-flowing and easily removable apron the most serviceable protection for the exposed vitals of the pubic region; and this device, a common one in thorny habitats generally, grades naturally into the short skirt or kilt; while it would well accord with the maritime habit and habitual thought of the Seri to apply the tough and densely feathered skin of the pelican to the purpose. This suggestion as to the nascent covering of the tribe consists with the tribal faith, in which the Ancient of Pelicans ranks as the creative deity, while its modern representative is esteemed a protective tutelary possessing talismanic powers against cold, wet, bestial claw and fang, alien arrows, and all other evils; so that the use of this feathered pelt as a shield against spiny shrubbery, sharp-leaved sedges, and barb-thorned cacti is quite in harmony with Seri philosophy. Accordingly it seems clear that the pelican-skin kilt was autochthonous among the Seri, and that it was the original form of tribal apparel; and it is of no small significance that the type persists in actual use as well as in suggestive vestigial forms, such as pelican-down swaddling for infants, pelican-feather plumes on cradle nets, etc. 182 291 [776] [774]

The passage from the pelican-skin kilt to the garment of textile fabric under the slow processes of primitive thought may not be traced confidently, though a strong suggestion arises in the Seri hair-cult (a Samsonian faith not without parallel in far higher culture) under which mystical powers and talismanic virtues are imputed to the human pelage. It is in connection with this cult that the Seri locks are so attentively cultivated and so assiduously preserved and consecrated to more intimate personal uses in belts, necklaces, and the like; and although the connecting links have not been found, it is thoroughly 174 291 826

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and groups; the linguistic activities serve to extend social relations in space and time, and the sophic activities to integrate and perpetuate all relations; but it is through the industrial activities that human intelligence interacts with physical nature and makes conquest of the material world. Accordingly, industries act as a steady and never-ceasing stimulus to intelligence; accordingly, too, the industrial activities afford the simplest and surest measure of intellectual advancement.

Under this view of the place of industrial activities in human phylogeny, certain phases of Seri technology acquire importance and especial significance.

1. One of the most conspicuous features of Seri craft is its local character. The foodstuffs, the materials for appareling and habitations, and the substances utilized in the several lines of simple handicraft are essentially local; moreover, the characteristic methods and devices evidently reflect local environmental conditions. There are, indeed, a few phenomena suggesting, and a still less number demonstrating, extraneous origin; the balsa and the kilt are sufficiently similar to devices of other districts to suggest, though not to prove, genetic identity (indeed, the sum of indications of local origin is much weightier than the several suggestions of extraneous derivation); the iron harpoon-points and arrow-tips are mainly of local flotsam, and are essentially provincial in modes of employment; the chipped stone arrow-tips, though local in material, are foreign in motive; but on summarizing the industrial phenomena, it would appear that by far the greater share are essentially local, while the few of exceptional (and extraneous) character can be pretty definitely traced to importation through the social interactions of recent centuries.

2. An equally conspicuous feature of the industrial craft of the Seri is the dominance of chance in both processes and devices. The traditional "fisherman's luck" is made exceptionally uncertain by the sudden gales and shifting currents of Seriland shores, while the absolute necessaries of life on land are still more capricious than those alongshore; this uncertainty of resources has profoundly affected the somatic features of the tribesman, as indicated elsewhere (ante, p. 139); and that the mental attributes of the folk are even more profoundly affected is attested by the rôle played by chance in the selection and shapement of the prevailing tools of stone and shell. The large rôle of chance in Seri life is also revealed, though less directly, in the overweening mysticism of zoötheistic faith, with its material reflection in zoömimic craft.

3. When the local and fortuitous features of the Seri industries are juxtaposed they are found to express a notably inchoate or primitive stage of industrial development. In both the local and the fortuitous or accidental aspects, the activities are so closely adjusted to the immediate environment as to approach the instinctive agencies and movements of bestial life, and correspondingly to diverge from the composite

1: McGee E-5 (1894-1895)1898 NU31 Ser. NU31

and cosmopolite characters of higher humanity; the dearth of extraneous devices denotes absence or intolerance of that acultural interchange accompanying and marking the progress of peoples; and the dearth of inventions denotes feebleness of creative faculty and absence of that self-confidence which accompanies and measures progress in nature-conquest. 105 13 182 [177]

4. When the local and fortuitous features of the Seri craft are viewed in their serial or sequential relations, they are found to reflect and attest autochthonal development. Excepting the few acultural processes and devices whose acquisition may confidently be traced to certain social interactions of the historic period, the Seri technic is too closely tied to local environment to warrant any supposition of importation from other districts. The question of the birthplace of the people may be left open in this case as in every other; but the birthplace of practically all those activities and activital products which define the folk as human was manifestly Seriland itself—so that the tribe, considered as a human folk rather than as a zoic variety, must be classed as autochthonous. 105 177

Summarily, then, the Seri industries are significant as (1) local, (2) fortuitous, (3) primitive, and (4) autochthonous; and these features combine to illumine a noteworthy stage in primitive thought. 105

5. On juxtaposing these significant features of Seri technic, they are found to reflect the tribal mind with noteworthy fidelity, and hence to indicate the sources of Seri mentations, and of the local culture in which these mentations are integrated. The local foodstuffs—especially that vital standard of values in arid regions, water—are periodic sources of the strongest aspirations and inspirations of industrial life, and the methods and devices for food-getting are but the legitimate offspring of the inevitable relation between effort and environment; the conspicuous rôle of chance is but the composite of the hard and capricious environment on the one hand, and of the lowly thought reflecting that environment on the other hand; the zoic faith into which the magma of recurrent chance has semicrystallized finds carnate symbols either in local beasts or in fantastic monsters suggested by those beasts; even the mating instinct, second only to thirst among the impelling action-factors of the folk, is so profoundly and bitterly provincial as to exclude foreign ideals to a degree unparalleled among known peoples. The industrial materials are local—but not more local than the thoughts in which they are reflected; the technical methods are unmistakably the offspring of the environment—but they are equally the offspring of minds reflecting that environment and no other; the few and simple devices stand for integrations of experiences, instinctive rather than ratiocinative, the germ of invention rather than even its opening bud—but the experiences bear the marks of that environment and no other. Accordingly, the mental side of Seri industry, and, indeed, of all Seri life, appears to be the counterpart of the physical 13 181 182

side.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

relation may be considered to begin in the animal realm with organisms adapted to environment through physiologic processes, and to end in that realm of enlightened humanity in which mind molds environment through complete nature-conquest. In the serial scale so defined the various primitive tribes and more advanced peoples may be arranged in the order of mental power or culture-status; when the same arrangement will express in inverse order the relative closeness with which the several tribal minds reflect their environments. It follows that the lowly minds and craft of the Seri reflect their distinctive environment with exceeding, perhaps unparalleled, closeness, because of their very lowliness; it follows, too, that any other equally lowly folk imported into the region and perfectly wonted to it by generations of experience would equally reflect the physical features of the region in their craft and in their thinking; it follows, also, that if the Seri were transported into any other district of equally distinctive physical features, they would gradually adapt themselves to the new environment—though with some added intelligence, and hence with diminished closeness, as is the way of demotic development—in such manner that their craft and thinking would reflect its features. In a more general way it follows that those similarities in culture, or activital coincidences, which have impressed the ethnologic students of the world (notably Powell and Brinton), are normal and inevitable in primitive culture and of diminishing prominence with cultural advancement.

Social Organization

Among the Seri, as among many other aboriginal tribes, the social relations are largely esoteric; moreover, in this, as in other savage groups, the social laws are not codified, nor even definitely formulated, but exist mainly as mere habits of action arising in instinct and sanctioned by usage; so that the tribesmen could not define the law even if they would. Accordingly the Seri socialry[1] is to be ascertained only by patient observation of conduct under varying circumstances. Unfortunately, the opportunities for such observation have been too meager to warrant extended description, or anything more, indeed, than brief notice of salient points.

Class and Totems

The most noticeable social fact revealed about the Seri rancherias is the prominence of the females, especially the elderwomen, in the management of everyday affairs. The matrons erect the jacales without help from men or boys; they carry the meager belongings of the family and dispose them about the habitation in conformity with general custom and immediate convenience; and after the household is prepared, the men approach and range themselves about, apparently in a definite

[1] A convenient term proposed by Patten.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

584 aught in the simple yet puissant law of conjugal conation—that law
585 whose motive underlies the world's song and story and all the pulsing progress of mankind as the inspiration of most men's work and most women's hopes—the vital intensity of this era passes down the line of blood-descent to the betterment of later generations. (4) Another collateral feature is the necessary reaction on clan and tribe; for not only
[182] [186] does the individual character-making raise the average physique and morale of the group, but the carefully studied restraint of excessive individuality serves to strengthen still further the tribal bonds and to lift still higher the racial bar against aliens. The blackest crime in the Seri calendar is the toleration of alien blood; and no more effective device could be found for keeping alive the race-sense on which this canon depends than that virtually sacramental surveillance of sexual intimacy which Seri usage requires.[1]

000 On scanning the conventional classifications of human marriage in the light of the Seri customs, it becomes clear that these customs define a plane not hitherto recognized observationally. For convenience, this plane and the mode of marriage defining it may, in special allusion to the correlative race-sense, be styled *ethnogamy;* and the more systematic characters of this mode and plane of marriage may be outlined briefly:

1. The most conspicuous character of ethnogamic union, as manifested in the type tribe, is its absolute confinement to the consanguineal group. The breach of this limitation is hardly conceivable in the minds of the group, since aliens are not classed as human, nor even dignified as animals of the kinds deified in their lowly faith, but contemned as unclean and loathsome monsters; yet the infraction has a sort of theoretical place at the head of their calendar as an utterly intolerable crime. In respect to this character, ethnogamy corresponds fairly with the endogamy of McLennan, Spencer, and others, i. e., with the tribal endogamy of Powell.

2. A hardly less conspicuous character of ethnogamic union is the formality, or legality, accompanying and reflecting the collective nature of the function. In this respect ethnogamy is the direct antithesis of that hypothetical promiscuity postulated by Morgan and adopted by Spencer, Lubbock, Tylor, and others; and the customs of the type tribe go farther, perhaps, than any other example in verifying the alternative

[1] The remarkable race-sense of the tribe, with the conjugal conation in which it seems to root, are discussed *seats, pp.* 160–163. There is nothing to indicate, and much to contraindicate, that the Seri are consciously engaged in stirpiculture; yet their social and ethnical doctrine would seem to be no less effective in developing race-sense, with its concomitants, than were those of prehistoric men in developing the physical attributes of animal associates, such as the wool-bearing of the sheep, the egg-laying of the fowl, and the milk-giving of the cow; or the still more striking mental attributes, such as the servility of the horse, the fidelity of the dog, and the domesticity of the cat. All these attributes are artificial, though not consciously so to their producers, hardly even to modern users; they are by-products of long-continued breeding and exercise, commonly directed toward collateral ends (as when the horse was bred for speed, the dog for hunting, and the fowl and cat for beauty); and, similarly, the Seri race-sense would seem to be largely a by-product of faith-shaped customs designed primarily to propitiate or invoke mystical potencies—yet the collateral effect is not diminished because overlooked in the primary motive.

2: Kroeber E-5 (1930)1931 NU31 Seri NU31

114 Davis has had fuller opportunity to investigate, but confined my
121 attention to the social and religious sides of their life. There was the more reason for this since it is in dealing with these latter aspects, where verbal communications are as important as observation, that McGee's monograph is most tenuous and dubious. I also secured linguistic notes for the preliminary placing of the curious tonal speech of the Seri.

178 Seri culture in its present form is a fragmentary thing such as could hardly have existed under purely native conditions. Religion
182 especially has suffered, no doubt under Christian influence, without many elements of Christianity having been taken over in exchange. Of mythology, only tatters seem to remain; of ritual, little more; only shamanism seems to be fairly well preserved. Nor, beyond the Spanish names for God and the cross, do the Seri give evidence of being or having been Catholics. The result is that they seem remarkably religionless. I do not know of a native people that appears so free from superstition and so unspiritual in its attitudes. Possibly I conferred with the wrong informants; but those I talked with seemed unsecretive. Social culture is better preserved, as is evident from a set of kinship terms that are numerous, precise, and untouched by Spanish concepts. On the other hand, there is little formal social organization. Whether this is also the result of a loss, is hard to say. The Seri may never have had sibs or clans; but the fact that they appear to lack them now is no positive evidence that they were without them three centuries ago. Shifts of residence, contraction of territory, shrinkage of numbers, amalgamation of distinct bands, may well have obliterated much of such social fabric as they once possessed. Games and the calendar are wholly native and intact, but taboos connected with sex, age, food, and the like seem fewer than among the backward tribes of the southwestern United States. It seems reasonable to construe this condition as the result of varyingly hostile, parasitic, and missionizing Spanish-Mexican contacts; especially when one realizes how overwhelmingly, though also spottily, this influence has affected the other tribes of Sonora—the Yaqui, Mayo, Pima, and Opata.

101 Historically the Seri are not a tribe but the consolidated rem-
131 nant of a series of dialectically distinct tribes that once held the barren coast of Sonora from Guaymas to Puerto Libertad. Tiburon
174 Island is the stronghold in which the mixed survivors, probably now numbering less than 200, have taken refuge, and, owing to its inaccessibility, drought, and poverty, have succeeded in maintaining themselves and their blended and reduced culture. Toward the interior, it is doubtful if they ranged beyond the present line of the Southern Pacific railroad, if that far. Orozco y Berra indeed assigns them territory up the Sonora River to Ures, on his famous map, which is still basic to all other ethnic maps of Mexico. But from Hermosillo

2: Kroeber E-5 (1930)1931 NU31 Seri NU31

to prepared defence or attack. The Seri mode of life and induced temperament must have led to many instabilities, with make-shifts often actually more in use, but finished or efficient types of artifact seemingly latent and sporadically emerging in the stream of their culture. Thus, the shell alongside the double-bladed paddle; plain baskets seen in use, but a series patterned in a definite style being produced as soon as their manufacture was profitable; unroofed and roofed houses. Similarly, the two-pointed fish-spear and olla carrying-net, which neither McGee nor I saw, but which may persist in memory in the culture ready for revival on occasion.

Somewhat similar, perhaps, is the status of polygyny, which prevailed in McGee's day (p. 279) a half generation after a disastrous war, but was not the rule, or was successfully disavowed, in earlier times and to-day.

Errors and Misconstructions

McGee dwells at length (pp. 152-156) on three strong trends of Seri life and culture: the pedestrian habit, accompanied by quite exceptional fleetness; a hand and tooth sense with corresponding absence of tool sense; and a race sense unalterably opposed to mixture with alien blood.

All the Sonora and Southwestern Indians were and largely still are fast and sustained long-distance travelers on foot. There is nothing to show that the Seri were superior to the others. The one time they remember having met the Papago in a foot-ball race, they were beaten. Yaqui warfare is a record of at least equal endurance and ability to evade superior civilized forces. In fact the faculties of the Yaqui are the more remarkable in that they have always been settled farmers and often moved in larger bodies. The incredible fleetness of the Seri was probably most manifest in mesquite thickets and on rocky ground. That they should outrun a horseman on an open plain is the sort of tale that one hears on every frontier and which the more intelligent frontiersman does not take seriously.

Hand and tooth sense was undoubtedly strong among the Seri. The same thing, especially as regards food, is reported for the Lower Californians. But the inference of lack of tool sense is erroneous. Knives are prized by the Seri, and, along with nails, axes, and the like, are handled with a direct, crude effectiveness. The crudity is due to the lack of standard, order, and interest in finish which pervades all Seri cultural manifestations and which rests ultimately on their essential isolation and self-sufficiency in an unusually forbidding environment. What a Seri is interested in is not a neat job but one that will substantially meet his immediate need. Their modern plank boats are weak in plan, badly joined, and always leaky; but they serve. A structurally stronger boat would probably profit noth-

2: Kroeber E-5 (1930)1931 NU31 Seri NU31

SUMMARY AND CONCLUSIONS

121 Knowledge of the Seri is still in its infancy. McGee's actual
114 observations are excellent but slender in range. He has interwoven them with conjectures, some of which are erroneous and others unproved and doubtful. Intensive study of the Seri will be difficult, chiefly for physical and practical reasons, but, to judge from such explicit data as are in hand, should prove them to be a tribe unusually interesting indeed, yet fundamentally similar to others in the same region. So many of their known traits are shared with one or another of these tribes, that it is practically precluded that complete investigation will leave the Seri as a unique people or even as one set widely apart, except in their historical fortunes.

13 The most distinctive thing about the Seri is their environment.
●182 This is extremely arid and lacking in water supply, but not desert in the ordinary, untechnical sense. Botanists describe it as a succulent vegetation desert. It is fairly well stocked with food inland and rich in food along shore. This territory is able to support a fair sized population, but scatters it and keeps it from settling down. The land is also inhospitable and difficult to strangers who are not ready to adopt the Seri mode of life. This fact has helped preserve Seri ethnic integrity and culture to an unusual degree. A considerable fraction of original Serian territory is wholly unoccupied by civilization today, a full three centuries after its frontier was settled. The Indian neighbors of the Seri, all being farmers in fertile valleys, had no more incentive or ability than Caucasians to penetrate Seri territory sustainedly.

Across the Gulf, the peninsula of California presents a very
171 similar environment, and was inhabited by tribes of very similar subsistence and residential habits, culture level, and temperament.
174 But the Baja Californians differed from the Seri in being so situated, with reference to the rest of the world, that the length of the peninsula cut them off, except in the northern portion, from nearly all outside relations. Each group in the peninsula thus had contacts and stimuli only from others of similar culture. The Seri, on the contrary, having long been surrounded on the landward side by peoples of higher cultural level, were able to exploit this difference, in part by adopting cultural traits from their neighbors; and perhaps still more largely by preying upon them economically; while their habitat afforded them a refuge from destructive reprisals. Such may have been the condition in pre-Columbian days. At any rate it has been such since the coming of the Spaniards, and has made the "history" of the Seri different from that of the Baja Californians.

174 Three islands, Tiburon, San Esteban, and San Lorenzo, form stepping stones from Seri mainland to the peninsula. The water gaps between them are navigable to native craft and have been navigated

3:Davis & Dawson I-5 (1822-1940) 1945
NU31 Seri NU31

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FIG. 2. THE PELICAN SKIN ROBE
A TYPICAL WOMAN'S GARMENT BEFORE THE ADVENT OF THE COTTON CLOTH AND RAGS THAT REPLACED IT.

131 bounded coastal plain, lived a life so independent and so oblivious of the outside world that they might well have been on another planet.

182 105 The hard, inhospitable natural environment afforded by Seriland long ago moulded the characteristics of its people and their whole mode of life. The distance between reliable food sources in the sea and supplies of fresh water created a pedestrian habit whereby they acquired a remarkable fleetness of foot and tremendous physical endurance against thirst and weariness on the trail. The monotonous sea-food diet induced a wandering, roving life in search of game and vegetal produce to supplement their meager rations. They became a homeless, burden-bearing people, wandering in family

[p. 194(A)]

105 groups or elans between the waterholes and
182 their temporary dwellings by the sea, chasing for game or searching for cactus fruits, sleeping wherever weariness overtook them, or where the successful end of a hunt left them gorged and drowsy. Under a climate where frost is almost unknown they needed no protection except from the sun, and built no other dwellings than their brush-heap jacals (Fig. 3). Living in animal-like savagery, without commerce or industry, the Seri's every bodily character and function were directed toward the provision, day by day, of the food and water necessary for life.

312 Potable water, a commodity so abundant in most regions as to divert conscious attention from its paramount role in physiologic function and in industrial economy, attained in Seriland the primary place of importance because of its rarity. In that arid land it is scanty to the extreme. Two thirds of the meager supply is confined to a single rivulet in the interior of Tiburon Island (Fig. 4). Because of this and other widely separated aguajes within the island whose shores provided the greater part of their food resources, the Seris early found this island the most tolerable habitat in their desolate realm.

225 The most conspicuous single article in the
[262] dietary of the Seri, and undoubtedly that which first determined the location of his habitat, is the green sea turtle which is abundant throughout the Gulf of California, but particularly so in the narrow channel between Tiburon Island and the mainland. There the shallow lagoons abound with its marine grass food plant, and the sandy beaches provide optimum conditions for egg laying and hatching. In consequence of this natural provision for abundant food, easily obtained, perhaps half the aggregate life of the Seri tribe came to be spent within easy reach of the feeding and breeding grounds of the turtle.

[361] The most extensive and permanent of all Seri communities was established on the channel side of the island, just back of the lagoon in which the turtles feed and whose sands provided eggs and the succulent flesh
225 of newly-hatched turtle young. When fe-
501 males could not be captured at the laying grounds, the big chelonians were speared

[p. 194(B)]

[text continues on p 195(B)]

171 the latter are largely unconcerned with by far the greater majority of them.
825 If there is any magical importance attached to any of the species, it has not been discovered in the course of this field work and this fact has been corroborated by other recent observers.3

Summary

182 Extensive field work of this sort has many ramifications. One of the main
825 items investigated has been the acuteness of the native observation of animals. In the case of the Seris, this knowledge progressively increases both in volume and in accuracy with the increasing economic importance of the group. The mammals and large fish are the best known followed in order by birds, reptiles, smaller fish, insects and marine invertebrates. It is also obvious that local ecology, habits and anatomy of the various species of animals set definite limitations upon observation. Lack of understanding of the hibernation of reptiles through the winter is a case in point. Another example is in the Seris' inability to distinguish between the sexes of birds. Purely cultural factors are also potent as can be seen in the standardized responses to the questions about the age of animals and the development of birds. Seri knowledge of animals is remarkably free from mythology, although a number of animals are known to have had mythological significance in the past.

825 There is little fear of animals except of those which are actually dangerous.

An interesting fact emerges from the comparison of the particular aspects of the knowledge of natural history. Namely, that this knowledge is not always symmetrical in that some facets of natural history are far better known by the Seris than others. An excellent illustration is provided here in the complicated ways of sexing animals, in their extensive knowledge of the food habits of some of the animals and their ecological environment, and by their very limited ability to guess correctly the age of animals.

Not all of these differences can be accounted for in natural terms and it is suggested that the answer to this asymmetry lies, perhaps, in the cultural factors unaccounted for in this study. In spite of their dependence upon a relatively few economically important species of animals, the Seris do make use of much of their animal environment in their diet, as would be expected of a marginal people who still live today in a fishing and gathering economy.

FOOTNOTES

127 1. This field work was made possible by research grants from the Department
114 of Anthropology, University of Washington. Most of the work was done in Desemboque, Sonora, during the summer of 1953 with some additional work there in May 1955.

For much help in carrying out this field work I am indebted to my friend, Leo Sandoval, a school teacher in Desemboque.

[89 cont.]

000 abundant flying and, especially, marine fauna.

For a modern technology, their region has great resources,
511 but for the culture of the Seri it is frankly inhospitable. The standard of living is exceedingly low, as is proclaimed by natives and foreigners and as is demonstrated by the illnesses and hunger that weaken the population.

[90] The Seri truly form part of our Western society, in
226 so far as they catch fish, with fishhooks and motorboats, to sell
439 in the markets of Hermosillo, Nogales, and Tucson, and they
[177] obtain payments in national specie and coin. The part that
● 182 they form, however, has its own internal structure, which regulates the relations with the environment and among its mem-
[161] bers, even though a group of 218 persons, which suffers severe alterations in percentages from disasters like the sinking of a boat or strokes of good luck like the establishment of a prosperous fishing camp, is almost insignificant for the nation.

Most probably they have never been much more numerous, and they must not have had great cohesion in the past, a situation explicable in view of their nomadic gathering economy.
621 Toward the close of the 18th century they were divided into bands, of which it is known that the most important were the Guaymas, Upanguaymas, Tepocas, Tiburones, and Salineros.
[648] They banded together at various times in order to defend themselves and to attack the nuclei of Mexicans of the zone, achieving combined action, but without effective political unity.

At present they seem to form a single group without marked
619 subdivisions, although they recognize affiliations like that of "Tiburones," "half-Papago," etc., which appear to have little real classificatory significance.

There is great uniformity: they speak a single language
184 incomprehensible to the rest of humanity; they have a relatively
619 uniform culture, and there is tribal unification for matters involving sexual exchange.

The most obvious relations are spatial; they have important
361 settlements that sprung up around the fishing establishments and are more or less permanently occupied. Of these, "El Desemboque," close to the mouth of a river from which they have been displaced, is the most important, with 80 per cent of the Seri

[90 cont.]

361 population. There is an obvious separation there between the
563 Seri and the yori, or non-Seri, with manifest differences in cultural patterns.

The yori occupy an extensive area per person; their homes are quite distant from one another, and four families in conjunction occupy a belt of land of about 100 by 50 meters.

361 The Seri are grouped by families, inhabiting minute squares of from one and a half to two meters to a side. The yori
182 feeling of prestige, based on the territorial expanse of their prop-
361 erty, contrasts with the feeling of security based on personal
511 contact that dominates many aspects of Seri life; the small size of the Seri habitation indicates, not a low standard of living, but a distinct [91] concept of comfort, according to which the Seri, having all the desert to live in, like the yori, confine themselves to the limits that personal contact permits.

In January, 1952, there were 33 dwellings, with an aver-
592 age of 4.6 persons in each, those lodging four, five, and six persons frankly predominating. Each three or four more closely related families occupied contiguous homes, forming relatively separate conjunctions by themselves, which we might call
596 macrofamilies.

The family is the basic Seri institution, which is manifest in all aspects of life: it is the center of production, co-operation, the division of labor, education, diversion, government, etc.

582 Going beyond the family and macrofamily organization,
619 we have a tribal structure based on the generalized exchange (2)
621

2. Lévy Strauss, Les Structures élémentaires de la Parenté [Elementary Kinship Structures], Paris, 1949.

of members for concluding marriage, by which all the Seri are actually linked by consanguinity or affinity. One is almost able to include all the members of the tribe on a single genealogical chart, systematically excluding only some few outsiders who have penetrated the group.

582 This situation, which would make one think of a primitive

237 On the other hand, the hides of all of these three animals had been traded off to the Mexicans, [439] but this again was now discarded. This would merely indicate the fluctuation of collapse of the [182] demand from the outside rather than any intrinsic change in the Seri values.

Incidental use of the horns of the bighorn had been denied by all of the younger informants although admitted by Miguel Barnett. However, as I observed, the horns of this sheep are sometimes [415] used as drinking cups. Several of them were [181] lying around in the usual disorderly way of the Seris, now and then picked up for drinking and then again discarded. But the use of them struck me as most casual.

224 *Hunting:* Hunting takes a variety of forms 411 and includes a variety of weapons, from .22 caliber and .30/.30 caliber rifles to spear, stone and throwing stick. Bighorn and deer are followed on foot but without dogs, probably because without dogs they may be easier to surprise. This hunt takes place in daytime. But the peccary is hunted with both the spear and the rifle and with a pack [231] of dogs, and only by the adult men. There is an [885] emphasis on the "adult," this surely owing to the certain amount of danger connected with the chase of the peccaries. The weapons of the chase dwindle to the throwing stick or a stone when it comes to the jackrabbit. Badgers, I was told, are also killed with the same weapons. But formerly, the informants said, bow and arrow was much instrumental in hunting the smaller beasts.

* 825 Other animals, according to the Seris, are not [224] hunted now, nor had they been in the past. Justification for this ranged from the usual "because it isn't done" to the more specific reasons. The skunk is "neither hunted nor eaten because it [225] stinks." The whale is considered "too big to kill" while the killer whale is "too fierce." The harmless *tonita* (dolphin)[1] was reported somewhat hazily as "sometimes killed" but the comments were inconclusive and were denied by other informants.

[224] Two other species had been reported as hunted in the past but not at the present time. The Ringtail cat was supposedly hunted with the slings [225] while the sea lion was hunted down "with a rifle or rock but not with the harpoon because of its great strength, it would break the harpoon." This, however, was "perhaps 25 years ago." Why the sea lion is no longer pursued is uncertain, unless there is again a lack of demand from the outside while the Serian economy is so much centered on fishing.

231 *Pets:* How many species of animals are kept as pets on and off is difficult to say. Like most hunting and gathering groups the Seris are fond of pets but their interest in them depends entirely on an accidental capture. Among the wild mammals of the region there are few that could be captured and tamed easily. The badger which I mentioned already was the only mammal I saw

[237] [1] I have seen bones of beached whales used for stools and [362] also the skull of the *tonita* used as a chair. But it must be remembered that these animals got stranded on the beach. They were not deliberately hunted down.

[P 10 B]

½ [Lia - deer, bighorn and peccary - Analyst]

Schaldin F-5 (1953-1956)1962 MU31 Seri MU31

*825 grounds. On the other hand, sometimes absence of a bird, the ibis for example, from Desemboque has been explained by lack of suitable mud.

Another sort of explanation for the presence or absence of a bird in a locality has been the presence or absence of fresh water. This was true of the dove which is said to be found near fresh water (for example in the Desemboque arroyo) which it drinks. This observation is not entirely amiss. Regardless of how far from fresh water the dove will nest, it does like to congregate near it. Still another explanation has been offered for the woodpecker and the humming-bird and the osprey. The humming-bird, they say, is rare where there are no trees. (This in view of its nesting habits and its feeding habits is not surprising.) The woodpecker, they think, must have a sahuaro to live in (quite correct) and this is why it is absent from the region of Infernillo where there are no sahuaros. The osprey, they say, also likes to live more in areas where there are sahuaros because it nests on the dry ones.

Parental Function

Here such meagre data as are available show that according to the informants rearing of the young among the birds is entirely the female's preoccupation and that the male has nothing to do with it. They repeatedly emphasized that "young do not know the father" or that "they are fed only by the mother." This hardly reflects the situation in nature, at least for a great many birds and especially for the song birds. But there is in the Seris, evidently, a streak of belief in the uselessness and uncooperativeness of the male in such matters. This belief is met up with time and again in many groups of animals, and probably represents a conventional attitude, not tempered by observational evidence.

*825
562
●182

Dangerous Birds

*825 With the exception of the eagle, no bird is considered dangerous and the eagle, who is supposed to be able to lift and attack a man, earns its reputation only on hearsay.

[P. 21 B]

*825 ence of feather. Uncertainty about the bat there is significant, considering the combination of traits. Other criterja may also be employed. Crabs are distinguished from some of the other marine crustaceans by their hairiness. Differences among the insects are suggested by general shape, hairiness and habitat although also certain features of behaviour sometimes suggested affinity.

Distinctions made within the groups coincide on the whole with the natural groupings, at least for the more conspicuous forms. Hence, comes the breakdown of fishes into two major categories: fishes proper on one hand, and mantas and sharks on the other, snakes and lizards among the reptiles and mammals proper and Cetaceans among the mammals. In a way the Seris' greatest talents appear to be in their ability to recognize the reptilians and amphibians. Here they confused only two species: the two small inconspicuous Utas.

[182] As for the ability to identify an animal, it is directly related to its economic importance and relative degree of frequency in the territory, as one may well expect.

[824] A movement represents the basic difference between animals and plants to the Seris. This is why a sponge is considered a plant while sessile molluscs are animals.

Sexing

Three tendencies distinguishing sexes run through the entire gamut of the animal forms, through all the classes except in the birds: the males are larger, darker and more brightly colored than are the females. These tendencies the Seris may combine in different ways. In the reptiles it is color pattern rather than size that suggests to them the male animal and while the male snakes tend to be darker than the females, in the lizards they tended to indicate the prevalence of the bright color in the males.

Then also in several groups very specific diagnostic traits are employed, as a rule in form of all sorts of extra appendages which are supposed to decorate the males. This is interesting, because it suggests the presence of such extra structures in the males rather than in the females, and, as has been seen from the text, these structures are often attributed to the males regardless of whether or not they really exist in them. The femoral ridge in the male lizards is an especially good illustration of this principle.

[182] There is also a suggestion that in one instance at least the Seris transpose their own social situation on the animals. The bees they claim have "chiefs" and these "chiefs" are males and they are also larger. Here socio-anthropomorphic interpretation is very clear.

But as indicated in the text, the sexing criteria differ often in different groups and it is only fair to show that birds represent an exception to the three major tendencies. The birds have sexes all right but the Seris cannot tell them apart. This requires no further commentary if we reflect why the Seris must think that way.

[182] [562] [P. 55 A] Finally, there is one more interesting point:

9:Malkin E-6 (1953-1958)1962 MU31 Seri MU31

+ 825 [182] [562]

no temperamental differences between the sexes can be detected which would only suggest that here the Seris do not introduce the interpretations from their own social situations, because they do have very clear cut ideas of the temperamental differences between men and women.

Age

Here aboriginal knowledge is virtually non-existant nor have the Seris made much effort to try a guess. There are hints that sometimes they associate the length of life of smaller animals with the season, obviously because these disappear for the cold season. Another feeble tendency was for the older informants to suggest greater longevity of an animal than it was customary for the younger informants. Finally, what little knowledge there was, it was still perceptibly greater for the reptiles than for almost any other class and this is quite in line with the general state and complexity of the Seri knowledge of the natural history of these creatures.

Size and Weight

[182] Here occupational influences are overwhelming. The weight of fishes and mammals was on the whole correctly estimated — this associated with the economic importance of these animals. Same features in the reptiles came out only so-so on the general scale and here, surprisingly, not too well on the economically important marine turtles. A rule of thumb is applied (usually incorrectly anyway) to the birds while the remainder of animal groups is covered by gross ignorance and disinterest in this respect.

Development

In general Seri knowledge of the mammalian development is far ahead of the rest of the animals and progressively becomes more and more obscure with the decrease in size. Within this range, specific ideas differ and often are associated with the particular group of mammals. One classic example is fishes which they divide into the viviporous and oviporous with sharks and mantas in the first category and the rest of the fishes in the second. The distinctions between the egg laying animals and those that are born alive run pretty much through the entire kingdom. Insects are the sole exception here but this is largely because of the lamentable lack of knowledge by comparison with the other animals.

Sequential development generally also runs through all of the groups. The belief in the time sequences is so striking that it covers even such groups as the fishes, for here the details of the mating sequences are not understood and, according to the Seris, there must be a time lag between mating and the delivery of the eggs by the female. At other times, such sequences are expressed in another sort of cultural fiction. I have in mind the birds where one month each elapses between the delivery of the eggs, hatching out of the young and the flight of the nestlings.

Knowledge of the young litters or the number of eggs laid by the birds or the oviporous reptiles

[P.55 B]

9:Malkin E-5 (1953-1958)1962 MU31 Seri MU31

#825 on the other hand usually falls very close to what happens in the natural situation. Here cultural factors enter: the Seri boys habit of collecting eggs. [857]

In general, in association with the development, the insignificance or complete absence of the male's parental function is well recognized. Only in the birds and mammals occasionally male's interest in the young had been indicated but even that rarely.

Food

In this field the Seris' knowledge is much better than their knowledge of the development. Herbivores and carnivores are usually quite correctly identified, at least for the majority of the animal groups. Crustaceans they think are largely scavengers—with great degree of accuracy. Predators and their victoms are as a rule scaled down according to the size. Some animals are considered relatively or completely free from predation and when this is so, reasons were usually stated in terms of some peculiarity of structure, size or behaviour. Power of flight figures strongly in this, because only a few birds, they thought, are subject to predation.

DISTRIBUTION

a) Geographical

[182] Knowledge of the geographical distribution of animals as expected is a function of the acquaintance with the particular area or locality and of the frequency of visits to them. It also indicates strong association with the ecology of the habitat, with such features as presence or absence of sand, rocks, types of bottom in waters and so forth. On the relative scale, once more the mammals are best known, insects least.

b) Seasonal

General suggestion of the greater number of species occurring in the hot than in the rainy season runs through all classes of animals. But while in most. birds included, the suggestion is only slightly in favor of the hot season, for the reptiles and amphibia it is overwhelmingly in favor of the summer. Oddly, there is no such clear cut association between the presence of insects and season except for few select groups. The *Lepidoptera* and *Neuroptera* are, according to the Seris, largely creatures of warmth. while the *Orthoptera* are of the rains. In general this short of knowledge is quite conspicuous.

c) Ecological

Here the Seris excell and this knowledge of habitats of a very large number of animals is considerable and perhaps more solid than any other feature of the natural history. In species after species, in all groups, habitat preferences were stated (and correctly). It is interesting that the detailed information here was available for practically all listed species of birds, molluscs and fishes. Great deal of information was also pro-

[P·56 A]

\# 825
[182]
[857]
[193]

vided for other creatures and even 2/3 of the insects. This indicates on one hand the connection between this type of knowledge and economic activity of the adults and on the other hand between the Seri boys' habit to collect and play with all sorts of animals from very early age. This knowledge of the habitats sometimes is even reflected in the aboriginal name of the animal such as for example the use of suffix or prefix *ax* meaning water in several forms associated with water.

Migrations

In contrast to the ecological distribution, knowledge of animals' migrations stands somewhere very near the very bottom in the richness, detail and accuracy. There is but bare suggestion of migration among the mammals and birds and where it does exist among the latter it curiously includes all three overwintering species. This is in contrast to this lack of knowledge or perhaps interest (or both) of migrations of all other animals, Seris' knowledge of the fish migration is much richer. Here at least there is a distinction between the migrating numbers and the size of fish: large fishes migrating supposedly singly, little ones in "millions."

Rhythmic Activity

Rhythmic differentiation is interesting because it clearly divides animals into the nocturnal, diurnal or those that are active in day and at night and because there is a clear association by the groups. Thus all marine animals are considered as both diurnal and nocturnal. But there are also differences in the relative degree of knowledge of different classes. While reptiles, amphibians and mammals stand at the top, the knowledge of this type of behaviour in birds is very fragmentary and in the insects scant and inconclusive, while for the molluscs non-existent.

In this respect, the reptiles probably are most clearly defined and best known.

There is also a clear recognition of the existence of the noon siesta or at least of slowing up of the animal activity. But this applies to the terrestrial animals and there is no suggestion of the siesta for the inhabitants of the sea.

Toxicity

At the apex of toxicity as a group stand unquestionably reptiles and amphibians, with the insects coming next and the marine animals which I loosely brought together under the heading of "miscellaneous" a poor third. Of the reptiles and amphibians 11 species are considered toxic, in various degrees and another seven as dangerous, 44 and 28% respectively, making the total an impressive 72% of all reported species. Among the insects about 20% are considered dangerous and fewer yet toxic; among the mammals fewer yet, with the bat only listed among the toxic forms and that on a disputed evidence; among the birds the eagle as the only dangerous beast and that admittedly on the hearsay; and finally among the molluscs none at all.

The fact is that only rarely these ideas were amiss and only few forms are believed dangerous

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9:Malkin F-S (1953-1955)1962 MJ31 Seri MJ31

*825 or toxic contrary to their genuine nature. When such contrasts exist, the beliefs cannot always be explained as a matter of the influence from the Mexican folklore. The reasons for this I discussed in the chapter on the reptiles and amphibians. The explanation for such beliefs depends mostly on additional field work. It is also interesting that in some of these instances (bat for example) there is a suggestion that the belief in the toxicity or other unpleasant traits not only is not associated with the Mexican folklore but is basically aboriginal, and it is on the way out among the younger men.

[178]

Attitudes

*825 182 With rare exceptions Seri attitudes toward animals are remarkably sober, pragmatic and matter of fact. This is evident in how little folklore or irrational fear is connected with the animals. It all runs pretty much along the line of their generalized attitudes, world view and religion as suggested by other investigators (Kroeber 1930:4; This is also the opinion of Spicer, personal communication). Elements of mystery are almost completely absent and this is probably not entirely due to the disintegration of their religion and culture as Kroeber (*Ibid*) thinks.

[114]

* 825 171 In other ways, their attitude toward animals ranges from indifference (adults) to downright deliberate cruelty (little boys). In this, the Seri boys differ markedly from the boys of some of the other groups I studied (Malkin 1958:89).

[P. 57 A]

9:Malkin B-5 (1953-1956)1962 NU31 Seri NU31

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Conclusions

From the presented evidence it is clear that Seri knowledge of the natural history of animals is disharmonic, that some animal groups are better known than others and also that there are great qualitative and quantitative differences in the degree of the knowledge of the special features of natural history within the groups.

Both cultural and environmental factors account for these differences. On one hand, the knowledge is related to the Seri boys' interest in the animals and to the adult's preoccupation with the economically important species. The direction of the change runs from the first to the second but in the final shakedown it is the gross economy that is more important. On the other hand, environmental factors, such as animals' behaviour, habits, and structure and most of all climate and generalized ecology influence and set the limits to the exploration of natural history by the aborigines. But careful distinction must be made in assessment of which factors and when are of dominant importance. It is never an none-or-all proposition.

Finally, there are temporal changes, related mostly to the shifts in the economy and these figure importantly in some of the features in our data.

It is true, that much of this can be only feebly hinted at from the Seri data alone. It is my conviction that all these things can be brought into much stronger relief only through series of comparative studies. Fortunately, a beginning stab in that direction has already been made (Malkin 1958).

[P.57 B]

2: Kroeber E-5 (1930)1931 NU31 Seri NU31

Society

583 [595] Marriage is monogamous. The wife is bought, in spite of the poverty of the Seri. Santa Blanco paid 150 pesos in property for his wife. Chico Romero, a widower, paid more for his, a widow, "because she had three daughters, and a family with daughters is rich" (in expectation of bride prices).

591 562 The wife goes to live with the husband. A young couple lives with the young man's parents, perhaps in an annex to the house. "The man commands." Chico was emphatic on this point, and repeated that when his son married he would live with him, not with the girl's relatives. Both he and Santo have step-sons-in-law as well as daughters-in-law living with them, but this is because they are chief and boat-owner respectively; (and the sons-in-law are young).

633 [313] Copulation was said to take place immediately on marriage. McGee's statement of a period of continence being cited as the custom of a foreign tribe, the informant obviously wondered and laughed. Intercourse goes on during pregnancy; but not for some months after birth, for fear of a new pregnancy, which would be injurious to the child. A good man respects his wife at all times and does not constantly pursue her.

144 164 No half-breeds were seen, and the Seri declare they are free of venereal disease.

551 614 Nothing could be elicited from the informant as to anything like the group-inherited names of lineages, or clans, of the Yuman tribes.

768 When a woman dies, the widower may give the children to his dead wife's parents to raise. This is the only item learned that might point to McGee's "matriarchate"; but the informant may have been thinking of particular cases. His son lives with him, though he lost the boy's mother.

582 Cross-cousin marriage is as prohibited as that of parallel cousins. This is in accord with the sibling terminology for all cousins; but in view of the present small number of the tribe, the rule must work difficulty.

[587] A man does not marry his dead wife's sister. Apparently he may not. Nor is there levirate. The informant volunteered the question if marriage with step-daughters was permitted by other peoples. Being told of the Navaho custom, he seemed shocked.

606 183 Neither husband nor wife looks at or addresses either parent-in-law. In the isolated, small-group life of the Seri, this rule can hardly be adhered to with complete rigor, and its conspicuous carrying out was not observed; but then everything in their behavior is casual, informal, and slovenly.

607 The kinship system as recorded contains a note as to a woman not addressing her younger sister's husband by kinship term except

9:Malkin E-5 (1953-1955)1962 NU31 Seri NU31

IV

BIRDS

136 Woodpecker—There are several species in the area but Gila woodpecker (*Centurus uropygialis*) is certainly one of them.
128 Hummingbird—Unspecified species, one of several occurring in the area according to Dr. Orr.

Economic Uses

262 Such use as had been made of the birds is largely in the form of an addition to the diet. Reading McGee, one gets the impression that the importance of the birds in the Seri diet, in contrast to the marine animals of all description, has declined greatly. We do know that in the past various birds and, most especially, the seagulls and the pelicans represented a significant item. But today out of the basic list of 24 species, only six has been reported as eaten and all, with an exception of the duck, in the past tense. The duck
*[825] evidently is the only bird which the Seri consider really fit to eat and yet, even here, there is temporary avoidance. Moreno told me that this bird "we eat only when we visit the island (Isla Patos).
[223] But we do not eat it in September because it is
[252] too lean. We like it in December when it is fat. We then kill it at night with stones. It is roasted."[1]

All other birds were reported as eaten only in the past and this has been expressed more or less as follows: sea-gull eaten a few years ago, cormorant 8-10 years ago, pelicans 30-35 years ago. This would mean that the pelicans had been discarded as food, at least according to the official Seri version, in the early twenties, before Kroe-
● 183 ber's visit. But the Seri disclaimers on the subject
262 of the bird diet are not entirely correct and reflect less the total rejection and more only low esteem in which these birds are held. For I have seen myself the sea-gull and the pelican eaten on few occasions when times were tough, and the
[261] food supply was non-existent, owing to the choppy
*[825] and windy seas. The Seris caught in the act of cooking the meagre flesh of the pelican or the seagull were obviously apologetic.

262 It is interesting that some of the birds present in the area, the quail or the woodpeckers, are not eaten although these birds figure prominently in the diet of some of the other groups. It may well be that the Seris consider them too small to bother.

[252] As far as I could find out, eggs of only two species of birds, the sea-gull and the heron, are collected, boiled and eaten. But the eggs of the

[1] His statement requires some explanation. There is no taboo on eating duck but the bird does not occur in Desemboque or any other place known to the Seris, with
[136] the exception of Isla Patos. Here these birds winter,
*[825] arriving in September and arrive worn out and lean, to recoup the fat, a few months later. The Seri unfamiliarity with their eggs is another indication that the birds come to Isla Patos only for the winter.

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9:Malkin E-5 (1953-1955)1962 MU31 Seri MU31

262 en simply because their flesh is disliked and unfit for human consumption. But it may also well be that some of them, especially of the giant variety, are not eaten simply because they are far too large to tackle and the Seris fear hunting them.

The Seris indicated also in some cases that larger specimens of fishes are eaten when they reach the size which would justify the effort. This is true of *Malacoctenus zonifer* which they indicated is "eaten when large," that is when at least 10 cm. long.

[226] Although only sometimes did the Seris specifically indicate that certain fishes are used for bait, it is very likely that almost all small or lesser fishes are so used.

262 178 In some cases the Indians indicated changes in preference for given fishes, with the time. For unexplained reason *Gymnothorax castenceus*, the morene, has been claimed to have been eaten in the past but not for the last 11 years. It isn't clear why the figure of 11 had been used and why suddenly in the early 40's they should stop eating it while the Mexican drool over it. But it may be also that here we have merely personal preference of the informants, as so often happens. As for the *pescara* it was formerly taken for food [439] but now it is merely sold to the Mexicans. This practice is increasing also to include the immense *mero*, even larger than the *pescara*. The fish is mainly sold but rarely eaten by the Seris themselves.

Food Preparation and Preferences

252 Food preparation is simple and in the main differs not at all from the preparation of other animal diet. The fish are either boiled whole or in part or else are roasted over slow fire on a grill. The entrails are usually discarded, but otherwise the beasts are eaten entire, eyes, brains and the rest, while the tiny fishlets are eaten complete with the scales and guts.

262 As for the preferences, as expected, there are some fishes that the Seri like better than others. The *bava* in the first place and the *pinto* in the second lead the list. The Seri prefer them to all others and consider them a real delicacy. On the other hand, there are some fishes that they'll eat only under protest, meaning when times are hard. *Girella simplicidens* is one such creature. The *Puerco* or *Cochi* is another. I have seen boat loads of puercos brought in with the other fish and un- [231] ceremoniously dumped out on the beach to the dogs. Literally! The Seris took to this fish only when fishing was poor during the wintry days when they were held ashore by the weather. Even • [183] then, they tried to eat the despised creatures on the sly, avoiding being seen doing this, and when I or the Mexicans picked up fresh fish from the beach to take home they laughed saying that we acted as a *cochi* (pig) would!

Other Economic Uses

* 825 237 322 One use made of fish concerns two species of sharks, the *chato* and *camposo*. Here, the informants claimed, the oil from their liver had been used in earlier times for polishing wood. This is

[P. 32B]

[89 cont.]
000 abundant flying and, especially, marine fauna.

For a modern technology, their region has great resources,
511 but for the culture of the Seri it is frankly inhospitable. The standard of living is exceedingly low, as is proclaimed by natives and foreigners and as is demonstrated by the illnesses and hunger that weaken the population.

[90] The Seri truly form part of our Western society, in
226 so far as they catch fish, with fishhooks and motorboats, to sell
439 in the markets of Hermosillo, Nogales, and Tucson, and they
[177] obtain payments in national specie and coin. The part that
182 they form, however, has its own internal structure, which regulates the relations with the environment and among its mem-
[161] bers, even though a group of 218 persons, which suffers severe alterations in percentages from disasters like the sinking of a boat or strokes of good luck like the establishment of a prosperous fishing camp, is almost insignificant for the nation.

Most probably they have never been much more numerous, and they must not have had great cohesion in the past, a situation explicable in view of their nomadic gathering economy.
621 Toward the close of the 18th century they were divided into bands, of which it is known that the most important were the Guaymas, Upanguaymas, Tepocas, Tiburones, and Salineros.
[648] They banded together at various times in order to defend themselves and to attack the nuclei of Mexicans of the zone, achieving combined action, but without effective political unity.

619 At present they seem to form a single group without marked subdivisions, although they recognize affiliations like that of "Tiburones," "half-Papago," etc., which appear to have little real classificatory significance.

● 184 There is great uniformity: they speak a single language
619 incomprehensible to the rest of humanity; they have a relatively uniform culture, and there is tribal unification for matters involving sexual exchange.

The most obvious relations are spatial; they have important
361 settlements that sprung up around the fishing establishments and are more or less permanently occupied. Of these, "El Desemboque," close to the mouth of a river from which they have been displaced, is the most important, with 80 per cent of the Seri

8: Ascher E-5 (1960) 1962 NU31 Seri NU31

411 gasket is not available. If a Seri needs a foreshaft for immediate
461 use he can dispense with the gasket, but all the other materials are necessary to make the tool functional. As a result, a Seri may have one or several foreshafts in the same or in different stages of manufacture (see Plate II),[2] and he may also have a number of shaped or unshaped points or pieces of metal but few finished foreshafts.

411 If an archeologist were to excavate the remains of contemporary Seri culture at some time in the future his observational field would be limited to the results of behavior. Under ideal conditions, the data available to him for reconstructing the turtle fishing complex might include foreshafts, the materials from which and implements with which they were manufactured, and turtle carapaces.

411 All 21 finished foreshafts (Plate I),[1] exhibit an obvious general
184 similarity despite the fact that they range in age from one to eight years. Twenty of them have a single barbed point. Plate II,[2] illustrates the general shape of the hafting, the place where the hafting has been split, a mesquite gum sealing, and a refinished hafting base—a combination of features that is exhibited in all 21 foreshafts. The manner in which the lead cord is interwoven with the extension cord is similar in all foreshafts except those in which either cord has been repaired. In nineteen cases (excluding one very long and one very short point), the length of the point beyond the hafting ranges from 4.4 to 6.1 cm. With three exceptions (one long and two short) the length of the hafting ranges from 5.8 to 7.8 cm. In all but two examples the hafting is longer than the point. The difference in length between the hafting and the point above the hafting varies within a range of 0.1 to 3 cm. Thus, with the exceptions noted, the maximal variation with respect to these measurements is small—1.7 cm. for the length of the point above the hafting, 2 cm. for the length of the hafting, and 3 cm. for the difference in length between the hafting and the point above the hafting (see Table 1).[3]

Examination of the three available sets of foreshafts produced by single individuals reveals a smaller range of variation within each set than within the entire collection. In four foreshafts of Juan Moreno the length of the point above the hafting ranges from 4.9 to 5.2 cm., and the length of the hafting from 6.1 to 6.7 cm. The sets produced by Francisco Barnett (see Plate II),[2] and by Miguel Barnett show a comparable restriction in the range of variation. A comparison of the three sets, however, shows that their measurements are similar enough to each other to provide little basis for distinction. The range in length of the haftings of Juan Moreno (6.1 to 6.7 cm.), for example, overlaps that of the haftings made by Francisco Barnett (6.4 to 7.7 cm.).

Variety in the 21 finished products taken as a group, other than that due to differential age and use, is most evident in one particular respect: eight of them lack a gasket. Each owner of foreshafts without gaskets was asked to explain this absence. Two could not or would not give an explanation; five replied that rubber was not available; and one man, Ignacio Molina, stated that he omitted a gasket be-

[1] [Facing p. 364] [2] [facing p. 365] [3] [page 367]

8: Ascher E-5 (1960) 1962 NU31 Seri NU31

TABLE 1
Foreshaft Specifications

411
184

Manufacturer	Plate Reference	Approx. Age of Artifact	Length of Hafting (Centimeters)	Length of Point (Centimeters)
Ernesto Dias	Ia	2	6.5	5.3
José Estorga	Ib	6	6.5	5.6
Francisco Garcia	Ic	4	6.5	5.8
Alberto Mendes	Id	5	5.8	5.7
Ignacio Molina	Ie	3	8.7	11.5
Louis Moreno	If	3	7.8	4.8
Ramon Perrales	Ig	3	7.0	4.4
Francisco Barnett	IIa	1	6.8	5.2
	IIb	2	6.4	5.3
	IIc	2	6.8	5.9
	IId	2	7.3	6.1
	IIe	–	7.7	5.8
Miguel Barnett		3	7.8	5.0
		3	6.0	4.9
		5	6.1	4.5
Ernesto Corrales		1	3.1	2.8
(8-year old boy)		1	3.0	4.2
Juan Moreno		7	6.5	5.0
		7	6.7	4.9
		8	6.7	5.2
		7	6.1	5.1

cause he did not believe it would help retard death. This man, interestingly enough, is the nephew of Alberto Molina, whom the Seri believe responsible for having introduced the gasket. The foreshaft produced by Ignacio (Plate Ie) is the most divergent one in the entire collection. It is, for example, the only one in which the point has two barbs and, except for those made by the eight-year-old boy, the only one in which the length of the point above the hafting exceeds that of the hafting. The finished products also show some variation in the source of the rubber used for the gasket and in the kind of wood used for the hafting. Six of the eight gaskets are shaped from an automobile tire, two from scraps of rubber of which the men did not recall the source. Three haftings (Plate Ia, d, g) are made of ironwood, all the others of mesquite, which is easier to obtain than suitable ironwood or nonindigenous woods.

[196]

Discussion

The foregoing example is designed as a paradigm to illustrate how observations on ongoing cultures might be adapted to the problems of archeological reconstruction. It is, of course, imperative to focus on behavior where matter is changed in some way, because it is only in altered matter that behavior is protracted through time. The example is deliberately selected to capitalize on an important area

121

462 desert plants or littoral fishlets from tide-pools or of the shellfish. Both men and women will [224] bring in an occasional rattler, although women [857] are more likely to do this because they spend more [883] time in the desert. Children of both sexes are engaged in the female occupations here, but adolescent boys already join in their fathers' hunts on land or sea.

342 Housing has undergone some changes. In the desert or on Tiburon the Indians construct the 184 kind of shelter they did in the recorded past, an ocotillo frame, bent over in the middle and covered up with dried plant debris and twigs from the desert, or with the sail cloth. But in Desemboque they have more substantial houses—of wattle and adobe, with flat roofs, rectangular or square, often with corrugated tin or drift planks and other debris piled up on top, or along the walls.

178 In the remainder of their material culture, not much has been left from years past although one must remember that from the very beginning of recorded Serian history it has been of a most [291] meager sort. Pelican robes, which some Seris ap- [412] parently still wore in 1930 are gone for good. So are the stone tools. So is the pottery which had [323] probably disappeared in Kroeber's time. The hu- [301] man hair necklace with rattlesnake rattles is also a thing of the past. The rattlesnake skin belts [291] McGee (1898:170) described and figured are probably all gone. I havn't seen or heard of any.

412 But what remains much as they had been in 285 1894 are the bone-awls. These are made of burros' carpals and the blossoming of basketry, owing to

[P. 8A]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

approaching nubility—receive some advantage through the connivance of the matrons. To a considerable extent in the matter of sustentation, and to a dominant degree in the matter of apparelling, the distribution of values is affected by a highly significant (though by no means peculiar) humanitarian notion of inherent individual rights—i. e., every member of the family or clan is entitled to necessary food and raiment, and it is the duty of every other person to see that the need is supplied. The stress of this duty is graded partly by proximity (so that, other things equal, it begins with the nearest person), but chiefly by standing and responsibility in the group (which again are reckoned as equivalents of age, whereby it becomes the business of the first at the feast to see that enough is left to supply all below him; and this duty passes down the line in such wise as to protect the interests of the helpless infant, and even of the tribal gnaw-for-naught or hanger on, who may gather crumbs and lick bones within limits fixed by the tribal consensus. Beyond these limits lies outlawry; and this status arises and passes into the tribal recognition in various ways: Kolusio was outlawed for consorting with aliens, and Mashem narrowly missed the same fate at several stages of his career; the would-be grooms who fail in their moral tests are ostracized and at least semioutlawed, and range about like rogue elephants, approved targets for any arrow, until they perish through the multiplied risks of solitude, or until some brilliant opportunity for display of prowess or generosity brings reinstatement; deformed offspring are classed as outside the human pale, even when the deformity is defined rather by occult associations than by physical features; abnormal and persistent indolence, too serious for scorn and ostracism to cure, may also outpass the tribal toleration; and, as indicated by Mashem's guarded expressions and slight additional data, disease, mental aberration, and decrepitude are allied with indolence and deemed sufficient reason for excluding the persistently helpless from the tribal solidarity, and hence from recognized humanity—and the fate of the outlaw, even if nothing more severe than abandonment in the desert, is usually sure and swift. The entire customs of outlawry among the Seri are singularly like those of gregarious animals, including especially kine and swine in domestication. Now, studied equity in the distribution of necessaries might seem to be allied to thrift; but it is noteworthy that this is not so among the Seri, who take thought for one another but not for the morrow, who seem to have no conception of storage—save an incipient one in connection with water and the repulsive notion underlying the "second harvest"), and who habitually gorge everything in sight until their stomachs and gullets are packed—and then waste the fragments.

The division of labor which affects proprietary interests is undoubtedly affected in turn by the militant habit of the tribe and by the frequent decimation of the warriors. In general, the adult males limit their work to fighting and fishing, with occasional excursions into the hunt-

7: Marroquin E-5 (1955) 1957 NU3. Seri NU31

POPULATION ABLE TO WORK
(between 11 and 65 years)

Men, 74 or 69% of the masculine population.
Women, 76 or 70% of the feminine population.

We can add that, at least as far as the male population is concerned, the figure of 69% with a potential work capacity is equivalent, in general terms, to the percentage of the population economically active, since one of the singular characteristics of the Seri population is the fact that they constitute a community fully occupied: all the men of working age have a place set aside in the fishing activities; this is an advantageous position for increasing economic development of the tribe. With relation to the women the situation is not the same, since the majority of girls of marriageable age carry on very few productive activities; it could be said that economic responsibility begins with matrimony.

If it is true that all the Seri men are fishermen, it is also true that there is the beginning of some specialization of jobs, which are carried on complementing or as an accessory to the principal occupation. Thus we have among the men:

Carpenters, constructors of *piraguas* (a kind of canoe)	6
Medicine men	14
Farmers	2

And among the women:

Seamstresses	4
Farmers	1
Midwives	22

The relatively high number of medicine men and midwives should not be surprising; Seri popular medicine is very well known and depends principally on magical propitiation and since the magic powers are acquired in a variety of ways, including dreams, and the healing rites are, on the other hand, very simple, it is not strange that medicine men should abound. As for the midwives, it can be said that every woman who has undergone the experience of childbirth feels herself able to help at a birth; nevertheless, it is said that the more experienced women are those best able to take care of those giving birth.

Problems which should be attended to

In addition to the sanitary problem mentioned above, mention should also be made of the problem of agriculture, linked with the necessity for supplying food to an Indian population which since economically it depends principally on fishing, needs to complement its diet with agricultural products to achieve a better one. In close relation

7: Marroquin E-5 (1955) 1957 NU31 Seri NU31

with this problem is the lack of legal title to the lands which the Seris own in fact but which legally belong to the nation.

Insofar as the economic problem, it is necessary to better the fishing techniques, doing away with old process of obtaining the catch through dynamite explosions. Finally, as Dr. Marroquin says, the fact should be noted that the Seris on passing from the nomadic economy to exchange economy lack the necessary knowledge to achieve success in their operations within the national and international market.

It is thus necessary to take care of these and other problems, to save this Indian group from complete extinction, succeeding on the other hand in raising their living conditions, making of them citizens capable of contributing to the progress of the State of Sonora and the Republic of Mexico as a whole.

NEW DIRECTOR OF THE SUMMER INSTITUTE OF LINGUISTICS IN MEXICO

For the next two years the Director of the Summer Institute of Linguistics in Mexico will be Dr. Benjamin Elson. Dr. Elson first came to México in 1942 and began linguistic field work among the Sierra Popoluca Indians of the State of Veracruz. Sierra Popoluca has been the principal object of his linguistic studies since that time, and various articles have resulted from these researches. He took his degree from Cornell University with the thesis "Sierra Popoluca Morphology". He has on other occasions served as Associate Director of the Institute in Mexico.

The Associate Director will be Mr. H. J. Klassen. Mr. Klassen has done linguistic field work on Lowland Mixteco in the State of Oaxaca. He has served as Interim Director of the Institute on previous occasions.

VII ROUND TABLE OF ANTHROPOLOGY HELD IN THE CITY OF OAXACA FROM SEPTEMBER 1ST. TO 7TH.

During the month of September, the VII Round Table of Anthropology, dedicated to the study of the Indian cultures of Oaxaca, was held in the city of Oaxaca, capital of the state of the same name. Since at the present time there exists in this state a large proportion of Indians, and since during its pre-Hispanic past such important cultures as the Zapotec and Mixtec flourished there, the interest of this Round Table is evident.

Lack of space makes it impossible to present here a complete report of this anthropological meeting; therefore, we will limit our coverage to a summary of the most important points, taken from the Report of the recording secretary, Prof. Wigberto Jiménez Moreno. This report was made available to us through the kindness of Mrs. Carmen Cook de Leonard, Vice-President of the Center of Anthropological Investigations of Mexico. The complete version in English may be seen in the *Boletín* of the Center of Anthropological Investigations (Nº 1, Oct., 1957, pp. 43-49).

9:Malkin F-5 (1955-1955)1962 MU31 Seri MU31

XI

SUMMARY

* 825 [114] In 1956 (Malkin 1956:74) I published tables indicating the degree of economic exploitation of the animal world by the Seria. These tables were incomplete and also need corrections. Therefore below I am reproducing the revised version.

Class	Species Reported	Species Exploited	Percentage
Mammalia	21	9	40
Birds	24	6	25
Reptiles and Amphibia	25	17	68
Fishes	44	23	52
Molluscs	27	27	70
Crustacea	10	2	20
Insects	92	—	—
Miscellaneous	9	—	—
Totals	262	82	30

These figures show as yet remarkable degree of exploitation of the products of the sea and also of the reptiles with correspondingly lesser interest in the terrestrial animals in general. Of course, mere listing of animals does not tell the whole story. In the first place, it does not indicate the changes that took place nor does it suggest the relative importance of any group or species. Historically, the situation is different now. Out of nine species of mammals reported as eaten only six still figure out in the diet. The reduction is even more striking in birds where only three are admittedly eaten and two of these only furtively. More yet, only 12 species of marine molluscs out of 27 are eaten while the rest get discarded. All this is tied up then with the changes in the economy, with the importation and increase of the trade foods and goods and also with increasing preoccupation with the commercial fishing at the expense of hunting and gathering.

262 177

262 Individually, by far the most important in the Seri diet and economy are the fishes with half a dozen large commercially lucrative species leading the list. Next come the marine turtles and following these for the third place tie the molluscs, the mammals (lagomorphs, bighorn and peccary) and probably the rest of the reptiles of which the rattlers are probably most important by volume. Insects do not figure any longer in the Seri economy in any way, although at one time they probably had some significance. On the other hand, while the food importance of the molluscs decreased immensely, their trade importance is on the upswing owing to the demand from the outside. Thus the basic changes in the Seri patterns of exploitation of animals has been a result largely of an outside stimulus.

[439] [177]

Fishing and Hunting

226 185 Fishing is practiced mostly to satisfy the immediate needs, of petty cash and food. Once these are satisfied, there is no incentive to fish until the need arises again.

[P. 54 A]

123 the flesh attached. This we roasted, or broiled, by standing it on
262 edge against two stakes in front of the fire. The breast was white and tender, somewhat like roast pig, but much more delicious.

262 The Seris cut off the great flippers, dug out the entrails, and
252 whenever there was a crack in the crowd of men, women and children, there was a dog lapping the blood and chewing a shred of meat before being driven off. Men, women and children tore off pieces of the tender
[251] meat and ate it raw. The blood which gathered in the hollow of the shell was baled out and saved in an olla.

A woman took out the coils of entrails, ripped them open with her finger, squeezed out the half-digested sea grass, which resembled closely-packed boiled greens, and rinsed them in the sea. The head
[251] was skillfully disjointed, and with flippers, entrails and liver, put up on the brush roof away from the sand and dogs.

Then began the feast; half the turtle being devoured immediately.
[264] To see Blanco, which name fits neither his complexion or character, gnaw the bone and tear away the raw flesh of a turtle flipper with his strong white teeth and cruel mouth, would not require much imagination to substitute the shin bone of a human being.

All parts of the sea turtle are utilized except the bones and portions of the head. The white, flexible under-shell is roasted and eaten, but how they can masticate and digest it is a mystery. I tried it and gave it up, as did all our party. It might have been a Goodyear tire, for all the impression we made on it, but even the Seri children
237 eat it. The carapace is broken into small pieces and dried out in an olla, and this yields a green oil. The shell is nearly one-half inch thick and filled with minute cells which carry oil. This oil is evidently a provision of nature to prevent barnacles and marine growths from attaching to the shell. This oil is poured into a previously cleaned section of intestine, fastened at one end, and then is bottled, ready for transportation or use.

The skin of the flippers is used for sandals. The broken pieces of carapace are also used for firing ollas. The shells are used for windbreaks, for receptacles for transporting household things on women's heads, and possibly for other needs. The stomachs are stretched, probably with sand, and when dried are used for transporting water, the same as we use a canteen.

185 The Seris are always improvident. They raise no cattle. They plant
261 nothing and the only crops they raise are children and dogs. They
[231] store no food away, eat when there is plenty, go hungry when there is
[231] nothing to eat. When they will eat raw turtle meat like animals, their
[262] taste is not refined. This is evidenced when they will eat a horse or burro dead, several days---scrape off the maggots to get a chance at it.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

even during this halcyon term no Seri save Kolusio and the Altar outlaw ever learned to live in a house; none but these and Mashém wore hats habitually; and, despite the fact that they often witnessed and sometimes playfully or perforce participated in the processes, no Seri ever really encompassed the idea of house-building or even of making adobe. Though surrounded by horses when near the rancho, they never learned to ride nor to use the animals otherwise than for immediate slaughter and consumption; though in frequent sight of skilful ropers, they never fully grasped the idea of the riata, preferring to seize their prey with hands and teeth; though familiar with the agricultural operations of the rancho, they never turned a sod nor planted a seed on their own account; though in frequent sight of cooking, they seldom began and never finished the process with their own food; though acquainted with firearms, they continued to regard them as thaumaturgic devices, and chose the bow and arrow for actual use; though submitting to apparel on the frontier, they commonly cast away the incumbrances on returning to their lairs; and no Mexican or other Caucasian ever saw within their esoteric life—their names remained unrevealed, their hair remained sacred, their mourning for the dead was unheard save at a distance, and no alien, even unto today, has ever seen the birth of their babes, the christening of their children, the burial of their dead, or the ceremonies of their abrinos. The Seri and the whites were, indeed, mutually tolerant; but, so far as concerns mutual sympathy, the toleration was almost precisely on a par with that between the ranchero and the vulture-flock that scavengers his corrals—and when depredation began the toleration was of a piece with that between householders and their unwillingly domiciled rodents. It is not too much to say that the interracial mistrust and hatred of the Western Hemisphere culminates on the borders of Seriland; though the antipathy is commonly regarded by the alien tribesmen and the Mexicans as other than racial, since the Seri are felt to be hardly human—a feeling fully shared by the Seri, who undoubtedly deem themselves more closely akin to their deified bestial tutelaries than to the hated humans haunting their borders.

Even during the Encinas régime the Seri came in occasional contact with aliens on other parts of the frontier: on Hacienda Serna, the somewhat remoter borderland outpost on the north, the relations between the landholders and the Seri were analogous to those on the Encinas plains, though less acute in the ratio of relative distance. Occasionally small parties of warriors journeyed to Guaymas[1] on balsas or on foot to barter pelican-skin robes for Caucasian commodities, chiefly aguardiente and manta; still more rarely similar pilgrimages were made to the outskirts of Hermosillo; a few marauding raids were made to the ranchos lying near Cieneguilla and Caborca; and a num-

[1] The accompanying plate XII is reproduced from a photograph of a small group of Seri traders taken near Guaymas, probably during the eighties. It was kindly furnished by F. A. Obet, who purchased it in Guaymas.

I: McGee E-5 (1894-1895)1898 NU31 Seri NU31

101 Opan Guaimas—1765; [Kentwig?], Rudo Ensayo, p. 228.
Upanguaima—1861; Orozco y Berra, Geografía de las Lenguas, p. 42.
M75 Upanguaimas—1879; Malte-Brun, Congrès International des Américanistes, tome II, p. 38.
Upanguayma—Synthetic form.
Upanguaymas—1882; Bancroft, Works (Native Races, vol. I, p. 606).
Upan-Guaymas—1890; Bandelier, Investigations in the Southwest, p. 75.

Possibly the name *Cocomaques* (1727, Rivera, Diario y Derrotero, I, 1514–1519) should be introduced among the synonyms of the Seri, but in the absence of definite information it may perhaps better be left unassigned.[1]

101 Of the four tribes assigned to the stock, the Upanguayma have been extinct probably for more than a century; the Guayma may survive in
197 a few representatives probably of mixed blood and adopted language; the Tepoka have never received systematic investigation, but appear to survive in limited numbers on the eastern coast of Gulf of California about the embouchure of the Rio Ignacio sand-wash; while the Seri alone continue to form a prominent factor in Sonoran thought.

External Relations

131 The most conspicuous characteristic of the Seri tribe as a whole is
648 isolation. The geographic position and physical features of their habitat favor, and indeed measurably compel, isolation: their little principality is protected on one side by stormy seas and on the other by still more forbidding deserts; their home is too hard and poor to tempt conquest, and their possessions too meager to invite spoliation; hence, under customary conditions, they never are neighbors save in chance encounters on their frontier or in their own predatory forays—and in either case the encounters are commonly inimical. The natural isola-
[186] tion of the habitat is reflected in modes of life and habits of thought; and during the ages the physical isolation has come to be reflected in a bitter and implacable hereditary enmity toward aliens—an enmity apparently forming the strongest motive in their life and thought, and indeed grown into a persistent instinct. Thus the Seri stand alone in every respect; they are isolated in habitat and still more intensely isolated in habits of thought and life from all contemporaries; they far out-Ishmael the Ishmael of old on Araby's deserts.

648 The isolation of the Seri in thought and feeling is well illustrated by the relations with their nearest neighbors (activitally as well as geographically), the Papago Indians. The Papago are much esteemed
[115] in Sonora as fearless fighters, always ready to join or even to lead a forlorn hope; yet when the expedition of 1895 was projected it was found no easy matter to induce the picked Papago guards quartered at Costa Rica to enter Seriland. They were ready, indeed mildly eager, for fray, provided it were on the frontier; but they held back in dread

[1] These names seem rather to be Yuman; cf. Cocopa, Cocomicopa, Cocomaricopa, Kohon, etc.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

impaired than their fear-born veneration evaporated, and their native antipathy reappeared in original virulence. The 1894 party was fortunate in successfully treating a sick wife of sub-chief Mashém, and subsequently spent days in the rancheria, distributing gifts to old and young in a manner unprecedented in their experience and making liberal exchanges for such small possessions as they wished to spare; yet, with a single possible exception, they succeeded in bringing no more human expression to any Seri face or eye than curiosity, avidity for food, studied indifference, and shrouded or snarling disgust. Among themselves they were fairly cheerful, and the families were unobtrusively affectionate; yet the cheerfulness was always chilled and often banished by the approach of an alien. The Sonorenses generally hold the Seri in indescribably deep dread as uncanny and savage monsters lying beyond the human pale; while the reciprocal feeling on the part of the Seri toward Caucasians, and still more toward Indian aliens, seems akin to that of the average man toward the rattlesnake, which he flees or slays without pause for thought—it seems nothing less than intuitive and involuntary loathing. The Seri antipathy is at once deepened into an obsession and crystallized into a cult; the highest virtue in their calendar is the shedding of alien blood; and their normal impulse on meeting an alien is to kill unless deterred by fear, to flee if the way is clear, and to fawn treacherously for better opportunity if neither natural course lies open.

Concordantly with their primary characteristic, the Seri have avoided ethnic and demotic union beyond the narrow limits of their own kindred; and even of these they seem to have cast out parts, annihilating the Guayma and Upanguayma, displacing and nearly destroying the Tepoka, and outlawing individuals and (apparently) small groups. The earlier chronicles indicate that the Jesuit missionaries, and after them the Franciscan friars and the secular officials, sought to scatter the tribe by both cajolery and coercion, and endeavored to divide families by restraint of women and children and by banishment of wives; there are loose traditions, too, of the capture and enslavement of Indian and Caucasian women in Seriland; yet the great fact remains that not a single mixed blood Seri is known to exist, and that no more than two of the blood (Kolusio and perhaps one other) now live voluntarily beyond the territorial and consanguineal confines of the tribe. The romantic story of a white slave and ancestress of a Seri clan, sometimes diffused through pernicious reportorial activity, is without shadow of proof or probability; the tradition of the captivity of a Papago belle was corroborated, albeit indefinitely, by Mashém's naive admission that an alien woman was once kept as a slave to a childless death due to her ineptitude for long wanderings; and there is not a single known fact indicating even so much as miscibility of the Seri blood with that of other varieties of the genus *Homo*. Naturally the presumption of miscibility holds in the absence of direct evidence; yet the presumption

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

412 rubbing face-paint, for bruising woody tissue to aid in breaking okatilla poles for house-frames or mesquite roots for harpoons (both afterward finished by firing), and on occasion for weapons; and this many-functioned tool is initially but a wave-worn pebble, is artificially shaped only by the wear of use, and is incontinently discarded when sharp edges are produced by use or fortuitous fracture. The hupf is supplemented chiefly by the simple perforator of mandible or bone or fire-hardened wood; and these two primitive implements, together with molluscan shells in natural condition, apparently serve as the primary tools for all the mechanical operations of the tribe.

726 The dearth of tools and the absence not only of knives but of knife-sense among the Seri illumine those traditions of Seri fighting made tangible by the tooth-torn arm of Jesus Omada; for they explain the alleged recourse of the Seri warriors to nature's weapons, used in the centripetal fashion characteristic of nascent intelligence.

● 186 The Seri are distinguished by another trait hardly less striking than the pedestrian habit, and even more conspicuous than the tooth-and-nail habit with the correlative absence of tool-sense; the trait is not tangible enough for ready definition or description in terms (of course because so unusual as not to have bred words for its expression), but is akin to—or, more properly, an exceeding intensification of—race-pride in all its protean manifestations; it may be called *race-sense*. Like other primitive folk, the Seri are self-centered (or egocentric) in individual thought, i. e., they habitually think of the extraneous phenomena of their little universe with reference to self, as in the labyrinth of consanguineal relationship extending and ramifying from the speaker; furthermore, they typify primitive culture in their collective thinking, which is tribe-centered (or ethnocentric), i. e., they view extraneous things, especially those of animate nature, with reference to the tribe, like all those lowly folk who denote themselves by the most dignified terms in their vocabulary and designate aliens by opprobrious epithets; but the Seri outpass most, if not all, other tribes in dignifying themselves and derogating contemporary aliens. Concordantly with this habitual sentiment, they glory in their strength and swiftness, and are inordinately proud of their fine figures and excessively vain of their luxuriant locks—indeed, they seem to exalt their own bodies and their own kind well toward, if not beyond, the verge of inchoate deification. The obverse of the same sentiment appears in the hereditary hate and horror of aliens attested by their history, by their persistent blood-thirst, and by the rigorous marriage regulations adapted to the maintenance of tribal purity; for just as their highest virtue is the shedding of alien blood, so is their blackest crime the transmission of their own blood into alien channels. The potency of the sentiment is established by the unparalleled isolation of the tribe after centuries of contact with Caucasians, by their irreducible love of native soil, by their implacable animosity toward invaders, and by

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1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

their rigorously maintained purity of blood; it is manifested in their commonplace conduct by a singular combination of hauteur and servility, forbidding association with aliens on terms of equality. The entire group at Costa Rica in 1894 were on good behavior, partly, no doubt, for profit, partly because they were at peace bought by bloodshed; yet they kept an impassable gulf between themselves and the Caucasians, and a still wider chasm against the Papago and Yaqui. They came to the tanque, usually in groups, rarely alone, always alert; especially when alone or in twos or threes, they moved slowly and stealthily in their peculiar collected and up-stepping gait, often stopping, always glancing furtively with roving eyes, and bearing a curious air of self-repression—as of the camp-prowling coyote who seems to hold down his instinctively bristling mane by voluntary effort. And the visitor to their rancheria sent a wave of influence before as his approach was noted; laughter ceased, languor disappeared, and a forced, yet sullen, amiability took their place, though the children and females edged away; if he appeared unexpectedly or came too close, the children and younger adults simply flitted like young partridges, while the elders stiffened rigidly, with bristling brows and everting lips and purpling eyes, perhaps accompanied by harsh gutturization—indeed the curiously canine snarl and growl, often evoked by the stranger unintentionally, betrayed the bitterness of Seri antipathy toward even the most tolerable aliens. Every human is panoplied in a personality, perhaps intangible but none the less real, which repels undue approach and fixes limits to familiarity on the part of strangers, friends, kinsmen, and mates, according to their respective degrees of mutually elective affinity; but the Seri are so close to each other and so far from all others that they are collectively panoplied against extra-tribal personalities even as are antipathetic animals against each other—and the Seri can no more control the involuntary snarl and growl at the approach of the alien than can the hunting-dog at sight or smell of the timber-wolf.

While the highly developed traits represented by pedestrian habit and hand-and-tooth habit and segregative habit expressing race-sense are conspicuous during exercise, each carries an equally well-marked obverse. Thus, while the Seri are known as runners par excellence in a region of runners, and were named by aboriginal neighbors from their spryness of movement, they have been no less notorious among the Caucasian settlers of two generations for unparalleled laziness—for a lethargic sloth beyond that of sluggish ox and somnolent swine, which was an irritating marvel to the patient padres of the eighteenth century, and is today a byword in the even-tempered Land of Mañana; concordantly the sinewy hands and muscular jaws are noticeably inert during the intervals between intense functionings, are practically free from the spontaneous or nervous movements of habitually busy persons, and contribute by their immobility to the air of indolence or languor which

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

To the actual observer of the Seri in his prime there is an indefinable but none the less impressive harmony between the intense regimen and the trenchant structural development characteristic of the tribe—a harmony like unto that felt by naturalist and artist alike in viewing at once the clean-cut form and vigorously easy mobility of tiger or thoroughbred horse; and simple inspection of the lithe limbs and body-muscles stirs into living realization a half-felt inference from many facts—the obvious and indubitable inference that they are stress-shaped structures. Accordingly, the concentrated and robust bodies, the shapely jaws, the well-chiseled arms, and the statuesque legs of the Seri, no less than their powerful hands and bulky feet, direct special attention to the axiom that somatic structures are the product of exercise, and indicate with convincing clearness that the structures are trenchantly developed because of the supreme intensity of the creative exercise. It may be impracticable to outline in terms of metabolism the precise processes of waste and repair in organs and organisms, or to define the relative periods of action and assimilation (or of catabolism and anabolism) best adapted to the development of motile tissue; yet the external facts of all bodily growth demonstrate the efficiency of alternating effort and repose, while the characteristics of highly developed animal bodies (including those of the Seri) demonstrate that the most beneficial exercise is that of relatively brief but intense stresses alternating with relatively long intervals of sluggish movement or complete repose. Moreover, the facile metabolism involved in the widely alternating regimen implies exceptional somatic plasticity of the sort normally accompanying youth and attending tissue growth; and this persistent bodily plasticity is in harmony with the peculiarly dilatory maturation characteristic of the Seri tribe. So the animal-like bodies of the Seri, no less than their animal-like movements, which at first sight suggest primitive condition, may safely be held in large measure to reflect specific habits of life, themselves reflecting a distinctive habitat.

Still more suggestive to the observer than the well-molded structures and the intense functioning with which they are conjoined are those elusive yet persistent characteristics of the Seri comprised in their distinctive race sense—characteristics ranging from overweening intratribal pride to overpowering extratribal hatred. Even at first blush it would seem obvious that the tribal isolation, itself the reflection of environment, would necessarily tend toward a segregative habit with concomitant hostility toward aliens; yet the race-sense of the Seri so far transcends that of other segregated tribes as to suggest the existence of a specific cause. So, too, it would seem obvious that the race feeling gathers about a corporeal nucleus in the form of the race-type exemplified in the heroic stature, the shapely face, the mighty chest, the luxuriant hair, the well-modeled muscles, the powerful feet and hands, the "collected" carriage, and the stored vitality, which (as already indicated) synthesize the environmental interactions of generations; yet the actual student can not avoid the impression that the

1: McGee E-5 (1894-1895)1898 NU3) Seri NU31

race-sense dominates the race-type—that the Seri are farther away from neighboring tribes in feeling than in features, in function than in structure, in mind than in body. Now, in seeking the sources of this distinctive (not to say specific) race-sense, several suggestions arise. Naturally the first suggestion is that of simple sexual selection, the (assumptive) analogue of an important factor in biotic evolution; but the suggestion is at once apparently negatived by the fact that all the mature men and women are married and have families of children proportionate to their ages. True, undesirable fiancés may be expelled from the tribe, or even executed (as intimated by neighboring Sonoreuses); yet there is little evidence that either method of selection is employed among the Seri more largely than among other peoples; and, as all recent researches indicate, the higher peoples at least have risen above the plane of sexual selection per se as an effective factor in somatic development. A second suggestion arises in the axiom (vivified by realization of the connection between Seri movements and Seri structures) that perfected organs are the product of stressful functioning—indeed, the suggestion is but the extension of the axiom from the individual to the stirp and the group. In developing the suggestion it is convenient to divide the career of the stirp into periods defined by the successive wax and wane of vitality in its most significant manifestations; and this may be done in terms of successive individual lifetimes in their three successive aspects of (1) youth, (2) maturity, and (3) senility, in which the dominant constructive functions are respectively (1) somatic growth, (2) collective growth (comprising both procreation and the accumulation of artificial possessions), and (3) dissipation of somatic vitality and distribution of extrasomatic accumulations (generational as well as material and intellectual). Now, it is a commonplace in every stage of culture that vital capacity, and also the inherent sense of kind manifested in pairing, culminate in the medial portion, or prime, of individual life; and if this universal recognition is valid, it is just to hold that the career of the stirp is defined by the successive vital climaxes expressing the primes of the series of generations pertaining to the stirp. It follows that each generation must represent, not the average qualities of the entire generation past, but the qualities of the most virile and muliebrile fraction of that generation; whence it follows in turn that in general the generations must develop along the lines most prominent in the lives of each people in their prime. The process may be formulated as the *law of periodic conjugation*, under which successive generations are initiated, not at random, but at periods of culminant effectiveness in shaping the course of the stirp. The immediate application of this law to the Seri tribe is manifest, for it explains (the initial condition of isolation and the consequent incipient segregative habit being given) how and why the tribal standards have grown more definite from generation to generation, and have interacted cumulatively with the distinctive environment in such manner as continually to widen the chasm between the desert-

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

143 bound tribe and their alien neighbors. Yet the general application of the law leads only to a more specific application; for, just as the career of the stirp is made up of a succession of vital maxima and minima, so the lifetime of the individual, even in the median stage, is made up of a series of vital climaxes separated by relatively inert intervals; and, as recognized by every naturalist and romancist, every philosopher and poet, in every stage of culture, it is during the periods of conative domination by the master passion that the career of the individual is shaped and that the stirp-sentiment (or susceptibility to kind) culminates in intensity. It follows that the progeny of successive generations represent not merely the optimum median stage of life in which vitality and virility and muliebrity are at flood, but the very climaxes of this stage in which manhood and womanhood attain their ideals, and in which the ideals react on the physical system with unequaled intensity; it follows in turn that each generation must (in so far as intellectual tension can control long series of metabolic interactions after the manner in which short series are controlled by direct volitional exercise) incarnate the ideals of the preceding generation; whence it follows still further that in general isolated race-types tend constantly and cumulatively to increase in definiteness—at least until the somatic factors are counterbalanced by demotic relationships arising with considerable increase in population. It is true that the extent to which the incarnation of ideals is effective or even possible has not been measured; it is also true that the naturalists of the higher culture-stages commonly neglect the process; yet the occasional recognition of its positive aspect, as in Goethe's "elective affinities" and in Jacob's getting of "ring-straked, speckled, and spotted" stock (Genesis xxx, 37–41), and the practically universal recognition—more especially among primitive peoples—of its negative aspect in adverse prenatal influences, clearly indicates its importance; the fact that the ancient Greeks at once idealized in unparalleled degree, and produced unexcelled perfection in, the human form being of no small significance. Even if the measure of the incarnation of ideals be reduced to the lowest minimum consistent with common knowledge, it remains true that the progeny of successive generations are not the offspring of average parents, but of pairs at the perfection and conjugal culmination of their virile and muliebrile excellencies; so that the generations must run in courses of cumulatively increasing racial (or human) perfection, under a general *law of conjugal conation*.

143 182 186 In extending the general law of conjugal conation to the Seri, it is found peculiarly applicable, in view of their distinctive marriage custom, the effect of which is to intensify conjugal sentiments, with the attendant magnification, and potential if not actual incarnation, of ideals.[1] Accordingly there would appear to be a harmony between

[1] The law of conjugal conation was indeed suggested by observations on the peculiar marriage custom and peculiarly developed race-sense of the Seri tribe, and it has already been applied in certain of its aspects as an explanation of the initial humanization of mankind (The Trend of Human Progress, American Anthropologist, new series, vol. I, 1899, pp. 625–648).

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

Seri race-sense and Seri race-type no less delicate than that between the stressful action and the stress-shaped structures of the tribe, and while the inception of both type and feeling may be ascribed to the isolated environment, it seems manifest that both have interacted constructively and in cumulative fashion through a significant process exemplified more clearly by this tribe than by others thus far studied. At the same time, analysis of the harmony between type and sentiment indicates that the lowly Seri are actually, albeit unconsciously, carrying out a meaningful experiment in stirpiculture—an experiment whose methods and results are equally valuable to students. The Seri gymnastic and the Seri stirpiculture are in close accord, in that both are conditioned by initially dilatory yet ultimately intense action; the results are equally accordant in that the one conduces toward individual vigor and the other toward a vigorous and distinctive stirp; while the excellence of the methods (viewed from the somatic standpoint) is attested by the magnificence of the product. Now, comparison of the stirpicultural Seri with contemporary tribes shows that the desert-bound folk have attained unequaled somatic development, and suggests that the intuitive stirpicultural processes have been rendered peculiarly effective through the persistence of that tribal isolation in which the processes apparently took rise; so the race-sense of the Seri may be regarded as the product of long-continued stirpicultural processes, initially shaped by environment, yet developed to unusual degree by somatico-social habits, kept alive largely through continuous environmental interaction.

Summarily, the Seri are characterized by noble physique, by peculiarly swift and lightsome movements, by great endurance coupled with capacity for vigorous action, by animal-like symmetry and slowness of maturation, and by various minor attributes combining with the major features to form a distinctive race-type; and they are still more conspicuously characterized by an acute race-sense which holds them apart from all aliens. At first sight, several of their somatic attributes seem incomparably primitive, yet analysis of the attributes in the light of certain laws which they exemplify better than other peoples thus far studied indicates not so much a lack of development as an excess of growth along purely somatic lines, with a correlative defect of development along demotic lines; and when the lines of growth are traced to the sources and conditions, it becomes fairly clear that the aberrant development of the tribe is merely the reflection of a distinctive environment operating (evidently) throughout a long period. In brief, the somatic interest of the Seri seems to center in the remarkable adjustment of the tribe to a peculiar environment—an adjustment of such delicacy as to imply interaction throughout many generations.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

the crudeness of the work, strongly supports the inference that the stone arrow-making of the Seri was originally a fetishistic mimicry of alien devices—a plane, indeed, above which the craft has hardly risen even in recent decades. 174 324

While the Seri are devoid of military tactics in the strict sense of the term, they have certain customs of warfare which seem to be scrupulously observed. These customs are closely akin to those followed in hunting the larger land animals—indeed, the warfare of the tribe is merely an intensified counterpart of their chase. 726 [224]

The favorite tactical device of the warriors, as indicated by the great majority of their battles, is the ambuscade, laid and sprung either with or without the aid of decoys (usually aged women). Sometimes a considerable body act in concert under a prearranged plan; more commonly a few warriors only are involved at the outset, though these may be joined as the crisis approaches by companions lurking behind rocks and shrubs to be either on hand at the finish or in the way of ready flight, according to the turn of the battle-tide; and it is probable that the greater part of the ambuscades prove stillborn by reason of the oozing courage of leaders and the shirking of their supporters if the prospective victims present a bold front, or if the final omens are otherwise adverse. The ambuscade, with its flying contingent, grades into the device of stalking a stationary or slowly moving enemy, the stealthy approach terminating either in covert attack at close range or in sudden rush by a superior force. The theory, or rather the instinctive plan, of the campaign is to seek advantage in both position and numbers, to keep under cover until the instant of attack, to have sure and ample lines of retreat, and in every way to minimize individual risk.

There is a widespread notion toward the Seri frontier that the savages are given to sorties and surprises by night; but both specific testimony and the records indicate, when carefully analyzed, that this tactical device is much less common in practice than in repute, and is not, indeed, characteristic of the tribe. A few known battles began in attacks by night; but the war parties, like the hunting and fishing parties (save in the semiceremonial pelican pilgrimages), display decided preference for daylight in their forays—indeed, there are various indications that the folk are much more timid and oppressed with superstitious fears by night than by day.

In rare cases small parties of aliens have been half openly surrounded and done to death by considerably larger parties of the savage folk; but this method, too, is incongruous with the fixed habits of the tribe and with the deep-planted instinct of avoiding personal exposure.

A considerable number of the long list of homicides charged against the Seri, and marking the beginning of many of their battles, were individual rather than collective, the consummation of inimical impulses sometimes treacherously concealed for favorable opportunity, as in the 186 643

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

pitiful case of Fray Cristóstomo Gil, and oftentimes rising explosively beyond the feeble control of the untrained mind; for the impulse of enmity toward aliens is an ever-present possession—or obsession—of the tribe, and a reflection of that race-sense which is their most distinctive attribute.

Of open warfare and face-to-face fighting there is hardly a germ among the Seri. When themselves ambushed or surrounded, some of their stouter warriors have in a few instances faced the foe for a few minutes at a time, as is shown by the annals of Cerro Prieto; yet this accidental attitude but betokens the play of chance rather than the plan of choice. Concordantly, the folk avoid the method of warfare (so common among other Amerind tribes as to be properly considered characteristic) involving open duel between chiefs and other warriors; they seem to be devoid of that sense of fairness in fighting which finds expression in the duel; and despite the individual advantages growing out of gigantic stature, immense strength, and superior swiftness, they habitually seek to combine in numbers against panicked or baffled enemies, just as their hunters throw themselves mercilessly on surrounded quarry. Of open boldness or confident prowess no trace appears; and the body of facts seems to justify the prevailing Sonoran opinion that the warfare of the Seri is treacherous and cowardly in design, craven and cruel in execution.

Once begun, the conduct of the fray by the Seri fighters is fairly uniform; the warriors either discharge clouds of arrows from their coigns of vantage, or rush to brain their victims with stones, or to break their necks and limbs and crush in their chests, as in the slaughtering of quarry; and according to the tale of the occasional survivors—Señor Pascual Encinas and his son Manuel, Don Ygnacio Lozania, Don Andrés Noriega, Don Jesus Omada of Bacuachito, and Don Ramon Noriega of Pozo Noriega, are among the survivors and informants; also the sturdy Papago fighters, Mariano, Anton, Miguel, and Anton Castillo (whose sister died of dread while he was on the 1895 expedition)—the rushing warriors are transfigured with frenzy; their eyes blaze purple and green, their teeth glisten through snarling lips, their hair half rises in bristling mane, while their huge chests swell and their lithe limbs quiver in a fury sudden and blind and overpowering as that of springing puma or charging peccary. Of the successful assaults the ghastly end is rarely recorded, though whispered large in the lore of Sonora; in the unsuccessful assaults recounted by survivors the blood-frenzy burned but briefly and died swiftly as the disappointed warriors skulked silently behind rocks and shrubs, or fled across the sands with inconceivable fleetness. These details of battle precisely parallel the details of butchery of beastly quarry, as recounted by local observers and corroborated by Mashéna's recitals.

So far as can be ascertained the parallelism between frenzied battling and furious butchery in the chase affords the chief basis for the firm

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

Seneca belief that the similarity extends one step farther, and that the human victims are rent and consumed, like the beasts. There is a lamentable lack of data concerning the alleged anthropophagy of the Seri; on the one hand there is the deep-seated local opinion, generally growing stronger as the tribal territory is approached, and agreeing so well with the hunting customs, the thaumaturgic arrow-poisoning, the zoomimic handicraft, and zootheistic faith, and especially with the pervading fetish-piracy of the folk, that its validity would seem inherently probable; on the other hand, there is not only a dearth of specific positive testimony, but haciendero Encinas (best informed among Caucasians concerning Seri customs) and several of his yeomen reject the prevailing belief, while Mashem consistently repudiated the custom, both in general and in particular, and in ceremonial as well as in economic aspects, whenever and in whatever way the subject was approached during his intercourse with the 1894 expedition. On the whole, the much-mooted question of Seri cannibalism must be left open pending further inquiry, with some preponderance of evidence against the existence of the custom.

The war-frenzy of the Seri fighters is significant in its parallelism with the blood-craze of the chase, and even more so in its analogy with the warpath customs and ceremonies of most Amerind tribes and many other primitive peoples. In typical tribes the warpath custom is a most distinctive one, standing for an abnormal state of mind and an unaccustomed habit of body, perhaps to the extent of an extreme exaltation or obsession akin to intoxication, in which the ordinary ideas of justice and humanity are inhibited; among most tribes the condition is sought voluntarily and deliberately when occasion is thought to demand, and is superinduced by fasts and vigils, exciting songs and ceremonies, and related means; while among certain tribes the aid of symbolic "medicines", which may be actual intoxicants, is invoked. Thus the savage on the warpath is a different being from the same man in times of peace; viewed from his own standpoint, he is possessed of an alien and violent demon, usually that of a fantastic and furious beast-god whose rage he must symbolize and enact; viewed from the standpoint of higher culture, he is a raving and ruthless maniac whose craze is none the less complete by reason of its voluntary origin. The warpath frenzy is one of the fundamental, even if little understood, facts of primitive life, and the character of the savage tribe can not properly be weighed without appreciation of it. Now, the Seri blood-craze seems measurably distinct in two ways: in the first place, it expresses a more profound and bitter enmity toward aliens than is found among most savage tribes—i. e., it is instinctive and persistent in exceptional degree; in the second place, it is more spontaneous and explosive in its culmination when conditions favor than among tribesmen who induce the condition by elaborate preparation—i. e., it is dependent on the swift-changing hazard of warfare in exceptional

I: McGee E-5 (1894-1895)1898 NU31 Seri NU31

On the coast bucklers are improvised from turtle-shells, though, according to Mashém (confirmed by direct observation), these are not carried inland for the purpose; but the protective function imputed to the turtle was well represented in the rancheria at Costa Rica by several fetishes made from phalanges of turtle-flippers tricked out in rags in imitation of Caucasian dress (somewhat like the mortuary fetishes illustrated in figure 40a and b). On the whole, the most conspicuous feature of the individual shields or protectors is their emblematic character; they are sortilegic rather than practical, and express imputation of mystical potencies rather than recognition of actual properties; and in this as in other respects they correspond closely with the offensive devices, and aid in defining the ideas and motives of the primitive warriors.

The actually effective protection of the Seri in warfare is their fleetness, coupled with their habitual and constitutional timidity, i. e., their wildness—for they are verily, as their Mexican neighbors say, "gente muy bronco". Moreover, they are adepts in concealing their persons and their movements behind shrubbery and rocks, and in finding cover on the barest plains; and suggestions are not wanting that the protecting shrub-clumps and rocks of their wonted ranges are credited with occult powers and elevated to the lower places of their zoic pantheon, after the customary way of that overpowering zootheism, or animism, which the Seri so well exemplify in many of their habits.

Summarily, the warfare of the Seri complements the pacific industries of the tribe in every essential respect. It is notable for improvidence, i. e., for reliance on chance; the dearth of devices for offense and defense parallels the poverty in industrial artifacts; and the disregard of fortifications is of a kind with the squandering of present food supplies and the utter neglect of provision for the future. A striking correspondence between workfare and warfare is found in the fierce blood-lust displayed alike in chase and battle, a feature manifestly borrowed from beasts and intensified by besetting beast-faith; and more striking still is the correspondence in motive, as revealed by the overlapping functions of the protective kilt, by the borrowing of animal symbols alike in peace and war, and by the imitation of animal movements on the warpath as in the chase.

In the last synthesis the warfare of the Seri may be considered as characterized by two attributes: (1) The motives, so far as developed, are zoomimic in even greater degree than the prevailing motives of the pacific industries; and (2) the methods are shaped largely by mechanical chance, like those normal to protolithic industry.

Nascent Industrial Development

Industries form the chief bond between man and his environment. The esthetic activities arise in the individual and extend to his fellows; the institutional activities express the relations among individual men

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

584 585 aught in the simple yet puissant law of conjugal conation—that law whose motive underlies the world's song and story and all the pulsing progress of mankind as the inspiration of most men's work and most women's hopes—the vital intensity of this era passes down the line of blood-descent to the betterment of later generations. (4) Another collateral feature is the necessary reaction on clan and tribe; for not only [182] [186] does the individual character-making raise the average physique and morale of the group, but the carefully studied restraint of excessive individuality serves to strengthen still further the tribal bonds and to lift still higher the racial bar against aliens. The blackest crime in the Seri calendar is the toleration of alien blood; and no more effective device could be found for keeping alive the race-sense on which this canon depends than that virtually sacramental surveillance of sexual intimacy which Seri usage requires.[1]

000 On scanning the conventional classifications of human marriage in the light of the Seri customs, it becomes clear that these customs define a plane not hitherto recognized observationally. For convenience, this plane and the mode of marriage defining it may, in special allusion to the correlative race-sense, be styled *ethnogamy;* and the more systematic characters of this mode and plane of marriage may be outlined briefly:

1. The most conspicuous character of ethnogamic union, as manifested in the type tribe, is its absolute confinement to the consanguineal group. The breach of this limitation is hardly conceivable in the minds of the group, since aliens are not classed as human, nor even dignified as animals of the kinds deified in their lowly faith, but contemned as unclean and loathsome monsters; yet the infraction has a sort of theoretical place at the head of their calendar as an utterly intolerable crime. In respect to this character, ethnogamy corresponds fairly with the endogamy of McLennan, Spencer, and others, i. e., with the tribal endogamy of Powell.

2. A hardly less conspicuous character of ethnogamic union is the formality, or legality, accompanying and reflecting the collective nature of the function. In this respect ethnogamy is the direct antithesis of that hypothetical promiscuity postulated by Morgan and adopted by Spencer, Lubbock, Tylor, and others; and the customs of the type tribe go farther, perhaps, than any other example in verifying the alternative

[1] The remarkable race-sense of the tribe, with the conjugal conation in which it seems to root, are discussed ante, pp. 149-151. There is nothing to indicate, and much to contradict, the fact that are conspicuously engaged in interpretation; yet their social and filial devices would seem to be no less effective in developing race-sense, with its concomitants, than were those of prehistoric men in developing the physical attributes of animal associates, such as the wool-bearing of the sheep, the egg-laying of the fowl, and the milk-giving of the cow; or the still more striking mental attributes, such as the servility of the horse, the fidelity of the dog, and the domesticity of the cat. All these attributes are artificial, though not consciously so in their producers, hardly even to modern users; they are by-products of long-continued breeding and service, commonly directed toward collateral ends (as when the horse was bred for speed, the dog for hunting, and the fowl and cat for beauty); and, similarly, the Seri race-sense would seem to be largely a by-product of faith-shaped customs designed primarily to propitiate or invoke mystical potencies—yet the collateral effect is not diminished because overlooked in the primary motive.

2: Kroeber E-5 (1930) 1931 NU31 Seri NU31

ing, because it would be swamped in a sea which it could resist. The joining and calking are always carried far enough that the boat can be bailed faster than it leaks. That the Seri prefer to bail rather than to finick over joints, is a matter of preference. Most of our real frontier life runs on much the same plan, though sprung from a tradition of intrinsic standard and provided with a superior tool equipment. Tribes like the Walapai and Papago, who live in nearly the same desert, show much of the Seri combination of technological crudeness and effectiveness. They do make an exception in basketry, which is what has chiefly reached our museum cases from their culture; but the Davis-Heye collection shows that the Seri too can make baskets of unsuspected quality. My impression, based on the way the Seri handle their knives, boats, bows, and the like, is that they have excellent practical mechanical sense, but that their standards are astonishingly different from our own. Most people that depended so much on sailing their boats as the modern Seri do, would not be content with two sticks, a blanket, and a harpoon line. But, given the willingness to operate with this equipment, very few would be as successful in quickly rigging and skilfully handling the sail. And sailing is something the Seri have recently learned or evolved. They are the frontiersmen of native culture: hardy, rude, unorganized, practical, efficient; but, like our own frontiersmen, in no sense only half emerged from the tool-less animal. McGee was so inspired by the desire to find ultimate "primitiveness" among the Seri that he often ignored the tremendous effect of their habitat which he so well observed and described. After all, in his day cultural evolutionism was still in vogue.

As to race sense, McGee seems partly but only partly right. Chico Romero of his own accord asked me if other Indians had venereal diseases, and on the return question replied that the Seri were entirely free from them. I also saw and heard of no half-breeds. On the other hand, Chico's historical tradition told of the violation and keeping of captive Tepoca women, and since his own son was descended from one of them, in the second generation, Chico's mother-in-law must have been a Tepoca. McGee's "alien conjugal union" as the "blackest crime" (p. 11) is therefore an exaggeration, and his informant's statement that a Papago woman captive among the Seri never could have had children because she was an alien slave (p. 278), must rest upon a misunderstanding.

The groom's continence for a year after marriage as a moral test before admission to full husbandly status (pp. 280-3), is probably a matriarchally colored fantasy based on another misunderstanding. As already mentioned, Chico was interested, but mildly ribaldly amused, at the idea when it was put before him as a foreign Indian custom. He reacted like the average white man under the circumstances, not in the least like an actor skilfully feigning ignorance.

642 621 618 714 [786] [406]

The third specification states that a kin group, to constitute a clan, must exhibit actual social integration. Murdock stresses the necessity of observing a positive group sentiment, such as would be manifested by organized collective activities or group functions, before the group can be characterized as a clan. An essential feature of this group sentiment is the inclusion of the wife as an integral member of her husband's kin group.

621 618 [628] [622] [701] [583] [406]

This sort of social integration was indeed exhibited by the Seri kin group of each subdivision. It was, in fact, fostered by the isolation brought about by the inhabitants' reservation of hunting and fishing rights for themselves. Tension existed between certain subdivisions and, since there was no chief, the oldest capable male organized and led the fighting force of the clan. In times of need, the members of the group united to give mutual assistance. The groom-to-be could expect material aid from his fellow clan members in the payment of the bride price. Mutual assistance was given in the fulfillment of puberty ceremony and burial obligations. The men cooperated in their hunting and fishing expeditions. The women of the clan, including the in-married spouses, cooperated in the gathering and sharing of food. Everyone could attend the various fiestas. It is said that in the performance of these collective activities, close harmony generally prevailed.

BAND INTERNAL AND EXTERNAL RELATIONS

642 619 578 [648]

The division of the Seri tribe into bands was likely brought about through internal strife. During the period of band history known to the present-day Seri,[8] however, serious skirmishes seem to have been fought predominantly with non-Seri groups.[9]

Band I

642 621 628 578 [721] [648]

Band I internal relations appear to have been relatively peaceful. The inhabitants of subdivisions 1, 2, 3, 4, and 5 were fishermen as well as hunters and gatherers, whereas the people of subdivision 6 preferred to subsist on gathered food and wild game. Also, the members of Band I robbed cattle and horses, which pursuit brought reprisals from the Mexican ranchers. There was apparently considerable social intercourse among the six subdivisions, even to the extent that hunting rights of one were sometimes granted to inhabitants of a neighboring section.

Trouble developed when some members of Band I speared fish within the domain of Band V. Here also bitter fighting broke out, and any semblance of peaceful co-existence between the two groups was destroyed.

648 726 on the settlements of Sonora. Many expeditions, fitted out at great expense, were sent against them, but in that barren land, destitute of water, the military parties suffered greatly in their campaigns, and succeeded little in their efforts to conquer the wary natives.

177 648 By 1850 probably every Seri between infancy and decrepitude had seen the proprietor and other inhabitants of the rancho of Don Pascual Encinas at Costa Rica where the Seris were abnormally tolerated and even encouraged to make themselves useful and unobjectionable. They yielded to indolent scavengering more than ever before; they substituted cast-off rags and barter-bought cotton cloth for their pelican robes and other primitive garments. They ate cooked food when it fell their way; half heartedly they adopted metal cutting implements and sought or stole nails and hoop-iron for arrow [191] points. Some acquired a smattering of Spanish and many came to sport Spanish names. Never, however, did more than one or two Seris come to live in a house, nor even to encompass the idea of making adobe. They had not learned to ride horses nor to burden them, but only to use them for immediate slaughter and consumption. They were acquainted with firearms, but it was not until years later that they learned to use them. In and about Rancho Costa Rica the Seris and the Mexicans lived for a time in mutual tolerance, certain depredations being allowed the Indians just as were the rodents of the rancheria.

648 721 When, in 1855, Don Pascual Encinas experienced the loss of unusually large numbers of stock from Seri raids, he was aroused into announcing that a Seri head would be taken for each head of stock stolen. For a while the Indians seemed to acquiesce, but within a few days a group of Seri women "milled" a band of horses, caught and threw one so that its neck was broken, whereupon [252] they immediately sucked its blood, gorged on its intestines, and buried its quarters to "ripen" according to their custom. The vaqueros of the settlement were instructed to shoot the first Seri seen on the llano. Within two days the tribe was on the warpath and the war raged for a decade.

[p.262(B)]

BAND V

642 These people were apparently hunters, gatherers, and fishermen. It is said that they speared fish from the shore since they did not use *balsas*. They too apparently raided the ranches. Their warring nature has already been discussed; it resulted in the acquisition of few friends. However, several marriages between members of this band and members of subdivision 2 of Band III are said to have occurred.

BAND VI

The members of Band VI lived on San Esteban Island and were the most primitive of the tribe. They lived in huts made of driftwood and in caves and made extensive use of the *balsa*. Although they did not have the bow and arrow, they did become expert in the use of the spear. The people depended mainly on a seafood, iguana, and maguey diet.

621 628 578 Perhaps it was due to the confined living space on the small island with the accompanying lack of fresh water that relations between the four subdivisions were precarious and fights broke out frequently. The Seri today stress the fact that the members of this band were impetuous and unpredictable.

642 Their relations with the other bands were generally good however. Seri from Band III were free to visit San Esteban where they were well treated.

The San Esteban people seldom traveled to the mainland, and, since they spoke no Spanish, it is probable that they made no peaceful contact with non-Seri groups.

642 628 578 648 COLLAPSE OF THE BAND SYSTEM

Internal strife in the Seri tribe was probably a major factor in the establishment of the band system. External strife was a major factor in its downfall.

Reference has been made to the plundering, killings and rustling of cattle to which certain of the bands were dedicated. The concern of the Sonora government was aroused, and steps were taken to crush the rebellious groups. According to the present-day Seri, military action by army units and rancher outfits against the various bands resulted in the near-destruction of the whole tribe.[11]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

greatly reduced. The leading clans are those of the Pelican, the chief tribal tutelary, and the Turtle, a minor tutelary. At present polygyny prevails, professedly and evidently because of the preponderance of females due to the decimation of warriors in battle; but both custom and tradition tell of former monogamy, with a suggestion of polyandry. The primary marriage is negotiated between the mothers of the would-be groom and the prospective bride; if the mother and daughter in the latter family look with favor on the proposal, the candidate is subjected to rigorous tests of material and moral character; and if these are successfully passed the marriage is considered complete, and the husband becomes a privileged and permanent guest in the wife's household. Family feeling, especially maternal affection, is strong; but petty dissensions are common save when internal peace is constrained by external strife. The strongest tribal characteristic is implacable animosity toward aliens, whether Indian or Caucasian; certainly for three and a half centuries, and probably for many more, the Seri have been almost constantly on the warpath against one alien group or another, and have successfully stayed Spanish, Mexican, and American invasion. In their estimation the brightest virtue is the shedding of alien blood, while the blackest crime in their calendar is alien conjugal union.

The Seri vocabulary is meager and essentially local; the kinship terms are strikingly scanty, and there are fairly full designations for food materials and other local things, while abstract terms are few. Two or three recorded vocables seem to resemble those of the Yuman languages, while the numerals and all other known terms are distinct. The grammatic construction of Seri speech appears not to differ greatly from that of other tongues of Sonora and Arizona; it is highly complex and associative. The speech is fairly euphonious, much more so than that of the neighboring Papago and Yaqui Indians.

The Seri Indians appear to recognize a wide variety of mystical potencies and a number of zoic deities, all of rather limited powers. The Pelican, Turtle, Moon, and Sun seem to lead their thearchy. Creation is ascribed to the Ancient of Pelicans—a mythical bird of marvelous wisdom and melodious song—who first raised Isla Tasape, and afterward Tiburon and the rest of the world, above the primeval waters. Individual fetishes are used, and there is some annual ceremony at the time of ripening of cactus fruits, and certain observances at the time of the new moon. The most conspicuous ceremony is the girls' puberty feast. The dead are clothed in their finest raiment, folded and fastened in small compass like Peruvian mummies, placed in shallow graves, and covered with turtle-shells, when the graves are filled with earth and heaped with stones or thorny brambles for protection against beasts of prey. Fetishes, weapons, and other personal belongings are buried with the body, as well as a dish of food and an olla of water, and there are curious customs connected with the place of

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

akin in function even in the superficial view of the Caucasian, and are much more closely related in primitive thought—indeed the fire-drill is but a featherless and nockless arrow, with the foreshaft charred at its fire-giving tip; and all are closely linked in language and allied with other terms in such wise as practically to establish identity among them in the thinking of their lowly makers (though unfortunately the incomplete vocabularies extant are insufficient for full study of the linguistic homologies). Briefly the indications are that the harpoon was the primary device, and that its foreshaft was a tooth of an aquatic fish-eater like the seal, or perchance in some cases an os penis; that its lineal successor was a loose-head lance for use on sea and land, at first with the unaided hand and later with the atlatl, or throwing-stick (the lance being now extinct, though recorded by early visitors to Seriland); that the next artifact-generation in the direct line was represented by the arrow, foreshafted with hard wood or tooth, made light and graceful and loose-headed or not, according to needs, and by the substitution of bow for atlatl; and that a somewhat aberrant line was marked by the taming of fire, its reproduction by the modified arrow, and the differentiation of fire-stick from arrow and either atlatl or bow.

In tracing these stages in technologic growth, it is to be remembered that the Seri are so primitive as to betray some of the very beginnings of activital concepts; that to them zoic potencies are the paramount powers of the cosmos; that in their simple thought fire is a bestial rather than a physical phenomenon; that in their naive philosophy the production of devouring flame is of a kind with vital birth and a similitude of sexual reproduction; and that according to their notions the conquest of quarry, including fire, is made practicable only by aid of the mystical potencies of beasts and flames gained through invocatory use of symbols or actual organs.

In the Seri tongue the term "fire-drill" is *kaak*, an indefinite generic meaning "kind" or "strong kind", with an egocentric connotation ("Our-Strong-Kind"), as in the proper tribal designation *Kun-kaak* or *Ku-kaak;* while the term for the nether fire-stick or hearth is either *maam* ("woman", or more properly "mother"), or else (and more commonly) *kaak-maam*, which may be rendered "Kind-Mother"—the "Kind", as among primitive folk generally, comprising both men and tutelary beasts, and in this case fire as the most mysterious of the beasts; there is thus a suggestive analogy between the designation for the fire-producing apparatus and that for the tribe itself. It should be noted that the zoic concept of fire is widespread among the more primitive peoples of various provinces, and sometimes persists in recognizable form in higher culture (witness the fire-breathing dragons of various mythologies, the "lited Flower" notion gathered in India by Kipling, etc); also that the ascription of sex to the fire-sticks is prevalent among North American tribes, and at once helps to interpret the development of the fire-drill, fire-syringe, and other primitive devices, such, for example, as

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

paints, and as small utensils generally; and they are used nearly as commonly for scraping skins, severing animal and plant tissues, digging graves and waterholes, propelling balsas, and especially for scraping reeds and sticks and okatilla stems in the manufacture of arrows, harpoons, bows, balsas, and jacal-frames—indeed, the seashell is the Seri familiar, the ever-present handmate and helper, the homologue of the Anglo-Saxon Jack with his hundred word-compounds, a half-personified reflex of habitual action and thought. Ordinarily—always, so far as is known—the shells are used in the natural state, i. e., either in the condition of capture and opening for the removal of the animal, or in the condition of finding on the beach. For certain purposes the fresh and sharp-edged shell is doubtless preferable, and for others the well-worn specimen (like the paint-cup illustrated in plate XXVII) is chosen; but everything indicates that the need for smoothed shells is met by selecting wave-worn specimens, and nothing indicates that the value of the appliance is deemed to be enhanced by wear of use—in fact, the abundance of abandoned shells about the rancherias and camp sites, and over all Seriland for that matter, indicates that the objects are discarded as easily as they are found along the prolific shores.

Next to the shells, the most abundant industrial appliances of the Seri are beach pebbles or cobbles. They are used for crushing shell and bone, for rending the skins of larger animals, for severing tendons and splintering bones, as well as for grinding or crushing seeds, uprooting canes, chopping trees and branches, driving stakes, and for the multifarious minor purposes connected with the manufacture of arrows and balsas and jacales; they are also the favorite women's weapons in warfare and the chase, and are sometimes used in similar wise by the warriors. The material for these appliances paves half the shores of Seriland, and is available in shiploads; and its use not only illustrates Seri handicraft in several significant aspects, but illumines one of the more obscure stages in the technologic development of mankind.

The cobble-stone implements of the Seri range from pebbles to bowlders, and there is a corresponding range in function from light hand-implements at one end of the series to unwieldy anvils and metates at the other end. The intermediate sizes are not infrequently utilized, and are customarily used interchangeably, the smaller of any two used in conjunction serving as the hand implement and the larger as the anvil or metate; yet there is a fairly definite clustering of the objects about two types, a larger and more stationary class, and a smaller and more portable one.

The Seri designation for the larger stone implement is that applied to rock generally, viz, *ahst* (the vowel broad, as in "father"); and it seems probable that the term is onomatopoetic, or mimetic of the sound produced in the use of the implement as a metate, and that its application to rocks generally is secondary. The designation applied to the

1: McGee F-5 (1894-1895)1898 NU31 Ser1 NU31

smaller implement is *hupf* or *hupf* (the initial sound explosive, combining the phonetic values of *h* and *k*; the vowel nearly as in "put", or like "oo" in "took"); the term is clearly an onomatope, imitating the sound of the blow delivered on flesh, on a mass of partially crushed mesquite beans, etc—indeed, both the word and the sound of the blow seem to connote food or eating, while regular pounding with the implement (either in ordinary use or by special design) is a gathering signal. So far as ascertained, the term is not extended to other objects save potential implements in the form of suitable pebbles; but it is significant that there is no distinction in speech—nor in thought, so far as could be ascertained—between the natural pebble and the wear-shaped implement.[1] The local terms ahst and hupf are explicit and specific, and without precise equivalents in other known tongues; moreover, the objects designated are too inchoate in development and hence too protean in function to be appropriately denoted by the designations of implements pertaining to more differentiated culture (mortar, metate, pestle, muller, mano, etc). Accordingly it seems desirable to retain the Seri designations.[2]

A typical specimen of intermediate size, used commonly as an ahst, but susceptible of employment as a hupf, is illustrated (natural size) in plates XXXV and XXXVI.[3] It is a hard, tough, hornblende-granite or greenstone, with a few structure-lines brought out by weathering and wave-wearing. Its weight is 4 pounds 10 ounces (2.10 kilograms); its form and surface are entirely natural, save for slight battering shown on the two principal faces and still less conspicuous bruises along one edge (as imperfectly shown toward the left of plate XXXV). The specimen was found in a jacal (illustrated in plate VI) on Rada Ballena, within a few hours after abandonment, in the position in which it was hastily left by the last users; it was smeared with blood and fat (which still remain, as is shown in plate XXXV) and bits of flesh, and bore bloody finger prints of two sizes—those of a man and those of a woman or large child; beside it lay the hupf depicted in plate XLII. In its last use the unwieldly cobble served as an ahst, but the markings on the edge record use also as a hand implement.

A functionally similar implement is illustrated in plate XXXVII (on reduced scale; maximum length 8¼ inches = 210 cm.). It is of tough

[1] The failure to discriminate natural objects from artificialized implements produced from such objects by wear of use is a noteworthy trait of primitive folk. It is conspicuous among the acorn Indians of California, who fail to appreciate the manufacture of their own mills and who conceive that their bowlder mortars and creek pebble pestles, even when completely artificialized by a generation's use, are merely found and appropriated; and a similar state of mind persists among the well-advanced Papago, who have no conception of making their well-finished mortars and pestles, or even the stone tomahawks occasionally surviving, but regard the implements as fruits of discovery or treasure-trove only.

[2] It should be noted that the terms used in the titles of the accompanying plates are not denotive, but merely descriptive.

[3] This, like the other illustrations of the series (except plate LVI, which is a lithograph, partly process and partly handwork), are photo-mechanical reproductions made directly from the objects; all are natural size unless otherwise specified.

2; Kroeber E-5 (1930)1931 NU31 Seri NU31

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174 On the other hand, if the hypothesis were true that the Seri reached their historic habitat from across the Gulf, they would have come from territory which in recent times was Cochimí, and their presumably closest relationship would be with these former neighbors, and only indirectly with the other Yumans. Thus the line of affinity would be Seri-Cochimí-main Yuman.

• 192 It is to test these two alternative hypotheses of Seri origins that
197 the accompanying comparative vocabularies of Seri, Cochimí, Yuma,
and Cocopa have been selected. They are limited because the only
material pertinent to the problem at issue is stems represented in all
[12] three linguistic groups; and both the Seri and Cochimí data are scant. A number of words of the same meaning differ completely in the three groups—in their surface appearance at any rate—and have therefore been omitted as irrelevant. The residue consists of 33 Seri words which show more or less resemblance to the corresponding Cochimí or Yuman words or to both.

The Seri, Yuma, and Cocopa vocabularies were recorded by myself. Yuma and Cocopa represent distinct branches of Yuman. Cochimí 1 and 2 were recorded or copied respectively by W. M. Gabb in 1867 and by J. R. Bartlett about 1852, and are transcribed from photostat copies of the originals filed in the Bureau of American Ethnology and furnished through the courtesy of its Chief, Mr. Matthew Stirling. Both are entered on Smithsonian printed blanks. The Bartlett vocabulary is designated "from M. Robinia at Guaymas." It may represent a vocabulary taken down by Robinia from a Cochimí and given to Bartlett, or a record made by Bartlett from Sr. Robinia's memory of Cochimí. The words for two and three are identical, even in spelling, with those given by Clavigero. Those for one and man (tepeeg and tama in Clavigero) are different. The Bartlett vocabulary may thus not go back to a single native source.

The relations of the Cochimí dialects are not clear. To judge from the three Lord's prayers given by Clavigero, languages rather than dialects may have been involved. These prayers begin respectively pennayú nakaenambà, ua-lappà anma-bang miamú, cahai apà ambeing mià, and are attributed to latitudes 25°30'-26°, 28°, and 29°-31° in the peninsula. Gabb's entry for "my father" is ka-ai and for "sky" em-bai, which clearly correspond to Clavigero's northern Cochimí cahai (h silent in Spanish, usually a glottal stop) and ambei-ng ("in heaven"). Bartlett's dialect is not so easily identified. His word for father is calembag, and his sky remains a blank entry. There are a few other identities with Clavigero, besides the numerals mentioned, but they are to words scattered in Clavigero's

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text, without reference to the locality of the dialect from which they are taken.[13]

Gabb's vocabulary therefore represents a Cochimí dialect or language north of the latitude of Tiburon; Bartlett's, a Cochimí dialect, or possibly mixture of dialects, farther south, somewhat more nearly abreast the Seri, but of undetermined provenience.[14]

Words from both these Cochimí sources are reproduced as they appear in the Bureau manuscripts, except that the accents have been put after instead of on the vowels, and that Gabb's syllabifying hyphens have been omitted where their absence seems irrelevant to his phonetic intent. Gabb states that his *ch* is as in German; his ch is presumably as in Spanish and English.

In the Seri, Yuma, and Cocopa lists, the circumflex denotes long open, the macron long close vowels; small capitals, vowels obscure in quality; superior vowels, glides or whispered vowels. Of consonants, q is velar k; X, velar fricative; x, palatal fricative; c, sh; L, surd l; italicised stops, unvoiced and unaspirated stops (intermediates); ð, interdental sonant fricative; v, *F*, bilabial v and f. The apostrophe denotes the glottal stop; its reverse, the Greek rough breathing sign, an aspiration;[15] a superior period, consonantal length.

In Yuma and Cocopa, the prime accent denotes stress accent;[16] in Seri, high tone. Seri low tone is shown by italicized vowels; middle tone, by lack of indication.

The comparative vocabularies of Seri, Cochimí, Yuman and Cocopa are given on the following page.

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[13] B, sun, yha, C, ihe; B, summer, mesaho, C, mejlbé, June to August, season of pitahaya harvest, also year; B, autumn, amadá, appi, C, amadá-appi, August to October; B, winter, masibéi, C, majlbéi, December to February; B, spring, masibe'a, C, majlben, February to April; B, 4, magazubugua', C, the same (but: B, 5, muguaconqui, C, naganná tejueg ignimel). Bartlett's vocabulary is general, whereas Clavigero chiefly gives names of foods, plants, animals, and points of ethnographic interest.

[14] Buschmann in his Spuren der Aztekischen Sprache, 469-472, 495-511, 1859, has assembled and discussed all available Cochimí material then in print, except Clavigero's.

[15] The initial pronominal h- of Seri body-part words might perhaps more properly have been written with a rough breathing, '.

[16] There is a tendency for the stressed syllable in Yuma and Cocopa to be higher in pitch, but the tone seems an incidental accompaniment, and not organic. The same is true of Maricopa and Walapai, and I now believe, contrary to previously expressed opinion, of Mohave and Diegueño.

	Seri	Cochimí 1	Cochimí 2	Yuma	Cocopa
man	ktam	(wanyu-)amjí[1]	delma'	l'pa"	iyupa'tc
person, people	e'm·ê	maha	demansu'	pi'ipa"	tcapa'l
hair	hetɪe't	epok	lagubu'	hê'e"	amxwaɪ
nose	hê"r	vichpyuk	huichil	hixû'	ixû'
eye	he'to=X	yupicha	yebaka'	hêêo"	iyu"
ear	he'stɪa	mang-ngi	muguil'	hacma'iyk	icmâ'l
tongue	hipɪ	hapara	abilg	hipa'ly	ampaɪ
tooth	hitâ'st	hastaa'	hy-a-mi	hêêô"	iya'wi'
beard	hita-môkne	hy-a-mi	jaeta	yâvome"	ialeme'c
bone	hitɪk	hak	acheso' (Sp?)	nyetc-acâ'k	nyengiyâ'k
blood	hfâ"it	huat	jued, ined	ny-êxwi'ţ	nyêny-exwa'ţ
house	âqo	ewa	guaka'	ava"	ewa"
sky	amfm'e	embai		am·a'l	=mâ'
moon	hê'câX	konga	keglimba'k	xely'a"	xeɪ'a"
earth	emt	emat	akug	ama'ţ	amatc
rock, mountain	ast	echkai	aba'	avî'	awî'
fire	emak	maahra	usi	a'a'u	a'a"
water	aX	tasi	cal	axa"	xa'
sea	Xepê	kachpara	caapai	axâ"xi'l'ly	xa'cx'l'ɪ
tree, wood	e"ê, eqe'uXq[2]	wache, aput[2]	agimoso', allegco[2]	a'l'	l
maize	a'pX=tɪ	pechkarai		ta$i'tc	tcâs
tobacco	â'pisqo'pX	mingnga	hui	a'û'v	'ûp
dog	aXc	ethatta	masa'	axa'ţ	
bird	ee'kâtɪk	icha	kabto'	atciye'r	
good	Xê'pê	tai'p	aha'mi	axo'tk	paxwa'l
large	kâ'kwx	chai	ca'okoo	vata'ik	âze'i
small	kesitɪ	achtawan	canil	ano'qek	alytca'c
yellow	ma'sotɪ	rimarai	yembil	aqwe'sk	qwac
one	taco=	chaqui	dopi'	ace'nt	=cit
two	kôk·u	kooak	goguo	xavi'k	xawa'k
three	ka'pX=	kabiak	combio'	xamu'k	xamo'k
eat	hîk-o"êt	hu-a'	guaba'	hamâ'-m	'oma"
drink	axe-ee'si	desi	calisi'	xa'-si'-m	'osi"

[1] Wanyu is young.
[2] Firewood. The first words mean tree or stick.

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The Seri similarities evident in the vocabulary may be summarized as follows:

Definitely more similar to Cochimí: man, person, large : 3.
Somewhat more similar to Cochimí: tooth, house, two, three : 4.
Equally similar to Cochimí and Yuman: nose, bone, blood, sky, earth, fire, drink : 7.
Somewhat more similar to Yuman: hair, tongue, water : 3.
Definitely more similar to Yuman: eye, wood, dog : 3.
Perhaps more similar to Cochimí: sea, maize, bird, small, yellow : 5.
Perhaps equally similar: rock, good, one, eat : 4.
Perhaps more similar to Yuman: ear, beard, moon, tobacco : 4.

The result is, in brief, that the available data indicate the Seri language as about equally related to, and differentiated from, normal Yuman and Cochimí. There is proof neither for the hypothesis that Seri and Cochimí branched off in different directions from the main body of Yuman tribes, nor for the one which would branch the Seri off from the Cochimí after these had drifted into the peninsula and acquired a certain specialization there. The relation of the three language groups might be described as an equilateral one—or more exactly as isosceles, with Cochimí and Yuman somewhat the nearest to each other, but Seri equidistant from both.

Various hypothetical considerations might be adduced to explain this condition. Seri might be construed as an ancient offshoot from Yuman or proto-Yuman, which later came into contact with the Cochimí off-shoot and was influenced by it. Or, Seri might be conceived of as a Yuman branch that had drifted earliest into the peninsula and then was superseded there by Cochimí as a later offshoot from Yuman. But all such suppositions are equally lacking in positive evidence in their favor, and discussion of them tends to become fine-spun among conjectures. It is wisest to accept the salient fact, namely that available linguistic evidence affords no decisive proof either for or against the hypothesis that the Seri originated in peninsular California, and to leave the problem there in the hope that fuller knowledge of the languages will ultimately solve it.

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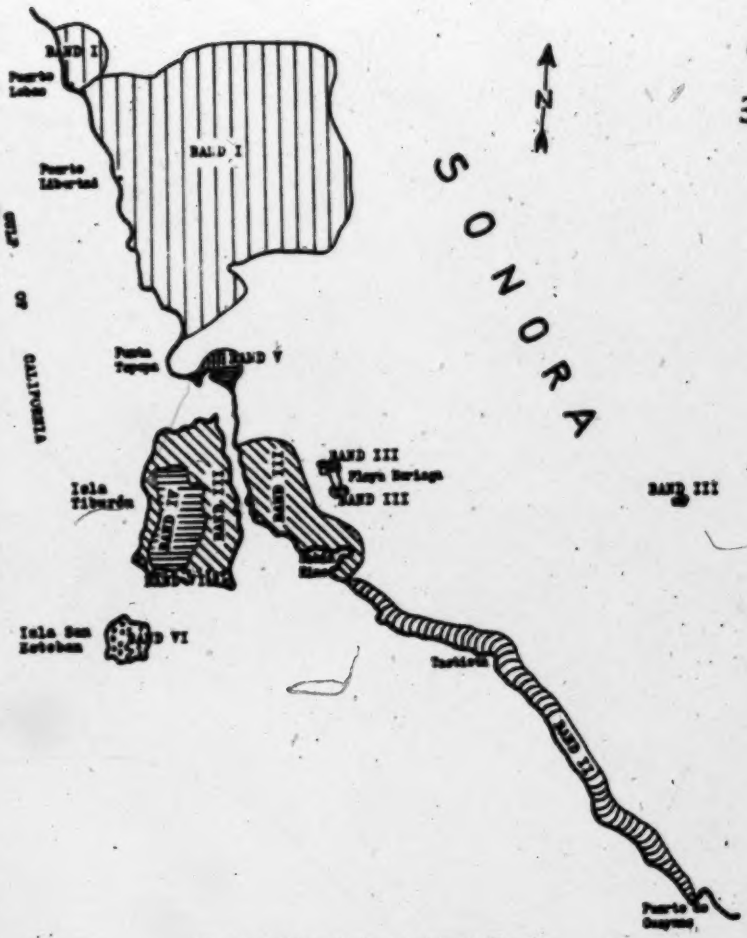

FIG. 2. Distribution of Seri Bands

DIALECTS

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The existence in former times of three distinct but mutually intelligible dialects seems evident.

Dialect 1 was spoken by Bands I, II, III, and IV. Any diversity of speech among these four bands seems to have been confined to word formation. The Seri language of today is derived largely from this dialect. [192]

Dialect 2 was spoken by Band V. This dialect is extinct and only scanty data on it can be gathered. From a number of expressions gathered, it appears that the dialect was characterized by extreme intonational contours. [194]

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greatly reduced. The leading clans are those of the Pelican, the chief tribal tutelary, and the Turtle, a minor tutelary. At present polygyny prevails, professedly and evidently because of the preponderance of females due to the decimation of warriors in battle; but both custom and tradition tell of former monogamy, with a suggestion of polyandry. The primary marriage is negotiated between the mothers of the would-be groom and the prospective bride; if the mother and daughter in the latter family look with favor on the proposal, the candidate is subjected to rigorous tests of material and moral character; and if these are successfully passed the marriage is considered complete, and the husband becomes a privileged and permanent guest in the wife's household. Family feeling, especially maternal affection, is strong; but petty dissensions are common save when internal peace is constrained by external strife. The strongest tribal characteristic is implacable animosity toward aliens, whether Indian or Caucasian; certainly for three and a half centuries, and probably for many more, the Seri have been almost constantly on the warpath against one alien group or another, and have successfully stayed Spanish, Mexican, and American invasion. In their estimation the brightest virtue is the shedding of alien blood, while the blackest crime in their calendar is alien conjugal union.

The Seri vocabulary is meager and essentially local; the kinship terms are strikingly scanty, and there are fairly full designations for food materials and other local things, while abstract terms are few. Two or three recorded vocables seem to resemble those of the Yuman languages, while the numerals and all other known terms are distinct. The grammatic construction of Seri speech appears not to differ greatly from that of other tongues of Sonora and Arizona; it is highly complex and associative. The speech is fairly euphonious, much more so than that of the neighboring Papago and Yaqui Indians.

The Seri Indians appear to recognize a wide variety of mystical potencies and a number of zoic deities, all of rather limited powers. The Pelican, Turtle, Moon, and Sun seem to lead their thearchy. Creation is ascribed to the Ancient of Pelicans—a mythical bird of marvelous wisdom and melodious song—who first raised Isla Tasnę, and afterward Tiburon and the rest of the world, above the primeval waters. Individual fetishes are used, and there is some annual ceremony at the time of ripening of cactus fruits, and certain observances at the time of the new moon. The most conspicuous ceremony is the girls' puberty feast. The dead are clothed in their finest raiment, folded and fastened in small compass like Peruvian mummies, placed in shallow graves, and covered with turtle-shells, when the graves are filled with earth and heaped with stones or thorny brambles for protection against beasts of prey. Fetishes, weapons, and other personal belongings are buried with the body, as well as a dish of food and an olla of water, and there are curious customs connected with the place of

vided for other creatures and even 2/3 of the insects. This indicates on one hand the connection between this type of knowledge and economic activity of the adults and on the other hand between the Seri boys' habit to collect and play with all sorts of animals from very early age. This knowledge of the habitats sometimes is even reflected in the aboriginal name of the animal such as for example the use of suffix or prefix *ax* meaning water in several forms associated with water.

Migrations

In contrast to the ecological distribution, knowledge of animals' migrations stands somewhere very near the very bottom in the richness, detail and accuracy. There is but bare suggestion of migration among the mammals and birds and where it does exist among the latter it curiously includes all three overwintering species. This is in contrast to this lack of knowledge or perhaps interest (or both) of migrations of all other animals, Seris' knowledge of the fish migration is much richer. Here at least there is a distinction between the migrating numbers and the size of fish: large fishes migrating supposedly singly, little ones in "millions."

Rhythmic Activity

Rhythmic differentiation is interesting because it clearly divides animals into the nocturnal, diurnal or those that are active in day and at night and because there is a clear association by the groups. Thus all marine animals are considered as both diurnal and nocturnal. But there are also differences in the relative degree of knowledge of different classes. While reptiles, amphibians and mammals stand at the top, the knowledge of this type of behaviour in birds is very fragmentary and in the insects scant and inconclusive, while for the molluscs non-existent.

In this respect, the reptiles probably are most clearly defined and best known.

There is also a clear recognition of the existence of the noon siesta or at least of slowing up of the animal activity. But this applies to the terrestrial animals and there is no suggestion of the siesta for the inhabitants of the sea.

Toxicity

At the apex of toxicity as a group stand unquestionably reptiles and amphibians, with the insects coming next and the marine animals which I loosely brought together under the heading of "miscellaneous" a poor third. Of the reptiles and amphibians 11 species are considered toxic, in various degrees and another seven as dangerous, 44 and 28% respectively, making the total an impressive 72% of all reported species. Among the insects about 20% are considered dangerous and fewer yet toxic; among the mammals fewer yet, with the bat only listed among the toxic forms and that on a disputed evidence; among the birds the eagle as the only dangerous beast and that admittedly on the hearsay; and finally among the molluscs none at all.

The fact is that only rarely these ideas were amiss and only few forms are believed dangerous

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Dialect 3 was spoken by Band VI. This dialect, which is also extinct, is described by the informants as musical and is referred to as "singing talk." Expressions which are recalled are characterized by sharp pitch contours and heavy stress. Several grammatical constructions from this dialect have been found to contain morphemes unknown to present-day speakers.

The elicitable utterances and expressions of dialects 2 and 3 appear to employ the same segmental phonemes as present-day Seri.

BAND SUBDIVISIONS

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Three of the six bands were subdivided. The territorial subdivisions of those three, Bands I, III, and VI are shown on Figs. 3-5.

Band I

Band I became divided into six groups, each group occupying a subdivision of the band territory. Each such subdivision was called an *i?iziiting*. The name of the most prominent camp in each *i?iziiting* was generally used also as the name of that subdivision. The names of these subdivisions are;[4]

zaah ?akaila	"(arrows) shot at the cliff"
pailk ?aokwt	"driftwood huts"
xpano ?ax	"fresh water in the sea"
?aasixp	"white mesquite"
?axwli?om	"place of clams"
xapoya?	"sea lion . . ."

Band III

This band became subdivided into fifteen groups, named as follows;

?ah?ax	"whichever water"
kiazin	"long and narrow"
sakpatix	"_____"
?aank	"clam (species of)"
?atkisa	"rotten testicle"
taih it	"willow trunk"
inoo?kw kixax	"rattling stone bay"
xniizk	"facing the wind"
takata	"_____"
?eeme	"camp"
?ast ?ax	"stone point (of arrow)"
sosnitaa	"in front of Alcatraz Island"
xoxaokl	"the large ones"
kail iti ktamkw	"men of the dry lake bed"
?ax ipak	"the other side of the water"

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LANGUAGE

Seri speech on first audition seems fairly difficult for the European ear. This is on account of the presence of marked tone instead of stress accent; an abundance of "gutturals," that is, palatal and velar stops and fricatives and glottal stops; a surd l and surd bilabial f; and certain consonant clusters. None of these features, however, present serious difficulties to a phonetically trained ear, and it is expectable that when intensive study can be made, it will show the Seri language a distinct one indeed, but in no sense abnormal. The tone variations are great enough to be unusually plain, and syllables are spoken in an even, measured way with clear articulation.

The principal present interest of the vocabulary I recorded is in the light it may throw on the ethnic relations and origin of the Seri. The vocabulary puts beyond doubt the often accepted kinship of the Seri to the Yuman languages.[11] However, the differences are also great. I had expected that an accurately recorded vocabulary might class Seri outright as one of the Yuman group of languages. This expectation however has been dispelled. Seri is coördinate with the Yuman group as a whole, not a branch of it.

Another possibility remains to be considered. The Yuman family may be described as situate at the head of the Gulf of California, extending east, north, and west of the mouth of the Colorado in a fairly compact block. The most remote member of the family geographically, as well as the most diverse intrinsically, it appears, is Cochimí, which occupied Lower California between about latitudes 26° and 31°,[12] in other words, the central part of the peninsula, across the Gulf from the Seri. Now if Seri is an ancient off-shoot from the main stem of the Yuman languages at the head of the Gulf, then Cochimí, which is also a much diversified off-shoot from the same stem, but on the other side of the Gulf, ought to represent a separate specialization independent of Seri, and the ancientness of split-off combined with the territorial separation ought to have led to an increased divergence of the two off-shoots from the presumedly ancestral and still relatively homogeneous main Yuman block. That is, in this event the relationship of Seri to Cochimí being through the main Yuman group, Seri and Cochimí should be more different from each other than either from Yuman. The line of similarity and kinship thus would be Seri-main Yuman-Cochimí.

[11] A. S. Gatschet, Der Yuma-Sprachstamm, 1883 (Zeitschrift für Ethnologie, 9:24, 1877-1882); D. G. Brinton, The American Race, 1891, 1901; J. W. Powell, BAE-R, 7:138, 1891; Kroeber, UC-PAAE, 11:379-396, 1916. McGee, 296-298, on the basis of Hewitt's comparative analysis, 299-344, makes Seri unrelated.

[12] Kiliwi or Kilwa and Akwa'ala-Paipai in the northern end of the peninsula belong with Diegueño, Cocopa, Walapai, etc., that is are "normal" Yuman and not Cochimí-Yuman in type.

439 little gods I traded some muslin, a harmonica and some *panoche*. For
123 native hair brushes, I traded three fine-tooth combs for catching *piojos*, or lice, easier. I gave each woman a little round mirror and they were greatly pleased.

To the old Chief I presented a good pocket knife and a mirror. For the bow I traded a spark lighter. By striking the edge of a small wheel with milled edge it strikes a spark from a small flint and lights a wick.

123 We asked for a dance, and the Seris, using the bow and striking
535 sticks for music, the slender girl jumped up and down on a flat piece
[534] of tin which served, instead, of a turtle shell and also served for
[252] baking flour cakes upon also. A while before, Louis had seen a woman
[415] wash her head and that of a child in the chamber pot, empty the water and then cook in it.

After the girl had danced a while on the tin, old Manual Encina pushed her away and hopped on himself and did the double-shuffle for half an hour, after which we left for our camp.

197 The language of the Seris is the most difficult and peculiar I
194 have ever heard. It is spoken deep in the throat with the mouth open and sounds like no other language I have ever heard except that there are some sounds like Papago.

439 Even before breakfast of the next day we were still trading with
123 the Indians, and in an hour or so I possessed nearly everything they had except their rags. They seemed happy and contented and postponed their trip to Hermosillo. I left some stuff with Louis Thomson to be traded later for bows and arrows, Pelican skin dresses and baby cradles.

We then arranged our loads, said *Adios* to the Seris, and left for Hermosillo, where we arrived without accident about six-thirty p.m. The sun was very hot and the road heavy and the sun glaring, and we were all very tired when we reached town. I stored my stuff with Mr. Marks at Hotel Cohen, and will crate it before leaving for Yaqui River.

123 Before leaving the Seri Chief I told him that whenever he saw
202 this sign---Circle Bar D and left hand below it, it was me---their friend, and not to shoot at me. He said he would tell all the Seris, and I left him my card with the same sign on it. When will I see him again!

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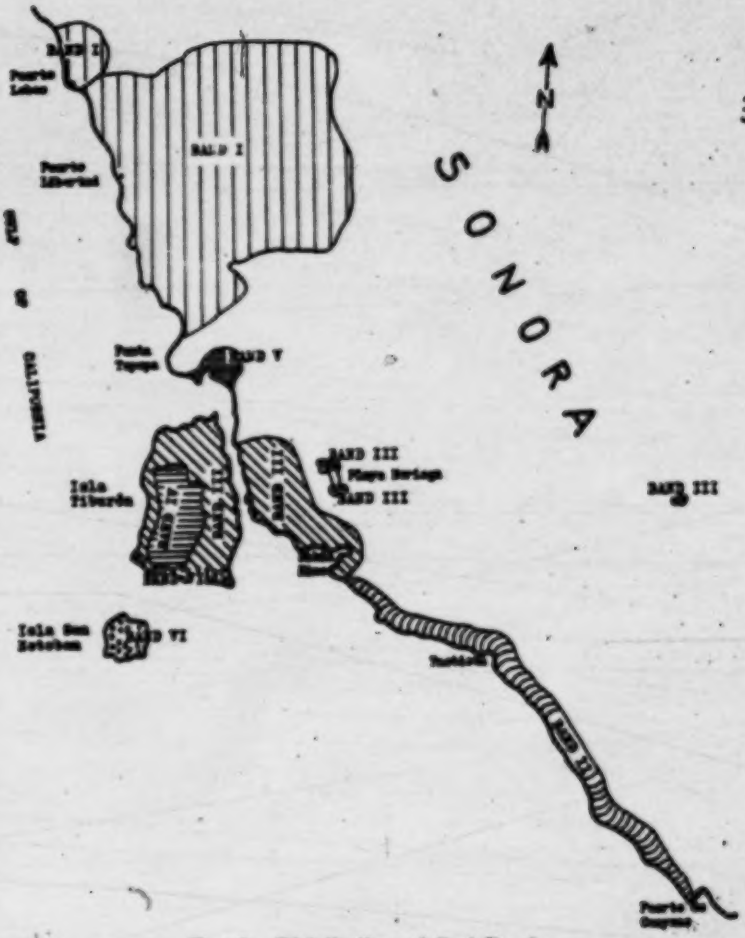

FIG. 2. Distribution of Seri Bands

DIALECTS

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The existence in former times of three distinct but mutually intelligible dialects seems evident.

Dialect 1 was spoken by Bands I, II, III, and IV. Any diversity of speech among these four bands seems to have been confined to word formation. The Seri language of today is derived largely from this dialect. [192]

Dialect 2 was spoken by Band V. This dialect is extinct and only scanty data on it can be gathered. From a number of expressions gathered, it appears that the dialect was characterized by extreme intonational contours. [194]

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[194]
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Dialect 3 was spoken by Band VI. This dialect, which is also extinct, is described by the informants as musical and is referred to as "singing talk." Expressions which are recalled are characterized by sharp pitch contours and heavy stress. Several grammatical constructions from this dialect have been found to contain morphemes unknown to present-day speakers.

The elicitable utterances and expressions of dialects 2 and 3 appear to employ the same segmental phonemes as present-day Seri.

BAND SUBDIVISIONS

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Three of the six bands were subdivided. The territorial subdivisions of those three, Bands I, III, and VI are shown on Figs. 3-5.

BAND I

Band I became divided into six groups, each group occupying a subdivision of the band territory. Each such subdivision was called an *i?iziiting*. The name of the most prominent camp in each *i?iziiting* was generally used also as the name of that subdivision. The names of these subdivisions are;[4]

zaah ?akaila	"(arrows) shot at the cliff"
pailk ?aokwt	"driftwood huts"
xpano ?ax	"fresh water in the sea"
?aasixp	"white mesquite"
?axwii?om	"place of clams"
xapoya?	"sea lion . . ."

BAND III

This band became subdivided into fifteen groups, named as follows;

?ah?ax	"whichever water"
kiazin	"long and narrow"
sakpatix	"_____"
?aank	"clam (species of)"
?atkisa	"rotten testicle"
taih it	"willow trunk"
inoo?kw kixax	"rattling stone bay"
xniizk	"facing the wind"
takata	"_____"
?eeme	"camp"
?ast ?ax	"stone point (of arrow)"
sosnitaa	"in front of Alcatraz Island"
xoxaoki	"the large ones"
kaii iti ktamkw	"men of the dry lake bed"
?ax ipak	"the other side of the water"

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TRIBAL FEATURES

DEFINITION AND NOMENCLATURE

According to Mashém and the clanmother known as Juana Maria, the proper name of the tribe known as Seri is *Kunkáak* (the first vowel obscure and the succeeding consonant nasalized; perhaps *K*ⁿ-*káak* or *K*ⁿ-*káak* would better express the sound). According to Kolusio, as rendered by M. Pinart, the Seri term for people or nation is *kun-kak*, while the Seri people are designated specifically as *Kwihx*, this designation being practically equivalent phonetically (and doubtless somatically) to Sr Tenochio's general term for women, *kunpkij*. Mashém was unable or unwilling to give the precise signification of the tribal appellation used by him, merely indicating Juana Maria and one or two other elderwomen squatting near as examples or types; but comparison of the elements of the term with those used in other vocables affords a fairly clear inkling as to its meaning. The syllable *kun* (or *k*ⁿ, *kun*, *kom*, etc.) certainly connotes age and woman, and apparently connotes also life or living (*kun-kaic*=an old woman, Metlec; *i-kom* =a wife, *ekom*=alive, Bartlett; *hikkom*=a wife, *kmom-hikmmom*=a married woman, *Yak-kom*=Yaqui tribe, Pinart; *kun-kobrr*=an old woman, Tenochio), the forms being distinct from the word for woman (*kmamm*, Metlec; *ék-e-mam*, Bartlett; *kmom*, Pinart and Tenochio) and widely different from the term for man (*kó-tkmm*, Metlec; *ék-e-tam*, Bartlett; *ktam*, Pinart; *tam*, Tenochio) with its several combining variants; there are also indications in numerous vocables that it connotes person or personality. On the whole, the syllable appears to be an ill-formulated or uncrystallized expression, denoting at once and associatively (1) the state of living or being, (2) personality, (3) age or ancientness (or both), and (4) either femininity or maternity (much more probably the latter), this inchoate condition of the term being quite in accord with other characters of the Seri tongue, and frequently paralleled among other primitive languages. The syllable *kauk* (or *kak*, and probably *kuk*, *kuj*, *kuick*, etc.) would seem to be a still more vague and colloidal term, despite the fact that it is used separately to designate the fire-drill. There are fairly decisive indications that it is composite, the initial portion denoting place and the final portion perhaps more vaguely connoting class or kind with an implication of excellence, both elements appearing in various vocables (too numerous to quote). On the whole, *kauk* would appear to be a typical egocentric or ethnocentric term, designating and dignifying Person, Place, Time,

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101 and Mode, after the manner characteristic of primitive thought;[1] so
196 that it may perhaps be translated "Our-Great-(or Strong-)Kind-Now-Here". The combination of the two syllables affords a characteristically colloidal connotation of concepts, common enough in primitive use, but not expressible by any single term of modern language; in a descriptive way the complete term might be interpreted as "Our-Living-Ancient-Strongkind-Elderwomen-Now-Here," while with the utmost elision the interpretation could hardly be reduced beyond "Our-Great-Motherfolk-Here" without fatal loss of original signification. It should be noted that the designation is made to cover the animals of Seriland (at least the zoic tutelaries of the tribe) and fire as well as the human folk.

101 562 The proper tribe name is of no small interest as an index to primitive thought, and as an illustration of an early stage in linguistic development. It is significant, too, as an expression of the matronymic organization, and of the leading role played by the clanmothers in the simple legislative and judicative affairs of the tribe; and it is especially significant as an indication of the intimate association of fire and life in primitive thought.

101 The designation "Seri", with its several variants, is undoubtedly an alien appellation, and neither Mashém nor Kolusio could throw light on its origin or meaning, though they did not apparently regard it as opprobrious. Peñafiel describes it as an Opata term; and Pimentel's Opata vocabulary[2] (extracted from the grammar and dictionary compiled by Padre Natal Lombardo) indicates its meaning satisfactorily, albeit without special reference to the tribe. The key term in this vocabulary is "*Sererài*, velocidad de la persoña que corre." The accent over the first vowel serves to indicate prolongation, so that term and definition may be rendered, literally, *se-ererài*, speed of the person who runs. Analysis of the term shows that the essential factor or root is that introduced elsewhere in the same vocabulary as "*Ere*, llegar." Now, "llegar" is a protean and undifferentiated Spanish verb neuter, without satisfactory English equivalent; it may be interpreted as arrive, reach, attain, fetch, endure, continue, accomplish, suffice, ascend, or mount to, while as a verb active and verb reflective its equivalents are approach, join, proceed a little distance, unite, etc; it may be said to imply movement or process with a centripetal connotation—i. e., a connotation antithetic to that of the expressive irregular verb "ir" in its protean forms, including the ubiquitous and ever present "vamos" (an American slang equivalent of the Castilian verb "llegar" in certain of its phases is the strong interjectory phrase, "get together"). The prefix *se* is merely an intensive, running not merely through the Opata, but throughout various tongues of the Piman stock. In his extensive vocabulary of the Pima and Papago Indians of Arizona (1871),[3] Captain

[1] Cf. The Beginning of Mathematics, in the American Anthropologist, new series, vol. I, 1899, p. 661.
[2] Vocabulario Manual de la Lengua Opata, por Francisco Pimentel, Boletin de la Sociedad Mexicana de Geografia y Estadística, tomo V, 1861, pp. 307-313.
[3] In the archives of the Bureau of American Ethnology.

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collected by Señor D. A. Tenochio and transmitted to the Mexican Society of Geography and Statistics. Noting the condition of the tribe at the time, Señor Pimentel wrote:

> The Seris are now reduced to a few families only, inhabiting Sonora, especially the island of Tiburon, for which reason they are also known sometimes by the name Tiburones. The Indians called Salineros, who live on the borders of Pimeria Alta, and the Tepocas, who live toward the south, belong to the Seri nation. The Seris have always been notable for their ferocity and barbarism, preferring death in war against the whites to the adoption of civilization. They are dreaded and notorious for their arrows, poisoned with a most virulent venom [emponzoñadas con activísimo veneno]. They are tall and well formed, and their women are good-looking. By reason of their distrust of the whites, it has not been possible to ascertain their traditions, further than that their ancestors came from distant lands of unknown direction. Of their religion it is known that they adore daily the rising sun.[1]

After brief discussion of the grammar, and extended comparison of some sixty out of the seventy vocables selected by Señor Tenochio, he concluded:

> Although in the list of Seri words consulted the foregoing reveal analogies with those of the Mexicano group, there are, without doubt, other terms belonging exclusively to the Seri or some other branch extraneous to the Mexican group; for this reason it would appear that the idioma representa a distinct family.[2]

The list of these distinct words was appended. Referring to the dialects, Señor Pimentel expressed the opinion, based on literary references, that the "Guaymas" or "Gayama", "Upangualma", and "Cocomaques" may be considered as belonging to the Seri family.[3]

While Señor Pimentel gave credit to his informant, Señor Tenochio, he did not indicate the original source of the vocabulary; but the source may be defined approximately by a process of elimination: there is hardly a possibility that the terms were obtained from any tribesmen in Seriland, since they were all inimical to the whites, and since very few of them have ever known enough of the Spanish tongue to permit communication with the Mexicans; accordingly, it is practically certain that the Seri interpreter must have been either (1) a resident of Pueblo Seri or (2) an attaché of rancho San Francisco de Costa Rica (of which more anon); and in either case it would seem certain that the native informant could have been none other than the standard Seri-Spanish interpreter of the last half century—Kolusio. Indeed, Kolusio was, at the time, the only Seri habitué of Pueblo Seri possessing sufficient knowledge of the Spanish and enough intelligence and independence to "give his language", and was one of the two frequenters of the rancho similarly equipped.

Pimentel's contemporary, Licenciate Manuel Orozco y Berra, contributed in important measure to systematic knowledge of the Seri, which

[1] Cuadro Descriptivo y Comparativo de las Lenguas Indígenas de México, ó Tratado de Filología Mexicana, por Francisco Pimentel, segunda edicion mucho completa, tomo II; Mexico, 1875, p. 220. The first edition of the work was published in two volumes, dated, respectively, 1862 and 1865.

[2] Ibid., p. 221.

[3] Ibid., p. 222.

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he defined (apparently on the basis of the Tenochtic vocabulary systemized and published by Pimentel) as a distinct linguistic family with two dialectic branches,[1] viz:

IX FAMILIA.—SERI.

XXXIII. *Séri*, por los séris, séris, tiburones, tepocas, salineros, en Sonora.
01. i. *Upanguaima*, por los upanguaimas, en Sonora.
02. ii. *Guaima*, por los guaimas, guaymas, guayamas, cocomaques, en Sonora.

Orozco's map assigns to the Seri family an immense area (recalling Villa-Señor's "despoblado") extending from just above the mouth of the Yaqui, northward to the thirtieth parallel on the coast, stretching inland nearly to Cucurpe, Opodepe, and Ures, and including Tiburon; the "Salineros" lying adjacent to the coast in the north, the "Tepocas" medially, and the "Guaymas" in the south, within this area. In elucidating the map he wrote, under the title "El séri.—El upanguaima.—El guaima":

The Séris, a tribe inhabiting Sonora, form, with its subtribes, a separate family. By their language, by their customs, and by their physiognomy, they are completely set apart from affiliation with the surrounding nations; and apparently they have lived in the district which they now occupy from times anterior to the establishment of the Pima race and its affines; their use of poisoned arrows recalls the Caribs of the islands, as well as of the continent, and it seems not unlikely, although very curious, that they are related to them. The Séris, known also as Tiburones, a name derived from the island of Tiburon in the Mar de Cortés, which serves them as a shelter, considered as parts of their tribe the Tepocas and the Salineros.

The "Upanguaima" (a very small tribe occupying the Seri border) and the "Guaimas", as well as the "Cocomaques" were combined chiefly on the authority of Jesuit writers.[2] In describing the State of Sonora he further wrote:

The Séris, bounded by the sea on the west, the Pimas Altos on the north, the Opatas and the Pimas Bajos on the east, and the pueblos of Rio Yaqui on the south, form the smallest nation of Sonora, but at the same time the most cruel and deceitful and the least capable of reduction to political organization. Hardly uniting with the smaller pueblos as at Populo and Belen, the rest of the nation engaged so constantly in cruel warfare that it was necessary to persecute and exterminate them. . . . Small as was the tribe, three divisions are known: the Salineros, extending to the confines of Pimeria Alta; north of them the Tepocas, nearest to the island of Tiburon; the Guaymas and Upanguaymas occupying the territory adjacent to the harbor of the same name, afterward added to the pueblo at Belen and blended with the Indians of Rio Yaqui. Furious and savage, they preferred to die in war against the whites rather than adopt their usages and customs; lazy and indolent, they so surrendered themselves to the passion of intoxication that mothers conveyed aguardiente from their mouths to the smallest babes. They are tall and well formed, the women not lacking in beauty. The poison with which they envenom their arrows is proverbial for deadly effect; they compound the venomous juice from a multitude of ingredients and fortify the compound by superstitious practices.[3]

[1] Geografía de las Lenguas y Carta Etnográfica de México, Precedidas de un Ensayo de Clasificacion de las Mismas Lenguas y de Apuntes para las Inmigraciones de las Tribus, por el Lic. Manuel Orozco y Berra; Mexico, 1864, p. 60.

[2] Ibid., p. 62.

[3] Ibid., pp. 252-254.

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The classifications by Pimentel and Orozco were widely accepted, and were given still wider currency by republication in standard works, such as the classic dictionary of the Nahuatl tongue by Rémi Siméon, in which is defined "La famille *Seri*, dans la Sonora, avec 3 idiomes: le *Seri*, le *Guaima* et l'*Upanguaima*."[1] In his ethnographic tableau of the nations and languages of Mexico, M V. A. Malte-Brun followed Orozco almost literally, save that he emphasized the suggested Caribbean affiliation of the Seri, saying:

> They make use of poisoned arrows, and when one studies their manners, their habits, their modes of life, one is tempted to find in them a strong affinity [grande affinité] with the Caribs of the continent and the islands.[2]

During the seventies Hubert Howe Bancroft was engaged in collecting material for his monumental series of works, and in arranging the ethnologic data for publication. Of the Seri he wrote:

> East of the Opata and Pima bajo, on the shores of the Gulf of California, and thence for some distance inland, and also on the island of Tiburon, the Cori language with its dialects, the Guaymi and Tepoca, is spoken. Few of the words are known, and the excuse given by travelers for not taking vocabularies is, that it was too difficult to catch the sound. It is represented as extremely harsh and guttural in its pronunciation and well suited to the people who speak it, who are described as wild and fierce. It is, so far as known, not related to any of the Mexican linguistic families.[3]

The only vocabulary of this language which Bancroft was able to find was added (without reference to the aboriginal source); it comprised the eleven words collected by Lavandera and discussed by Ramirez in 1859.[4]

The Seri, with their affines, the Tepoka, Salinero, Guayma, and Upanguayma, were included by Bancroft in his arbitrarily defined "Northern Mexican family".[5] The accompanying map (which is highly inaccurate) located the "Salineros" on the gulf coast, considerably north of the common embouchure of "R. de Horcasitas" and "Rio de Sonora", while the "Seris" were more conspicuously represented about the broad estuary into which the rivers embouch, and the "Tepocas" were located still farther southward on both Tiburon and the mainland, the island being placed too far southward and the river much too far northward.[6] Numerous data relating to the Seri were incorporated in his text; all were second-hand, though many were taken from unique or rare manuscripts. The coastwise natives of Sonora were said to "live on pulverized rush and straw, with fish caught at sea or in artificial enclosures"; mention was made of the allegation that "the Sali-

[1] Dictionnaire de la Langue Nahuatl ou Mexicaine, rédigé d'après les Documents imprimés et Manuscrits les plus authentiques et précédé d'une Introduction; Paris, 1885, p. xviii.

[2] Tableau de la Distribution ethnographique des Nations et des Langues au Mexique; Congrès International des Américanistes, Compte-rendu de la Seconde Session, tome II, 1878, p. 37.

[3] The Works of Hubert Howe Bancroft, vol. III (The Native Races, vol. III, 1882, p. 706). The "east" in this quotation is obviously a misprint for west.

[4] Ibid., p. 725.

[5] Op. cit., vol. I, pp. 604-605.

[6] Ibid., p. 671.

[113]

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to Pueblo Seri, and early in April obtained there a Seri-Spanish vocabulary of several hundred words, with a number of short phrases throwing some light on the grammatic construction. This record was transmitted to Dr Albert S. Gatschet. It comprises a title page inscribed "Vocabulario de la lengua Séri | Interprete el Gl. de los Seris | y otro Indio. | Pueblo de Seris | 4 Abril 1879"; four foolscap sheets (written on both sides, thus making 16 pages) of vocabulary; and a final page bearing two short phrases and inscribed "Los Séris, me dice el general de ellos, son como doscientos hombres de llevar armas—viven todavia parte en la isla de Tiburon, parte en la costa.[1] Pueblo de Seris, 4 Abril, 1879, Alph. Pinart." A transcript of this invaluable vocabulary is preserved in the Bureau of American Ethnology. There is nothing either in the original vocabulary or in the known correspondence relating to it to identify the aboriginal informant, but the identification is made easy through the coincident testimony of living witnesses and the unmistakable implication of the historical records to the effect that there was at that time but a single Seri Indian[2] resident at Pueblo Seri—i. e., the official interpreter, "El General" Kolusio. This identification is strengthened by the remarkable similarity between this vocabulary and that of Bartlett, a similarity made the more striking by the fact that one was recorded in English, the other in Spanish; the identification is supported, too, by Kolusio's memory of "giving his language" to a stranger "not a Mexicano" yet familiar with the Spanish; and the identification is practically established by the considerable number of terms expressing concepts alien to the Seri (e. g., ax, adobe, house, horse, hog, field, irrigate, pigeon, thresh, tobacco, shirt, the names of the months, etc), evidently acquired through long and intimate acquaintance with Mexican customs and domiciles and modes of thought—for all these concepts were familiar enough to Kolusio, yet to no other known Seri Indian of recent decades. Accordingly it may be deemed practically certain that M Pinart's vocabulary, like that of Commissioner Bartlett, was obtained from Kolusio; and it is at least strongly probable that both the Lavanders-Ramirez and the Tenochio-Pimentel vocabularies were derived from the same aboriginal source—an indubitably excellent source, save for the occasional interjection of alien notions, and the infrequent substitution of foreign equivalents for forgotten terms.

Barred from Seriland by the current war craze, M Pinart was prevented from obtaining much collateral information concerning the Seri; but he concluded (on grounds not stated) that "the Tepoca spoken on

[1] "The Seris, the chief tells me, comprise about 200 men fit to bear arms—they still live part on the island of Tiburon, part on the coast."

[2] M Pinart's reference to his interpreter is not only impersonal but ambiguous. "Interpreter by the chief of the Seri and another Indian" might be considered to imply two Seri Indians, though it may, with equal linguistic probability, be interpreted to mean the specified Seri and another Indian; and while the temporary presence of a second Seri at the pueblo seems possible, the sum of probabilities points so closely the other way as to demand the latter interpretation.

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the south of Rio del Altar is identical with the Seri",[1] and also that "the Guaymas were of the stock of the southern Pimas, or Nebomes".[2]

While M Pinart failed to publish, his linguistic collections were compared, systemized, and made public by Dr Albert S. Gatschet in a notable memoir on "Der Yuma-Sprachstamm", 1883. Comparing the Seri, as represented by the Pinart and Bartlett and Pimentel vocabularies, with the Yavapai, M'Mat, and incidentally with the Kouino, Tonto, Cochimi, and other tongues, Dr Gatschet was led to adopt the suggestion of Professor Wilhelm Herzog[3] that the Seri is a dialect of the Yuman stock. In the comparative vocabulary, which comprises about a hundred and forty Seri words (selected from the 611 terms in the Pinart collection), there are perhaps a dozen terms presenting some similarity to those of one or more Yuman dialects; among these are terms for ax, tree, split, tobacco, heaven, pigeon, dog, and others of presumptively or certainly alien character.[4]

Herzog's suggested classification, with Gatschet's indorsement, was accepted even more promptly and widely than the earlier classifications of Pimentel and Orozco. It was tacitly adopted by Director J. W. Powell in his classic arrangement of Indian linguistic families of America north of Mexico;[5] it was explicitly approved by Adolph F. Bandelier in his "Final Report of Investigations";[6] and it was implicitly accepted and fortified by Dr Daniel G. Brinton in his work on "The American Race".[7] Brinton's Seri words were "chiefly from the satisfactory vocabulary obtained by the late John Russell Bartlett"; of the 21 terms, about 8 (including that for the alien concept "house") suggest affinity with the Yuman, chiefly in the Mohave dialect; the others are either wholly distinct or only superficially similar, e. g., in the concurrence of a consonant or two, or merely in the correspondence in number of syllables.[8]

Stated briefly, the scientific researches relating to Seriland and the Seri during the fifty years from the fourth decade of the century to the middle of the last decade resulted in (1) a satisfactory survey of the coast, (2) the collection of two excellent Seri vocabularies, with a few others of less extent, and (3) two discrepant linguistic classifications of the tribe, both widely quoted and accepted.

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[1] Gatschet, op. cit., p. 191.

[2] Bandelier, Final Report of Investigations among the Indians of the Southwestern United States, part i, in Papers of the Archæological Institute of America, American series, iii, Cambridge, 1890, p. 76. As already noted, it is probable that the Guaymas lost their "antigua lilioma" (Ramirez, op. cit. p. 149) long before M Pinart's visit; and pending definite statement of the facts on which his conclusion rests it is necessary to retain the classification based on specific and repeated, albeit unskilled, observations of the identity of the Guaymas speech with that of the Seri.

[3] In correspondence with Dr Gatschet, op. cit., p. 191.

[4] Dr. Gatschet has recently revised the data and recognized the distinctness of the Seri tongue (Science, new series, vol. xii, 1900, p. 936-939).

[5] Seventh Annual Report of the Bureau of Ethnology, 1885-'86; Washington, 1891, p. 137.

[6] Op. cit., p. 74.

[7] The American Race: A Linguistic Classification and Ethnographic Description of the Native Tribes of North and South America; New York, 1891, p. 335.

[8] Mr. Hewett's discussion (postea, pp. 239-244) gives fuller details of this short vocabulary.

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171 The Papago, of the same region and linguistic stock, have a racing
481 game in which a ball of wood or stone caught on the foot is thrown, followed, and thrown again until the two or more rival racers have covered 20 to 40 miles in the course of a few hours; and their feats as couriers and trailers are quite up to those of the Opata. Yet among all these tribes, and among the Mexicans as well, the Seri are known as *the* runners par excellence of the Sonoran province; and it is but natural that their astounding swiftness and lightness of foot should have brought them an appellation among contemporaries to whom these qualities peculiarly appeal.

101 Accordingly, both derivation and connotation give meaning to the name, and warrant the rendering (much weakened by linguistic infelicities) of "spry" or "spry-moving", used in substantive sense and with an intensive implication.

181 The chronicles of the tribe, especially those written during the seven-
114 teenth and eighteenth centuries, indicate that the alien designation
175 was applied loosely and with little appreciation of the tribal organiza-
197 tion, just as was the case elsewhere throughout the continent. Gradually the chroniclers took cognizance of intertribal and intratribal relations, and introduced various distinctions in nomenclature expressing tribal or subtribal distinctions of greater or less importance. One of the earliest distinctions was that between the Seri and the Tepoka, and this distinction has been consistently maintained by nearly all later authorities, despite the commonly accepted fact (brought out most authoritatively by Hardy) that the tongues of the tribes are substantially alike. Another early distinction was that made between the Seri and the Guayma; it was based primarily on diversity of habitat and persistent enmity, though all the earlier authorities agreed, as well shown by Ramirez, that the tongues were essentially identical. The distinction has been maintained by most authorities and strongly emphasized by one (Pinart, as quoted by Bandelier), and since the Guayma are extinct, and hence beyond reach of direct inquiry, the early interpretation of tribal relation must be perpetuated.[1] Still another distinction was that made between the Upanguayma and the Guayma, and inferentially the Seri also; although the grounds for this distinction were not specifically stated, it seems to have grown out of diversity in habitat merely; but there were clear implications that the tribe or subtribe was
101 affiliated linguistically with the Guayma, and hence with the Seri, and
114 this assignment has been adopted by leading authorities, including
175 Pimentel and Orozco. Among the earlier distinctions based on indus-

[1] In view of the clear indications, both a priori and a posteriori, that the latest Guayma survivors must have taken the language of the Pimas (Yaqui) tribesmen with whom they found refuge, and in view of his failure thus far to present his data for public consideration, M Pinart's inference that the Guayma belonged linguistically to the Pimas stock can hardly be admitted to hold against the specific statements of the Jesuit missionaries and such accomplished inquirers as Ramirez and Pimentel.

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trial factors was the setting apart of the Salineros, or Seri Salineros; yet this distinction, fortuitous and variable at the best, expressed no essential character and has not been maintained. A much later distinction was that between the Seri and Tiburones, emphasized by Mühlenpfordt and exaggerated by Buschmann; but there seem to have been no better grounds for it than misapprehensions naturally attending a slowly crystallizing nomenclature. In any event it has not been maintained.

At several stages the chroniclers coupled the Seri with other tribes, on various grounds: in the eighteenth century they were thus combined with the Pima, the Piato, and especially the Apache tribes. In the earlier half of the nineteenth century they were frequently coupled in similar fashion with the Pima and Apache tribes, and in the later half of the nineteenth century, and even in its last lustrum, they have been similarly combined with the Yaqui. The later combinations seem to explain the earlier: the Yaqui outbreaks withdraw portions of the arm-bearing population from the Seri frontier, and the marauders take advantage of the withdrawal so regularly that a Yaqui scare is invariably followed by a Seri scare, and hence the two warlike tribes are constantly associated in the minds of the Sonorenses as synchronous insurrectionists; and scrutiny of the earlier chronicles indicates that most of the so-called combinations of former times were of similar sort.

On putting the chronicles together, it seems clear that the term "Seri" was originally of lax application, but was gradually restricted to the tribe inhabiting Tiburon and ranging adjacent territory, including the collingual but inimical Guayma and Upanguayma, and also the collingual and cotolerant Tepoka; and that the various Piman tribes, as well as the Apache, were always distinct, and commonly if not invariably inimical.

The ethnic relations of the Seri people attracted early and repeated attention. Humboldt gave currency, albeit not unquestioningly, to a supposed Chinese or related Oriental affiliation; Hardy noted the similarity of the Seri tongue to that of the Patagonians; Lavandera classed the language as Arabic; Stone and Bancroft circulated a supposed identification of the speech with the Welsh; Ramirez, and more especially Pimentel, narrowed the field of affiliation to Mexico and defined the tongue as distinct; Orozco y Berra, and more especially Malte-Brun, slightly reextended the field and suggested affiliation with the Caribs; while Herzog, Gatschet, and Brinton reextended the field in another direction and saw, in a vocabulary obtained from a Seri scion but alien thinker, similarities between the Serian and Yuman tongues. The recent researches tend strongly to corroborate the evidence collected and the conclusions reached by Ramirez and Pimentel; for the somewhat extended comparisons between the Serian and neighboring languages (introduced and discussed in other paragraphs) indicate that the

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Seri tongue is distinct save for two or three Cochimi or other Yuman elements, which may be loan words such as might readily have been obtained through the largely inimical interchange of earlier centuries described by Padre Juan Maria de Sonora and other pioneer observers—certainly the slight and superficial similarities with other tongues of the region seem insufficient to meet the classific requirement of supposititious descent from "a common ancestral speech".[1] Accordingly the group may be defined (at least provisionally) as a linguistic family or stock, and may be distinguished by the family name long ago applied by Pimentel and Orozco, with the termination prescribed in Powell's fifth rule,[2] viz, *Serian*. Conformably, the classification of the group would become—

Serian stock, comprising—
- Seri tribe, including Tiburones and (certain) Salineros;
- Tepoka tribe;
- Guayma tribe;
- Upanguayma tribe.

Naturally this classification is provisional in certain respects. It is little more than tentative in so far as the Tepoka are concerned, since no word of the Tepoka tongue has ever been recorded, so far as is known, and since the tribe is still extant and within reach of research; it must be held provisional also in respect to the separateness of the stock, which may be found in the future to be affiliated with neighboring stocks, though the effect of the more recent and more critical researches in eliminating supposed evidences of affiliation points in the opposite direction. The arrangement is in some measure provisional also with respect to the relations between the long-extinct Guayma and Upanguayma and the type tribe, especially since contrary suggestion has been offered in terms implying the existence of unpublished data; yet the presumption in favor of the critical work by Ramirez, Pimentel, and Orozco is so strong that practically this feature of the classification may be deemed final.

No attempt has been made to render the tribal synonymy exhaustive, though search of the records has incidentally brought out the more important synonyms, as follows:

Seri Tribe

CERIS—1826; Hardy, Travels, p. 95.
CERI—1875; Pimentel, Lenguas Indígenas, tomo II, p. 220.
CERIS—1745; Villa-Señor, Theatro Americano, p. 391.
CERIS TEPOCAS—1850; Velasco, Noticias Estadísticas, p. 132.
HERI—1851; Buschmann, Die Spuren der aztekischen Sprache, p. 221.
HERIS—1645; Ribas, Triumphos de Nuestra Santa Fee, p. 358.
HERISES—1620 (?); Van der Aa, map.

[1] Indian linguistic families, by J. W. Powell, in Seventh Annual Report, Bureau of Ethnology, 1885-86 (1891), p. 11.
[2] Ibid., p. 80.

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101 UPAN GUAIMAS—1765; [Kautzig?], Rudo Ensayo, p. 229.
UPANGUAIMA—1864; Orozco y Berra, Geografía de las Lenguas, p. 42.
N75 UPANGUAIMAS—1879; Malte-Brun, Congrès International des Américanistes, tome II, p. 38.
UPANGUAYMA—Synthetic form.
UPANGUAYMAS—1882; Bancroft, Works (Native Races, vol. I, p. 605).
UPAN-GUAYMAS—1890; Bandelier, Investigations in the Southwest, p. 75.

Possibly the name *Cocomaques* (1864, Orozco y Berra, Geografía de las Lenguas, p. 42), or *Cocomaques* (1727, Rivera, Diario y Derrotero, I. 1514–1519) should be introduced among the synonyms of the Seri, but in the absence of definite information it may perhaps better be left unassigned.[1]

101 Of the four tribes assigned to the stock, the Upanguayma have been extinct probably for more than a century; the Guayma may survive in
● 197 a few representatives probably of mixed blood and adopted language; the Tepoka have never received systematic investigation, but appear to survive in limited numbers on the eastern coast of Gulf of California about the embouchure of the Rio Ignacio sand-wash; while the Seri alone continue to form a prominent factor in Sonoran thought.

EXTERNAL RELATIONS

131 The most conspicuous characteristic of the Seri tribe as a whole is
648 isolation. The geographic position and physical features of their habitat favor, and indeed measurably compel, isolation: their little principality is protected on one side by stormy seas and on the other by still more forbidding deserts; their home is too hard and poor to tempt conquest, and their possessions too meager to invite spoliation; hence, under customary conditions, they never see neighbors save in chance encounters on their frontier or in their own predatory forays—and in either case the encounters are commonly inimical. The natural isola-
[186] tion of the habitat is reflected in modes of life and habits of thought; and during the ages the physical isolation has come to be reflected in a bitter and implacable hereditary enmity toward aliens—an enmity apparently forming the strongest motive in their life and thought, and indeed grown into a persistent instinct. Thus the Seri stand alone in every respect; they are isolated in habitat and still more intensely isolated in habits of thought and life from all contemporaries; they far out-Ishmael the Ishmael of old on Araby's deserts.

648 The isolation of the Seri in thought and feeling is well illustrated by the relations with their nearest neighbors (activitally as well as geographically), the Papago Indians. The Papago are much esteemed in Sonora as fearless fighters, always ready to join or even to lead a
[115] forlorn hope; yet when the expedition of 1895 was projected it was found no easy matter to induce the picked Papago guards quartered at Costa Rica to enter Seriland. They were ready, indeed mildly eager, for fray, provided it were on the frontier; but they held back in dread

[1] These names seem rather to be Yaquis, cf. Cocopa, Cocomiza, Cocomaricopa, Kahwan, etc.

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to Ures is good farming country, and why the only non-agricultural people in Sonora should have held this stretch, is hard to see. Moreover, Orozco's bringing the Serian tribes so far inland as to abut on the Opata, severs the continuity of the American Pima Alto and Papago with the Mexican Pima Bajo, whose speech is almost identical. This identity is best understood as the reflection of a continuous occupation by the Pima of the whole foothill country from the Gila to the Mayo, between the Serian desert lowlanders and the Opata in their mountain valleys, with the Yaqui, Mayo, and other Cahita peoples replacing the Serians south of Guaymas where heavier rainfall and large flowing rivers made the lowlands attractive to farming peoples. The natural inland frontier of the Seri along the Sonora River would have been at the Siete Cerros, a low range some 25 miles, more or less, west of Hermosillo, where grass ends and creosote bush and giant sahuaro cactus soon become dominant beside mesquite. This boundary would have put the farmers on farm land, the roving gatherers into the succulently overgrown desert and along the food-stocked coast.

The Seri, then, in the wider sense, including the Guaymas, Tepocas, etc., were anomalous among the native peoples of Sonora in habitat as well as in culture. Now a similar country, almost waterless and cactus dominated, is the central segment of Mexican California. Here lived the Cochimi, dialectically the most divergent of the Yuman peoples, and with a culture similar to that of the Seri at least in its level. The habitat enforced a similar subsistence economy, unsettled living, scattering of population, inability of serious accumulation of property, and hence no doubt a relative paucity of most organizational aspects of culture. Whether the content of Cochimi culture was equally similar is difficult to say because of the melting away of the people. At any rate the question arises whether Cochimi and Seri are not historically connected, especially as both their languages are related to Yuman, whereas all other Sonora tribes are Uto-Aztecans. The connection seems the more possible in that southwest of Tiburon lies San Esteban Island; beyond that, San Lorenzo; and beyond, the great peninsula. The open-water distance nowhere exceeds fifteen miles. This is a difficult but not impossible gap to cross on cane rafts; and the Seri have skilful knowledge of currents and winds. The passage across the Infiernillo between mainland and Tiburon is little more than a mile at the narrowest point, but they often paddle five in their open boats to take advantage of weather conditions. The Seri remember navigating to San Esteban, and there is historical mention of crossings of the Gulf.

The final evidence for or against derivation of the Seri from Baja California will probably be linguistic, and if, as seems possible though doubtful, Cochimi speech can still be recorded in the peninsula, the answer may be definitive. The materials at present available

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197 are inconclusive. Some of the outstanding speech similarities and
171 differences are given in a section of the present paper; a fuller presentation will be made in a subsequent classification of the Yuman languages.

171 The Yuman tribes of the United States are better known, and there are published or collected accounts of the Diegueño, Kamia, Cocopa, Yuma, Mohave, Maricopa-Halchidhoma, Yavapai, Walapai, and Havasupai. These fall into two groups, culturally: the farming tribes of the Colorado (and Gila) bottomlands, and the gathering tribes of the desert and semi-desert of Arizona and southern California, the latter again affiliating with those of northern Baja California, such as the Kiliwa and Akwa'ala-Paipai. As might be expected, it is the desert Yumans of Arizona who show the greater number of resemblances to the Seri and fewest differences.

The Pima as the immediate neighbors of the Seri, and the Opata and Cahita tribes beyond, ought to show many similarities with the Seri, plus differences due to their agriculture and activities like weaving which are normally encouraged by sedentary habits.

Such are some of the indications as to the history of the Seri
114 and their culture, as discussed more in detail below so far as the preliminary data available allow. Further and intensive investigation
121 is obviously needed. On the side of material life, Mr. Davis' studies
122 ought largely to fill the need. For social and spiritual culture, the work will be difficult. It is not that the Seri are unwilling, but that they are inaccessible and hard to communicate with. The obvious procedure would be a study of their speech until it served as a medium. In that way both their language and their culture could be recorded hand in hand. But the obstacles are numerous. The island is thirty miles long by twenty wide. There is not a roof on it. The six summer months are extremely hot, and, along the coast, said to be almost insufferable from gnats and mosquitoes. Most of the few water holes are inland; the Seri live, except during the cactus and mesquite harvest, scattered in small settlements along the shore, often several miles from water. There is no communication across the strait, except by open boat, subject to weather conditions; and then it is twenty miles to the nearest house and a hundred to a town. Life on the island would be both harsh and monotonous to an unusual degree. Nor can the Seri as yet be studied by taking one or two of them to civilization for a prolonged stay. They soon become restless and homesick. Added to all this is the fact that their Spanish, though reasonably fluent in some cases, is ungrammatical, and would hardly serve for securing paradigms or accurate translations of texts; and while able to endure hardships, the people are not accustomed to steady work or mental concentration. The difficulties would not be insuperable, when the destined linguist-ethnologist undertakes the task; but he should not under-rate them.

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SERIAN TERRITORY AND TRIBES

The close speech unity of the Seri, Tepoca, Salineros, Guaymas, and Upanguaymas is affirmed by all the older authors. The name Seri has however been used in several senses, even in pre-ethnologic days: (1), for the entire group of related tribes, sometimes excluding and sometimes including the Guaymas; (2), for the inhabitants of Tiburon Island and the immediately opposite stretch of mainland; (3), for the inlanders more or less associated with the mission establishments from Hermosillo upstream, in contrast with the "Tiburones" of the island; (4), for the modern fusion of mainlanders and islanders, which evidently includes descendants of all Serian tribes except the Guaymas and Upanguaymas, who became absorbed in the lowermost Yaqui tribe or village of Belem. It is in this fourth and last sense that I use the term; my principal informant, in the tradition given, employed the third meaning; McGee mostly the second, with a strong implication of the thorough apartness and greater primitiveness of the islanders, as compared with their ethnic kinsmen.

The Tastioteños of my informant appear not to be known otherwise. The coastwise alignment of tribes from south to north seems to have been: Guaymas, Upanguaymas, Tastioteño, Seri or Tiburones, Tepoca, Salinero.

As already mentioned in the Introduction, it seems inherently unlikely that Serian territory extended as far up the Sonora river as Ures, near which Orozco y Berra puts the boundary. His undue extension is probably due to the fact that the missions to which Serians (other than Guaymas-Upanguaymas) became attached, were situated in the valley of the Opodepe or Horcasitas branch of the Sonora. According to McGee[10] these Missions were: Santa Magdalena de Tepoca, founded in 1699, soon abandoned, location long lost but probably up-stream from next; Nacameri, 7 leagues below Opodepe; Nuestra Señora del Pópulo, 9 leagues down, at Horcasitas; Nuestra Señora de los Angeles, 3-4 leagues down, maintained, with preceding, until 1767; Pitic or Pueblo de los Seris, more than 12 leagues down (opposite Hermosillo), founded last, in 1742. Nacameri and Pitic sound like Pima, not Seri, words. Whether the river valleys from Hermosillo up were actually Pima territory, as here surmised, will have to be established from documentary sources, possibly supplemented by recollections of the Pima surviving about Ures. It is conceivable that Serian tribes had driven the Pima out of the Sonora valley shortly before the founding of the missions, thus effectuating the division into Pima Bajos and Altos; or that the Pima shrinkage out of the middle of their territory began after their mis-

[10] Pp. 66, 69, 78, 72.

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LANGUAGE

Seri speech on first audition seems fairly difficult for the European ear. This is on account of the presence of marked tone instead of stress accent; an abundance of "gutturals," that is, palatal and velar stops and fricatives and glottal stops; a surd l and surd bilabial f; and certain consonant clusters. None of these features, however, present serious difficulties to a phonetically trained ear, and it is expectable that when intensive study can be made, it will show the Seri language a distinct one indeed, but in no sense abnormal. The tone variations are great enough to be unusually plain, and syllables are spoken in an even, measured way with clear articulation.

The principal present interest of the vocabulary I recorded is in the light it may throw on the ethnic relations and origin of the Seri. The vocabulary puts beyond doubt the often accepted kinship of the Seri to the Yuman languages.[11] However, the differences are also great. I had expected that an accurately recorded vocabulary might class Seri outright as one of the Yuman group of languages. This expectation however has been dispelled. Seri is coördinate with the Yuman group as a whole, not a branch of it.

Another possibility remains to be considered. The Yuman family may be described as situate at the head of the Gulf of California, extending east, north, and west of the mouth of the Colorado in a fairly compact block. The most remote member of the family geographically, as well as the most diverse intrinsically, it appears, is Cochimi, which occupied Lower California between about latitudes 26° and 31°,[12] in other words, the central part of the peninsula, across the Gulf from the Seri. Now if Seri is an ancient off-shoot from the main stem of the Yuman languages at the head of the Gulf, then Cochimi, which is also a much diversified off-shoot from the same stem, but on the other side of the Gulf, ought to represent a separate specialization independent of Seri, and the ancientness of split-off combined with the territorial separation ought to have led to an increased divergence of the two off-shoots from the presumedly ancestral and still relatively homogeneous main Yuman block. That is, in this event the relationship of Seri to Cochimi being through the main Yuman group, Seri and Cochimi should be more different from each other than either from Yuman. The line of similarity and kinship thus would be Seri-main Yuman-Cochimi.

[11] A. S. Gatschet, Der Yuma-Sprachstamm, 1882 (Zeitschrift für Ethnologie, 9-24, 1877-1882); D. G. Brinton, The American Race, 1891, 1901; J. W. Powell, BAE-R, 7:1-24, 1891; Kroeber, UC-PAAE, 11:279-290, 1916. McGee, 296-298, on the basis of Hewitt's comparative analysis, 290-344, makes Seri unrelated.

[12] Kiliwi or Kiliwa and Akwa'ala-Pakpal in the northern end of the peninsula belong with Diegueño, Cocopa, Walapai, etc., that is are "normal" Yuman and not Cochimi-Yuman in type.

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197 174 On the other hand, if the hypothesis were true that the Seri reached their historic habitat from across the Gulf, they would have come from territory which in recent times was Cochimí, and their presumably closest relationship would be with these former neighbors, and only indirectly with the other Yumans. Thus the line of affinity would be Seri-Cochimí-main Yuman.

192 197 [121] It is to test these two alternative hypotheses of Seri origins that the accompanying comparative vocabularies of Seri, Cochimí, Yuma, and Cocopa have been selected. They are limited because the only material pertinent to the problem at issue is stems represented in all three linguistic groups; and both the Seri and Cochimí data are scant. A number of words of the same meaning differ completely in the three groups—in their surface appearance at any rate—and have therefore been omitted as irrelevant. The residue consists of 33 Seri words which show more or less resemblance to the corresponding Cochimí or Yuman words or to both.

The Seri, Yuma, and Cocopa vocabularies were recorded by myself. Yuma and Cocopa represent distinct branches of Yuman. Cochimí 1 and 2 were recorded or copied respectively by W. M. Gabb in 1867 and by J. R. Bartlett about 1852, and are transcribed from photostat copies of the originals filed in the Bureau of American Ethnology and furnished through the courtesy of its Chief, Mr. Matthew Stirling. Both are entered on Smithsonian printed blanks. The Bartlett vocabulary is designated "from M. Robinia at Guaymas." It may represent a vocabulary taken down by Robinia from a Cochimí and given to Bartlett, or a record made by Bartlett from Sr. Robinia's memory of Cochimí. The words for two and three are identical, even in spelling, with those given by Clavigero. Those for one and man (tepeeg and tama in Clavigero) are different. The Bartlett vocabulary may thus not go back to a single native source.

The relations of the Cochimí dialects are not clear. To judge from the three Lord's prayers given by Clavigero, languages rather than dialects may have been involved. These prayers begin respectively pennayú nakaenambá, ua-happá anma-bang miamú, cahai apá ambeing miá, and are attributed to latitudes 25°30'-26°, 28°, and 29°-31° in the peninsula. Gabb's entry for "my father" is ka-ai and for "sky" em-bai, which clearly correspond to Clavigero's northern Cochimí cahai (h silent in Spanish, usually a glottal stop) and ambei-ng ("in heaven"). Bartlett's dialect is not so easily identified. His word for father is calembag, and his sky remains a blank entry. There are a few other identities with Clavigero, besides the numerals mentioned, but they are to words scattered in Clavigero's

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text, without reference to the locality of the dialect from which they are taken.[13]

Gabb's vocabulary therefore represents a Cochimí dialect or language north of the latitude of Tiburon; Bartlett's, a Cochimí dialect, or possibly mixture of dialects, farther south, somewhat more nearly abreast the Seri, but of undetermined provenience.[14]

Words from both these Cochimí sources are reproduced as they appear in the Bureau manuscripts, except that the accents have been put after instead of on the vowels, and that Gabb's syllabifying hyphens have been omitted where their absence seems irrelevant to his phonetic intent. Gabb states that his *ch* is as in German; his ch is presumably as in Spanish and English.

In the Seri, Yuma, and Cocopa lists, the circumflex denotes long open, the macron long close vowels; small capitals, vowels obscure in quality; superior vowels, glides or whispered vowels. Of consonants, q is velar k; X, velar fricative; x, palatal fricative; c, sh; ʟ, surd l; italicised stops, unvoiced and unaspirated stops (intermediates); ð, interdental sonant fricative; v, *F*, bilabial v and f. The apostrophe denotes the glottal stop; its reverse, the Greek rough breathing sign, an aspiration;[15] a superior period, consonantal length.

In Yuma and Cocopa, the prime accent denotes stress accent;[16] in Seri, high tone. Seri low tone is shown by italicized vowels; middle tone, by lack of indication.

The comparative vocabularies of Seri, Cochimí, Yuman and Cocopa are given on the following page.

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[13] B, sun, yha, C, ihe; B, summer, mesho, C, méjíbé, June to August, season of pitahaya harvest, also year; B, autumn, amadá, appi, C, amadá-appi, August to October; B, winter, meaíbé, C, majíbé, December to February; B, spring, maaíbe'a, C, majíbea, February to April; B, 4, magarubugun', C, the same (but: B, 5, muguncoqui, C, naganaá tejueg iguimel). Bartlett's vocabulary is general, whereas Clavigero chiefly gives names of foods, plants, animals, and points of ethnographic interest.

[14] Ruschmann in his Spuren der Aztekischen Sprache, 469-472, 495-511, 1869, has assembled and discussed all available Cochimí material then in print, except Clavigero's.

[15] The initial pronominal h- of Seri body-part words might perhaps more properly have been written with a rough breathing, '.

[16] There is a tendency for the stressed syllable in Yuma and Cocopa to be higher in pitch, but the tone seems an incidental accompaniment, and not organic. The same is true of Mariopa and Walapai, and I now believe, contrary to previously expressed opinion, of Mohave and Diegueño.

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	Seri	Cochimí 1	Cochimí 2	Yuma	Cocopa
man	ktam	(wanyu-)amiˡ	delma'	l'pa"	iyupa'ɪc
person, people	o'm·é	maha	demanau'	pi'lpa"	icapa'l
hair	hetɪc'l	epok	lagubu'	hê'e"	amxwac
nose	hê"r	vichpyuk	huichil	hixâ'	ixâ'
eye	he'lo=X	yupicha	yebaka'	hêêu"	iyu"
ear	he'stɪa	mang-ngi	muguil'	hacma'lyk	icmâ'l
tongue	hipc	hapara	abilg	hipa'ly	ampac
tooth	hitâ'st	hastaa'	foea'	hêêp"	iya'wi'
beard	hita-môkno	hy-a-mi	jaeta	yâvomo"	laleme'e
bone	hitok	hak	acheso' (Sp?)	nyete-ácâ'k	nyengiyâ'k
blood	hfâ"lt	huai	jued, inad	ny-dxwi'l	nyény-exwa'l
house	ihpo	ewa	guaka'	ava"	•wa"
sky	amfm'c	embai		am·a'l	•mâ'
moon	hê'câX	konga	keglimba'k	zely'a"	xec.'a"
earth	emt	emat	akug	ama'l	AMAIC
rock, mountain	ast	echkai	aba'	avi'	AWI'
fire	emak	maahra	usi	a'a'a	a'a"
water	aX	tasi	cai	axa"	xa'
sea	Xepé	kachpara	caapai	axâ"sl'l'ly	xa'ca'l'l.
tree, wood	e"é, eqe'aXq²	wache, aput²	agimoso', allegco²	a'l'	l
maize	a'pX•tɪ.	pechkarai		tasl'lc	tcks
tobacco	â'pisqo'pX	mingnga	hui	a'û'v	'ûp
dog	aXc	ethatta	maaa'	axa'l	
bird	ce'kâtɪk	icka	kabio'	atciye'r	
good	Xé'pê	taf'p	aha'mi	axo'lk	paxwa'l
large	kâ'kax	chai	ca'okoo	vata'lk	âlc'l
small	kesîtɪ.	achtawan	canil	ano'qek	alytca'c
yellow	ma'sotɪ.	rimarai	yembil	aqwe'sk	qwac
one	taco²	chaqui	dopi'	ace'nt	•cit
two	kôk·•	kooak	goguo	xavi'k	xawa'k
three	ka'pXa=	kabiak	combio'	xamu'k	xamo'k
eat	hîk-e"êt	hu-a'	guaba'	hamâ'-m	'oma"
drink	axe-se'sî	desi	calisi'	xa'-sî'-m	'osi"

¹ Wanyu is young.
² Firewood. The first words mean tree or stick.

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The Seri similarities evident in the vocabulary may be summarized as follows:

Definitely more similar to Cochimí: man, person, large : 3.
Somewhat more similar to Cochimí: tooth, house, two, three : 4.
Equally similar to Cochimí and Yuman: nose, bone, blood, sky, earth, fire, drink : 7.
Somewhat more similar to Yuman: hair, tongue, water : 3.
Definitely more similar to Yuman: eye, wood, dog : 3.
Perhaps more similar to Cochimí: sea, maize, bird, small, yellow : 5.
Perhaps equally similar: rock, good, one, eat : 4.
Perhaps more similar to Yuman: ear, beard, moon, tobacco : 4.

The result is, in brief, that the available data indicate the Seri language as about equally related to, and differentiated from, normal Yuman and Cochimí. There is proof neither for the hypothesis that Seri and Cochimí branched off in different directions from the main body of Yuman tribes, nor for the one which would branch the Seri off from the Cochimí after these had drifted into the peninsula and acquired a certain specialization there. The relation of the three language groups might be described as an equilateral one—or more exactly as isosceles, with Cochimí and Yuman somewhat the nearest to each other, but Seri equidistant from both.

Various hypothetical considerations might be adduced to explain this condition. Seri might be construed as an ancient offshoot from Yuman or proto-Yuman, which later came into contact with the Cochimí off-shoot and was influenced by it. Or, Seri might be conceived of as a Yuman branch that had drifted earliest into the peninsula and then was superseded there by Cochimí as a later offshoot from Yuman. But all such suppositions are equally lacking in positive evidence in their favor, and discussion of them tends to become fine-spun among conjectures. It is wisest to accept the salient fact, namely that available linguistic evidence affords no decisive proof either for or against the hypothesis that the Seri originated in peninsular California, and to leave the problem there in the hope that fuller knowledge of the languages will ultimately solve it.

2: Kroeber E-5 (1930) 1931 NU31 Seri NU31

by them at times. This raises the question of whether the Seri may not have reached their habitat from the peninsula, or possibly the reverse. The solution of this problem depends on an analysis of full data on physical type, speech, and culture content, and only a partly conclusive answer, discussed below, can as yet be given. In general behavior and temperament, Seri and peninsular Californians seem to have been strikingly alike; but this fact can not in itself be construed as evidence of common origin, because the similar psychology may be largely determined by similar residence and subsistence habits resting in turn on almost parallel environment; much as pastoral nomads or mariners in whatever part of the world, and with or without historical connections, are likely to exhibit analogous mental attitudes in contrast with rural or urban populations.

In any event, it is wholly unproved that the Seri possess a native endowment which is more animal-like, more dominated by instinctive impulses and less capable of cultural development, than other peoples'. In fact the improbability of such an assumption is indicated by their possession of culture traits, like certain games and their kinship system, which they either share with neighboring tribes or have developed into rather high specialization. The meagernesses of their culture are therefore evidently due to factors in their particular history or geography rather than to congenital deficiencies or abnormalities. This does not mean that it would be easy to convert the Seri to the mode of life of Pima or Mexican. Habits of irresponsibility and unsettlement once established, even through part of childhood only, are notoriously difficult to alter. Witness the Gypsies. However, such practical habit difficulties are of course no evidence as to quality of endowment.

The modern Seri are the amalgamated remnants of some three or four of a half dozen closely related Serian groups formerly recognized. The preponderant one in the fusion of these groups is likely to have been that which held Tiburon and the fronting mainland, on account of better preservation of their numbers and habits in the relatively inaccessible island refuge.

Seri physique is distinctive in physiognomy, expression, and habitus, as would be expectable in a people sharply set off from its neighbors in practises and attitudes. The measurements available show no very marked differences of gross anatomy from neighboring tribes, either in stature, head shape, or nose proportion. The head may be somewhat rounder than among Pima and Yaqui; the difference in body seems more to be one of greater slenderness than of greater height. The Seri abilities to endure hunger and fatigue and to run great distances are faculties possessed by nearly all tribes of the southwest United States and northwest Mexico.

The Seri language is intrinsically and markedly tonal, more given to consonontal accumulations than the neighboring Uto-Aztecan and

2: Kroeber E-5 (1930)1931 NU31 Seri NU31

197 Yuman dialects, and possessed of some relatively rare sounds like *f*. It bears an indubitable relation to Yuman, as was assumed forty years ago, but the relationship is remote enough to indicate that the Seri have had a history apart from that of the Yuman tribes for a long time, estimable at a thousand years at the least, to judge by the rate of change of most languages. The Yuman idioms seem to fall into two primary groups, Yuman in the narrower sense, in Arizona, southern upper California, and northern lower California; and Cochimí in central lower California. On Cochimí, which is generally reputed extinct, data are very scant. If this group of dialects showed markedly greater resemblance to Seri than do the other Yuman languages, a derivation of the Seri from the Cochimí across the Gulf of California (or the reverse, if Cochimí proved more different than Seri from Yuman) would be an almost inescapable inference. Unfortunately, the available data are too scant to allow of a definite decision. On their face, they seem to make out Cochimí and the narrower Yuman group as about equally distinct from Seri.

[7] Comparative analysis of the known specific facts of Seri culture, while impeded by inadequate information on many tribes, especially in Mexico, shows positive relations in all directions, but outstandingly with three peoples: the Pima, the Arizona desert Yumans, and the Lower Californians.

The Pima in question are those of the Gila river, the remotest of their nation from the Seri, agricultural, and demonstrably subject to some cultural affection by the Yuman tribes of the lower Colorado. Quite expectably therefore they lack many elements of Seri culture besides those which they share; not to mention a large stock of their traits not possessed by the Seri. Had we satisfactorily specific data on more southerly Pima divisions, such as those of the Sonora river, who were immediate neighbors of the Seri, there can thus be little doubt that an even larger proportion of the Seri cultural inventory would be found among them. More or less the same would probably hold for the Yaqui. These adjacent cultures would seem to have contained most of Seri culture plus increments such as agriculture, cloth weaving, and others.

The Arizona desert Yuman tribes, the Yavapai, Walapai, Havasupai, live farther from the Seri, in fact beyond even the Gila Pima. It is therefore significant that they show almost as many cultural agreements with the Seri, and fewer disagreements. They are perforce an almost non-farming population, except in a few spots. It is clear that they and the Seri have jointly preserved many features of an old, non-agricultural, desert-adapted culture. The Yuman tribes of the lower Colorado are much more different, though their geographical distance from the Seri is no greater. They possess definitely fewer and lack more Seri traits. This is not only because they

9:Malkin E-5 (1953-1955)1962 NU31 Seri NU31

II

OUTLINE OF SERI CULTURE

Territory

Historically the Seri territory at its greatest expansion extended from the coast of Mar del Cortez to Hermosillo and from Porto Libertad to Guaymas and included also the Tiburon Island. Ethnically, the Seris represented a collection of dialectically distinct tribes, the Guyma, Tepoca, etc., perpetually at war with each other, whose common characteristic was their culture, and who were framed in to the north by the Pima Alto and Papago, to the west by the now extinct Cochimi, to the east by the Opata and Pima Bajo and to the south by the Cahita, Mayo and the Yaqui.

But their area had fluctuated much. After the bitter and disastrous wars against the Mexicans from the late 18th century through most of the 19th, the Seris lost out and were forced by the Mexican government to settle on Tiburon. This incarceration did not last long. McGee had already in 1894 found them on the mainland and Kroeber found them equally divided between Tiburon and Kino. In 1930 when he visited, evidently they lived largely in Kino Bay. As the Mexicans pressed on Kino moving in, in ever greater numbers, and as Japanese fisheries worked the Gulf out of Desemboque attracting the fish-loving Seris, their main settlement has moved once more. About 1940 most of the Seris moved into Desemboque and at the time of my visit, almost all of them lived there while only two families made Tiburon their "permanent" camp. School and availability of the medical facilities as well as the location of the Mexican traders in Desemboque, part of whose scheme the Indians have become, attracted the Seris. Only occasionally today they roam inland or visit other areas, either owing to the hunting or fishing expeditions.

Numbers

Seri numbers fluctuated as much as their territory and had suffered immense diminution. I shall list the estimates below, indicating the source of the information:

	Authority		Source
1780	Velasco	2,000	McGee
1824	Troncoso	1,000+	"
1826	Ratio (Tiburon only)	1,000-1,500	"
1826	Hardy	3,000-4,000	"
1841	de Mofras	1,500	"
1844	....	550	"
1846	Velasco	500	"
c.1855	Encinas	500-600	"
c.1865	"	250-300	"
1894	Mashem, native	250-350	"
1930	Thomson	175	Kroeber
1934	Mex. En. Cifras	160	Ethn. Synth. Mex.
1953	Smith, Jr.	248	MS. Univ. of Ariz.
1955	Malkin	236	Malkin

439 little gods I traded some muslin, a harmonica and some *panoche*. For
123 native hair brushes, I traded three fine-tooth combs for catching *piojos*, or lice, easier. I gave each woman a little round mirror and they were greatly pleased.

To the old Chief I presented a good pocket knife and a mirror. For the bow I traded a spark lighter. By striking the edge of a small wheel with milled edge it strikes a spark from a small flint and lights a wick.

123 We asked for a dance, and the Seris, using the bow and striking
535 sticks for music, the slender girl jumped up and down on a flat piece
[534] of tin which served, instead, of a turtle shell and also served for
[352] baking flour cakes upon also. A while before, Louis had seen a woman
[415] wash her head and that of a child in the chamber pot, empty the water and then cook in it.

After the girl had danced a while on the tin, old Manual Encina pushed her away and hopped on himself and did the double-shuffle for half an hour, after which we left for our camp.

• 197 The language of the Seris is the most difficult and peculiar I
194 have ever heard. It is spoken deep in the throat with the mouth open and sounds like no other language I have ever heard except that there are some sounds like Papago.

439 Even before breakfast of the next day we were still trading with
123 the Indians, and in an hour or so I possessed nearly everything they had except their rags. They seemed happy and contented and postponed their trip to Hermosillo. I left some stuff with Louis Thomson to be traded later for bows and arrows, Pelican skin dresses and baby cradles.

We then arranged our loads, said *Adios* to the Seris, and left for Hermosillo, where we arrived without accident about six-thirty p.m. The sun was very hot and the road heavy and the sun glaring, and we were all very tired when we reached town. I stored my stuff with Mr. Marks at Hotel Cohen, and will crate it before leaving for Yaqui River.

123 Before leaving the Seri Chief I told him that whenever he saw
202 this sign---Circle Bar D and left hand below it, it was me---their friend, and not to shoot at me. He said he would tell all the Seris, and I left him my card with the same sign on it. When will I see him again!

642 BAND II *xika xnai kkoii* "they who live toward the south wind"
101 This group is commonly referred to as the Tastioteño. These
131 people roamed the coastal area from Guaymas to Bahía Kino.

BAND III *ta?eowkw kongkaak* "the people of Tiburon Island"

This band is referred to in the literature as the Seri or Tiburones. At one time their territory included only the northern and eastern coasts of Tiburon Island. Later it was extended to include the whole coastal strip of the mainland directly opposite the island.

BAND IV *?eno kongkaak* "the people of the desert"

The area this band occupied in the center of Tiburon Island is shown in Fig. 2.

642 BAND V *xnaamotat* "they who came from the direction of the
131 south wind"
173 The Seri believe that this band came originally from a region
628 south of Guaymas. It may have been the Upanguayma group
[101] mentioned in the literature. Its members came in contact with the members of Band II with whom they resided, apparently for a period of years. Whether the *xnaamotat* were Seri or non-Seri,
● [197] I have been unable to ascertain. Since no informant suggests that this group spoke another language besides Seri, it seems reasonable to believe that it was simply a distinct dialect group.

642 The *xnaamotat* were a belligerent people and, after fighting
628 broke out between them and the members of Band II, they
721 traveled northward. Eventually they established themselves on
[131] the relatively small coastal strip located east of Punta Tepopa as shown in Fig. 2.

642 BAND VI *xika ?ast ano koii* "they who live in the mountains"

[101] This group, which has been recognized previously only by
[131] Griffen, inhabited San Esteban Island. It laid claim also to the greater part of the coast on the southern end of Tiburon Island. One informant stated that in earlier times this band had ranged over all of Tiburon Island except for the northern two-thirds of the eastern coast, but that they were slowly pushed southward by the movements of other groups.

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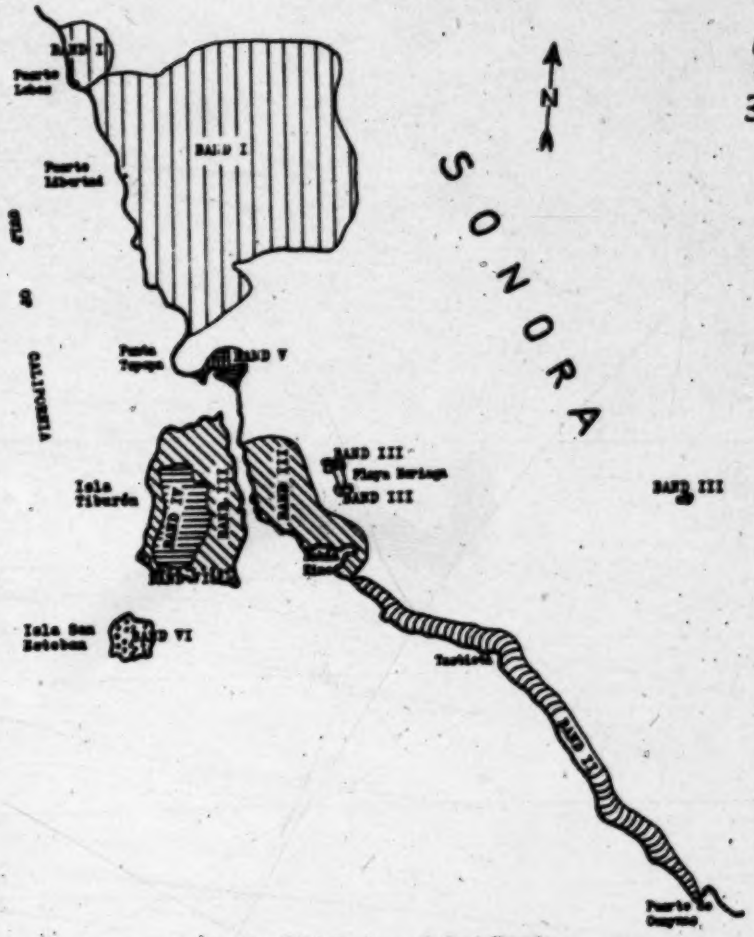

FIG. 2. Distribution of Seri Bands

DIALECTS

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The existence in former times of three distinct but mutually intelligible dialects seems evident.

Dialect 1 was spoken by Bands I, II, III, and IV. Any diversity of speech among these four bands seems to have been confined to word formation. The Seri language of today is derived largely from this dialect. [192]

Dialect 2 was spoken by Band V. This dialect is extinct and only scanty data on it can be gathered. From a number of expressions gathered, it appears that the dialect was characterized by extreme intonational contours. [194]

•197 642 [194] [193] Dialect 3 was spoken by Band VI. This dialect, which is also extinct, is described by the informants as musical and is referred to as "singing talk." Expressions which are recalled are characterized by sharp pitch contours and heavy stress. Several grammatical constructions from this dialect have been found to contain morphemes unknown to present-day speakers.

The elicitable utterances and expressions of dialects 2 and 3 appear to employ the same segmental phonemes as present-day Seri.

BAND SUBDIVISIONS

642 621 101 Three of the six bands were subdivided. The territorial subdivisions of those three, Bands I, III, and VI are shown on Figs. 3-5.

Band I

Band I became divided into six groups, each group occupying a subdivision of the band territory. Each such subdivision was called an *i?iziitng*. The name of the most prominent camp in each *i?iziitng* was generally used also as the name of that subdivision. The names of these subdivisions are;[4]

zaah ?akaila	"(arrows) shot at the cliff"
pailk ?aokwt	"driftwood huts"
xpano ?ax	"fresh water in the sea"
?aasixp	"white mesquite"
?axwil?om	"place of clams"
xapoya?	"sea lion . . ."

Band III

This band became subdivided into fifteen groups, named as follows;

?ah?ax	"whichever water"
kiazin	"long and narrow"
sakpatix	"_____"
?aank	"clam (species of)"
?atkisa	"rotten testicle"
taih it	"willow trunk"
inoo?kw kixax	"rattling stone bay"
xnitzk	"facing the wind"
takata	"_____"
?eeme	"camp"
?ast ?ax	"stone point (of arrow)"
sosnitaa	"in front of Alcatraz Island"
xoxaokl	"the large ones"
kail iti ktamkw	"men of the dry lake bed"
?ax ipak	"the other side of the water"

10: Davis E-5 (1922-ca. 1939) 1965 NU31 Seri NU31

Roberto Thomson waving white bandera as signal of peace. In the Gulf - Sonora. April 26, 1922

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202 •

Pulling the boat up the beach above high tide - Kino Bay and Alcatraz Island - 1936

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123 the boat and took dinner. Afterward, we pulled out into the Gulf and skirted the coast, rowing for miles. We passed great red mountains with the sea beating against their rugged breasts, hollowing out deep caverns; then sandy bluffs with mountains receding, but the horizon was always notched with rugged, pinnacled desert ranges.

We landed for the night on a sandy point and made camp. After our supper two fires were built, Roberto's signal that he was on hand. [202] Also a white scarf was tied to a long pole as a signal of friendship. No answering signal appeared. Probably the people were on the opposite side of the Island.

At sunset the sea became calm as a pond and the mountains on Tiburon in the distance turned purple and lavender. The sea reflected all the sky and mountain colors like a mirror.

The next morning we got an early start and it required our united strength to push the boat down to the water as it was low tide. The beach was strewn with various shells and a lot of colored pumice stone which had drifted in from seventy-five miles north, where there are some pumice hills near the sea.

The nearest point of Tiburon was only one and a half miles distant, a short row across. The water was pure green, indicating a shallow sea. [361] We rounded the point and rowed into a bay and then to the head of the bay where there were a few huts called *Rancheria Tinajanita*, or Little Tanks. The water was so shallow in places we had to get out and push the boat a long way out and walk up a long muddy beach over shells and a sort of coral that bruised and cut our bare feet, so that we went as if walking on eggs.

342 The rancheria was built on the shore with no shade; each hut facing
361 the water. The huts were very crude---the frames of *carriso* reed and ocotillo, covered with coarse brush and blankets of dried seaweed.
[351] Around the bottoms, or sides, of each hut were piled sea turtle shells three and a half feet high and two and a half feet wide. Over these were piled seaweed and brush, not fastened. Round about were turtle bones and shells, and sea shells, bones and anything that contained meat.

This was just a temporary camp of about eight huts.

123 We left this camp, raised the sail, which consisted of several
202 flour sacks sewed together, and lay in the bottom of the dug-out, while the one-eyed Mexican steered with a paddle. Before leaving, Ricardo left his sign---a sign agreed between him and the Seris. Since he and his family had been so kind to them, they would never harm him or kill his horses and cattle. He erected a stick with a rag to call attention, made a circle with his heel, and inside the circle made the tracks of his right bare foot and right hand.

123 At the bow we carried the white banner always to signify peace.
361 We crossed the bay to a sandy point and came upon another small

[text continues on p. 153]

123 Mile after mile. We got very dry and had almost given up finding the [133] water. We had gone up a sandy wash for miles, barren arid mountains terminating in regular saw tooth pinnacles on all sides, some of beautiful red rock---red as blood; some gray and some lavender.

312 123 At last we came to the water hole which had also been frequented by coyotes, skunks and other animals, and their flavor was easy to taste. But we had ceased to be critical long ago. The hole was really a crooked shaft and led down crude steps worn into the rock for ten or twelve feet. It had been dug by clam shells and bones and sticks, and may have dated back many years. Part of it was through rock and it was a work of great patience to dig with such primitive tools.

123 At the foot, a seepage came through the sand and formed a shallow pool from which, in the semi-darkness, we dipped water and filled our cans. After a rest, all partook of a generous drink. It took us two and a quarter hours---six miles to go there, and we were probably the only white men who had ever been there. I am glad I went for the experience, but we were all completely exhausted on reaching camp. Ricardo and the Mexican carried the cans of water six miles on a stick balanced over the shoulder. Roberto left his sign along the trail. We slept in the Seri huts, all tired out. My feet were tender from walking on the sharp shells and my shoes had shrunk from being wet in salt water, and that pained my feet greatly by cramping them too much.

We heard many interesting tales about the Seris: their wonderful endurance, their susceptibility to disease, their marvelous feats of tracking and swimming, their habit of getting food only when necessary and laying up none ahead, and other queer customs.

The breaking of dawn brought a marvelously beautiful sunrise. It was very low tide and the boat was stranded nearly two hundred feet from water. The sky and sea were crimson and the mountains purple on the Sonora side. The sea was calm, without a ripple, and mirrored every peak and color and made a picture of indescribable beauty.

We ate a hasty breakfast and strained ourselves to the utmost to move the boat. It slowly slid over the grass and shells to the water's edge, and then we had to push it out seventy-five feet in the water to get it deep enough to float. A slight breeze was blowing, so we raised the sail and rounded the point and headed across for another point, across a stretch of water five or six miles.

• [202] At last we saw a few huts and as we neared shore we saw two men with rifles. We waved the white banner, laid our rifles handy, fixed our revolvers, and ran the boat ashore. The men had darted back into the brush as experience had told them to beware of strangers. Roberto and his brother Nene leaped out, leaving their rifles, seized the white flag, ran after the men and called to them and said they were friends who had come to see them. They recognized Roberto, returned to the brush shelters, left their rifles and came to the boat bare-

[text continues on p. 157]

123 It was a beautiful morning in early May, and the water was still
[202] as a pond, reflecting all the sunrise tints like a mirror. After a breakfast of clams and broth, bread and sand and bronco tea, we made a big smoke and were answered by a similar smoke two miles off, so we knew our friends were on the way.

123 In one hour they began trailing in, the women each with a load on
482 her head, walking graceful and erect. On one head was an inverted
[415] turtle shell containing nearly all the family belongings done up in rags. On the top was the most precious belonging of all---the rifle. The man carried two or three ollas and other things on a shoulder stick. Everything necessary for their home was carried on their heads.

123 Soon the Indian Blanco was seen paddling in his *balsa;* he also had a load and had paddled all the way from Ironwood camp against wind and sometimes tide. As they were all very thirsty we gave them water around. They immediately went to the shore as it was low tide, and began gathering small oysters from the rocks. Soon each woman returned with a half bushel of them on her head.

About three o'clock and for an hour or so thereafter, Antonio Herrera, the Chief's son Chico, the old Chief Juan Tomas, two other men and one woman, came drifting into camp with their dogs. Each one was loaded with things. They were a pretty wild looking bunch. There was very little food and little water for so many.

648 The Chief said that a day or two before, some of his men had a
731 fight with some sailors (Mexicans) on the Island of San Estevan four or five miles off the south west corner of Tiburon. Nobody was killed, but the two boats, the wealth of the Island, had drifted away and were lost, leaving eight men marooned on the Island. They had gone there to gather *mescal* to make drink to celebrate a wedding to come off soon. Three men were five days without water. They sent up frantic smoke signals every day. At last they were seen, and help went for them in the only remaining boat on the Island. They were rescued.

648 The Chief and his men and women, with us, are going to Hermosillo
484 ninety miles afoot with all their belongings to ask the Government
123 for food and help.

142 The Chief looks to be seventy years old, a grim dark-skinned in-
[622] dividual with a thin fringe of hair on his upper lip, broad nose, wide nostrils, small black eyes. He is well-built and erect. None of these that I have seen so far have any fat. They are lean and sinewy.
[302] The young men are of large build, high cheek bones, some with hair on
[291] their lips, their long black hair braided; sometimes with a strand of red worsted. All were either barefooted or wore sandals. I saw one pair of sandals made out of turtle hide; another of burro hide.

648 When the Chief arrived, the sail of a vessel was seen over the
123 beach. Bob recognized it as belonging to a launch of a Yaqui Indian

[text continues on p. 180]

439 little gods I traded some muslin, a harmonica and some *panoche*. For
123 native hair brushes, I traded three fine-tooth combs for catching *piojos*, or lice, easier. I gave each woman a little round mirror and they were greatly pleased.

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123 it from shore by a paddle. A little child in the boat sat still as a
484 mouse. No matter how the boat rocked, it never whimpered or cried. All the children stayed perfectly quiet in the frail crafts, in the very positions in which they were placed.

123 Once the boat approached shore to secure a small octopus for fish
484 bait. One was finally located by Stanley, who could see its eyes
136 shining with a baleful purple light under a large boulder in about
220 eighteen inches of water. The Seri got out and pinned it down with an oar, while Roberto pounded it time and time again with another oar. Even then it escaped in a cloud of sepia which it discharged. Its tentacles were easily a foot in length, and its color was the bottom of the sea. If it once gets a grip on a rock it is practically impossible to tear it loose.

Schools of porpoises played close to the boat each day, curving up to breathe and throw spray and then diving lazily below the surface, frequently gliding like a dark shadow below the waves. Sometimes, in the sheer joy of living, they would leap clear of the water and splash back in a spray of foam.

123 We soon reached the extreme point where it juts from the Sonora
484 shore, landed and set a signal smoke to notify other Seris on the
[208] Island. (A dry *pitahalla* cactus was selected for a black smoke.) No answering signal came. We crossed the narrow channel, the Infernillo, a little over a mile wide, the water like a mill pond, and landed on the sheltered side and unloaded on the stony beach. For miles the beach was covered by windrows of round wave-worn rocks and pebbles of all beautiful colors and sizes mingled with strange shells and seaweed. Here we made camp and stayed overnight.

The Indian canoe landed its cargo of women, children and dogs a little later, and established a camp adjoining. Three little boys were commissioned to secure us some clams and they returned in a while with a pail of clams, one crab and some oysters. These were boiled in salt water, the meat extracted and Pancho Oliverria cooked them in rice for supper. The crab was my especial delicacy.

123 Roberto and Stanley walked off after dinner to hunt in the mountains a few miles back from the coast, and they returned long after dark very weary from carrying, for seven miles, a young burro deer which they had shot. The Indians soon gathered around it chattering volubly, as both they and ourselves had eaten no meat for several days. We gave them nearly three-fourths of it, reserving a hind quarter and some ribs for ourselves. Rafael Feliz and Chico, with skill born of long practice, skinned and unjointed the animal in a very short time, and devoured a good part of their share in a cooking pot a little later, although they had eaten only a little while before. The boys cracked the bones and scraped the marrow, eating it like candy.

[484] At six thirty the next morning, we were crowded in the boats again

123 We have given the Seris so much we are now short ourselves. Variety is very restricted. We haven't enough tin dishes or tools to go around, but that does not trouble us at all. All the cleaning is done in salt water and sand. Fresh water is only used to drink. Nothing else. We can't even take a shave. Not a drop of water. We are very lax in our personal toilets and appearance. We are barefooted always in the boat, as we have to wade to get the boat in deep water, and often the waves slosh on board.

This boat is made of a hollowed log twenty feet long and three feet, three inches wide, and she is very cranky. She almost upset with us several times. When everybody is placed in it, it is difficult to even change a posture without endangering everybody. She has no keel and leaks some, so we have to bail out often. But she is a good sea boat and rides the waves well if they are not too rough.

123 One evening we decided to get a message through to Juan Tomas, the 439 Chief, some twenty or thirty miles distant. Herrera promised to go if [203] we gave him twenty thirty-thirty cartridges. He would go one day and [404] return the next, a round trip of about fifty miles. We gave him the message to tell those people we had a lot of things to trade for the things they use in every day life. Pelican skin kilts, bows and arrows, ollas, baby cradles, hair brushes and other interesting things. I had already made a trade with Blanco for his *balsa*, promising him sufficient lumber, nails and tools, to make a boat large enough to carry five men. This promise I fulfilled to the letter, and later on another expedition to Seriland I had the pleasure of sailing in this boat, which was well built and seaworthy. The unusual part of this bargain was that Blanco permitted me to deprive him of his only means (apparently) of making a living in hunting *cahuama* for himself and his family, freely and without hesitation, simply on my promise of lumber in the future. I was deeply touched by the trust reposed in me by this old sea rover.

322 These people are splendid mechanics with the crudest of tools--- [50] rocks, fire, bones, knives. For instance, the pole of the harpoon was composed of five pieces of driftwood and a seagoing boat which I saw in Guaymas, captured by Mexican fishermen after killing the Seri crew, was composed of fully one hundred pieces of driftwood fastened with nails made of wire, and tied with fiber, and all the seams were filled [325] with a black composition of native origin resembling pitch. Previous to the use of old iron, harpoon points were made of ironwood, but now iron is universally used.

283 I asked old Blanco for some of his native rope. He gave me some of [123] it. He said they get the slender roots of the mesquite and peel the bark, and then the girls and women chew the fibrous wood. This is shredded and twisted into small two-stranded ropes. It is this rope, tied around and around, that holds the *carriso balsa* together.

285 [824] I watched a woman make a basket. She used young branches from the terote tree, I think *terote blanco*. The bark was peeled and shredded into two parts, the heart taken out and kept separate. The coils of the round part were put in a pot of hot water to soften, and the edge of the basket was soaked a little in hot water. The center of the coils or woof consisted of six or eight strips of heart while the outer sap wood was woven around in regular coil-weave fashion.

[287] [412] A brad of deer shin-bone sharpened on pumice to a needle point was used as a brad. With this brad she split the fiber, held one piece in her mouth, and stripped the back down. Then she punched a hole in the bone brad, inserted the sharp end of the fiber and pulled it almost through. She then repeated the operation, adding a strip of heart once in a while. These baskets are coarse and unattractive, but they are hard and tough and stand heavy use.

323 [238] [372] Cooking vessels consist of two or three cooking ollas that nest together to facilitate transportation. These are made of coarse clay, solely for utility without regard for beauty of shape, color or design. In burning these ollas they use the shell of the sea turtle. The cells of the shell are filled with a fine oil and this burns the ollas. On most of the other places on the mainland, the Indians use cow chips, or dried droppings to fire the clay.

283 484 123 [277] We proposed to shift camp to Tinajanita, our first landing place, where Herrera was to meet us in two days with the Chief and some of his men. Since it was blowing, he said the men couldn't fish and they would be on land probably hunting, so he would be able to see them. At this time they gathered *sescal* on an island off the west coast to make the liquor they used at fiestas, weddings and other celebrations.

Herrera left at five o'clock in the morning, with a swinging gait, for the opposite side of the Island. The distance around by boat would be fifty miles, and across, only about twenty or twenty-five---a full day's trip and hard, as mountains would have to be crossed and the rocks were sharp and the way difficult.

123 We had breakfast on rice and bread. Our rations are running low and we expect to move this morning. We made arrangements about the native boat and saw Blanco trot off with two five-gallon cans for water, a distance of ten miles. We went to the camp to get a few things---an old basket, a Pelican hide and other things, and then we asked the help of everybody to get the boat down to water---the tide was very low. The one man, the women and five of us were required to drag and push the boat to water.

We waved goodbye, loaded her up and then rowed against the tide and wind for miles, and finally landed in a lovely sheltered lagoon, built our fire and had lunch. A few crabs were speared, and late in the afternoon the wind shifted. We loaded the boat again and pushed off for Tinajanita, our first landing place. After rowing, we raised

[text continues on p.174]

123 rancheria of about ten or fifteen huts, half tumbled down, all facing
361 the sea and surrounded by turtle shells and deer bones, and sea shells. Things were dropped wherever they ate. This rancheria was deserted also.

We set sail again and landed on a sandy beach near another deserted rancheria called *Palo Fierro*. We hauled the boat way up and took out all our things and carried them up to the huts. In this place there were twenty-one huts---sometimes three built together. Many of them were in a good state of preservation. They were all in a long row with bleaching bones and turtle shells on all sides. From the inside of one hut I counted thirteen turtle shells around the base. There must have been about a hundred turtle shells here, and a few land tortoises.

123 There were two or three fragments of painted parts of a boat---
[649] probably remains of a boat belonging to seven fishermen who got drunk and landed here, and were all killed by the Seris two years ago. Six months ago a single Seri was captured by some Mexican fishermen and killed in reprisal.

As the wind increased it kicked up an ugly sea and we decided to camp over night. As we were reduced to about six gallons of water, Roberto suggested we take two empty five-gallon cans and go for water. I had offered to stay with the boat but was told the Seris would kill me if they found me alone.

[312] A Seri had told Roberto to follow a certain trail from the rancheria and go between the mountains and he would find a *pozo*, or well, not far away. Ricardo left his private sign and the five of us marched away, following a well-worn trail. For the full distance broken shards of ollas lined the trail at short distances, so we knew we were on
137 the right trail. Brush began at the sea shore and we passed various
123 kinds of desert vegetation---several kinds of cactus, especially the *zarbuseo*. This starts with a single great trunk two or three feet in diameter, and then branches out like a vase, running up fifteen to twenty or more great columns like the *saguaro*. They were thirty or forty feet high. In some of these were piled a great accumulation of sticks and trash ten feet high or more, and on the top where the sea eagle makes its nest. There were a number of these.

Then we came to the *pitahalla*, *cholla*, *ocotillo*, and others, and the strange *torote* tree. This tree is the *Bursura Microphylla*, and has an odor like turpentine. It is a fat, dropsical tree like stuffed sausage, with crooked ungainly branches coming out at all angles. There are three varieties---the *torote colorado*, *blanco*, and *negro*, according to the color of the cut bark. Another strange tree was the *palo blanco*. Then there was the *palo verde*, *palo fierro* and *mesquite*. The *mesquite* was rare.

123 A number of signs were marked in the sand. We could not translate
[312] them. We walked single file, rifles in hand, and revolvers handy.

[text continues on p. 155]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

22 502 Despite their poverty in propelling devices, the Seri navigate their waters successfully and extensively. Perhaps the commonest function of the craft is that exercised in connection with the turtle fishery, though its chief office as a factor of general industrial economy is that of bridging El Infiernillo at the will of the roving clans. It is by means of this craft, also, that the semiceremonial pelican feasts on Tiburon are consummated; it is by the same means that Isla Patos, Isla Turner, Roca Foca, and other insulated sources of food-supply are habitually reached; and both Mashém's accounts and the Jesuits' records indicate that occasional voyages are pushed to San Esteban, San Lorenzo, Angel de la Guarda, and even to the Baja California coast.

Concordantly with the tribal customs, little freight is carried. The traveling family transport their poor possessions to the shore, bring out the balsa from its hiding place in the thick and thorny fog-shrubbery, launch it, lade it with a filled olla and the weapons of a man and implements of a woman, besides any chance food and clothing, and embark lightly to enjoy the semirepose of drifting before the breeze—until the rising gale brings labor still more arduous than that of scouring the spall-strewn slopes or sandy stretches of their hard motherland. Commonly the terminus of the trip is fixed largely by the chance of wind and tide; and when it is reached the party carry the craft inshore, conceal it shrewdly, and then take up their birdskin bed and walk forth in search of fresh water and meat. The successful fishing trips of course end in orgies of gorging, and when the voyage is the climax of a foray to the mainland frontier for stock-stealing, the quarters and paunches and heads hastily thrown aboard at the mainland side of the strait are carried to the rancherias for consumption at leisure; and this has happened so often that equine hoofs and bovine bones are common constituents of the middens on Tiburon.

171 501 Although measurably similar to Central American and South American types of water-craft, the Seri balsa is a notably distinct type for its region. The California natives, as well as those of the mainland of Mexico south of Rio Yaqui, used rafts made either of palm trunks or of other logs lashed alongside rather than balsas; while the far-traveling tribes used either sails or well-differentiated paddles for propulsion.

501 Briefly, the Seri balsa is remarkable for perfect adaptation to those needs of its makers shaped by their distinctive environment. It seems to approach the ideal of industrial economy—the acme of practicality—in the adjustment of materials and forces to the ends of a lowly culture; and, like the olla and harpoon and arrow, it affords an impressive example of the adjustment of artifacts to environment through the intervention of budding intelligence. Yet the chief significance of the craft would seem to reside in its vestigial character as a survival of that orarian stage in the course of human development

8: Ascher E-5 (1960) 1962 NU31 Seri NU31

Elsewhere (Ascher 1961) I have disputed this portrayal of the potential of existing ethnography, citing examples where qualitative and quantitative models have been constructed from ethnography and suggesting that one task for archeology is to codify the literature in a manner useful to itself. Regardless of doubts about existing ethnographies for archeological purposes, the worth of future ethnography for archeology will depend on the acquisition of the relevant kinds of information. Although discussion on the subject has been recorded (Tax *et al.* 1953: 229-232), no specific guides have been produced. This paper provides and discusses an example, which can be used as a paradigm, model, or guide of the kind of information to be collected from ongoing communities which would be of general value for archeology. The subject culture is that of the Seri Indians of Sonora, Mexico; the example describes a persistent trait complex associated with fishing for the Pacific green turtle, with particular emphasis on one trait in the complex, the harpoon foreshaft.

Example from the Seri Indians

The Seri, who numbered approximately 200 individuals in 1960, occupy a band of coastal desert about four miles wide and seventy miles long in the state of Sonora in western Mexico. The band extends along the Gulf of California from Kino Bay in the south to Desemboque in the north, opposite the largest island in the Gulf, Tiburon. Although the region is desert, with an estimated average rainfall of less than eight inches per year, falling mostly in July and August, it is comparatively rich in succulents and small land mammals. The Gulf forms a natural trap for large fish and marine mammals and is a breeding ground for the Pacific green turtle. The scantiness of fresh water has constituted, in the past and present alike, the single crucial limiting factor to agriculture and human occupancy.

In the past the Seri may have comprised from four to six tribal groups, and they were certainly numerically larger, with a maximum estimated population of 2,000 (Kroeber 1931: 53, 30). Until very recently they also occupied Tiburon Island, and at some more remote period they extended south, north, and east over a territory whose bounds are uncertain (Kroeber 1931: 5). On the basis of linguistic change, Kroeber (1931: 54) calculated that the Seri could have inhabited this general region for 1,000 years. It is uncertain whether the original occupation stemmed from Baja California via the Gulf of California or from the north and west via an overland route or routes (Kroeber 1931: 39-51). The first contact with Europeans occurred as early as 1540 (McGee 1898: 51).

In culture content the Seri are most closely affiliated with the Pima (Kroeber 1931: 51), but they do not share the practice of agriculture with them or with their western neighbors. The Seri are primarily fishermen; secondarily they gather the fruits of succulents; and to a still lesser extent they hunt game. McGee (1898: 214)

3:Davis & Deacon E-5 (1922-1940) 1945
NU31 Seri NU31

178 of sea lion oil and powdered cactus skeleton,
396 was launched. It was the largest craft they had ever possessed and came to be called the "battleship," for its size.

114 After having established firm friendship with the tribe in 1922, it was possible two
221 years later to carry out an extensive plan to learn the habits of the Seris by living among them, sharing their comradeship along with their privations. At this time they still had no homes that could even be called semi-permanent. Moving here and there in response to fluctuations of their precarious food supply, household things were not accumulated, and life continued to be reduced to its very simplest elements and absolute necessities. Baskets made of fiber from the torote tree, some tin cooking and water vessels (the handmade olla was seldom any longer made), some patched and filthy rags which served as blankets to the fortunate few, constituted the family possessions (Fig. 15). Starved, bony family dogs were abundant, as always, every Indian having one or two (Fig. 16). Each day they could be seen gnawing on some old fish head long since

[415]

231

[p. 264 (B)]
[Text continues on p. 265 (N)]

3:Davis & Dawson E-5 (1922-1940) 1945
NU21 Ser NU21

342 They are mostly of ocotillo sticks and mesquite branches stood up in the sand, lashed together, and plastered with mud for protection from the wind, but not from the rain (Fig. 22). When the fishing season ends
●221 about Holy Week, they all move away to the turtle grounds on Tiburon Island, where they also hunt deer. Then in June and July they go into the desert hills to reap the harvest of cactus fruit, retiring to the lowlands thereafter to harvest the mesquite beans and to await the recurrence of the big fish. In and about Kino they are reasonably well fed and clothed, and were it not for their susceptibility to disease they would be as well-
164 off as many of the Mexicans. Influenza
161 strikes them heavily, however, and pneumonia is common, usually fatal. Their numbers dwindle and their extinction is in sight, yet for a little while these strange people will continue to tread the rocks and thorns of their desert land, a handful of Nature's primitive creatures, through whose veins flows the blood of thoroughbred American aborigines.

[p.268(C)]

5:Dawson N-5 (1940) 1944 NU31 Seri NU31

an important handicraft among these Indians. They made a shallow, coil type basket such as is characteristic of many southwestern tribes. The Seri basket, however, was remarkable for its extreme lightness in proportion to capacity, a quality due to the spongy character of the coil made of a whisp of splints of the torote. Several torotes are found in the region, the commonest species being *Jatropha cardiophylla*. Also used were the torote amarillo, *Jatropha spatulata*, torote blanco, *Bursera microphylla*, and torote prieto, *Bursera laxiflora*. The woof consisted of splints of palo blanco, *Acacia Willardiana*, or of baraprieta, *Caesalpinia gracilis*, deftly interlaced by means of a bone awl to form a smooth, practically waterproof utensil.

In pre-Columbian times the Seris commonly sought wild game, mostly deer, without the aid of weapons, using only their tremendous physical endurance against their prey, chasing the animal until it was exhausted and could be thrown to the ground. With the introduction of iron, however, the development of the bow and arrow achieved prominence, for the shaping and fastening of points had long retarded the exploitation of these implements. Few straight stemmed or straight grained plants grow in Seriland suitable for making arrow shafts, but on the flanks of the deeper gorges of Sierra Seri and Sierra Kunkaak on Tiburon Island, the Indians found one leafy shrub that filled the need, *Sapium biloculare*. The juice of this plant is also said to have been used for arrow poison. The bow was preferably of palo blanco, wrapped and strung with mesquite fiber cord.

The modern Seri tribe consists of barely more than 100 souls, with early extinction threatening from imported diseases. Their natural habits are now vastly modified and they live a comparatively sedentary life near the village of Kino, scavengering for fish heads and other refuse discarded by the fishermen, now and then fishing for themselves when in need. Every year, however, they trek off to the cactus forest for the annual feast, and in late summer many may be seen camping among the mesquite groves near the Kino well where an abundance of both mesquite beans and water makes for easy living.

In general, the Seris have a healthy appearance; the most frequent complaints are gastro-intestinal and visual defects due to avitaminosis. It is very possible that given the difficult living conditions resulting from the desert environment, a rigorous selective process among the newborn takes place so that only those who possess exceptional physical qualities survive. This explains why the majority of them retain the physical characteristics described by Hardy more than a century ago: "the Indians of Isla Tiburón are tall, healthy and well built". 164 147 142

In spite of attempts at education, the Seris do not practice the elemental rules of hygiene; their way of life, neglecting this aspect, contributes to increase the unhealthy foci which exist in the places where they have established themselves. 515 751

Dwellings.—The Seris retain many vestiges of their nomadic life, among them the hut which serves as their living quarters; many of them are simple provisional arrangements for sheltering themselves from wind and sun, and they bear no relationship to the stability and durability of our dwellings. The Seri hut was made to meet the necessities of a nomadic people who had no reason to spend much time nor work on making a dwelling which would only be used for a season (one, two or at the most three months). Nevertheless, some innovations have been introduced in the last 20 years, so that we must distinguish between two types of houses. The primitive model consists of a series of scrub pine arches interwoven with branches from the same shrub almost totally covered by foliage, tortoise shells, *zacate*, etc., with only a small hole in one of its ends as an entrance (this type of hut is the same that McGee saw in 1894 when the Seris still led a nomadic life). 342 [221] [177]

In the new model more resistent woods are used, like *sabueso*, *torote*, etc., and poles, between which is laid a layer mud. The house is rectangular, without windows; with only one entrance, but always larger than the entrance to the brush hut. Other models would have to be added to these two, due to the incorporation and utilization of tents made in the United States which some U. S. tourists or the Society of Friends have given them. The tent is used as permanent living quarters; or sometimes combined with branches to cover the primitive type huts. 342 178 [177]

Domestic Animals.—The Seris are very fond of domestic animals like the dog, cat, and finally, the chicken. For all practical purposes these animals live together with the family; they rest on the piles of rags and sand which serve the Indians as beds; lick the plates and cooking utensils; dirty the house; increase the household fauna with their fleas and other vermin thus contributing to create and unhealthy atmosphere in the home. 231 [136]

Problems of Intoxication.—Their dealings with the fish buyers, in whose stores are sold beer, mezcal and tequila, has turned them to the consumption of these drinks. The Seri drinks liquor in an uncontrolled 273 [275]

7: Marroquin E-5 (1955) 1957 NU31 Seri NU31

with this problem is the lack of legal title to the lands which the Seris own in fact but which legally belong to the nation.

Insofar as the economic problem, it is necessary to better the fishing techniques, doing away with old process of obtaining the catch through dynamite explosions. Finally, as Dr. Marroquin says, the fact should be noted that the Seris on passing from the nomadic economy to exchange economy lack the necessary knowledge to achieve success in their operations within the national and international market.

It is thus necessary to take care of these and other problems, to save this Indian group from complete extinction, succeeding on the other hand in raising their living conditions, making of them citizens capable of contributing to the progress of the State of Sonora and the Republic of Mexico as a whole.

NEW DIRECTOR OF THE SUMMER INSTITUTE OF LINGUISTICS IN MEXICO

For the next two years the Director of the Summer Institute of Linguistics in Mexico will be Dr. Benjamin Elson. Dr. Elson first came to Mexico in 1942 and began linguistic field work among the Sierra Popoluca Indians of the State of Veracruz. Sierra Popoluca has been the principal object of his linguistic studies since that time, and various articles have resulted from these researches. He took his degree from Cornell University with the thesis "Sierra Popoluca Morphology". He has on other occasions served as Associate Director of the Institute in Mexico.

The Associate Director will be Mr. H. J. Klassen. Mr. Klassen has done linguistic field work on Lowland Mixteco in the State of Oaxaca. He has served as Interim Director of the Institute on previous occasions.

VII ROUND TABLE OF ANTHROPOLOGY HELD IN THE CITY OF OAXACA FROM SEPTEMBER 1ST. TO 7TH.

During the month of September, the VII Round Table of Anthropology, dedicated to the study of the Indian cultures of Oaxaca, was held in the city of Oaxaca, capital of the state of the same name. Since at the present time there exists in this state a large proportion of Indians, and since during its pre-Hispanic past such important cultures as the Zapotec and Mixtec flourished there, the interest of this Round Table is evident.

Lack of space makes it impossible to present here a complete report of this anthropological meeting; therefore, we will limit our coverage to a summary of the most important points, taken from the Report of the recording secretary, Prof. Wigberto Jiménez Moreno. This report was made available to us through the kindness of Mrs. Carmen Cook de Leonard, Vice-President of the Center of Anthropological Investigations of Mexico. The complete version in English may be seen in the *Boletin* of the Center of Anthropological Investigations (N° 4, Oct., 1957, pp. 43-49).

McGee (1898:214)

estimated that maritime resources provided two-thirds of the Seri diet. Kroeber (1931: 20), approximately 30 years later, estimated the proportion at about three-fifths. In the winter of 1960, 30 years after Kroeber's visit, the Seri were obtaining at least three-fifths of their food from the sea.

In pursuit of their main source of subsistence, the Seri travel up and down the narrow coastal band. In the winter of 1960 they were occupying one temporary camp toward the southern end of the band and a permanent camp at the northern extreme. Seri women and children gather mollusks; fishing is a male occupation. In addition to gathering and fishing for their own needs, the Seri dispose of a portion of their catch on the commercial market. This enterprise began about 1930, and was encouraged by the establishment, in 1958, of the Sociedad Cooperative de Produccion Pesquera Seri with the cooperation of the Mexican government.

The Pacific green turtle constitutes the largest single item in the Seri diet for at least six months of the year—from January to June—and it is also caught occasionally at other seasons. In 1896 McGee estimated that it provided 25 per cent of the total food supply. Emphasizing the intimate ecological relationship between the Seri and the turtle, McGee (1898: 186-187) wrote:

> ... perhaps half of the aggregate life of the tribe is spent within easy reach of its [the turtle's] feeding and breeding grounds, and tribesman and turtle have entered into an inimical communality something like that of the Siouan Indian and buffalo in olden time. ...

Kroeber (1931: 20) believed that McGee stressed the Seri-turtle relationship too strongly and overestimated its contribution to the diet. McGee (1898: 187), in support of the importance of the turtle to the Seri, points to the fact that the turtle carapace is used for, among other things, a house covering and buckler, a cradle, a coffin, and footgear. The carapace is currently used for supporting and roofing houses and as a starvation food. The contribution of the turtle to the diet varies from year to year, but observations made in 1960 suggest a range of from 15 to 20 per cent as a reasonable estimate.

Seri men fish for turtle from boats, which are manned by two or three men and are propelled by oars, sails, outboard engines, or any combination of the three. The boats operate either individually or in groups. The men fish by night or day, depending on the weather and sea conditions. When they fish at night, they use a kerosene lamp to attract turtles to the surface. The principal implement is the harpoon.

The harpoon tackle of the Seri is illustrated in Figure 1. It consists of a foreshaft (c-h), a mainshaft (j-k), and an extension cord (i). The component parts of the foreshaft are a projectile point (c), a gasket (d), a wrapping cord (f), a hafting base (g), and a lead cord (e and h). In preparation for turtle fishing, the hafting base (g) is plugged into the socket (j) on the main shaft (k), and the extension cord (i) is looped through the lead cord (h).

9:Malkin E-5 (1953-1955)1962 NU31 Seri NU31

1

INTRODUCTION

[13] [12] [36] [22] [46] The territory discussed in this paper is somewhat larger than the historical area occupied by the Seris. While Seri settlements are limited today to a quite narrow range, the Tiburon Island and the coast of Sonora immediately adjacent to it, they are familiar with a far larger region, owing to their periodic trips, either on their own after fish, turtle and game or, occasionally, in the temporary employ of the Mexican fish-traders and even farmers. The further away from Tiburon perimeter, the lesser their familiarity with a locality.

The area is limited by Hermosillo in the east, Punta Penasco and Porto Libertad in the north, and Nogales in the south, and finally it includes also the coast of Baja California which the Seris sometimes visit. It also includes all of the islands within that area, Tiburon, Patos, Rasa, Angel de la Guarda, San Lorenzo and San Esteban.

137 With very minor variations this entire region belongs properly to the Sonoran desert. *Palo Verde, Palo Fierro, Pithaya, Mesquite, Cholla, Sahuaro,* prickly pear, elephant tree and creosote bush are the basic plants. Among the vertebrates, 136 such forms as the Sonoran bighorn, deer, cougar, jumping rat, badger, coyote, skunk, rattlesnake, sidewinder and Gila Monster are most conspicuous and diagnostic. Among the birds are the roadrunner, the raven, as well as many pelagic or littoral birds, the pelican and cormorant among them.

132 The region is one of very low rainfall, limited to the hot summer months, in some places occuring only a few times in a year. Winters are chilly and dry with persistent winds and dust, with the temperature falling down, on rare occasion, to just above the freezing point. Summers are intensely hot, with daily temperatures usually over 100 and the water temperature of the sea along the shore not infrequently as much as 85 degrees. There are great differences between diurnal and nocturnal temperatures, very much influencing the desert life.

134 Within this region there are several different ecological zones or perhaps sub-zones, varying from the alkaline flats like Playa Noriega, and the alkali-and salt-permeated soils of Desemboque to the more bountiful slopes of the mountains and the irrigated mud-flats around Hermosillo.

121 For the sake of distinction, I have selected several of the typical localities or zones as a point of reference either because of their ecological distinctions or because of their signficance as a landmark, readily delineating a peculiar habitat. Personally I am familiar only with some of the

[P. 1A]

9:Malkin E-5 (1953-1955)1962 NU31 Seri NU31

361 capital by paved road. Formerly, in the twenties and early thirties, Seris' chief mainland settlement: Now with the influx of the Mexicans, the [491] Seris deserted the place completely as a camp site, [166] although they still visit it occasionally. Distinct in the extensive sand beaches and sand marine flats which harbor peculiar bird, fish and insect fauna.

7. **Guaymas**—southernmost point considered here and probably also of the Seris' historical extension. Nowadays very rarely visited by them and probably only while cruising with the Mexicans. Large settlement, many tourists. Backlands; rocky desert.

8. **Tepopa** —spectacular rocky head just south of Desemboque, opposite to Tiburon. Caves, usual mountainous vegetation, *Sahuaro*. Many Seri hunting encampments and one of the places where the Sonoran bighorn is still hunted.

9. **Coast of Baja California** — very rocky area across the bay—almost never visited by the Indians.

13 10. **Tiburon** —island in the Gulf of California separated from the mainland by a narrow channel called "Infernillo," only a mile wide. Rugged, mountainous. By **Tiburon** is meant an overall island area in distinction from **Tecomate** or the mountains.

[361] 11. **Tecomate** — a water-hole and Seri campsite on the northern shore of Tiburon. Today this is ● [221] the only permanent site on the island where these Indians, actually only a few families among them, still go to live for part of the year.

12. **Mountains of Tiburon** — rugged interior of the island, reaching up to almost 4000 feet. Usual vegetation cover with *Sahuaro* and other typically Sonoran floral components, fauna much as on the mainland except lacking cougar, bighorn and some other larger forms. The interior does have some "tenajas," that is water-holes and there is said to be a rivulet up in the mountains.

13. **Infernillo**—narrow channel between Tiburon and the mainland, often called locally "canal." For the terrestrial fauna and for birds reference is made to the mainland shores of Infernillo. For the marine fauna is meant either the open water in this channel or to the littoral off the mainland. The opposite shores and littorals are covered as "Tiburon." Maximum depth is said to be up to 25 fathoms.

14. **Isla Patos** — small island north of Tiburon and directly due west of Estero Sargente and halfway between Tiburon and Punto Tepopa. Visited [223] by the Indians only occasionally, mostly in connection with the duck hunt.

15. **Isla Raza** — a small island between Angel de la Guarda and San Lorenzo.

16. **San Esteban Island**—a round island between Tiburon and San Lorenzo, up to 1700 feet elevation. Visited occasionally during fishing or turtle [221] hunt trips or in search of a chuckawalla.

[P. 2A]

Coyote figures out probably

as an important and perhaps disreputable figure in the mythology although nothing but scraps and bits of information suggest this. It is possible that there is actually a taboo on eating this animal or perhaps it is so disreputable that eating its flesh would put a gourmant in an inferior position.

How important is the Seri mammalian diet is hard to tell. It certainly looms more heavily during the winter, because in the cool season hunting is easier than during the heat of the summer and in fact this is when most of it is done by the ardent hunters. Too, winter subjects the Seris to greater hazards and is apt to increase their dependence on the desert resources over that during the summer, even if these resources are scantier at that time.

To all of these animals one should add the semi-wild burros running about the extensive Mexican rancherias. The Indians poach on them frequently using their fire arms, usually the .22 caliber rifles. In any case, it appears that during the summer when the field work was carried out, the mammalian diet figures quite lightly on the Seri table.

Food preparation: Very little is done in the preparation of the mammalian meat. All that I could observe was the boiling of it in hot water spiced with salt. The Indians were saying that in order to have the meat of a peccary, deer or bighorn ready to eat one must boil it 2-3 hours. The same procedure is followed with the meat of the burros. In contrast to this, as shall be seen later, fish are boiled as well as roasted while the turtles are also dried and salted. Preparation of meat is done by women, certainly at least in the encampments when they are present.

Food preferences: Some of the Seri food preferences have already been mentioned. At the top of the list as the desirables are the peccary, the deer, the bighorn and the blacktail jackrabbit; at the bottom is the badger, whose meat "is not much good." There is also preference by sex. Females of both the bighorn and peccary are preferred over the males "because they do not have the bad odor like the males." This sort of favoritism also occurs among the Mexicans. However, the Indians did not elaborate beyond this point.

Other economic uses: Apart from meat, hides are also used. The hides of the deer, bighorn and peccary had been used for sleeping mats although this matter has been expressed in the past tense. Miguel Barnett also suggested that the bighorn hides had been used for clothing by the Indians in the past—but he neglected to say how long ago. During Kroeber's stays, no Seris went about in the animal or bird (pelican) skins but earlier when McGee visited them they went about in these simple garments. Judging then by Miguel's memory, the use of the bighorn hide for clothing must be pushed back to the period of World War I or even earlier.[1]

[1] Miguel Barnett indicated that the "fur" of the bighorn had once been worn for the cold season "but not now."

[P 10 A]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

bours tumultuous waves come and go sporadically, while about the mile-wide boca the choppy sea sometimes takes the form of spire-like jets, spurting 5 or 10 feet high and breaking into aigrettes of glittering spray in most unwaterlike and wholly indescribable fashion. Dewey described the strait as "unsafe for navigation by any except the smallest class of vessels"; it is safe, indeed, only for portable and indestructible craft like the Seri balsas, which may be put off or carried ashore at will by craftsmen willing to wait for wind and tide, and unpossessed of impediments of a sort to be injured by wetting. Of such an environment the balsa is a natural product.

The adjunct islets of Seriland are miniatures of Tiburon in all essential respects, save that they are without fresh water. The largest is San Esteban, a somewhat complex butte rising sharply from the waters in a nearly continuous sea-cliff recording vigorous work by storms and tides; it is occasionally visited by the Seri, chiefly in search of water-fowl and eggs. The most important of the series in Seri economy and mythology is Isla Tasne, off the mouth of Bahia Kino; it is a rugged butte some 600 feet high, rising in wave-cut cliffs on the sea side and pedimented by low spits and banks of sand toward the lea; the sand-banks are literally flocked with pelicans, while other fowl cover the flatter ledges and crowd the crannies of the pinnacle. Isla Turner is a somewhat smaller and still more rugged butte, bounded on both sides by precipitous cliffs, while Roca Foca is merely a great rock shelving upward from the storm-swept waters off the most exposed angle of Tiburon; in the crannies of the former birds nest abundantly, while the lower ledges of both are haunted by seals. Isla Patos, north of Tiburon, is a breeding-place for different water-fowl, and is especially noted as a refuge for ducks; it, too, is for the most part a rocky butte, with a sandy shelf at the eastern base. Beyond San Esteban lies the similar but smaller Isla San Lorenzo, while Isla Salsipuedes and a few other islets stretch thence northward half way to the southern point of Isla Angel de la Guarda, the second-largest island of the gulf. San Lorenzo and the smaller islets are occasionally visited by the Seri, partly for a mineral pigment used in face-painting, partly in quest of game; and they sometimes push on to the larger island to enjoy its fairly abundant game, including the easily taken iguana, amid the ruins of an ancient culture apparently akin to that of southern Mexico. Even the most frequented islets, Tasne and Patos, can be reached only by crossing miles of open sea; but in their way the Seri are as canny navigators as they are skilful boat-builders—it is their habit to hug the shore in threatening weather, to await wind and tide for hours or days together, to set out on distant journeys only when all conditions favor, and in emergency to seize inspiration from the storm like the vikings of old, and bend supernormal power to the control of their craft.

Summarily, the prevailing features of Seriland may be said to be

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

vivacity awakened in the Seri bystanders by their spokesman's frequent interlocutions with them during the recital. Unfortunately the account was not clear as to the seasons selected, though the expressions indicated that the feasts are fixed for times at which the young are fully fledged. It would seem inconceivable that the Seri, with their insatiate appetite for eggs and tender young, should consciously respect a breeding time or establish a closed season to perpetuate any game; yet it is probable that the pelican is somehow protected in such wise that it is not only not exterminated or exiled, but actually fostered and cultivated. It is certain that the mythical Ancient of Pelicans is the chief creative deity of Seri legend, and its living representative the chief tutelary of one of the clans; it is certain, too, that this fleshly fowl, sluggish and defenseless as it is on its sleeping grounds, would be the easiest source of Seri food if it were hunted indiscriminately; and it is no less certain that the omnivorous tribesmen would quickly extinguish the local stock if they were to make its kind, including eggs and young, their chief diet; yet it survives in literal thousands to patrol the waters of all Seriland in far-stretching files and vees seldom out of sight in suitable weather. On the whole, it would seem evident that an interadjustment has grown up between the tribesmen and their fish-eating tutelary during the centuries, whereby the fowl is protected, albeit subconsciously only, during the breeding seasons; and in view of other characteristics of the tribe it would seem equally evident that the protection is in some way effected by means of ceremonies and tabus. 223 [776]

Somewhat analogous, though apparently less ceremonial, expeditions are made to Isla Patos and other points in search of ducks, and to Isla San Esteban, and still more distant islands in search of eggs (preferably near the hatching point) and nestlings; while the abundant waterfowl of the region are sought in Bada Ballena and other sheltered bays, as well as in such landlocked lagoons as those of Punta Miguel and Punta Arena. This hunting involves the use of bows and arrows, though the archery of the tribe pertains rather to the chase of larger land game, and apparently attains its highest development in connection with warfare. No specialized fowling devices have been observed among the Seri; and their autonomous recitals, the facies of their artifacts, and the observed habits of the tribe (especially the youth) with respect to birds, all indicate that ordinary fowling holds a subordinate place in Seri craft—i. e., that it is a fortuitous and emergency avocation, rather than an organized art like turtle-fishing and water-carrying. Concordantly, culinary processes are not normally employed in connection with waterfowl, and the customary implements used for incising the skin and severing other tissues are the shell-cup, which is carried habitually for other purposes, the cane-splint, which appears to be improvised on occasion and never carried habitually, and the ubiquitous hupf. [772] [411] [412]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

one of the hunts. The condition of the remains and the various indications connected with the rancheria corroborated the tradition that the great creature had afforded unlimited and acceptable food for many moons; and various expressions of the tradition indicated that the event, though the most memorable of its class, was not unique in Seri lore.

A few bones and fragments of skin of the seal were found in and about the rancherias on Isla Tiburon, and an old basket rebottomed with sealskin was picked up in a recently abandoned jacal on Rada Ballena; a few bones provisionally identified with the porpoise (which haunts Boco Infierno in shoals) were also found amid the refuse about the old rancheria at the base of the long sand-spit terminating in Punta Tormenta; but nothing was learned specifically concerning the chase and consumption either of these animals or of the abundant sharks from which the island is named.

Among the exceedingly limited food supplies brought from the coast by the Seri group at Costa Rica in 1894, were rank remnants of partly desiccated fish, usually gnawed down to heads and tails; and Mashém and others spoke of fish as a habitual food, while Señor Encinas regarded it as the principal element of the tribal dietary. The harder bones and heavier scales of several varieties of fish were also found abundantly among the middens of both mainland and Tiburon shores in 1895. None of the remains bore noticeable traces of fire; and all observations, including those of Señor Encinas, indicate that the smaller varieties of fish are habitually eaten raw, either fresh or partially dried, according to the state of appetite at the time of taking—or the condition of finding when picked up as beach flotsam. But a single piscatorial device was observed, i. e., the barbed point and foreshaft, shown in figure 21—the iron point being, of course, acultural, and probably obtained surreptitiously. This harpoon, which measures 6 inches in length over all, is designed for use in connection with the main shaft of a turtle-catching tackle; and it is evidently intended for the larger varieties, perhaps porpoises or sharks. In 1827 Hardy observed a related device:

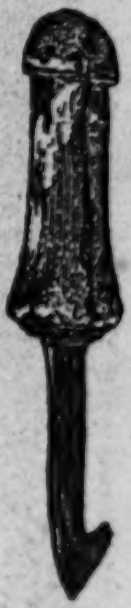

FIG. 21—Fish-spearhead.

> They have a curious weapon which they employ for catching fish. It is a spear with a double point, forming an angle of about 90°. The insides of these two points, which are 6 inches long, are jagged, so that when the body of a fish is forced between them, it can not get away on account of the teeth.[1]

Don Andrés Noriega, of Costa Rica, described repeatedly and circumstantially a method of obtaining fish by aid of pelicans, in which a

[1] Travels, p. 330.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

young or crippled fowl was roped to a shrub or stone, to be fed by his fellows; when at intervals a youth stole out to rob the captive's pouch. At first blush this device would seem to rise above the normal industrial plane of the Seri and to lie within the lower stages of zoöculture, like the cormorant fishing of China if not the hawking of medieval Europe; yet on the whole it may be deemed fairly consistent with that cruel yet mutually beneficial toleration between tribesmen and pelicans attested by the preservation of the avian communal, as already noted. Moreover, Don Andrés observations are in accord with early notes of the exceedingly primitive aborigines of California, from whom the Seri have undoubtedly borrowed various cultural suggestions; thus Venegas quotes Padre Torquemada as saying:

> I accidentally found a gull tied with a string and one of his wings broke. Around this maimed bird lay heaps of excellent pilchards, brought thither by its companions; and this, I found, was a stratagem practiced by the Indians to procure themselves a dish of fish; for they lie concealed while the gulls bring these charitable supplies, and when they think that little more is to be expected they seize upon the contributions.

The padre says also of these gulls that "they have a vast craw, which in some hangs down like the leather bottles used in Peru for carrying water, and in it they put their captures to carry them to their young ones"—from which it is evident that he refers to the pelican. Venegas adds, "Such are the mysterious ways of Providence for the support of his creatures!"[1] And in the margin of his accompanying "Mapa de la California", he introduces a vigorous picture of a captive fowl, its free fellow, and the mess of fish, the cut being headed "Alcatraxes" (pelicans).

Despite these devices, the dearth of fishing-tackle among the Seri is evidently extreme. Save in the single specimen figured, no piscatorial apparatus of any sort was found among the squalid but protean possessions at the Costa Rica rancheria; neither nets nor hooks nor rods nor lines nor any other device suitable for taking the finny game were found in the scores of jacales containing other artifacts on Tiburon; while Señor Encinas was conversant only with the simple method of taking fish by hand from the pools and shallows left by receding breakers or ebbing tides. This dearth of devices is significantly harmonious with other Seri characteristics: it accords with the leading place assigned the turtle in their industry and their lore; it is in harmony with that primitive and nonmechanical instinct which leads them to rely on bodily strength and skill and swiftness rather than on extracorporeal artifacts in their crude and incomplete conquest of nature; and it is a manifest expression of relation with their distinctive physical environment—for the ever-thundering breakers of their gale-swept coast are abundant, albeit capricious, bringers of living grist, while the offshore gales at low tide lay bare hundreds of acres of shoaler

[1] History of California, 1759, vol. i, p. 61.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

177 224 knives in severing the tough integuments and tendons of horses and kine, although the tendency has not yet resulted (as elsewhere noted, ante, pp. 153–154) in the development of a knife-sense; and although boys on the frontier play at roping dogs, no effort to use the riata or any form of rope is made in the actual chase. As naively explained by Mashém amid approving grunts from his clan-mates, they have no time for ropes or knives when hungry.

262 A quantitatively unimportant yet by no means negligible fraction of the normal diet of Seriland is vegetal; and while the sources of vegetal food are many and diverse, the chief constituent is a single product characteristic of American deserts, viz, the tuna, or prickly pear.

222 All of the cacti of the region yield tunas in considerable quantity. The pitahaya is perhaps the most abundant producer, and its name is often given to the fruit; the huge saguaro affords an enormous annual yield, and the still more gigantic saguesa is even more prolific, especially in its immense forests along the eastern base of Sierra Seri; the cina adds materially to the aggregate product, while the nopal, or common prickly pear, contributes a quota acquiring importance from the facility with which it may be harvested. The fruits of all these cacti are sometimes classed as sweet tunas, in contradistinction from the sour tunas yielded in great abundance by the choila and consumed with avidity by stock, though seldom eaten by men. The edible tunas average about the size of lemons, and resemble figs save that their skin is beset with prickles. The portion eaten is a luscious pulp, filled with minute seeds like those of the fig save that they are too hard for mastication or digestion, its flavor ranging from the sickly sweet of the overcultivated fig to a pleasant acidity. While occasional tunas may be found at any time during the year, the normal harvest occurs about midsummer, or shortly before the July-August humid season, and lasts for several weeks. During the height of the season the clans withdraw from the coast and give undivided attention to the collection and consumption of the fruits, gorging them in such quantities that, according to the testimony of the vaqueros, they are fattened beyond recognition. Commonly the tunas are eaten just as they are gathered, and the families and larger bands move about from pitahaya to pitahaya and from valley to valley in a slovenly chase of this natural harvest, until waning supply and cloying appetite drive them back to the severer chase of turtle and pelican. The fruit is not cooked, and never preserved save in the noisome way of nature, and is rarely transported in quantities or over distances of industrial importance; yet the product may have some connection with the basketry of the tribe. The devices for collecting the fruits, especially from the lofty saguaro and saguesa, are mere impersonations of harpoon shafts, palobianco branches, or chance cane-stalks carried primarily for arrow-making or bulas construction.

[413]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

There is no such well-studied and semiceremonial apparatus for fruit-gathering as, for example, the Papago device made from the ribs of the dead saguaro in accordance with traditional formula. 222 [412]

Perhaps second in importance among the vegetal constituents of Seri diet is the mesquite bean, which is gathered in random fashion whenever a well-loaded tree is found and other conditions favor. The woody beans and still woodier pods are roughly pulverized by pounding with the hupf on any convenient stone used as an abat (metate or mortar), or, if suitable stones are not at hand, they are carried in baskets or improvised bags to the nearest shore or other place at which stones may be found. The half-ground grist is winnowed in the ordinary way of tossing in a basket; and the grinding and winnowing continue alternately until a fairly uniform bean meal is obtained. So far as was actually observed this is eaten raw, either dry in small pinches or, more commonly, stirred in water to form a thin atole; but expressions at Costa Rica indicated that the meal is sometimes stirred in boiling water or pot-liquor, and thus partially cooked, in times of rest and plenty. [262] 252

Other vegetal products used as food comprise a variety of seeds collected from sedges and grasses growing about the mud-flats of Laguna La Cruz and other portions of the province, as well as the seeds and nuts of the scant shrubbery of shores and mountains; while a local seaweed or kelp is eaten in small quantity, apparently as a condiment, and is sometimes carried on journeys even as far as Costa Rica, where specimens were obtained in 1894. 262

It is of interest to note that one of the most distinctive constituents of the Sonoran flora, and one intimately connected with human life in the great neighboring province of Papagueria, is of negligible rarity in Seriland; this is the visnaga (*Echinocactus*, probably of two or three species), the thorniest of the cacti and the only one containing consumable pulp and sap. This peculiar plant is of no small interest in itself as a striking example of the inverse relation between protective devices of chemical sort (culminating in acrid, offensive, or toxic juices) and the mechanical armaments so characteristic of desert plants;[1] it is of still deeper interest economically as the sole source of water over broad expanses of the desert, and one to which hundreds of pioneers and travelers have been indebted for their lives; and it is of interest, too, as a factor of Papago faith, in which the visnaga ranks among the richer guerdons of the rain gods. Throughout most of Papagueria this cactus is fairly abundant; usually there are several specimens to the square mile of suitable soil (it is not found in playas or on the ruggeder sierras), so that it is always within reach of the sagacious traveler; but it diminishes in abundance toward the borders of Seriland, and not more than a dozen examples were found in the portions of that province traversed by the 1895 expedition. Its rare occurrence, 137

[1] Cf. The Beginning of Agriculture, The American Anthropologist, vol. VIII, Oct., 1895, pp. 350-376.

283 from coarse, wiry grass stems, and saved all
302 the brushings to be used in the making of strong threads and cords.

The fleetness of foot and remarkable physi-
147 cal endurance of these people attest to the
481 rigorous and difficult life in Seriland where the ability of an individual to survive a season of want depended upon the reserve energy of his own body by which he could carry himself long distances in search of food and yet have strength to return to a waterhole, left miles behind. The slender, sinewy limbs and capacious chests of the Seris, in whom no trace of obesity has ever been observed, show clearly the result of untold centuries of selection of the strong by the severity of the environment, where water,
[312] too heavy for transport, too difficult of storage, is yet always within reach of an organism strong enough to journey ten, twenty, or even fifty miles in search of it.

Perhaps the most severe physical exercise
224 practiced by the Seris was the chase of animal game, particularly since it was often resorted to only after a period of weakening hunger which prompted the all-out effort to obtain adequate food supply. Days of wandering over the deserts in search of vegetable food were sometimes unrewarded, and although rabbits were to be had for the chase, they were too small to be of much consequence in the feeding of a family. The deer were fairly plentiful and provided excellently for a lasting feast.

The deer hunt was conducted by several tribesmen without weapons. When an animal was sighted it was followed by one and circled by others of the party, chased until frantic and exhausted, whereupon one of the men rushed upon it, threw it to the ground and caved in its skull with a stone.

The most avidly sought prey in the Seri chase were the helpless young and heavily pregnant does which were pursued and rent to fragments with a horrible fury, particularly with intent upon the succulent tidbits afforded by the fetal flesh.

● 222 A time of ease and plenty came each summer, for usually in late May or June the cactus plants with which Seriland abounds begin to mature their fruits. In the foothills of Sierra Seri on the mainland, great

3:Davis & Dawson F-5 (1922-1940) 1945
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222 forests of giant cacti (Fig. 9) provide during this season an unlimited supply of "pitahayas" toward which the tribespeople customarily moved to accomplish the annual harvest. The fruits were readily knocked down by means of long poles and, when ripe, the spines were easily brushed off, leaving a luscious pulp as big as a fig. During the height of the season all the clans withdrew from the coast and gave their undivided attention to the collection and consumption of the cactus fruit, gorging tremendous quantities for weeks until waning supply and cloying appetite drove them back to the more severe hunt for turtle and pelican.

252 262 514 Perhaps the only germ of thriftiness in the Seris is shown by a peculiar custom with respect to the pitahayas. The fruits, eaten in such enormous quantity, were imperfectly digested, the hard-coated seeds particularly passing through the body unchanged. Using [415] [251] large seashells, the feces containing these seeds were collected and preserved with some care. Thus, when the harvest of fresh fruits was over, there remained a hoard of these dry, nutritious discharges which were ground on the stone abet, winnowed in a shallow basket and made into a meal to be eaten, either dry, as a watery atole, or mixed with turtle grease to form a thick paste.

614 Although the Seri's omnipresent problems of food-getting and of personal subsistence have been of particular interest, the lost social customs of the tribe deserve a moment's attention. Before the death of all [161] but a few of the 2,000–3,000 Seris at the hands of invading Spaniard and Mexican, the tribe consisted of a number of conspicuous maternal clans, each of which was presided over by a zoic tutelary such as the Pelican, the Turtle, the Rattlesnake, or the Badger. The totemic symbols denoting the 302 various beast-gods and incidentally indicating the blood-carriers of clans dedicated to 386 them, consisted of elaborate designs painted 614 upon the face (Fig. 10). In accord with their savagery in which the social organization was based on blood kinship reckoned in the female line, under ordinary circumstances, the faces only of the females were painted. Colored minerals pounded to powder afforded the pigments for the paint-

[p. 201(A)]

ingenuity of a modern shipbuilder to have constructed a boat. These simple, desert people, however, through centuries of struggle for life in their desolate realm had learned to use every natural material available to them, however laborious the tasks and inefficient the products. The carrizal reed, *Phragmites communis*, grows about the few permanent water holes of Seriland, and from countless numbers of these slender, buoyant canes they built their watercraft. The reeds were stripped of leaves and gathered in long bundles, bound together and gradually augmented by more and more interlaced canes until a bundle 18 to 30 feet long and 1½ feet in diameter, tapering at both ends, was made. Three of these were then bound together with cords of fiber or human hair, making a maneuverable one or two man raft, easily transported to the shores.

The mesquite tree, *Prosopis juliflora*, provided fiber for cords. The flexible outer tissues of the roots were stripped off, soaked and progressively pounded, split and worked between hand and mouth until very slender, fibrous threads were obtained which were then twisted into cords. In some cases a coarse, rough fabric was woven from these fibers, but most garments were made of pelican skins. The strips of workable mesquite root or sometimes yucca fiber were also used in making doughnut-shaped head pads which aided in balancing the capacitous earthen water jars as they were carried on the heads of the women over rough and stony trails from water hole to camp site.

While occupying the turtle fishing camps on El Infiernillo during the good season, vegetable supplements to the fishy diet were few. Every nourishing seed or woody fruit yielded by the desert was carefully gathered; even the tiny seeds of the sea grass, *Ruppia*, were sorted from beach drift and made into meal. Never did the Seris learn to cultivate any crop or domesticate any animals other than the half wild coyote dogs that lived in mutual toleration with them. Even had they done so, their success in the barren, waterless land would have been small.

Sterile as is the Seri's hinterland, for a time each summer the thorny plants with which it is so profusely stocked ripen an abundant crop of fruit. The cacti in particular yield a wonderful harvest of luscious and succulent fruits, and toward this fortuitous supply the Seris were accustomed to move in June and July. The foothills of Sierra Seri on the mainland are adorned with great numbers of giant cacti, *Pachycereus Pringlei*, *Carnegiea gigantea* and *Lemaireocereus Thurberi* from which the luscious pitahayas were readily knocked down when ripe. The Indians wandered into the cactus forest and after a simple ritual marking the beginning of the feast, proceeded to gorge themselves for weeks on the succulent fruit until waning supply and cloying appetite drove them back to more severe food-getting activity by the sea. They did not customarily find it necessary to leave the cactus forest, however, as soon as the supply of fruits was no longer sufficient, for by the time the fruiting season was ended they had provided themselves with a second harvest. The pitahayas, gorged in such tremendous quantity throughout the season, were very imperfectly digested; the miriads of hard seeds, particularly, passed through the system unchanged and with the preservation of these in mind the Indians carefully collected with the aid of large sea shells all such seedy discharges and let them dry in the desert sun. Thus, as the supply of fresh fruit faded they proceeded to the use of this hoard

X

INSECTS AND ARACHNOIDS

114 Altogether information has been collected concerning 92 species of insects, scorpions, ticks, myriapods and arachnoids.

Economic uses

262 [114] McGee says that "good many insects" are part of the Seri diet, although he does not specify just which they were nor how significant. There is no doubt that in his days, the insects played some role in the Seris' food and that they were probably far more important in the distant past, in the [177] XVIII and early XIX centuries, before large flocks of livestock, horses and cattle of the Spanish rancheros offered excellent opportunities to supplement the usual diet.

Of all this but minor traces remain today. The Seris even have forgotten which insects had been eaten by their ancestors. Apart from the bees, only the Sphingid caterpillar has been indicated as "eaten in the past, but not now." As for the bees, [263] their honey still is part of the Seri diet. But with the availability of sugar, even this addiction dwindles.

* 825 857 Other than this I have been unable to discover any uses whatever, except perhaps as playthings of little boys, with the usual torture in view. The *Cicada* is most significant of these, of which more later.

Pets

231 The only insect pet is a *Cicada*. This insect is usually tied to a long thread, its forewings partly clipped off and then released into the air like a [171] kite. Local Mexicans also provide their own boys with a similar kind of toy.

Hunting

● 222 Only bees are hunted. They are usually flushed out of the cave shelters in the mountains. The operation is accomplished without the use of smoke. The honey is cut out with a knife.

Taxonomy

* 825 Seris' ideas of association of various insects are very loose. Few insects are recognized to form natural groupings; bees, butterflies, wasps, spiders are most distinct. However, there are all sorts of gradations blending confusedly with each other, often dependent on the knowledge and interest of particular informants.

Simple recognition is not always present. Out of 92 forms, 13 the informants could not identify, simply saying that they didn't know them. *Cicindela lemniscata*, *Melanotus cribricollis*, *Horistonotus*, *Meloid*, *Oxacis*, both species of *Cymatodera*, *Photopis*, *Scolopsella*, tiny Scarab, *Leptoremus*, *Homolocorus*, and *Reduviid*—all these were in the

[P. 47 B]

157 The women are virtuous and faithful and perform all the duties of
152 wife and mother and bear their share of hardships. The hard life,
[145] exposure and struggle for existence soon causes hard features, wrinkles
and ugliness. Many babies die young and the tribe probably numbers
[165] only about two hundred.
[167]

The dancing by the driftwood fires continued as we turned in to
123 rest, our eyes constantly drawn to the flame and the glittering eyes in the wild dark faces, while the waves of the sea accompanied the chanting in that mysterious isle of Seriland.

225
133

Seris - off to the fishing grounds - December 1934. Alcatraz Island in distance.

• 222 In Seriland most of the food comes from the sea. During April and May, at the time of my first visit, a green grass growing on the sea bottom was detached and washed ashore. The women dragged it up on the bank near camp and spread it out to dry. Some of the stalks contained about seven fine green seeds the size of a pin head. When dry, the
[285] women threshed them out with sticks on a piece of canvas. These are cleaned by the deft use of the *batea*, or winnowing basket, of which these people are pastmasters.

252 A pint of these fine seeds were parched in an olla over coals of
262 driftwood and constantly stirred to prevent burning. It was then ground on a flat rock like a *metate*---any flat rock---into a green meal which was very nourishing. This was cooked in an olla with turtle oil, making a porridge like thick green paint. It was then drunk or eaten with the fingers. If there is plenty, two fingers are used; if not, only one finger.

262 The Seris also eat the fruit of the *cholla* cactus, *pitahaya* and *sag-*
• 222 *uaro*, and probably many other plants in season, but they are wild to get flour. But the principal diet is cahuama, or sea turtle.

225 After a day or so with the Seris, their food supply became exhaust-
123 ed and they made arrangements to take our boat (all they had was a
[177] *balsa*) and get a sea turtle. So at four o'clock in the morning, with Roberto and Nene, his brother, and myself, they shoved off for the fishing ground. It took two hours of hard rowing to reach the Sonora
[133] side, as the tide was racing up the *Infernillo*. Most of the waters are shallow, with patches of dark and light sandy bottom, with seaweed or grass. On this green grass the turtle feeds; it is their alfalfa field, and it takes a keen-practised eye to see a turtle at the bottom and harpoon him before he escapes.

225 Once on the hunting ground, water, one of the Seris stood in the
[411] bow with a harpoon twenty feet long, a detachable barb on the end of it, and a heavy line attached. The Seri in the bow motioned with his hand this way or that, slow or fast, and watched the bottom. At last he plunged his spear and withdrew the pole. The turtle swam awhile
[411] until exhausted, and then he was drawn alongside, his head pounded with an ironwood club, and then he was turned on his back and drawn on board. This called for great skill in balancing the cranky, smooth-bottomed boat to keep it from shipping a wave.

225 When a Seri goes in his native *balsa*, which only holds one man, he
501 straddles the middle part on his knees, resting them on seaweed. The craft is light and is a good sea craft, but it is low in the water and the man is wet all the time. He uses a double-bladed paddle, and his harpoon rests against pegs set in the *carrisos*. A rock which serves to quiet the turtle, two pointed stakes and a heavy fish line complete the equipment. He has to paddle across to the other side in that cramped position, say eight or ten miles, very early in the morning, then watch his chance to harpoon. If successful he brings up the turtle, knocks him on the head with the rock, pulls him on the end of the craft by skillful manipulation, cut slots in the front flippers, put stakes through and into the *carriso*, pinning him firmly in place, then paddle back.

225 The wind came up strong when we started to return from our turtle
123 hunt and with wind and tide against us we rowed across the Island. Bob and his brother disembarked and took it afoot for camp, a distance of ten miles, reaching there at two p.m. The Seris made a tump line and towed the boat, one towing and two warping off-shore until we arrived at camp about four p.m.

When the bow was run up on the shore everybody came down, the women and children talking a steady stream in their strange jargon.
123 They soon jerked the heavy turtle out, dragged him up the beach on
262 his back, and began immediately to cut him up. Bob spoke for the breast, which is a white plate on the underside of the turtle with

[text continues on p. 168]

642
621 Little information could be elicited about subdivisions 7, 8, 9, and 10. The reason for this might be that Band VI was slow in
[169] abandoning those coastal areas (if it actually did inhabit them)
[688] as it was being displaced by Bands III and IV.

621 The Seri say that long ago several men, called *?ant i?akimhoh* "they who explain the land," came to Tiburon Island and told the
642 people along the eastern shore that they owned also a corre-
173 sponding strip of land on the mainland. Thus the inhabitants of
425 subdivisions 2, 3, 4, 5, and 6 laid claim to the coastal areas directly
167 across the channel from them as shown by the dotted lines on Fig. 4. They assumed that their new territories extended inland
[222] to include as much terrain as they chose to claim. At first the people went to their mainland areas primarily to gather cactus fruit. Eventually some of them remained on the mainland and established subdivisions 11 and 12. This establishment superseded the claims of the five Tiburon Island subdivisions to their main-
[101] land territories. Although the mainland subdivisions 11 and 12 formed, in some respects, a separate band in their own right, they retained their name, *ta?eowkw kongkaak* "the people of Tiburon Island." Eventually this group returned to Tiburon.

621 Of subdivisions 13 and 14 which are shown on Fig. 4, very
642 little is known. The people of subdivision 13 inhabited an area
131 encompassing the northern end of the dry lake, La Playa Noriega
[829] (San Bartolo). Some of the Seri believe that these people were
[172] giants. Although in this area I have found clay figurines and other
[173] artifacts common to abandoned camps elsewhere, the Seri do not know the names of the camps of this subdivision. Subdivision 14 occupied the area surrounding the southern end of the same dry lake.

Subdivision 15 occupied the general area which is now Villa de Seris, a settlement on the southern edge of Hermosillo. As
[167] Hermosillo grew, it became increasingly difficult for these Seri to maintain their customary way of life, and they eventually returned to Tiburon Island.

642 BAND VI
621 Band VI became divided into four subdivisions, the names of
101 which are:

xnitom	"_____"
pahii	"flint"
kofte oki ifa	"large iguana peninsula"
koiih	"tubular"

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

during prenatal times; but an intimation from Mashém that the old men thought it much better to take the turtle with the teeth of an "animal that goes in the water", and the similarity in terms for "harpoon" (or arrow) and "teeth" both suggest that the aboriginal point may have been a sea-lion tooth, and that the foreshaft itself may have been a larger tooth of seal or cetacean. While the modern harpoon is shaped with the aid of metal (hoop-iron, etc.), the forms are quite evidently vestigial of knifeless manufacture, in which a naturally rounded or abraded or fire-shaped foreshaft was fitted into the natural socket afforded by a cane-stalk broken at its weakest point—i. e., just below the joint; and both function and socket arrangement (as well as the linguistic evidence) strongly suggest the cylindrical tooth as the germ of the apparatus.

It is probable that water-fowl, considered collectively, stand second in importance as Seri prey; and the foremost fowl is undoubtedly the pelican, which serves not only as a fruitful food-supply but as the chief source of apparel.

The principal haunt and only known breeding ground of the pelican in the Gulf of California is Isla Tasnne, an integral part of Seriland; and while the great birds are doubtless taken occasionally in Bahia Kunkaak, El Infiernillo, Bahia Tepoka, and other Seri waters, this island is the principal pelican hunting ground. According to Mashém's account, the chase of the pelican here is a well-organized collective process: at certain seasons, or at least at times deemed propitious by the shamans, pelican harvests are planned; and after some days of preparation a large party assemble at a certain convenient point (presumably Punta Antigualla) and await a still evening in the dark of the moon. When all conditions are favorable they set out for the island at late twilight, in order that it may be reached after dark; on approaching the shore the balsas are left in charge of the women, while the warriors and the larger boys, armed only with clubs, rush on the roosting fowls and slaughter them in great numbers—the favorite coup de grâce being a blow on the neck. The butchery is followed by a gluttonous feast, in which the half-famished families gorge the tenderer parts in the darkness, and noisily carouse in the carnage until overcome by slumber. Next day the matrons select the carcasses of least injured plumage and carefully remove the skins, the requisite incisions being made either with the edge of a shell-cup or with a sharp sliver of cane-stalk taken from an injured arrow or a broken balsa-cane. The feast holds for several days, or until the last bones are picked and the whole party sated, when the clans scatter at will, laden with skins and lethargic from the fortnight's food with which each maw is crammed.

Mashém's recital gave no indication as to whether the Pelican clan participate in the hunting orgies, though it clearly implies that the chase and feast are at least measurably ceremonial in character; and this implication was strengthened by the interest and comparative

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

vividly awakened in the Seri bystanders by their spokesman's frequent interlocutions with them during the recital. Unfortunately the account was not clear as to the seasons selected, though the expressions indicated that the feasts are fixed for times at which the young are fully fledged. It would seem inconceivable that the Seri, with their insatiate appetite for eggs and tender young, should consciously respect a breeding time or establish a closed season to perpetuate any game; yet it is probable that the pelican is somehow protected in such wise that it is not only not exterminated or exiled, but actually fostered and cultivated. It is certain that the mythical Ancient of Pelicans is the chief creative deity of Seri legend, and its living representative the chief tutelary of one of the clans; it is certain, too, that this fleshly fowl, sluggish and defenseless as it is on its sleeping grounds, would be the easiest source of Seri food if it were hunted indiscriminately; and it is no less certain that the omnivorous tribesmen would quickly extinguish the local stock if they were to make its kind, including eggs and young, their chief diet; yet it survives in literal thousands to patrol the waters of all Seriland in far-stretching files and vees seldom out of sight in suitable weather. On the whole, it would seem evident that an interadjustment has grown up between the tribesmen and their fish-eating tutelary during the centuries, whereby the fowl is protected, albeit subconsciously only, during the breeding seasons; and in view of other characteristics of the tribe it would seem equally evident that the protection is in some way effected by means of ceremonies and tabus.

Somewhat analogous, though apparently less ceremonial, expeditions are made to Isla Patos and other points in search of ducks, and to Isla San Esteban, and still more distant islands in search of eggs (preferably near the hatching point) and nestlings; while the abundant waterfowl of the region are sought in Rada Ballena and other sheltered bays, as well as in such landlocked lagoons as those of Punta Miguel and Punta Arena. This hunting involves the use of bows and arrows, though the archery of the tribe pertains rather to the chase of larger land game, and apparently attains its highest development in connection with warfare. No specialized fowling devices have been observed among the Seri; and their autonomous recitals, the facies of their artifacts, and the observed habits of the tribe (especially the youth) with respect to birds, all indicate that ordinary fowling holds a subordinate place in Seri craft—i. e., that it is a fortuitous and emergency avocation, rather than an organized art like turtle-fishing and water-carrying. Concordantly, culinary processes are not normally employed in connection with waterfowl, and the customary implements used for incising the skin and severing other tissues are the shell-cup, which is carried habitually for other purposes, the cane-splint, which appears to be improvised on occasion and never carried habitually, and the ubiquitous hupf.

223

[776]

[222]

[411]

[412]

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291
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FIG. 10. SERI BELLE
WEARING A PAINTED DESIGN SUCH AS FORMERLY WAS INDICATIVE OF THE BLOOD LINE OF A GIVEN CLAN.

264 but, the rotting flesh and cartilage of its noisome interior to be explored and mouthed by the toddling children or gnawed by the cringing coyote-curs attached to the rancheria.

223 At certain seasons or when deemed propitious by the elders of the family, a pelican harvest was planned. Isla Tasne, some fifteen miles from Tiburon Island, is the haunt and breeding ground of the pelican that served not only as a valuable food supply for the Seris, but also as the chief source of apparel. At such seasons temporary rancherias were set up on the shores of Bahia Kino, and when conditions were favorable, or when hunger prompted them, the balsas [502] would be launched in the evening toward Isla Tasne, the women of the party lying prone on the cane bundles and propelling the craft by paddling with their hands or with large hatchet clam shells. Reaching the island after dark, the balsas were left in charge of the women while the men and older boys, armed with clubs, crept up over the slippery, guano-covered rocks to rush on the roosting fowls and slaughter them. The [264]

[p. 179(B)]

3:Davis & Dawson E-5 (1922-1949) 1945
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[301]
[302]
[386]
[516]

FIG. 11. PAINTING THE FACE
USING A RED PIGMENT OBTAINED FROM THE TUBOTE.

223 lice-infested carcasses were then gathered
264 and brought to a central place among the stinking rocks where a gluttonous feast was held in the dark, the long ahungered tribesmen gorging themselves with the soft entrails and succulent parts, and carousing in the carnage until overcome by slumber.

281 The day following the slaughter, the
294 matrons collected the carcasses with least damaged plumage and carefully removed the skins, which were then gnawed and sucked clean of flesh and grease and dried in the sun (Fig. 8). From two or more of these skins they made a kilt or robe (Figs. 1, 2), the principal apparel, not so much for protection from cold as from the scratch and prick of the abounding spines and thorns of Seriland. The skins were sewed with sinew and often held in place on the body by a
283 cord made of human hair (Fig. 1). The
302 culture of their long, luxuriant hair, indeed, was an important matter. They brushed their hair regularly with a brush fashioned

[p. 200(A)]

224 Game pursuit is usually done on foot, mostly in the winter and very little in the summer. The intense heat of the desert in the summer makes hunting unattractive. The most frequent trophies are the Sonoran bighorn, peccary, cottontail and jack-rabbits. Sometimes, semi-wild burros, running loose on the adjacent extensive Mexican "rancherias", are poached for meat. The peccary is the only animal hunted with the aid of dogs. Large rodents are dispatched by sling-shot, stick, stone, or shot with a .22 caliber rifle. Birds, such as sea-gulls, ducks and pelicans, are clubbed, stoned or shot with a small caliber rifle.

462 While fishing and hunting are primarily men's occupations, the gathering
224 of the terrestrial and marine animals is almost exclusively women's work.
226 Rattlesnakes and other reptiles are often killed and brought to the encampments by the women from their morning trek into the desert after firewood and fruit. Small fish and marine invertebrates in the tidal pools are collected by women, aided by children of both sexes.

252 Preparation of meat is quite simple. It is either boiled in hot water with salt added as the only seasoning or else roasted whole, if small enough, over an open fire with or without a grill. The use of spices such as tomato sauce, chili, peppers, and the like, depend upon the tastes of the individuals and also upon the availability of money.

225 In individual competence as hunters or fishermen the men show a great deal
224 of variability. Some excel in fishing while others do so in hunting. Hand in
226 hand with this, goes the degree of knowledge of the local natural history and, as expected, the best fishermen lead in the knowledge of fishes while the best hunters possess the most extensive knowledge of terrestrial animals and insects. It has also been observed that boys were far ahead of adults in their knowledge of inconspicuous or otherwise commercially unimportant creatures such as insects, obscure marine invertebrates and small fishes. Interest in the commercially or otherwise economically important forms of animals unquestionably becomes overwhelming in adult life while much of the natural history lore learned in youth is forgotten.

Food Preferences and Taboos

262 A number of animals were reported as being a part of their diet in the past but which were not used at the present time. Several species of shells collected from kitchen middens along the coast were thus identified. In some instances it has been denied that a certain animal was used for food; yet, later when such a beast was brought to the camp, it would be added to the menu. Undoubtedly, some of the species were held in low esteem as food and the Seris preferred not to admit eating them.

Large fishes, especially pinta and baya, sea-turtles, and the very large chuckwalla lizard, which is brought back from rare expeditions to San Esteban Island, are the preferred cuisine. Cochi fish, also called puercos, are disdained. Large catches of these were frequently brought in from the sea, only to be unceremoniously dumped on the beach and left to the dogs and the vultures. But when other fish were scarce, the puercos were eaten. Pelicans, once an

9:Malkin E-5 (1953-1955)1962 NU31 Seri NU31

361 capital by paved road. Formerly, in the twenties and early thirties, Seris' chief mainland settlement. Now with the influx of the Mexicans, the Seris deserted the place completely as a camp site, although they still visit it occasionally. Distinct in the extensive sand beaches and sand marine flats which harbor peculiar bird, fish and insect fauna.

7. **Guaymas**—southernmost point considered here and probably also of the Seris' historical extension. Nowadays very rarely visited by them and probably only while cruising with the Mexicans. Large settlement, many tourists. Backlands; rocky desert.

8. **Tepopa**—spectacular rocky head just south of Desemboque, opposite to Tiburon. Caves, usual mountainous vegetation, *Sahuaro*. Many Seri hunting encampments and one of the places where the Sonoran bighorn is still hunted.

9. **Coast of Baja California** — very rocky area across the bay—almost never visited by the Indians.

10. **Tiburon**—island in the Gulf of California separated from the mainland by a narrow channel called "Infernillo," only a mile wide. Rugged, mountainous. By **Tiburon** is meant an overall island area in distinction from **Tecomate** or the mountains.

11. **Tecomate** — a water-hole and Seri campsite on the northern shore of Tiburon. Today this is the only permanent site on the island where these Indians, actually only a few families among them, still go to live for part of the year.

12. **Mountains of Tiburon** — rugged interior of the island, reaching up to almost 4000 feet. Usual vegetation cover with *Sahuaro* and other typically Sonoran floral components, fauna much as on the mainland except lacking cougar, bighorn and some other larger forms. The interior does have some "tenajas," that is water-holes and there is said to be a rivulet up in the mountains.

13. **Infernillo**—narrow channel between Tiburon and the mainland, often called locally "canal." For the terrestrial fauna and for birds reference is made to the mainland shores of Infernillo. For the marine fauna is meant either the open water in this channel or to the littoral off the mainland. The opposite shores and littorals are covered as "Tiburon." Maximum depth is said to be up to 25 fathoms.

14. **Isla Patos** — small island north of Tiburon and directly due west of Estero Sargente and halfway between Tiburon and Punto Tepopa. Visited by the Indians only occasionally, mostly in connection with the duck hunt.

15. **Isla Raza** — a small island between Angel de la Guarda and San Lorenzo.

16. **San Esteban Island**—a round island between Tiburon and San Lorenzo, up to 1700 feet elevation. Visited occasionally during fishing or turtle hunt trips or in search of a chuckawalla.

[P. 2 A]

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IV

BIRDS

136 Woodpecker—There are several species in the area but Gila woodpecker (*Centurus uropygialis*)
128 is certainly one of them.

Hummingbird—Unspecified species, one of several occurring in the area according to Dr. Orr.

Economic Uses

262 Such use as had been made of the birds is largely in the form of an addition to the diet. Reading McGee, one gets the impression that the importance of the birds in the Seri diet, in contrast to the marine animals of all description, has declined greatly. We do know that in the past various birds and, most especially, the seagulls and the pelicans represented a significant item. But today out of the basic list of 24 species, only six has been reported as eaten and all, with an exception of the duck, in the past tense. The duck
*[825] evidently is the only bird which the Seri consider really fit to eat and yet, even here, there is temporary avoidance. Moreno told me that this bird "we eat only when we visit the island (Isla Patos).
●[223] But we do not eat it in September because it is
[252] too lean. We like it in December when it is fat. We then kill it at night with stones. It is roasted."[1]

All other birds were reported as eaten only in the past and this has been expressed more or less as follows: sea-gull eaten a few years ago, cormorant 8-10 years ago, pelicans 30-35 years ago. This would mean that the pelicans had been discarded as food, at least according to the official Seri version, in the early twenties, before Kroeber's visit. But the Seri disclaimers on the subject
183 of the bird diet are not entirely correct and re-
262 flect less the total rejection and more only low esteem in which these birds are held. For I have seen myself the sea-gull and the pelican eaten on
[261] few occasions when times were tough, and the food supply was non-existent, owing to the choppy
*[825] and windy seas. The Seris caught in the act of cooking the meagre flesh of the pelican or the sea-gull were obviously apologetic.

262 It is interesting that some of the birds present in the area, the quail or the woodpeckers, are not eaten although these birds figure prominently in the diet of some of the other groups. It may well be that the Seris consider them too small to bother.

[252] As far as I could find out, eggs of only two species of birds, the sea-gull and the heron, are collected, boiled and eaten. But the eggs of the

[1] His statement requires some explanation. There is no taboo on eating duck but the bird does not occur in Desemboque or any other place known to the Seris, with
[136] the exception of Isla Patos. Here these birds winter,
*[825] arriving in September and arrive worn out and lean, to recoup the fat, a few months later. The Seri unfamiliarity with their eggs is another indication that the birds come to Isla Patos only for the winter.

Bdalkin E-5 (1953-1955)1962 NU31 Seri NU31

262 pelicans are not; they are regarded as "bad food," unfit for eating. No further explanation has been offered here and it might be that the same sort of prejudice works here as in the case of the adult birds. Otherwise, reasons for rejecting eggs for food are probably a matter of mere customary attitude without any particular rationalization. In a few instances, the dove being one example, the eggs were said to have been rejected because they were "too small to bother."

237 Other economic uses made of the birds are ex-
291 tremely few. At one time, the pelican skins were used for clothing and, in fact, in McGee's time they represented, perhaps, the most important item of clothing for the Seris, having been worn in shape of wrap-around robes, usually covering the lower part of the body. Moreno reported these robes as still is use "30 years ago or more," in the early twenties, but in Kroeber's time these
[177] robes were already discarded in favor of the European garment. The Seri, nevertheless, still preserve skins of these birds—the white pelican,
[439] larger of the two, always had been favored here—and occasionally sell them to the visitors. Another
237 use made of the feather is in the arrows. The
411 cormorants, heron and the owls had been especially mentioned in this connection. But it is certain that they were not the only birds so exploited and also that this particular use went out of business along with the disappearance of the bow and arrow as the principal weapons. The use of feather for arrows may well continue into the present in a somewhat degraded form. The Seri boys play a
[857] great deal with bows and arrows, shooting them at any moving available target. They'll pick up any available feathers.

Pets

231 Somewhat desultory use is made of birds as pets. During my visit I have seen doves and an egret kept in houses as pets by the adults and fed quite frequently. The number and variety of birds which may become pets in households may well
* 825 be larger. Pelicans and sea-gulls are less fortun-
857 ate. They are often shot at and over-powered by the boys. But instead of taking them to the households, the boys stage games, shooting them at point blank from bows and arrows and pea- shooters. These somewhat bloody executions take place almost every day. The pattern is the same. Only the subject of the game changes, depending on the available species of bird or animal.

Hunting

●223 It is hard to speak of hunting in connection with birds, because there is so little effort made to go out and get them. The main exception is the duck and this, as I already mentioned, is hunted on Isla Patos and clobbered at night with sticks and stones in great numbers. This is one of the few instances in which the Seris will go out of their way to get a bird. Sea-gulls and cormorants and, more rarely, pelicans are dispatched by pea-
[411] shooter (stone), sticks, small clubs and, on occasion, with a shot from a .22 caliber rifle.

[p.18A]

000 search out an old fish head or Pelican bone. Discouraged, never!

123 • 223 We had intended going to Alcatraz *(Pelican Island)* and have the Indians secure more skins for us at night, but the wind was strong and not favorable, so the trip was put off. The Indians hold up torches of dry *pitahalla*, while another Indian knocks the Pelicans over the head.

123 224 Stan and three Indians started out for the *picachos* with rifles in a hunt for mountain lions and a *tigre* our Indian said he saw. They returned in the afternoon tired and hungry and carrying no game. Stan had mounted the highest peak, an almost perpendicular one, and dangerous climb.

123 593 One member of the hunting party, Santo Blanco *(Holy White)* which belies his name---as he is neither white nor holy---evidently didn't find his dinner waiting for him, and proceeded to beat up his poor wife. Perhaps she didn't expect him so soon or perhaps the larder was empty. At any rate, another woman, Luis Torres' wife, flew to her assistance and grabbed the rifle or stick and he cut her hand cruelly with his knife. She was brought whimpering to our camp, her poor thin hand dripping blood. One or two sympathizing women, crying softly, followed her.

I immediately put some flour over the cut and tore up strips of cotton goods and wrapped them round and round her hand, then pressed the veins to check the hemorrhage, and held her hand up. After fifteen or twenty minutes it ceased to drip, and an Indian brought me some mentholatum from my grip. I bathed her hand in salt water while she whimpered softly, put on the salve and re-wrapped her hand in clean goods and she returned to her camp. Her child picked up the discarded bloody clothes and took them to her.

123 Roberto had gone back for the things he had left, and at noon had returned with the car to Santa Cruz, intending to return by mule in the evening. He returned long after dark after five hours in the saddle. He had been bucked off once and lost in a jungle of timber, both down and standing for two hours. He was fenced inside this tangle, he said, finding it almost impossible to escape.

The mule was later to be tied up, rolled into the boat and taken to the Island for my use, so I would not get worn out walking and carrying food and water.

Again, we were lulled to sleep by the murmur of the sea.

On account of unfavorable conditions, we did not start in the boat the next morning, but fully expected to start the following morning. After breakfast we decided to give the Indians a feast. One Seri secured a five-gallon can three-quarters filled with water, and one by one I poured four cups of flour in it. I hesitated a moment and the Indian said "too much water," and all the crowd waited with bated breath. When I poured in an extra cup-full a great sigh of

[text continues on p.200]

The Pelican Skin Robe

133

Toshne of Pelican Island - Kino Bay - 1936

It was the dark of the moon and a very black night, ideal for surprising the Pelicans asleep, roosting on the steep slope above the waters of the Sea of Cortez. The Pelican is a very wary bird and cannot be approached in the light of the moon. 123 223

At sundown we had climbed several hundred feet to the saddle between two peaks on the Island of Alcatraz in Kino Bay off the coast of Sonora. We rolled up in our blankets and hugged the great volcanic rocks at the crest, to be as inconspicuous as possible to the great birds circling the peaks to seek a roosting place on the west slope of the Island.

Santo Blanco had provided himself with a torch made from the slender rods of a dead *pitahaila* (organ) cactus which he had tied together in a long bundle. The four young Seris who joined him also had a torch and in addition, each had provided himself with a club. We took no fire arms. Senor Roberto Thomson, my companion, had arranged this trip with Santo Blanco, for my benefit. [416] [824]

[text continues on p. 215]

123 It was March and the night wind was cold, but we did not dare light
• 203 a fire, so we hugged our blankets close to us for warmth until Santo Blanco judged the Pelicans were sound asleep. We could hear the waters of the Gulf roaring softly as they broke against the cliffs far below us.

At midnight Santo Blanco lighted his torch and the other Indians
[21] did likewise. They all wore rawhide sandals to keep their feet from being cut on the sharp rocks. Santo Blanco was agile as a cat, as he jumped from rock to rock on the steep slope holding his torch over head. Part way down the party split, leaving Santo Blanco, Roberto and myself. I had a flashlight which threw a feeble ray on nearby
[134] rocks and then shot off into blackness. The rocks were slippery from droppings of thousands of cormorants, gulls, Pelicans and other sea birds and climbing down rocks on the steep slope and that on a dark night, was risky if not dangerous, for if we slipped or missed our footing, we might roll, bump a few times and drop from a high cliff into the sea.

Santo Blanco was far below us and at last we could hear him clubbing Pelicans over the head and by the time we reached him he had several dead Pelicans spread on the rocks and he was bringing in the last of them near where we had stopped.

There lay five of these great silver gray birds, each boasting a wing spread of ten feet, as against seven feet of the golden eagle. The flashlight picked them out, one by one, with their long necks, long bills, and with pouches on the nether mandibles for temporary storage of their catch. They are very awkward and ungainly as they stand in groups on rocks at the edge of the tide, but when their great pinions are spread in flight over the sea, they are the epitome of grace.

That was a heavy load, over one hundred pounds, for one man to pack up those steep slippery rocks. I suggested that we help Santo Blanco to the top, but Roberto said the Pelicans were covered with lice and it was not advisable, but with Santo a few more or less made no difference. So he tied the birds together and swung them over his shoulders leaving his hands free for climbing. His torch had burned out and our only light was my flashlight to pick out hand and foot holds. At times we would reach down and give him a lift where the rocks were steepest, but for the most part he struggled alone. Sometimes he would find a few steps like a stairway and then he would look for an easy way, using both hands to pull himself up, but there was no easy way. It was a herculean task to climb those slippery rocks and one time the load almost pulled him over backward, but he recovered his balance and finally the crest of the hill was reached and the rest was down hill on an easy trail.

The boys already had a camp fire going near the beach and as soon as Santo deposited his load, they all fell to and began skinning the

[text continues on p. 217]

123 birds. As soon as the skin was off the breast was laid on top of the
223 coals and roasted. The meat was red as raw beef, but it was free of
[262] fishy flavor and tasted excellent. The Indians ate pelican flesh till daylight.

252 We gave them a generous helping of flour in a pail and this with
[123] water from a canteen, Santo stirred vigorously with a stick and then kneaded the dough with his hands until it was of the right consistency. He rolled hunks of this into little balls of dough about the size of golf balls, which he laid on his blanket. The boys picked these up, patted them flat like pancakes, scraped away ashes and sand from the edge of the fire, placed their pancakes in the hollow, covered them with hot ashes and hot sand, and in about three minutes pulled them out all baked brown. They shook the ashes and sand from them, leaving them clean and ready to eat. I am telling this in detail to show how simple cooking can be done without a dutch-oven, frying pan, or cooking grease, far from civilization.

281 We were soon paddled across to their village on the shores of
[123] Kino Bay and the skins turned over to Mrs. Santo. The skins had been split down the back, leaving the breast unmarred. The wings and legs had already been removed, and she sewed the skins together with sinew recovered from the birds. The boys had secured an extra pelican making six, three to a side, then placed together and sewed lengthwise, making a robe three and a half feet wide by seven feet long.

[342]
[291]
[301]

Pegging out and drying a Pelican skin robe by a Seri Indian woman - 1936

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hours tumultuous waves come and go sporadically, while about the mile-wide boca the choppy sea sometimes takes the form of spire-like jets, spurting 5 or 10 feet high and breaking into aigrettes of glittering spray in most unwaterlike and wholly indescribable fashion. Dewey described the strait as "unsafe for navigation by any except the smallest class of vessels"; it is safe, indeed, only for portable and indestructible craft like the Seri balsas, which may be put off or carried ashore at will by craftsmen willing to wait for wind and tide, and unpossessed of impediments of a sort to be injured by wetting. Of such an environment the balsa is a natural product.

The adjunct islets of Seriland are miniatures of Tiburon in all essential respects, save that they are without fresh water. The largest is San Esteban, a somewhat complex butte rising sharply from the waters in a nearly continuous sea-cliff recording vigorous work by storms and tides; it is occasionally visited by the Seri, chiefly in search of water-fowl and eggs. The most important of the series in Seri economy and mythology is Isla Tasnne, off the mouth of Bahia Kino; it is a rugged butte some 600 feet high, rising in wave-cut cliffs on the sea side and pedimented by low spits and banks of sand toward the lea; the sand-banks are literally flocked with pelicans, while other fowl cover the flatter ledges and crowd the crannies of the pinnacle. Isla Turner is a somewhat smaller and still more rugged butte, bounded on both sides by precipitous cliffs, while Roca Foca is merely a great rock shelving upward from the storm-swept waters off the most exposed angle of Tiburon; in the crannies of the former birds nest abundantly, while the lower ledges of both are haunted by seals. Isla Patos, north of Tiburon, is a breeding-place for different water-fowl, and is especially noted as a refuge for ducks; it, too, is for the most part a rocky butte, with a sandy shelf at the eastern base. Beyond San Esteban lies the similar but smaller Isla San Lorenzo, while Isla Salsipuedes and a few other islets stretch thence northward half way to the southern point of Isla Angel de la Guarda, the second-largest island of the gulf. San Lorenzo and the smaller islets are occasionally visited by the Seri, partly for a mineral pigment used in face-painting, partly in quest of game; and they sometimes push on to the larger island to enjoy its fairly abundant game, including the easily taken iguana, amid the ruins of an ancient culture apparently akin to that of southern Mexico. Even the most frequented islets, Tasnne and Patos, can be reached only by crossing miles of open sea; but in their way the Seri are as canny navigators as they are skilful boat-builders—it is their habit to hug the shore in threatening weather, to await wind and tide for hours or days together, to set out on distant journeys only when all conditions favor, and in emergency to seize inspiration from the storm like the vikings of old, and bend supernormal power to the control of their craft.

Summarily, the prevailing features of Seriland may be said to be

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X175 immediately burned), as well as bones and other remains of horses.[1] On August 28 and 29 Espence skirted the abrupt and rocky coasts of Tiburon, west and south of the northern bay, without seeing trace of natives; on the 30th he reached the western bay, where he found huts and fresh tracks, and captured a woman disabled by snake-bite. Farther down the bay he encountered a considerable party, who first prepared to attack, and then, overawed by his bold front, used for peace; whereupon he accepted their submission, and sent them with a letter to Colonel Andrade. This affair concluded, and escaping currents so contrary that he was nearly locked ("por las corrientes encontradas que me volvian loco"),[2] he coasted southward; and on September 1, at the southwestern point of the island, he found another rancheria, and made peaceful conquest of the occupants, whom he also sent with a letter to Andrade. Thence he coasted eastward, and, on September 3, returned to his starting point, "having navigated the island in the period of nine days, having in this time burned 64 huts and 97 balsas, and reduced to peace 194 Indians with their families." The next day he transported the captives to the mainland, "their number, comprising men, women, and children, reaching 384, besides about 37 remaining at large on the island."[3] On September 5 the remaining troops were transferred to the mainland, with the exception of a small detachment, which remained for an unspecified, but evidently short period, in the vain hope of corraling the warriors, with the families to which they belonged, supposed (on grounds not given) to remain on the island. The troops and their captives immediately moved to Laguna de los Cercaditos (probably Laguna la Cruz) to rejoin the cavalry guard; thence, suffering much from thirst, they marched toward Hermosillo, arriving at that place September 12,[4] where the troops and captives formed a triumphal procession, met on the highroad by the merchants and the civil and military authorities, and greeted by the ringing of bells and the firing of rockets, and with music and refreshments.

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[1] The expressions of the journal indicate that Espence was not familiar with the Seri custom of eviscerating and quartering stolen stock, consuming the entrails at once, and transporting the more substantial pieces across the strait on their balsas. Velasco fell into still further error in assuming that the expressions relate to tracks and other indications of the presence of living stock on the island.

[2] Velasco, op. cit., p. 102.

[3] Ibid., p. 103. On the same page Espence classifies the captives as 9 old men ("viejos de cuenta ahos arriba"), 12 boldmen ("viejos de cuarenta arriba"), 1 blind, 1 idiotic boy, 5 crippled male, 1 crippled female, 140 women, 140 children, and 144 men—510 in all. Andrade's report enumerates the captives as 120 in each of two lots, with 20 or more in a third, making 260 odd (Ibid., p. 100); while Velasco put the number at 300 and odd ("doscientas y tantas personas"), men, women, and children, including only 30 odd oldsters and warriors combined. The discrepancies are characteristic, and of a piece with those prevailing in the same latitude and longitude today: e. g., Velasco says there are but four waters on the island, Espence says there are eight or ten, and Andrade implies that there are many; Velasco says there were 100 troops from Guaymas, while Andrade mentions only 80; Espence says that in transporting the stock (as noted above) but one mule was drowned by the strength of the current, while Andrade says that a mule and a steer were lost on account of the bad storm which prevailed during the day; yet there is such agreement between dates and facts in the independent journals of Andrade and Espence as to establish general verity despite the provincial vagueness concerning details.

[4] According to Andrade (Ibid., p. 102); Velasco says September 16 (Ibid., p. 104).

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blocks or metates, though it is manifest that most of the camps were fireless and many foodless. It is particularly noteworthy that even the more temporary resting-places are seldom if ever less than a mile or two from the nearest fresh water. In short, the Seri are not a domiciliary folk, but rather homeless wanderers, customarily roving from place to place, frequently if not commonly sleeping where overtaken by exhaustion or storm, ordinarily slumbering through a part of the day and watching by night, habitually avoiding fresh waters save in hurried and stealthy visits, and apparently gathering in their flimsy huts only on special occasions. 361 [312]

In conformity with their rovingness the Seri are notable burden-bearers. They habitually carry their entire stock of personal belongings (arms, implements, utensils, and bedding), as well as their stock of food and—weightiest burden of all—the water requisite for prolonged sustenance amid scorching deserts, in all their wanderings, the water being borne chiefly by women, in ollas, either balanced on the head singly or slung in pairs on rude yokes like those of Chinese coolies. And they have never grasped the idea of imposing their burdens on their bestial associates; their coyote-curs are not harnessed or even led; when they surround and capture horses, burros, and kine they make no use of ropes, never think of mounting even when pursued by vaqueros, but immediately break the necks or club out the brains of the beasts, perchance to tear the writhing body into quarters and flee for their lives with the reeking flesh still quivering on their sturdy heads and brawny shoulders—and scores of vaqueros agree in the affirmation (wholly incredible as it would be if supported by fewer witnesses) that even when so burdened the Seri skim the sand wastes of Desierto Encinas more rapidly than avenging horsemen can follow. 482 [231] 224 177 [481]

The hardly conceivable fleetness of the Seri is conformable with their habitual rovingness and their ability as burden-bearers; and this faculty is established by cumulative evidence so voluminous and consistent as to outweigh the presumption arising from the standards attained among other peoples. A few minutes after they were photographed, the group of boys shown in plate XVI, with several others of about the same size, provided themselves with a stock of their favorite human-hair cords, "rounded up" a dozen mongrel coyote-dogs haunting the rancheria at Costa Rica, and herded the unwilling animals toward a shrubbery-free space a quarter of a mile away, in order to rope them in imitation of the work of the Mexican cowboys earlier in the morning. From time to time as they went a frightened cur sneaked or broke through the cordon of boys, and made for distant shrub-tufts at top speed; yet in every case a boy darted from the ring, headed off the animal within one or two hundred yards, and lashed it back to its place. On arriving at their miniature rodeo the boys widened their ring, and at a signal scattered and frightened the dogs; then, when the fleeing animals had a fair start, each selected his victim and fol- 177 231 481 857

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loved it, yelling and swinging his light lasso, until, after much doubling and dodging and many unsuccessful casts, he caught and dragged the howling beast back to the open; and it was only after half a dozen repetitions that enough dogs had escaped to spoil the sport. As the boys lounged chattering back toward the rancheria their course lay between two clumps of the usual desert shrubbery, so placed that when the first was obliquely left and 40 or 50 feet distant from them, the other was obliquely right and 100 feet away. At this point a bevy of small birds (perhaps blackbirds—at any rate corresponding to blackbirds in size and flight) fluttered suddenly out of the nearer clump toward the more distant one, when, too instantaneously for the untrained eye to catch exchange of signal or beginning of movement, the boys lunged forward in a common effort to seize the birds; and though none were entirely successful, one exultantly displayed a tuft of feathers clutched by his fingers as the bird darted into and through the thorny harbor. When the distances were paced it was found that, although the birds had the advantage of the start, the boys covered at least 90 per cent of their distance in the same time; while the spontaneity of the impulse demonstrated habitual chase of flying game under fit conditions.

While obtaining the Seri vocabulary with Mashém's aid, advantage was taken of every opportunity to secure collateral information concerning the actual use of the terms, and thereby of gaining insight into the tribal habits. Through his naive explanations, usually repeated and corroborated by the elderwoman of the Turtle clan (Juana María) and others of the tribe, it was learned that half-grown Seri boys are fond of hunting hares (jack-rabbits); that they usually go out for this purpose in threes or fours; that when a hare is started they scatter, one following it slowly while the others set off obliquely in such manner as to head it off and keep it in a zigzag or doubling course until it tires; and that they then close in and take the animal in their hands, frequently bringing it in alive to show that it was fairly caught—for it is deemed discreditable, if not actually wrong, to take game animals without giving them opportunity for escape or defense by exercise of their natural powers. Similarly, Mashém described the chase of the burro and other deer as ordinarily conducted by five persons (of whom one or two may be youths), who scatter at sight of the quarry, gradually surround it, bewilder it by confronting it at all points, and finally close in either to seize it with their hands, or perhaps to brain it with a stone or short club; the former being held the proper way and the latter a partial failure. This hunting custom, described as a commonplace by Mashém, is established by the vaqueros who had frequently witnessed it from a distance; and the same extra-tribal observers described still more striking feats of individual Seri hunters: Don Manuel, son of Señor Encinas, and Don Ygnacio Lozania were endeavoring to train to work a robust Seri (one of a band sojourning temporarily at Costa

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Rica) noted for his prowess in hunting. One hot afternoon he begged relief from his tasks, saying the spirit of catching a deer had hold on him; and he was excused on condition that the deer be brought entire to the rancho. Two hours later he was seen driving in a full-grown buck; on approaching the rancho the terrified animal turned this way and that, describing long arcs in wild efforts to avoid the human habitation; yet the hunter kept beyond it, heading it off at every turn and gradually working it nearer, until, at a sudden turn, he was able to rush on it; whereupon he caught it, threw it over his shoulders, and ran in to the rancho with the animal still struggling and kicking off its overheated hoofs. 224

Señor Encinas himself, with Don Andrés Noriega and several other attachés, vouch for the catching of a horse by a Seri hunter in still more expeditious fashion: one of the horses belonging to the rancho was exceptionally fat, and hence exceptionally tempting to the Seri band (and at the same time worthless to the vaqueros); the chief begged for it persistently until, wearied by his importunities, the ranchero offered the horse to the band on condition that a single one of them should catch it within a fixed distance (about 200 yards) from the gateway of the corral—and the offer was promptly accepted. With the view of making the test of fleetness fair, a vaquero was called in to frighten the horse and start him running around the interior of the corral, while a boy stood by to drop the bars at the proper moment, the Indian standing ready outside the gateway; when the animal had gained its best speed the bars were dropped and it bolted for the open plains—but before the 200-yard limit was reached the hunter had overtaken it, leaped on its withers, caught it by the jaw in one hand and the foretop in the other, and thereby thrown it in such manner as to break its neck. Knowing of these and other instances, L. K. Thompson, of Hermosillo, undertook arrangements for publicly exhibiting Seri runners as deer catchers at different expositions during the nineties; but his arrangements failed, chiefly because of the anticipated (and probably underestimated) difficulty of taming the Seri sufficiently for the purpose. [648]

About 1893, Señor Encinas and several attendants left Costa Rica one morning for Hermosillo, leaving at the rancho, among others, a Seri matron with a sick child nearly a year old; in the evening (as they learned later) the child was worse, and the matron took the trail about dusk, in the hope of finding a cure in the white man's touch or other medicine—and at dawn next morning she was at Molino del Encinas, 17 leagues (nearly 45 miles) away, with her helpless child and a peace offering in the form of a hare, which she had run down and caught in the course of the journey. And the matrons, with children astride their hips and water-filled ollas balanced on their heads, and all their goods and chattels piled on their backs, habitually traverse Desierto Encinas from the sea to Costa Rica (some 30 miles), or from Costa Rica to the sea, in a night. 481 [484]

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224 While by far the larger share of Seri sustenance is drawn from the sea, a not inconsiderable portion is derived from the land; for the warriors and striplings and even the women are more skilful hunters than fishers.

The larger objects of the feral chase are deer of two or three species (the bura, or mule-deer, being most conspicuous and easiest taken), antelope, and mountain sheep; to which the puma, the jaguar, and perhaps two or three other carnivores might be added. The conventional method of taking the bura and other deer is a combination of stalking and coursing, usually conducted by five of the younger warriors, though three or four may serve in emergency; any excess over five being regarded as superfluous, or as a confession of inferiority. The chase is conducted in a distinctly ceremonial and probably ritualistic fashion, even when the finding of the game is casual, or incidental to a journey: at sight of the quarry, the five huntsmen scatter stealthily in such manner as partially to surround it; when it takes fright one after the other strives to show himself above the shrubbery or dunes in order to break its line of flight into a series of zigzags; and whether successful in this effort or not they keep approximate pace with it until it tires, then gradually surround it, and finally rush in to either seize it in their hands or cripple it with clubs—though the latter procedure is deemed undignified, if not wrong, and hardly less disreputable than complete failure. When practicable the course is laid toward the rancheria or camp; and in any event the ideal finish is to bring the animal alive into the family group, where it may be dissected by the women, and where the weaklings may receive due share of the much-prized blood and entrails. The dissection is merely a ravenous
264 rending of skin and flesh, primarily with the teeth (perhaps after oblique bruising or tearing by blows with the hupf over strongly flexed joints), largely with hands and fingers aided anon by a foot planted on the carcass, and partly with some improvised device, such as a horn or tooth of the victim itself, the serrated edge of a shell cup, or perhaps a sharp-edged cane-splint from a broken arrow carried for emergency's sake. Commonly the entire animal, save skin and harder bones, is gulped at a sitting in which the zeal of the devotee and the frenzy of the carnivore blend; but in case the group is small and the quarry large, the sitting is extended by naps or prolonged slumberings, and
[252] the more energetic squaws may even trouble to kindle a fire and partially cook the larger joints, thereby inciting pallid appetite to new efforts. Finally the leg bones are split for the marrow and their ends
[237] preserved for awls; the horns are retained by the successful huntsmen
[281] as talisman-trophies; while the skin is stretched in the desert sun, scratched and gnawed free of superfluous tissue, rubbed into partial
224 pliability, and kept for bedding or robe or kilt.
857 The chase of the hare is closely parallel to that of the deer save that it is conducted by striplings, who thereby serve apprenticeship in hunt-

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ing and at the same time enrich the tribal larder with a game beneath the dignity of the warriors; while still smaller boys similarly chase the rabbit, which is commonly scorned by the striplings. The conventional hare-hunting party is three, and it is deemed disreputable to increase this number greatly. The youths spread at sight of the game and seek to surround it, taking ingenious and constant advantage of the habit of the hare to run obliquely or in zigzags to survey more readily the source of its fright; for some time they startle it but slightly by successive appearances at a distance, but gradually increase its harassment until it bounds hither and thither in terror, when they rapidly close in and seize it, the entire chase commonly lasting but a few minutes. The quarry is customarily taken alive to camp, where it is quickly rent to fragments and the entrails and flesh and most of the bones consumed; the skin usually passes into possession of a matron for use as infantile clothing or cradle bedding, while the ears are kept by the youth who first seized the game until his feat is eclipsed by some other event—unless chance hunger sooner tempts him to transmute his trophy into pottage.

While the collective, semiceremonial style of chase alone is thoroughly good form in Seri custom, it is often rendered impracticable by the scattering of the tribe in separate families or small bands, in which case the bura and its associates, like the larger carnivores customarily, are taken by strategy rather than by strength. This form of chase is largely individual; in it archery plays a leading rôle; and in it, too, ambuscade, stealthy lying in wait, and covert assault attain high development. It is closely analogous with the warfare typical of the tribe; and it is especially noteworthy as one of the most effective stimuli to intellectual activity, and hence to the development of invention—if the term may be applied to industrial products so lowly as those of the Seri.

The chief artifact produced by the strategic chase on land would seem to be the analogue of the harpoon used at sea, i. e., the arrow. This weapon is one of the three or four most highly differentiated and thoroughly perfected of the Seri artifacts, ranking with canteen-ollas and balsa, and perhaps outranking the turtle-harpoon. It is fabricated with great care and high skill, and with striking uniformity in details of material and construction. A typical example is 25 inches in length and consists of three pieces—point, foreshaft, and main shaft (feathered toward the nock). The foreshaft is 8¼ inches long, of hard wood carefully ground by rubbing with quartzite or pumice into cylindrical form, about three-eighths of an inch in diameter at the larger end and tapering slightly toward the point; the larger end is extended by careful grinding into a tang which is fitted into the main shaft, the joint being neatly wrapped with sinew. This main shaft is a cane-stalk (*Phragmites communis*?) 15 or 16 inches long, carefully selected for size and well straightened and smoothed; it is feathered with three equidistantly-

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ally shattered, and no prints are known to have been made from it; but the fragments were carefully joined, and were kindly transferred to the Bureau by Mr Von Bayer in 1897, and from them plate XXIX was carefully drawn. The posture (partly concealed by the drapery) is extraordinary, being quite beyond the reach of the average human, and impossible of maintenance for any considerable interval even by the well-wonted Seri. The posture itself partly explains the difficulty of inducing the warriors at Costa Rica to assume it, since it is essentially a fleeting one, and indeed but a part of a continuous and stressful action—it is no less difficult to assume, or to catch in the camera, than the typical attitude of a baseball pitcher in action. The posture thus fortunately caught is quite in accord with the accounts of Seri archery from the esoteric side given by Mashém, and with the exoteric observations of Señor Encinas, Don Andrés, and others; for all accounts agree in indicating that the archer commonly rests inert and moveless as the watching feline up to a critical instant, then springs into movement as swiftly as the leaping jaguar, and hurls, rather than shoots, one, two, or three arrows before rushing in to the death or skulking to cover as the issue may require.

The Seri archery habit is in every way consistent with the general habits of the tribe, alike in the chase and in warfare, in which the tribesmen, actuated by the fierce blood-craze common to carnivores, either leap on their prey with purpling eyes and gnashing teeth, or beat quick and stealthy retreat; and it is especially significant in the light thrown on the bow as a device for swift and vigorous rather than accurate offense, an apparatus for lengthening the arm still more than does the harpoon, and at the same time strengthening and intensifying its stroke. The quick-changing attitudes of half hurling are equally suggestive of the use of the atlatl, and support Cushing's hypothesis[1] that the bow was derived from the corded throwing-stick. While the critical posture of Seri archery is unique in degree if not in kind in the western hemisphere, so far as is known, an approximation to it (illustrated in fig. 22) has been observed in Central Africa.[2] On the whole the Seri mode of using the bow, like its crude form and rude finish, indicates that it is a relatively new and ill-developed artifact, possibly accultural though more probably joined indigenously with the archaic arrow to beget a highly effective device for food-getting as well as for warfare; while the genetic stages are still displayed not only in the homologies between arrow and harpoon, but by the common functions of both arrow and bow with the fire-sticks.

Concordantly, as indicated by the use of the archery apparatus, the individual taking of large game is effected either by stealthy stalking or by patient ambuscade ended by a sudden rush; when, if the chase is successful, the quarry is rent and consumed as at the finish of the

[1] The Arrow: Proceedings Am. Ass. Adv. Sci., vol. XLIV, 1895, pp. 232-240.
[2] Grave's Journey to the Livingston Tree. The Century Magazine, vol. LII, 1896, p. 788.

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224 semiceremonial collective chase. The fleet but wary antelope, the pugnacious peccary, the wandering puma and jaguar, and the mountain sheep of the rocky fastnesses, are among the favorite objects of this style of chase; while the larger land birds and some of the water-fowl are taken in similar fashion.

The smaller land game comprises a tortoise or two, all the local

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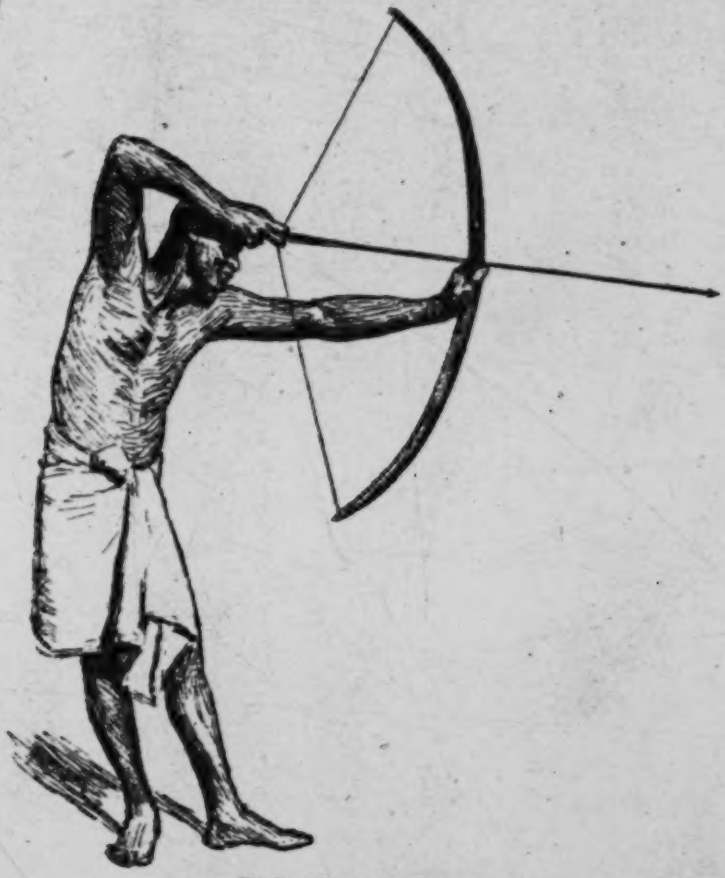

FIG. 22.—African archery posture.

snakes and lizards, and a good many insects, besides various birds, including hawks and owls, as well as the eaters of seeds and insects. The crow and vulture are also classed as edible, though they are rare in Seriland, probably because of the effective scavengering of the province by its human residents. It is a significant fact that the

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smaller rodents, especially the long-tail nocturnal squirrel, are excluded from the Seri menu by a rigidly observed tabu of undiscovered meaning. A general consequence of this tabu is readily observed on entering Seriland; there is a notable rarity of the serpents, the high-colored and swift efts, and the logy lizards and dull phrynosomas so abundant in neighboring deserts, as well as of song birds and their nests; and this dearth is coupled with a still more notable abundance of the rodents, which have increased and multiplied throughout Seriland so abundantly that their burrows honeycomb hundreds of square miles of territory. A special consequence of the tabu is found in the fact that the myriad squirrel tunnels have rendered much of the territory impassable for horses and nearly so for pedestrians, and have thereby served to repel invaders and enable the jealous tribesmen to protect their principality against the hated alien. Seriland and the Seri are remarkable for illustrations of the interdependence between a primitive folk and their environment; but none of the relations are more striking than that exemplified by the timid nocturnal rodent, which, protected by a faith, has not only risen to the leading place in the local fauna, but has rewarded its protectors by protecting their territory for centuries.

In both the collective and the strategic chase, constant advantage is taken of weakness and incapacity, whether temporary or permanent, of the prospective quarry; so that diseased and wounded as well as sluggish and stupid animals are eliminated. The effect of this policy on the fauna is undoubtedly to extinguish the less capable species and to stimulate and improve the more capable; i. e., the presence of the human factor merely intensifies the bitter struggle for existence in which the subhuman things of this desert province are engaged. At the same time, the entrance of the human folk into the struggle characteristic of subhuman species serves to bar them from one of the most helpful ways to the advancement of their kind—i. e., the way leading through cotoleration with animals to perfected zoöculture. The most avidly sought weaklings in the Seri chase are the helpless young, and the heavily gravid dams which are pursued and rent to fragments with a horrid fury doubtless reflecting the practical certainty of capture and the exceptionally succulent tidbits afforded by the fetal flesh; naturally the cruel custom reacts on habitual thought in such wise that the very sight of pregnancy or travail or newborn helplessness awakens slumbering blood-thirst and impels to ferocious slaughter. To such custom and deep-planted mental habit may be ascribed some of the most shocking barbarities in the history of Seri rapine, tragedies too terrible for repetition save in bated breath of survivors, yet explaining the utter horror in which the Seri marauder is held on his own frontier. At the same time the hunting custom and the mental habit explain the blindness of the Seri to the rudiments of zoöculture, and clarify their intolerance of all animal associates, save the sly coyote that habitually

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224 hides its travail and suckling in the wilderness, and perhaps the deified
[225] pelican.[1]

Parallel to the chase of the larger land game is the hunting of horses and other imported stock; for the animals are regarded in no other light than that of easy quarry. The horses of the Seri frontier, like those of wild ranges generally, are strongly gregarious, and the herds are well regimented under recognized leaders, so that the chase of their kind is necessarily collective on the part of both hunters and game; and the favorite method is for a considerable group of either warriors or women to surround the entire herd, or a band cut out from it, "mill" them (i. e., set them running in a gradually contracting circle) and occasionally dash on an animal, promising by reason of exceptional fatness or gravidness. The warrior's customary clutch is by the mane or foretop with one hand and the muzzle with the other, with his weight thrown largely on the neck, when a quick wrench throws the animal, and, if all goes well, breaks its neck;[2] while the huntress commonly aims to stun the animal with a blow from her hupf. In either case the disposition of the carcass is similar to that of other large quarry, save that thought is given to the danger of ensuing attack by vaqueros; so that it is customary to consume at once only the blood and pluck, and if time permits the paunch and intestines with their contents, and then to rend the remainder into quarters, which warriors or even women shoulder and rush toward their stronghold. Burros (which, next to the green turtle, afford the favorite Seri food) and horned cattle are commonly stalked and slain, or, at least, wounded with arrows, so that it is commonly the stragglers that are picked off; though sometimes several animals are either milled or rushed, and thrown by a

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[1] A single incident expressing the first sentiment toward travelling animals must be noted: a few minutes after the group shown in plate XI was photographed, a starveling cur—a female apparently of nearly pure coyote blood and wild's a week of Sun—slunk toward the broken olla-bottle in the left center of the picture, in which a rank horse-foot was simmering; the women heading over the bottle suddenly straightened and shot out her foot with such force and directness that the cur was lifted entirely over the corner of the nearest jacal, and the poor beast fell stunned and moaning, a prematurely born pup protruding from her two-thirds of its length. The sound of the stroke and fall attracted attention throughout the group; the women smiled and greeted approval of the well-aimed kick, and a dozen children gathered to continue the assault. Partially recovering, the cur struggled to its feet and started for the chaparral, followed by the jeering throng; at first the chase seemed spontaneous only, but suddenly one of the smaller boys (the third from the left in the group shown in plate XVI) took on a new aspect—his figure stiffened, his form set, his eyes shot purple and green, and he plunged into the lead, and just before the hunted beast reached cover he seized the protruding embryo, jerked it away, and ran off in triumph. Three minutes afterward he was seen in the shelter of a jacal greedily gorging his spoil in concert with Mrs. Juan, as the Cucapaian boy devours a peeled banana. Meanwhile, two or three males who had struck his troll stood around begging bites and snarling at chance blood spatters on earth, skin, or tattered rags; and as the victor came forth later, licking his chops, he was met by half a dozen lean adolescent ghoulies for his pourboire from the dozen natives lounging about the neighboring jacales. Parallel instances, both observed and gathered at second hand, might be added in numbers; but this may suffice as the sole specific basis for the generalization which places the first below the plane of possible cannibalism—a generalization so broad as to demand some record of data which it would be more agreeable to ignore.

[2] This warrior's clutch, and the notion that it is discreditable if not attended for the succeeding adult to take possession by trespass in hand-to-hand slaughter, are strongly suggestive of ceremonial customs and of studied mimicry of the larger carnivores, such as the jaguar—the "male-striker" of the Maya.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

strong wrench on the horns or stanned with a blow of war-club or hupf, as conditions may demand. Straggling swine and wandering dogs are occasionally ambushed or stalked and transfixed with arrows, torn hurriedly into fragments, or shouldered and carried off struggling, as exigency may require; while sheep and goats are practically barred from the entire Seri frontier because of their utter helplessness in the face of so hardy huntsmen.

The quantity of stock consumed by the Seri varies greatly with the policy of rancheros and vaqueros. At different times during the last two and a half centuries it has been estimated that the chief portion of the subsistence of the tribe was derived from stolen stock, and it is probable that during the early period of the Encinas régime this

FIG. 23—Desiccated pork.

estimate was fair; but under the Draconian rule of a Seri head for each head of slaughtered stock, the consumption is reduced to a few dozen head annually, including superannuated, crippled, and diseased animals unable to keep up with the herds, those bogged in Playa Noriega and other basins during freshets, the stallions and bulls slain in strife for leadership of their bands, and the festering or semimummied carcasses gladly turned over by idle rancheros on the chance visits of Seri bands to the frontier (such as the specimen in the protograph reproduced in figure 23).

No special devices have been developed in connection with the chase for stock, nor has material progress been made in acquiring Caucasian devices. There are, indeed, indications of a disposition to use

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

177 224 knives in severing the tough integuments and tendons of horses and kine, although the tendency has not yet resulted (as elsewhere noted, ante, pp. 133–154) in the development of a knife-sense; and although boys on the frontier play at roping dogs, no effort to use the riata or any form of rope is made in the actual chase. As naively explained by Mashém amid approving grunts from his clan-mates, they have no time for ropes or knives when hungry.

262 A quantitatively unimportant yet by no means negligible fraction of the normal diet of Seriland is vegetal; and while the sources of vegetal food are many and diverse, the chief constituent is a single product characteristic of American deserts, viz, the tuna, or prickly pear.

222 All of the cacti of the region yield tunas in considerable quantity. The pitahaya is perhaps the most abundant producer, and its name is often given to the fruit; the huge saguaro affords an enormous annual yield, and the still more gigantic saguesa is even more prolific, especially in its immense forests along the eastern base of Sierra Seri; the cina adds materially to the aggregate product, while the nopal, or common prickly pear, contributes a quota acquiring importance from the facility with which it may be harvested. The fruits of all these cacti are sometimes classed as sweet tunas, in contradistinction from the sour tunas yielded in great abundance by the cholla and consumed with avidity by stock, though seldom eaten by men. The edible tunas average about the size of lemons, and resemble figs save that their skin is beset with prickles. The portion eaten is a luscious pulp, filled with minute seeds like those of the fig save that they are too hard for mastication or digestion, its flavor ranging from the sickly sweet of the overcultivated fig to a pleasant acidity. While occasional tunas may be found at any time during the year, the normal harvest occurs about midsummer, or shortly before the July-August humid season, and lasts for several weeks. During the height of the season the clans withdraw from the coast and give undivided attention to the collection and consumption of the fruits, gorging them in such quantities that, according to the testimony of the vaqueros, they are fattened beyond recognition. Commonly the tunas are eaten just as they are gathered, and the families and larger bands move about from pitahaya to pitahaya and from valley to valley in a slovenly chase of this natural harvest, until waning supply and cloying appetite drive them back to the severer chase of turtle and pelican. The fruit is not cooked, and never preserved save in the noisome way of nature, and is rarely transported in quantities or over distances of industrial importance; yet the product may have some connection with the basketry of the tribe. The devices for collecting the fruits, especially from the lofty saguaro and saguesa, are mere improvisations of harpoon shafts, palobianco branches, or chance cane-stalks carried primarily for arrow-making or balsa construction.

[412]

1; McGee E-5 (1894-1895)1898 NU31 Seri NU31

is an infallible remedy. On the whole it seems probable that the yerba mala (*Sebastiana bilocularis?*), or yerba de flécha, or mago, or magot, yielded or formed the standard arrow-poison of the Opata and perhaps of other Indians, and that the ill-repute of the shrub survived and spread throughout Mexicanized Sonora in such frequent repetition and common belief as to affect the ideas of residents and travelers alike; but it seems equally probable that the magic-inspired brew of the Seri is entirely distinct.[1]

As suggested by widespread primitive customs, and as illustrated specifically by the arrow-charming, the warfare of the Seri is largely sortilegic, this feature being but an extension and magnification of a corresponding feature of their hunting customs. The economic object of the chase is, of course, the flesh of the quarry; but the hunt normally begins with invocatory or other fiducial ceremonies, culminates in a feast opened with oblations, and ends in the use of horns or hoofs, teeth or bones, mane or tail, as talisman-trophies—primarily pledges of fealty to the favorable potencies, only secondarily symbols of success. The observances illumine the ever-present esoteric object of the chase, which is to gain the favor or overcome the power of the beast-god represented by the animal hunted; in general, this is sought to be effected through mimetic movements, or symbolic objects, associated with that animal-kind, and the retained charm-trophy is valued as a symbol of the placation or outwitting of a particular deity. Similarly, the Seri warrior strives for the supposed deific symbols of the enemy—the scalp or headdress or arrow of the alien tribesman, the fire-breathing and echo-waking (as well as death-dealing) wand of the Caucasian; and the Papago arrows, Yaqui scalps, and white man's firearms are sought avidly, treasured as fetishes, and often carried conspicuously as badges of borrowed prowess.[2] So the Seri are never without alien insignia in the form of weapons. The day before the 1895 expedition entered their stronghold, a band of warriors and women were frightened from a freshly slaughtered cow by a party of yaqueros so suddenly that their arms were left behind—and these

[1] It should be noted that the actuality of the poisonous property ascribed to the yerba mala is in some degree questionable; the plant is the only one of southern Papaguería yielding suitable material for arrow-shafts, and it is possible (if not probable) that it was consecrated to this purpose by the aboriginal Opata and protected by tabu in such wise as to become a sacred and fearsome thing. It is accordingly by no means improbable that the reputed poisonous property is but the product of generations of association, and that the plant is really harmless—an inference supported by experiments on the part of the leader of the 1895 expedition, who swallowed the juice of stem and leaves in two or three minute but increasing doses without perceptible effect. On the other hand, it should be observed that the region is one abounding in toxic juices, and that this shrub is so luxuriant and so free from thorny armament and other protective devices of a mechanical sort as to raise the presumption that it must be protected against herbivorous animals, at least, by chemical constituents of some kind (cf. ante, p. 35).

[2] These motives on the part of the Seri were reciprocated by their tribal comrades; a Papago fetish in the form of an Apache arrowpoint, long worn by an aged warrior as a protection from Apache arrows, was among the spoil of the 1894 expedition; and a "poisoned" Seri arrowhead and foreshaft, worn by a supernumerated Papago "doctor" as a badge of invulnerability to similar missiles, was confidently shown to the 1895 expedition, but was held above price by its wearer—and this despite the fact that he had been christianized for decades, and retained no other pagan symbols.

278 [171] 224 [776] 727 177 411 726 [171]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

the crudeness of the work, strongly supports the inference that the stone arrow-making of the Seri was originally a fetishistic mimicry of alien devices—a plane, indeed, above which the craft has hardly risen even in recent decades. 174 324

While the Seri are devoid of military tactics in the strict sense of the term, they have certain customs of warfare which seem to be scrupulously observed. These customs are closely akin to those followed in hunting the larger land animals—indeed, the warfare of the tribe is merely an intensified counterpart of their chase. 726 [224]

The favorite tactical device of the warriors, as indicated by the great majority of their battles, is the ambuscade, laid and sprung either with or without the aid of decoys (usually aged women). Sometimes a considerable body act in concert under a prearranged plan; more commonly a few warriors only are involved at the outset, though these may be joined as the crisis approaches by companions lurking behind rocks and shrubs to be either on hand at the finish or in the way of ready flight, according to the turn of the battle-tide; and it is probable that the greater part of the ambuscades prove stillborn by reason of the oozing courage of leaders and the shirking of their supporters if the prospective victims present a bold front, or if the final omens are otherwise adverse. The ambuscade, with its flying contingent, grades into the device of stalking a stationary or slowly moving enemy, the stealthy approach terminating either in covert attack at close range or in sudden rush by a superior force. The theory, or rather the instinctive plan, of the campaign is to seek advantage in both position and numbers, to keep under cover until the instant of attack, to have sure and ample lines of retreat, and in every way to minimize individual risk.

There is a widespread notion toward the Seri frontier that the savages are given to sorties and surprises by night; but both specific testimony and the records indicate, when carefully analyzed, that this tactical device is much less common in practice than in repute, and is not, indeed, characteristic of the tribe. A few known battles began in attacks by night; but the war parties, like the hunting and fishing parties (save in the semiceremonial pelican pilgrimages), display decided preference for daylight in their forays—indeed, there are various indications that the folk are much more timid and oppressed with superstitious fears by night than by day.

In rare cases small parties of aliens have been half openly surrounded and done to death by considerably larger parties of the savage folk; but this method, too, is incongruous with the fixed habits of the tribe and with the deep-planted instinct of avoiding personal exposure.

A considerable number of the long list of homicides charged against the Seri, and marking the beginning of many of their battles, were individual rather than collective, the consummation of inimical impulse sometimes treacherously concealed for favorable opportunity, as in the 186 648

2: Kroeber E-5 (1930)1931 NU31 Seri NU31

789 Some shamans display their ability to hold live coals in their mouth.

Taboos

[88] 784 At first menstruation, the girl eats nothing (!) for 8 days, only drinking water. For 4 nights a *fiesta* is held for her, men and women dancing in a circle, anti-sunwise. She is outside the ring. Her head is not covered. San-pit roasting was unknown to the informant.

[841] At menstruation a woman drinks hot water. She may cook for others. She may not eat deer meat.

[844] After childbirth, both husband and wife eat only *atole* (gruel) and water, he for 4, she for 8 days. She may not work at all, he only a little, such as getting wood, "hunting" as necessary, etc.

[861] There is no puberty ceremony for boys. Nothing is said to be known of any rule forbidding a boy to eat of the first game killed by him.

[224]

[833] Continence before hunting deer was not observed. Nor was there any special treatment or respect due the deer carcass. It is said that deer meat could not be left behind unless there was too much, but this is probably a statement of practise rather than a taboo.

Dances

535 [727] Besides the girl's puberty dance, the Seri also had a scalp dance. Only the frontal piece of the scalp was used. This was hung on a pole. Men (armed) and women danced together around it. If the scalp fell down, all would die.

Dances seen were solo on a plank laid over a shallow pit. Several singers sat by, beating or rattling anything convenient. Each song and dance lasted scarcely three minutes. The tempo is fast. The step is a quick double shuffle with alternate feet. In one type, the dancer held to a stick with one hand, his body and hanging arm remaining as motionless as possible. Another type was without the stick, the dancer holding a gourd rattle and keeping his body bent forward somewhat.

534 171 Rattles are of gourds, e'Xĕc, on a stick, or of cocoons, Xekakĕ'ntta. Deer-hoof rattles were denied. The cocoons are on a band worn below the knee. The Yaqui-Mayo wear such knee-bands of cocoons; and sometimes of deer-hoofs. The Gila Pima also know the cocoon band.

Various Religious Items

276 Datura (toloache, jimsonweed) does not appear to have been used. Even the plant seems unknown, although it is said to occur in the Seri range.

778 789 Rain making seems to be by amulet rather than by direct shamanistic power. For instance, Antonio Herrera wears a small object

2: Kroeber E-5 (1930)1931 NU31 Seri NU31

NU 583 As to the "total absence" (p. 285) of marriage purchase, whereas I found it, such purchase can hardly be believed to have originated wholly within the last 35 years, in view of its wide distribution in native America.

114 614 The whole matter of maternal lineages crystallized into totemic clans with matron rule (pp. 10-11, 167-8, 269 seq.) seems a fantasy. A careful reading of the passages in questions reveals how much McGee has built up on statements which he conscientiously admits to have been slender, probable only, and subject to possible misunderstanding. It must be remembered that in 1894 the matriarchate as original and primitive was still standard anthropological doctrine. At any rate, I got nothing suggesting even matrilineal reckoning in my indirect approaches to the subject, and explicit denials when it was directly presented.

114 342 That house-building may now and then be "accompanied by a chant" (p. 223) is possible, though it seems out of accord with the haphazard and shiftless methods of Seri work and the flimsy irregularity of their homes; but that the chant was "usually led by the eldest matron" seems more matriarchate.

114 174 That the Upanguayma, Guayma, and Tepoka were successively "extruded" (p. 75) would be correct if there were anything to show that the Seri were the parent stock of superior virtue, conservatism, and faithful attachment to their original habitat.

114 601 The statement (p. 11) that "kinship terms are strikingly scanty," made in the face of round-about and imperfect speech communications with the Seri, I cite only as an indication of the degree of McGee's readiness to fall back upon his preconceptions when facts became thin.

114 304 I did not note the absence of superior medial incisor teeth observed by McGee (p. 169) in married women. If a regular practise, its connection with the puberty rite would be a natural inference. But knocking out of teeth is a rare custom in America.

114 224 McGee's statements (pp. 196-7) that it is "undignified, if not wrong" to kill deer other than with the hands, and that jackrabbits are "customarily taken alive to camp," seem over-emphases. That a sense of sport or passing pride, or lack of weapons, now and then leads to such happenings, I do not doubt; but the Seri seem too practical and unromantic to exact rules on the point. I suspect that a youth who insisted on living up to them would soon be considered a vain lore. I may add that I saw a crippled wild duck hobble about the camp on Tiburon for two days, being played with occasionally by the children—without unusual roughness or unkindliness—and that finally it wandered to the water and gradually drifted off without notice being taken.

114 302 614 Face painting is construed by McGee as sematic of totemic line-

2:Davis & Dawson I-5 (1922-1960) 1945
NUSI Seri NUSI

283 from coarse, wiry grass stems, and saved all
302 the brushings to be used in the making of strong threads and cords.

The fleetness of foot and remarkable physi-
147 cal endurance of these people attest to the
491 rigorous and difficult life in Seriland where the ability of an individual to survive a season of want depended upon the reserve energy of his own body by which he could carry himself long distances in search of food and yet have strength to return to a water-hole, left miles behind. The slender, sinewy limbs and capacious chests of the Seris, in whom no trace of obesity has ever been observed, show clearly the result of untold centuries of selection of the strong by the severity of the environment, where water,
[312] too heavy for transport, too difficult of storage, is yet always within reach of an organism strong enough to journey ten, twenty, or even fifty miles in search of it.

Perhaps the most severe physical exercise
224 practiced by the Seris was the chase of animal game, particularly since it was often resorted to only after a period of weakening hunger which prompted the all-out effort to obtain adequate food supply. Days of wandering over the deserts in search of vegetable food were sometimes unrewarded, and although rabbits were to be had for the chase, they were too small to be of much consequence in the feeding of a family. The deer were fairly plentiful and provided excellently for a lasting feast.

The deer hunt was conducted by several tribesmen without weapons. When an animal was sighted it was followed by one and circled by others of the party, chased until frantic and exhausted, whereupon one of the men rushed upon it, threw it to the ground and caved in its skull with a stone.

The most avidly sought prey in the Seri chase were the helpless young and heavily pregnant does which were pursued and rent to fragments with a horrible fury, particularly with intent upon the succulent tidbits afforded by the fetal flesh.

222 A time of ease and plenty came each summer, for usually in late May or June the cactus plants with which Seriland abounds begin to mature their fruits. In the foothills of Sierra Seri on the mainland, great

Class	Species Reported	Species Identified	Percentages
Mammals	21	9	5
Birds	23	6	4
Reptiles and Amphibians	25	11	7
Fish	36	23	14
Molluscs	36	21	13
Crustaceans	10	2	1
Total:	160	72	45

These figures show clearly the dependence of the Seris on marine life for a major source of their diet. Today, pinta, baya, cubera and sardinera are their primary source of income with meat and sea-turtles ranking second in importance. Several species of clams, limpets and gastropods supplement this diet.

All other animals represent only incidental additions to the menu. During the last war, sharks and mantas were hunted extensively for their liver, then a source of vitamin D. But since the war, the demand for shark liver has declined and because of this, a considerable income for the Seris has been lost. Shark and manta fishing have been abandoned for these fish were taken only for the commercially profitable liver and not for their flesh.

Fishing and Hunting

Seri fishing techniques are simple. In the past they used double-pronged spears and for the larger fish, harpoons. Today the spears are employed chiefly in fishing while the harpoons are reserved exclusively for sea-turtles. Hook and line fishing was introduced after 1930, as Kroeber (1931) saw none during his visit to Kino in 1930, and it is now the standard method of fishing. An abortive and unsuccessful attempt was made several years ago with net fishing. Another change has occurred within the past fifty years. The old balsas have been replaced by flat-bottomed plank boats outfitted with five-horsepower motors or sails. These motors, incidentally, are leased from the Mexican fish traders because none of the Seris are rich enough to own one.

Bait is obtained by dynamiting schools of small fish in coastal waters or by collecting them at low tide in the tidal pools and from under rocks. Fishing usually begins at dawn and lasts until noon when, as a rule, all of the "pangas", as the boats are called, return to Desemboque. In stormy weather no fishing expeditions are made and when this occurs, starvation becomes a real menace. Harpooning of sea-turtles takes place far out in the Gulf. It is done only at night in exceptionally calm weather by the light of torches or Coleman lanterns.

Hunting as it is done today has changed from the time of McGee's visit in 1894-95. The bow and arrow has disappeared completely except for a crude and diminutive form used as a toy by small boys. Iron spears once used in shark and manta hunting are now carried primarily as a weapon against the numerous and much feared rattlesnakes. They are said to be used occasionally in the peccary hunt. Old .22s or 30/30 rifles are owned by several of the men, some of whom specialize in hunting.

224 Game pursuit is usually done on foot, mostly in the winter and very little in the summer. The intense heat of the desert in the summer makes hunting unattractive. The most frequent trophies are the Sonoran bighorn, peccary, cottontail and jack-rabbits. Sometimes, semi-wild burros, running loose on the adjacent extensive Mexican "rancherias", are poached for meat. The peccary is the only animal hunted with the aid of dogs. Large rodents are dispatched by [223 410] sling-shot, stick, stone, or shot with a .22 caliber rifle. Birds, such as sea-gulls, ducks and pelicans, are clubbed, stoned or shot with a small caliber rifle.

462 While fishing and hunting are primarily men's occupations, the gathering 224 of the terrestrial and marine animals is almost exclusively women's work. 226 Rattlesnakes and other reptiles are often killed and brought to the encampments by the women from their morning trek into the desert after firewood and fruit. Small fish and marine invertebrates in the tidal pools are collected by women, aided by children of both sexes.

252 Preparation of meat is quite simple. It is either boiled in hot water with [163] salt added as the only seasoning or else roasted whole, if small enough, over an open fire with or without a grill. The use of spices such as tomato sauce, chili, peppers, and the like, depend upon the tastes of the individuals and also upon the availability of money.

225 In individual competence as hunters or fishermen the men show a great deal 224 of variability. Some excel in fishing while others do so in hunting. Hand in 226 hand with this, goes the degree of knowledge of the local natural history and, as expected, the best fishermen lead in the knowledge of fishes while the best hunters possess the most extensive knowledge of terrestrial animals and insects. It has also been observed that boys were far ahead of adults in their knowledge of inconspicuous or otherwise commercially unimportant creatures such as insects, obscure marine invertebrates and small fishes. Interest in the commercially or otherwise economically important forms of animals unquestionably becomes overwhelming in adult life while much of the natural history lore learned in youth is forgotten.

Food Preferences and Taboos

262 A number of animals were reported as being a part of their diet in the past but which were not used at the present time. Several species of shells collected from kitchen middens along the coast were thus identified. In some instances it has been denied that a certain animal was used for food; yet, later when such a beast was brought to the camp, it would be added to the menu. Undoubtedly, some of the species were held in low esteem as food and the Seris preferred not to admit eating them.

Large fishes, especially pinta and baya, sea-turtles, and the very large chuckwalla lizard, which is brought back from rare expeditions to San Esteban Island, are the preferred cuisine. Cochi fish, also called puercos, are disdained. Large catches of these were frequently brought in from the sea, only to be unceremoniously dumped on the beach and left to the dogs and the vultures. But when other fish were scarce, the puercos were eaten. Pelicans, once an

5:Dawson N-5 (1940) 1944 NU31 Seri NU31

an important handicraft among these Indians. They made a shallow, coil type basket such as is characteristic of many southwestern tribes. The Seri basket, however, was remarkable for its extreme lightness in proportion to capacity, a quality due to the spongy character of the coil made of a whisp of splints of the torote. Several torotes are found in the region, the commonest species being *Jatropha cardiophylla*. Also used were the torote amarillo, *Jatropha spatulata*, torote blanco, *Bursera microphylla*, and torote prieto, *Bursera laxiflora*. The woof consisted of splints of palo blanco, *Acacia Willardiana*, or of baraprieta, *Caesalpinia gracilis*, deftly interlaced by means of a bone awl to form a smooth, practically waterproof utensil.

In pre-Columbian times the Seris commonly sought wild game, mostly deer, without the aid of weapons, using only their tremendous physical endurance against their prey, chasing the animal until it was exhausted and could be thrown to the ground. With the introduction of iron, however, the development of the bow and arrow achieved prominence, for the shaping and fastening of points had long retarded the exploitation of these implements. Few straight stemmed or straight grained plants grow in Seriland suitable for making arrow shafts, but on the flanks of the deeper gorges of Sierra Seri and Sierra Kunkaak on Tiburon Island, the Indians found one leafy shrub that filled the need, *Sapium biloculare*. The juice of this plant is also said to have been used for arrow poison. The bow was preferably of palo blanco, wrapped and strung with mesquite fiber cord.

The modern Seri tribe consists of barely more than 100 souls, with early extinction threatening from imported diseases. Their natural habits are now vastly modified and they live a comparatively sedentary life near the village of Kino, scavengering for fish heads and other refuse discarded by the fishermen, now and then fishing for themselves when in need. Every year, however, they trek off to the cactus forest for the annual feast, and in late summer many may be seen camping among the mesquite groves near the Kino well where an abundance of both mesquite beans and water makes for easy living.

Smithsonian F-5 (1965-1955)1962 NU31 Seri NU31

I have no idea, of course, what the diet may have been in the past since only archaeology can suggest the answer. But I am sure that there has been much change in their diet since Kroeber saw them, not in the basic pattern but in the composition. With the introduction of hook and line fishing, the percentages swung in favor of fish, while decimation of the marine turtle cut down the importance of this animal. Simultaneously, the Seris now have available manufactured or imported Mexican food items: flour, sugar, rice, potato (when no one is looking; potatoes are not supposed to be sold to them because they make *tepache* from them which makes them grossly ill) fish in cans, coffee and tea. Dependence on the products of the desert has dwindled. Rattlesnakes, desert turtles and chuckawalla still find their way to the Seri kitchen but not too frequently. Pelican and sea gull will be eaten only when rough times beset them but are disdainfully refused at other times. My own estimates, impressions not supported by any attempt to measure their diet, are as follows:

fish	50+%
turtle	8-
Mexican import	20
desert plant	7
desert land animals incl. stock	5
shellfish	10
total marine origin	68+
total desert origin	12
imported origin	20

Another important change in the pattern is the unquestionable decrease of hunting (other than marine animals) in Seri life, as of the domestic stock stealing, the place of which has been taken in a way by the dependence on manufactured foods and items. Hunting nowadays is done rarely and only few individuals will devote some months out of the year to it. Stealing of domestic stock has ceased for practical purposes, since in the past it lead to virtual extermination of these Indians. Occasionally the Seri kill off a semi-wild burro, herds of which run about loose in the desert or they'll get leavings off one, hunted down by a Mexican trader or fishermen.

The Seris' basic tools of game procurement have changed. Bow and arrow were still much in evidence and in use in McGee's time but seem to have gone out soon after. Kroeber did not mention them and by now they are quite extinct, except as clumsy toys little boys use to play with. The throwing stick is still used on rabbits—any stick one can scrounge on a moment's notice will do for the purpose. If any traps or falls had been used we do not know of them. Accidental stones may be used much in the same way as throwing sticks. In general, various sorts of fire arms, mostly .22 and .38 caliber are owned by a good many Seri men and have replaced other weapons in the terrestrial hunt.

More important are changes in the fishing procedures. Formerly spear and detachable harpoon were their only marine weapons. Even as late as 1930, during Kroeber's visit, the Seris made no use of hook and line. But now, hook and line of

[P. 7A]

[apparently a line of type has been omitted here-Analyst]

462 desert plants or littoral fishlets from tide-pools
or of the shellfish. Both men and women will
[224] bring in an occasional rattler, although women
[857] are more likely to do this because they spend more
[883] time in the desert. Children of both sexes are
engaged in the female occupations here, but ado-
lescent boys already join in their fathers' hunts
on land or sea.

342 Housing has undergone some changes. In the
184 desert or on Tiburon the Indians construct the
kind of shelter they did in the recorded past,
an ocotillo frame, bent over in the middle and
covered up with dried plant debris and twigs
from the desert, or with the sail cloth. But in
Desemboque they have more substantial houses—
of wattle and adobe, with flat roofs, rectangular
or square, often with corrugated tin or drift
planks and other debris piled up on top, or along
the walls.

178 In the remainder of their material culture, not
much has been left from years past although one
must remember that from the very beginning of
recorded Serian history it has been of a most
[291] meager sort. Pelican robes, which some Seris ap-
[412] parently still wore in 1930 are gone for good.
So are the stone tools. So is the pottery which had
[323] probably disappeared in Kroeber's time. The hu-
[301] man hair necklace with rattlesnake rattles is also
[291] a thing of the past. The rattlesnake skin belts
McGee (1898:170) described and figured are
probably all gone. I havn't seen or heard of any.

412 But what remains much as they had been in
285 1894 are the bone-awls. These are made of burros'
carpals and the blossoming of basketry, owing to

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9:Malkin E-5 (1953-1955)1962 NU31 Seri NU31

III

MAMMALS

262 [231] water for a week until it escaped. There was no intent to do away with it and serve it up for dinner later on.

The 3 species reported as eaten in the past are kangaroo rat, sea lion and the ringtail cat or cácomistle. Of these the little rodent had been [252] supposedly "boiled in hot water with salt" which [261] method of preparation may indicate that it happens quite recently yet. It is quite possible that in times of famine this animal is still used. The sea [432] lion has been reported as "eaten once a long time ago. All of it. But not now. Its hide was once sold also but now it isn't used at all." This conflicts [114] with McGee's statement (McGee, 189:202) that there was a taboo on eating sea lions among the Seris and there is no way to reconcile the information.

[114] McGee's report may be as truthful as are the uncertain and hazy comments of the present day Indians.

● 224 On the other hand, the cougar belongs to a very dubious category, unless we can rely on Miguel Barnett's memory. All 4 of the younger informants emphatically deny that the cougar has ever been hunted for meat. But Miguel Barnett claimed that this has been done in the past, although he could not tell how long ago. Kroeber says nothing about this animal and this makes it difficult to date the events. At the time of Kroeber's visit, Miguel was at least 25 years old and the cougar could have been hunted either then or earlier. But today the Seris do not eat the [262] flesh of the big cat and their abhorrence of it has been confirmed by the Mexicans to whom I talked about the subject, and who relish cougars' meat. This apparent distaste for the *el tigre's* flesh may [178] well be a recent development quite unconnected with the lack of weapons. McGee (1894: *loc. cit.*) casually mentions that the Seris hunt both cougars [411] and the jaguars but cites no evidence for it. Yet [177] in his time Seris' almost only weapons were the bow and arrow and a lance which today has been replaced by firearms. I am unable to explain this contradictory behaviour.

262 Finally, there is the Ringtail cat or cácomistle. Although this beast has been reported as part of the diet, the information isn't too reliable. I had [124] no way of checking whether this was the animal the Indians had in mind. Their description of it seemed to answer some other unspecified animal and their answers were confused. The fact is that the Ringtail cat does occur in the Seri territory and they are surely familiar with it.

Of the remaining 11 species none were ever mentioned by any of the informants as having been ever eaten. Their denial of eating the coyotes were most vehement. Coyote figures out probably

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9:Malkin E-5 (1963-1965)1962 NU31 Seri NU31

Coyote figures out probably

262 as an important and perhaps disreputable figure in the mythology although nothing but scraps [273] and bits of information suggest this. It is possible that there is actually a taboo on eating this animal or perhaps it is so disreputable that eating its flesh would put a gourmant in an inferior position.

How important is the Seri mammalian diet is hard to tell. It certainly looms more heavily during [224] the winter, because in the cool season hunting is easier than during the heat of the summer and [221] in fact this is when most of it is done by the ardent hunters. Too, winter subjects the Seris to greater hazards and is apt to increase their dependence on the desert resources over that during the summer, even if these resources are scantier at that time.

[136] To all of these animals one should add the semi-wild burros running about the extensive Mexican [224] rancherias. The Indians poach on them frequently using their fire arms, usually the .22 caliber rifles. In any case, it appears that during the summer when the field work was carried out, the mammalian diet figures quite lightly on the Seri table.

252 *Food preparation*: Very little is done in the preparation of the mammalian meat. All that I [263] could observe was the boiling of it in hot water spiced with salt. The Indians were saying that in order to have the meat of a peccary, deer or bighorn ready to eat one must boil it 2-3 hours. The same procedure is followed with the meat of the burros. In contrast to this, as shall be seen later, [251] fish are boiled as well as roasted while the turtles are also dried and salted. Preparation of meat is [462] done by women, certainly at least in the encampments when they are present.

262 *Food preferences*: Some of the Seri food preferences have already been mentioned. At the top of the list as the desirables are the peccary, the deer, the bighorn and the blacktail jackrabbit; at the bottom is the badger, whose meat "is not much good." There is also preference by sex. Females of both the bighorn and peccary are preferred over the males "because they do not have the bad odor like the males." This sort of favoritism also occurs among the Mexicans. However, the Indians did not elaborate beyond this point.

237 *Other economic uses*: Apart from meat, hides 178 are also used. The hides of the deer, bighorn and peccary had been used for sleeping mats although [513] this matter has been expressed in the past tense. Miguel Barnett also suggested that the bighorn [291] hides had been used for clothing by the Indians in the past—but he neglected to say how long ago. During Kroeber's stays, no Seris went about in the animal or bird (pelican) skins but earlier when McGee visited them they went about in these simple garments. Judging then by Miguel's memory, the use of the bighorn hide for clothing must be pushed back to the period of World War I or even earlier.[1]

[1] Miguel Barnett indicated that the "fur" of the bighorn had once been worn for the cold season "but not now."

[P 10 A]

237 On the other hand, the hides of all of these three animals had been traded off to the Mexicans, [439] but this again was now discarded. This would [182] merely indicate the fluctuation of collapse of the demand from the outside rather than any intrinsic change in the Seri values.

Incidental use of the horns of the bighorn had been denied by all of the younger informants although admitted by Miguel Barnett. However, as I observed, the horns of this sheep are sometimes [415] used as drinking cups. Several of them were [181] lying around in the usual disorderly way of the Seris, now and then picked up for drinking and then again discarded. But the use of them struck me as most casual.

● 224 *Hunting:* Hunting takes a variety of forms 411 and includes a variety of weapons, from .22 caliber and .30/.30 caliber rifles to spear, stone and throwing stick. Bighorn and deer are followed on foot but without dogs, probably because without dogs they may be easier to surprise. This hunt takes place in daytime. But the peccary is hunted [231] with both the spear and the rifle and with a pack [885] of dogs, and only by the adult men. There is an emphasis on the "adult," this surely owing to the certain amount of danger connected with the chase of the peccaries. The weapons of the chase dwindle to the throwing stick or a stone when it comes to the jackrabbit. Badgers, I was told, are also killed with the same weapons. But formerly, the informants said, bow and arrow was much instrumental in hunting the smaller beasts.

* 825 Other animals, according to the Seris, are not [224] hunted now, nor had they been in the past. Justification for this ranged from the usual "because it isn't done" to the more specific reasons. The skunk is "neither hunted nor eaten because it [225] stinks." The whale is considered "too big to kill" while the killer whale is "too fierce." The harmless *tonita* (dolphin)[1] was reported somewhat hazily as "sometimes killed" but the comments were inconclusive and were denied by other informants.

[224] Two other species had been reported as hunted in the past but not at the present time. The Ringtail cat was supposedly hunted with the slings while the sea lion was hunted down "with a rifle [225] or rock but not with the harpoon because of its great strength, it would break the harpoon." This, however, was "perhaps 25 years ago." Why the sea lion is no longer pursued is uncertain, unless there is again a lack of demand from the outside while the Serian economy is so much centered on fishing.

231 *Pets:* How many species of animals are kept as pets on and off is difficult to say. Like most hunting and gathering groups the Seris are fond of pets but their interest in them depends entirely on an accidental capture. Among the wild mammals of the region there are few that could be captured and tamed easily. The badger which I mentioned already was the only mammal I saw

[237] [1] I have seen bones of beached whales used for stools and [362] also the skull of the *tonita* used as a chair. But it must be remembered that these animals got stranded on the beach. They were not deliberately hunted down.

1/2 [i.e. - deer, bighorn and peccary - Analyst]

*825 the Seri think, but the captive badger held for a week certainly did not fit this description. Finally, the peccary is held in great respect by the Seris owing to its combativness, nastiness and aggressiveness while in the pack. For this reason peccary hunting is done only by the adults, the Seris [224] said.

Other than this and with the exception of the bat, the Seri do not particularly fear mammals. Their attitudes may be best described as being very much matter of fact and pragmatic.

The situation is slightly different with the bat. [177] The older ones surround it with a great deal of folklore, possibly related to or originated from

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9:Malkin E-5 (1963-1965)1962 MU31 Seri MU31

262 them to their shelter and held them there for several days before they and their families finally ate them up. The turtles are also a well-liked item.

As already indicated in some instances there exists preference for a particular part of an animal. Of the Gila monster only the fat tail was said to have been eaten, and of both rattlers, the head and the tail are discarded on the grounds
* [825] that they contain toxin. Finally the toad and the gecko and *Xantusia* are all rejected as completely venomous.

178 It is also evident that changes in the Seri
262 taste have occured in the course of the past several decades. Some animals are on their way out as food, and here we have the Gila monster, the whipcoach, the red racer and smaller lizards. In several cases, and this includes the Gila monster, the responses indicated that the animal had been eaten in the past. I also observed that on the sly, the Seris would eat them when other food was in short order. But they are reluctant to admit this and often altogether denied it.

Hunting

● 224 Most reptiles are captured by hand or else killed
[225] with a stick, stone or pea-shooter. Except for the turtles, the Seris will not make special expeditions. But it is certain that if they find themselves on any of the islands near the shores of Baja California they will go ashore deliberately in search of the chuckawalla.

225 The turtles are another matter. Here now, just as in the past, special expeditions are made in order to get them. These expeditions take place
[501] nowadays in the usual flat-bottomed plank boats, either motor or oar propelled. The hunt takes place only during unusually quiet and dark nights, when the Gulf is smooth and calm and there is neither wind nor ripple. With the slightest disturbance,
[354] turtle fishing is impossible. It is all done with the
[411] torch lights or Coleman lanterns. The principal and only weapon is the harpoon, identical with that described and illustrated by McGee. The turtles are then harpooned, dragged into the boat and either left alive, when the hunters have a sale of live ones in mind, or pounded to death with a
[251] club or oar, quartered and then either consumed on the spot or else dried and salted."

[224] While the collecting of the smaller animals us-
[462] ually falls to the children or women, turtle hunting is men's job. Men, too, usually get the chuckawalla because they usually visit more distant islands.

Pets

231 None of the reptiles are pets in a real sense. Those few that might be kept are only held until the day when they are butchered and eaten. It is motivated more by the wish to preserve fresh food than by any affection for the animal. The turtles, • the tortoises and the chuckawalla belong here. Occasionally a Seri boy will string a lizard, a *Sceloporus*

"The loggerhead is hunted in the daytime because, owing to its great strength, night hunt would be too dangerous. Two harpoons are always used on it, while for the smaller species, one harpoon usually suffices.

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XI

SUMMARY

224 Hunting is very decidedly secondary to fishing, although it is still much practiced by certain individuals and in a desultory way probably by all.

462 There is a clean cut division of labor in all these occupations. Fishing and hunting are men's occupations, gathering of the desert animals and beachcombing for the intertidal animals is largely the job of women and children. Boys get broken [868] into men's occupations in adolescence, girls into women's jobs very much earlier.

224 Avoidance of fishing or hunting certain creatures appears much more a matter of custom than of well defined and socially rationalized attitude. Frequently an animal is not hunted simply because the Seri feel it is too big and too strong for them to tackle.

157 Through all these activities, Seri individualism is curiously woven and accounts for the failure of anything that might resemble a collective effort.

Food Preferences and Preparation

252 Seri food is prepared in a simplest sort of way. [263] Boiling in water is usual with salt and sometimes a few other spices added. While most food is prepared that way, snakes and fishes are usually fried, without any ingredients. There has been a [178] notable shift toward greater fanciness in the ingredients, as they have become more readily available.

262 There are many preferences. Animals are scaled in desirability. Some fishes, marine turtles, chuckawalla, deer and peccary and duck are at the top of the list; lower animals, smaller fishes including puerco in the middle, while the sea gull and the pelican are probably at the very bottom of the pit. This again reflects temporal changes in tastes [178] although not necessarily a direct influence from the Mexicans.

Pets

231 Few pets are kept, other than dogs. Such animals as come are those captured accidentally. In most cases they are bird nestlings.

Taxonomy

* 825 Differential criteria are applied in the classification of different groups. There is less tendency to group birds than to group different mammals and classificatory ideas break down almost completely in smaller animals, especially insects and molluscs. Considering the economic importance of the molluscs, poor ability to distinguish the Gastropods from the Pelecypods is striking.

The classificatory criteria differ for different groups. Mammals are generally recognized by the furiness, birds by the ability to fly and the pres-

000 search out an old fish head or Pelican bone. Discouraged, never!

123 223 We had intended going to Alcatraz *(Pelican Island)* and have the Indians secure more skins for us at night, but the wind was strong and not favorable, so the trip was put off. The Indians hold up torches of dry *pitahalla*, while another Indian knocks the Pelicans over the head.

123 224 Stan and three Indians started out for the *picachos* with rifles in a hunt for mountain lions and a *tigre* our Indian said he saw. They returned in the afternoon tired and hungry and carrying no game. Stan had mounted the highest peak, an almost perpendicular one, and dangerous climb.

123 593 One member of the hunting party, Santo Blanco *(Holy White)* which belies his name---as he is neither white nor holy---evidently didn't find his dinner waiting for him, and proceeded to beat up his poor wife. Perhaps she didn't expect him so soon or perhaps the larder was empty. At any rate, another woman, Luis Torres' wife, flew to her assistance and grabbed the rifle or stick and he cut her hand cruelly with his knife. She was brought whimpering to our camp, her poor thin hand dripping blood. One or two sympathizing women, crying softly, followed her.

I immediately put some flour over the cut and tore up strips of cotton goods and wrapped them round and round her hand, then pressed the veins to check the hemorrhage, and held her hand up. After fifteen or twenty minutes it ceased to drip, and an Indian brought me some mentholatum from my grip. I bathed her hand in salt water while she whimpered softly, put on the salve and re-wrapped her hand in clean goods and she returned to her camp. Her child picked up the discarded bloody clothes and took them to her.

123 Roberto had gone back for the things he had left, and at noon had returned with the car to Santa Cruz, intending to return by mule in the evening. He returned long after dark after five hours in the saddle. He had been bucked off once and lost in a jungle of timber, both down and standing for two hours. He was fenced inside this tangle, he said, finding it almost impossible to escape.

The mule was later to be tied up, rolled into the boat and taken to the Island for my use, so I would not get worn out walking and carrying food and water.

Again, we were lulled to sleep by the murmur of the sea.

On account of unfavorable conditions, we did not start in the boat the next morning, but fully expected to start the following morning. After breakfast we decided to give the Indians a feast. One Seri secured a five-gallon can three-quarters filled with water, and one by one I poured four cups of flour in it. I hesitated a moment and the Indian said "too much water," and all the crowd waited with bated breath. When I poured in an extra cup-full a great sigh of

[text continues on p.200]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

sizii), laid inverted in the jacales; these shells also being used in natural condition. No wrought shells, molluscan or chelonian, were observed in use or found either in the jacales or on the hundreds of abandoned sites; but the vicinage of the rancherias, the abandoned camps and house sites, and the more frequented paths are bestrewn with slightly worn shells, evidently used for a time and then lost or discarded. The relative abundance of the fictile ware and this natural shell ware in actual use is about 1:3; i. e., each adult female usually possesses a single olla of the conventional type, and there may be one or two extra ollas and two or three clay dishes in each band or clan, while each matron or marriageable maid is usually supplied with two to four shell-cups and each little girl with one or two; and there are twice as many carapace trays as clay dishes. The disproportion of

FIG. 15.—Shell-cup.

pottery and shell about the abandoned sites is naturally much greater; for the former is the most highly prized industrial possession of the women, while the shells are easily gained and lightly lost.

With respect to solid food the Seri may be deemed omniverous though their adjustment to habitat is such that they are practically carniverous.

The most conspicuous single article in the dietary of the tribe is the local green turtle. This chelonian is remarkably abundant throughout Gulf of California; but its optimum habitat and breeding-place would appear to be El Infiernillo, whose sandy beaches are probably better adapted to egg laying and hatching than any other part of the coast. Here it has been followed by the Seri; perhaps half of the aggregate life of the tribe is spent within easy reach of its feeding and breeding grounds, and tribesman and turtle have entered into an insulcal com-

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

munalty something like that of Siouan Indian and buffalo in olden time, whereby both may benefit and whereby the more intelligent communal certainly profits greatly. The flesh of the turtle yields food; some of its bones yield implements; its carapace yields a house covering, a convenient substitute for umbrella or dog-tent, a temporary buckler, and an emergency tray or cistern, as well as a comfortable cradle at the beginning of life and the conventional coffin at its end; while the only native foot-gear known is a sandal made from the integument of a turtle-flipper.

FIG. 20.—Turtle harpoon.

Doubtless the eggs and newly hatched young of the turtle are eaten, and analogy with other peoples indicates that the females are sometimes captured at the laying grounds or on their way back to water; but observation is limited to the taking of the adult animal at sea by means of a specialized harpoon. A typical specimen of this apparatus, as constructed since the introduction of flotsam iron, is illustrated in figure 20. It comprises a point 3 or 4 inches long, made from a nail or bit of stout wire, rudely sharpened by hammering the tip (cold) between cobbles, and dislodging the loosened scales and splinters by thrusts and twirlings in the ground; this is set firmly and cemented with mesquite gum into a foreshaft of hard wood, usually 4 or 5 inches long, notched to receive a cord and rounded at the proximal end; the rounded end of this foreshaft fits into a socket of the main shaft, which may be either a cane-stalk (as shown in the figure) or a section of mesquite root; while a stout cord is firmly knotted about the foreshaft and either attached to the distal portion of the main shaft or carried along it to the hand of the user. The main shaft is usually 10 or 12 feet long, with the harpoon socket in the larger end, and is manipulated by a fisherman sitting or standing on his balsa. On catching sight of a turtle lying in the water, he approaches stealthily, preferably from the rear yet in such wise as not to cast a frightening shadow, sets the foreshaft in place, guides the point close to the carapace, and then by a quick thrust drives the metal through the shell. The frictional resistance between the chitin and the metal holds the point in place, and although the foreshaft is jerked out at the first movement of the transfixed animal the cord prevents escape; and after partial tiring

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

the turtle is either drowned or driven ashore, or else lifted on the craft.[1] Immediately on landing the quarry, the plastron is broken loose by blows of the hupf[2] and torn off by vigorous wrenches of the warriors and their strong-taloned spouses in the impetuous fury of a fierce blood-craze like that of carnivorous beasts; the blood and entrails and all soft parts are at once devoured, and the firmer flesh follows at a rate depending on the antecedent hunger, both men and women crushing integument and tendon and bone with the hupf, tearing other tissues with teeth and nails, mouthing shreds from the shells, and gorging the whole ravenously if well ahungered, but stopping to singe and smoke or even half roast the larger pieces if nearer satiety. If the quarry is too large for immediate consumption and not too far from a rancheria the remnants (including head and flippers and shells) are hoisted to the top of the jacal immediately over the open end—the conventional Seri larder—to soften in the sun for hours or days; and on these tough and gamey tidbits the home-stayers, especially the youths, chew luxuriously whenever other occupations fail. In times of plenty, such sun-ripened fragments of reeking feasts are rather generally appropriated first to the children and afterward to the coyote-dogs; and it is a favorite pastime of the toddlers to gather about an inverted carapace on hands and knees, crowding their heads into its noisome depths, displacing the rare scavenger beetles and blowflies of this arid province, mumbling at the cartilaginous processes, and sucking and swallowing again and again the tendonous strings from the muscular attachments, until, overcome by fulness and rank effluvias, they fall asleep with their heads in the trough—to be stealthily nudged aside by the cringing curs attached to the rancheria. Com-

[1] A lively and explicit account of Seri turtle-fishing appears in Hardy's Travels in the Interior of Mexico, 1829, pp. 396-397: "Bruja's bay is of considerable extent, and there are from five to three fathoms water close to Arnold's island, in the neighborhood of which the Indians catch abundance of turtle in a singular manner. I have already described their canoes, which in Spanish are called 'balsas'. An Indian paddles himself from the shore on one of these by means of a long, elastic pole of about 12 or 14 feet in length, the wood of which is the root of a thorn called mesquite, growing near the coast; and although the branches of this tree are extremely brittle, the underground roots are as pliable as whalebone and nearly as dark in color. At one end of this pole there is a hole an inch deep, into which is inserted another bit of wood, in shape like an arrow, having a square bit of iron 4 inches long fastened to it, the other end of the iron being pointed. Both the *bolt* and *eye* are first moistened and then tightly inserted one within the other. Fastened to the iron is a cord of very considerable length, which is brought up along the pole, and both are held in the left hand of the Indian. So securely in the mud then dwell in the pole that although the latter is used as a paddle it does not fall out.

"A turtle is a very lethargic animal, and may frequently be surprised in its watery slumbers. The balsa is placed nearly perpendicularly over one of these unsuspecting sleepers, when the fisherman, softly sliding the pole through the water in the direction of the animal till within a foot or two of it, he suddenly plunges the iron into its back. No sooner does the creature feel itself transfixed than it swims hastily forward and endeavors to liberate itself. The slightest motion of the turtle displaces the iron point from the long pole, which would otherwise be inevitably broken and the turtle would as certainly be lost; but in the manner here described it is held by the cord fastened on to the iron which has penetrated its back till, after it has sufficiently exhausted its strength, it is hoisted on board the canoe by the fisherman, who proceeds to the shore in order to dispose of his prize."

[2] The universal stone implement of the Seri, improvised from a cobblestone and used in nearly every industrial occupation (see pocket, p. 226); the designation is mimetic, or onomatopoetic, from the sound of the stroke, particularly on animal tissues.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

monly the carapace and the longer bones from the flippers of the larger specimens are preserved entire for other uses, and are cleaned only by teeth and talons and tongues, aided by time but not by fire; but the plastron, unless broken up and consumed immediately, is subjected to a cooking process in which it serves at once as skillet and cutlet—it is laid on the fire, flesh side up, and at intervals the shriveling tissues are clawed off and devoured, while at last the scorched or charred scutes themselves are carried away to be eaten at leisure.[1]

Perhaps the most significant fact connected with the Seri turtle-fishing is the excellent adaptation of means to ends. The graceful and effective balsa is in large measure an appurtenance of the industry; the harpoon is hardly heavier and is much simpler than a trout-fishing tackle, yet serves for the certain capture of a 200-pound turtle; and the art of fishing for a quarry so shy and elusive that Caucasians may spend weeks on the shores without seeing a specimen is reduced to a perfection even transcending that of such artifacts as the light harpoon and fragile olla. Hardly less significant is the nonuse of that nearly universal implement, the knife, in every stage of the taking and consumption of the characteristic tribal prey; for it may fairly be inferred that the comparative inutility of the knife in dissevering the hard and horny chelonian derm, and the comparative effectiveness of the shell-breaking and bone-crushing hupf, have reacted cumulatively on the instincts of the tribe to retard the adoption of cutting devices. Of much significance, too, is the limited cooking process; for the habitual consumption of raw flesh betokens a fireless ancestry at no remote stage, while the crude cooking of (and in) that portion of the shell not consecrated to other uses might well form the germ of broiling or boiling on the one hand and of culinary utensils on the other hand. On the whole, the Seri turtle industry indicates a delicate adjustment of both vital and activital processes to a distinctive environment, in which the abundant chelonian fauna ranks as a prime factor.

Analogy with other primitive peoples would indicate that the flesh of the turtle is probably tabu to the Turtle clan, that the consumption of the quarry is preceded by an oblation, and that there are seasonal or other ceremonial rites connected with turtle-fishing; but no information has been obtained on any of these points save a few vague and unwilling suggestions from Mashém tending to establish the analogy.

Flotsam and stolen metal have played a rôle in the industries of Seriland so long that it is difficult to learn much of the turtle fishing

[1] These details were furnished largely by Mashem and father Kaxinas, but were verified in essentials by personal observation of district customs at Costa Rica in 1896; and they were corroborated by observations on both shores of El Infiernillo and Bahía Kanhook in 1895. Especially significant were the remnants of a turtle feast on the southern beach of Punta Miguel interrupted by the approach of the exploring party. The indications were clear that the turtle had been hooked and largely consumed before the fire was kindled, and that the cooking of the firmer portions had hardly been commenced before the camp was abandoned so hurriedly that not only the nearly eaten turtle and the glowing embers, but the harpoon (the specimen illustrated in figure 20), the still bloody and green hupf (that represented in plate LXVI), and the fire-sticks were left behind. Gnawed fragments of charred plastrons are common relics about hastily abandoned camps generally.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

262 Probably second in importance among Seri prey, as a food-source merely, stand the multifarious fishes with which the waters of Seriland teem, particularly if the class be held to comprise the cetaceans and seals and selachians ranked as leaders of the fish fauna in Seri lore.

225 Naturally, whales lie outside the ordinary range of Seri game, yet they are not without place in the tribal economy. During the visit to the Seri rancheria near Costa Rica in 1894, it was noted that various events—births, deaths, journeys, etc—were referred to "The Time of [173] the Big Fish"; and it was estimated from apparent ages of children and the like that this chronologic datum might be correlated roughly with the year 1887. The era-marking event was memorable to Mashém, to the elder women of the Turtle clan, and to other mature members of the group, because they had been enabled thereby to dispense with hunting and fishing for an agreeably long time, and because they had moved their houses; but the providential occurrence was not interpreted at the time. On visiting Isla Tiburon in 1895, the interpretation became clear; along 172 the western shore of Bada Ballena, near the first sand-spit north of the bight, lay the larger bones of a whale, estimated from the length of the mandibles and the dimensions of the vertebræ to have been 75 or 80 feet long. It was evident that the animal had gone into the shoal water at exceptionally high tide and had stranded during the ebb; while the condition of the bones suggested an exposure to the weather of perhaps half a dozen years. On the shrubby bank above the beach, [961] hard by the bleaching skeleton, stood the new rancheria, the most extensive seen in Seriland, comprising some fifteen or twenty habitable jacales; and fragments of ribs and other huge bones about and within the huts[1] attested transportation thither after the building, while the shallowness of the trails and the limited trampling of the fog 172 shrubbery gave an air of freshness to the site and surroundings. The 262 traditions and the relics together made it manifest that "The Time of the Big Fish" had indeed marked an epoch in Seri life; that when the leviathan landed (whether through accident or partly through efforts of balsa men) it was quickly recognized as a vast contribution to the Seri larder; and that some of the clans, if not the entire tribe, gathered to gorge first flesh and blubber, next sun-softened cartilage and chitin, and then epiphyses and the latter bones. Some of the ribs were split- [252] tered and crushed, evidently by blows of the hupf, in order to give access to the cancellate interiors; several of the vertebræ were battered and split, and nearly all of the bones bore marks of hupf blows, aimed to loosen cartilaginous attachments, start epiphyses, or remove spongy and greasy processes. Little trace of fire was found; in one case a mandible was partly scorched, though the burning appeared to be fortuitous and long subsequent to the removal of the flesh; and a bit of charred and gnawed epiphysis, much resembling the fragments of half-cooked turtle plastron scattered over Seriland, was picked up in

[1] One of the smaller vertebræ and part of a rib are shown in the upper figure of plate VI.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

one of the huts. The condition of the remains and the various indications connected with the rancheria corroborated the tradition that the great creature had afforded unlimited and acceptable food for many moons; and various expressions of the tradition indicated that the event, though the most memorable of its class, was not unique in Seri lore.

A few bones and fragments of skin of the seal were found in and about the rancherias on Isla Tiburon, and an old basket rebottomed with sealskin was picked up in a recently abandoned jacal on Rada Ballena; a few bones provisionally identified with the porpoise (which haunts Boco Infierno in shoals) were also found amid the refuse about the old rancheria at the base of the long sand-spit terminating in Punta Tormenta; but nothing was learned specifically concerning the chase and consumption either of these animals or of the abundant sharks from which the island is named.

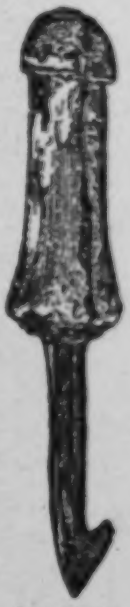

FIG. 21.—Fish-spearhead.

Among the exceedingly limited food supplies brought from the coast by the Seri group at Costa Rica in 1894, were rank remnants of partly desiccated fish, usually gnawed down to heads and tails; and Mashém and others spoke of fish as a habitual food, while Señor Encinas regarded it as the principal element of the tribal dietary. The harder bones and heavier scales of several varieties of fish were also found abundantly among the middens of both mainland and Tiburon shores in 1895. None of the remains bore noticeable traces of fire; and all observations, including those of Señor Encinas, indicate that the smaller varieties of fish are habitually eaten raw, either fresh or partially dried, according to the state of appetite at the time of taking—or the condition of finding when picked up as beach flotsam. But a single piscatorial device was observed, i. e., the barbed point and foreshaft, shown in figure 21—the iron point being, of course, secultural, and probably obtained surreptitiously. This harpoon, which measures 6 inches in length over all, is designed for use in connection with the main shaft of a turtle-catching tackle; and it is evidently intended for the larger varieties, perhaps porpoises or sharks. In 1837 Hardy observed a related device:

> They have a curious weapon which they employ for catching fish. It is a spear with a double point, forming an angle of about 5°. The insides of these two points, which are 6 inches long, are jagged, so that when the body of a fish is forced between them, it can not get away on account of the teeth.[1]

Don Andrés Noriega, of Costa Rica, described repeatedly and circumstantially a method of obtaining fish by aid of pelicans, in which a

[1] Travels, p. 288.

105 groups or clans between the waterholes and
182 their temporary dwellings by the sea, chasing for game or searching for cactus fruits, sleeping wherever weariness overtook them, or where the successful end of a hunt left them gorged and drowsy. Under a climate where frost is almost unknown they needed no protection except from the sun, and built no other dwellings than their brush-heap jacals (Fig. 3). Living in animal-like savagery, without commerce or industry, the Seri's every bodily character and function were directed toward the provision, day by day, of the food and water necessary for life.

312 Potable water, a commodity so abundant in most regions as to divert conscious attention from its paramount role in physiologic function and in industrial economy, attained in Seriland the primary place of importance because of its rarity. In that arid land it is scanty to the extreme. Two thirds of the meager supply is confined to a single rivulet in the interior of Tiburon Island (Fig. 4). Because of this and other widely separated aguajes within the island whose shores provided the greater part of their food resources, the Seris early found this island the most tolerable habitat in their desolate realm.

225 The most conspicuous single article in the
[262] dietary of the Seri, and undoubtedly that which first determined the location of his habitat, is the green sea turtle which is abundant throughout the Gulf of California, but particularly so in the narrow channel between Tiburon Island and the mainland. There the shallow lagoons abound with its marine grass food plant, and the sandy beaches provide optimum conditions for egg laying and hatching. In consequence of this natural provision for abundant food, easily obtained, perhaps half the aggregate life of the Seri tribe came to be spent within easy reach of the feeding and breeding grounds of the turtle.

[361] The most extensive and permanent of all Seri communities was established on the channel side of the island, just back of the lagoon in which the turtles feed and whose sands provided eggs and the succulent flesh
225 of newly-hatched turtle young. When fe-
501 males could not be captured at the laying grounds, the big chelonians were speared

[p. 194(8)]
[text continues on p 195(8)]

Schevill & Dawson E-6 (1825-1940) 1945
NUIH Smi NU31

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from graceful balsas made of carrizo canes bound together with mesquite fiber cords (Fig. 5). On these buoyant craft, too, they navigated freely the narrow but stormy

[p. 195(B)]

S.Davis & Dawson E-5 (1923-1940) 1945
NU31 Seri NU31

225 channel separating their island habitations
501 from those on the mainland.

In pre-Columbian times the turtle fisheries
614 of the channel must have supported several

[p. 195(c)]

3: Davis & Dawson E-5 (1922-1940)1945 NU31 Seri NU31

225
501

FIG. 1. THE NATIVE BALSA MADE OF CARVED REEDS

PHOTOGRAPHED IN 1922, THIS WAS THE LAST BALSA MADE BY THE SERIS. IT IS ONE OF THE SMALLER SEMI-MAN BALSAS FROM WHICH TURTLES WERE SPEARED WITH THE LONG-SHAFTED IMPLEMENT PICTURED HERE.

[p. 196(c)]

3:Davis & Dawson E-5 (1923-1960) 1944
NUXI Seri NUXI

396 the extremities. Throughout the process the
[283] cord used for lashing was laboriously made
by hand and mouth by the women who ob-
[462] tained the fibrous raw material from mes-
quite tree roots, from the yucca or the
maguay. Three of the finished bundles were
lashed together to form a watercraft some
thirty feet in length and of four-foot beam.
These large balsas were buoyant enough to
carry several members of a family across El
Infiernillo channel. One-man balsas were
also made (Fig. 5) principally for use in
turtle fishing.

225 Except during the egg-laying season
411 turtles had to be sought from the balsa. The
Seris lacked tool sense in the extreme, but
their clumsy brains had devised a harpoon
for use against the turtle. The hard, pene-
trating point was commonly made of native
ironwood, but may also have been the sharp-
ened tooth of a sea lion or the shin bone of
a deer. It was fitted and firmly cemented
with mesquite gum to a short, hardwood
foreshaft whose rounded end fitted into the

[p. 197(C)]
[text continues on p. 198(B)]

3:Davis & Dawson E-5 (1923-1949) 1945
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225
[411]

ten- to twelve-foot main shaft. A stout cord was knotted to the foreshaft and carried along the main shaft to the hand of the user. When, from the quietly floating bales, a

[p. 198(B)]

3:Davis & Dawson E-5 (1923-1940) 1946
NU31 Sect NU31

225 turtle was seen lying in the water, the fisherman stealthily brought his spear-point over the carapace of the unsuspecting animal and then, with a sharp thrust, drove the point

[p. 198(c)]

225 through the shell. The foreshaft was jerked out at the first movement of the animal which was held by the fisherman's line until tired, after which it was either driven ashore or lifted onto the balsa.

No sooner was the quarry landed than the soft undershell was crushed and broken loose with a cobblestone "hupf," and then torn off
264 by the tribespeople with the impetuous fury of blood-crazed carnivorous beasts. The entrails and soft, bloody gore were first consumed, followed, depending upon the proximity of the last meal, by the firmer flesh, all but the infants of the household pounding, tearing and chewing their raw, grisly
[252] chunks, stopping to singe or half roast larger pieces only if near satiety. If immediate consumption of the prey was not accomplished, the remnants were carried to the rancheria and there lifted to the top of the jacal to soften in the sun. The reeking carapace was often left indefinitely beside the

[197]

Photo by J. B. Harrison

FIG. 9. PITAHAYA AND SAGUESO CACTI PROVIDE A RICH HARVEST OF FRUITS IN SUMMER.

[p. 199(A)]

5:Dawson N-5 (1940) 1944 NU31 Seri NU31

DESERT
PLANT LIFE

SIXTEENTH YEAR NUMBER 9

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SOME ETHNOBOTANICAL NOTES ON THE SERI INDIANS

105 121 If the natural resources of a region may be said to reflect the degree of cultural and social development of its aboriginal people, we may easily understand why the Seris of Sonora, now approaching extinction and with much modified habits and culture, are considered the most primitive and savage of American Indians. Certainly the arid coast of Sonora, destitute [133] of water but for a few widely separated, stagnant holes, with a dry, rocky soil habitable only by the most frugal and thorny of desert vegetation, presents little in the way of resources to a native people. It was, indeed, [262] only along the ocean shore that the Seris found animal food sufficient to sustain them, principally, the sea turtle and the pelican. This food source proved adequate to support a tribe of some 2000 in pre-Columbian times, but the limited habitat of the pelican and turtle brought about extreme isolation of the people. Thirty-mile-long Tiburon Island became their principal home, separated from the mainland by the narrow but tempestuous channel, El Infiernillo, across which they frequently voyaged in their buoyant balsas to search out vegetal supplements to their monotonous sea food diet. It is this use of vegetable materials, not only as food but in other phases of the domestic economy of these people in earlier times, with which these notes are particularly concerned.

●225 Primary occupation of the Seris aside from their continual movement to and from the water holes was, necessarily, their search for food, for they cultivated nothing and conserved little. Fish were exceedingly abundant in the waters around their island, but their very limited tool sense, pro- [227] viding them with almost no fishing devices, excluded much of this food from their diet. Clams and other shellfish were to be had, but it was the abundant green sea turtle, feeding upon luxuriant growths of marine grass, *Ruppia maritima*, in the shallow, sandy lagoons along El Infiernillo, that provided their meat staple. The turtles could be captured with ease during egg laying season as they crawled over the beach, but at other times they had to be 396 speared from a watercraft. No sizable timber grows in Seriland and before the advent of flotsam boards and hoop-iron it would have strained the

8: Ascher E-5 (1960) 1962 NU31 Seri NU31

McGee (1898:214)

estimated that maritime resources provided two-thirds of the Seri diet. Kroeber (1931: 20), approximately 30 years later, estimated the proportion at about three-fifths. In the winter of 1960, 30 years after Kroeber's visit, the Seri were obtaining at least three-fifths of their food from the sea.

In pursuit of their main source of subsistence, the Seri travel up and down the narrow coastal band. In the winter of 1960 they were occupying one temporary camp toward the southern end of the band and a permanent camp at the northern extreme. Seri women and children gather mollusks; fishing is a male occupation. In addition to gathering and fishing for their own needs, the Seri dispose of a portion of their catch on the commercial market. This enterprise began about 1930, and was encouraged by the establishment, in 1958, of the Sociedad Cooperative de Produccion Pesquera Seri with the cooperation of the Mexican government.

The Pacific green turtle constitutes the largest single item in the Seri diet for at least six months of the year—from January to June—and it is also caught occasionally at other seasons. In 1896 McGee estimated that it provided 25 per cent of the total food supply. Emphasizing the intimate ecological relationship between the Seri and the turtle, McGee (1898: 186-187) wrote:

> ... perhaps half of the aggregate life of the tribe is spent within easy reach of its [the turtle's] feeding and breeding grounds, and tribesman and turtle have entered into an inimical communality something like that of the Siouan Indian and buffalo in olden time. ...

Kroeber (1931: 20) believed that McGee stressed the Seri-turtle relationship too strongly and overestimated its contribution to the diet. McGee (1898: 187), in support of the importance of the turtle to the Seri, points to the fact that the turtle carapace is used for, among other things, a house covering and buckler, a cradle, a coffin, and footgear. The carapace is currently used for supporting and roofing houses and as a starvation food. The contribution of the turtle to the diet varies from year to year, but observations made in 1960 suggest a range of from 15 to 20 per cent as a reasonable estimate.

Seri men fish for turtle from boats, which are manned by two or three men and are propelled by oars, sails, outboard engines, or any combination of the three. The boats operate either individually or in groups. The men fish by night or day, depending on the weather and sea conditions. When they fish at night, they use a kerosene lamp to attract turtles to the surface. The principal implement is the harpoon.

The harpoon tackle of the Seri is illustrated in Figure 1. It consists of a foreshaft (c-h), a mainshaft (j-k), and an extension cord (i). The component parts of the foreshaft are a projectile point (c), a gasket (d), a wrapping cord (f), a hafting base (g), and a lead cord (e and h). In preparation for turtle fishing, the hafting base (g) is plugged into the socket (j) on the main shaft (k), and the extension cord (i) is looped through the lead cord (h).

8: Ascher E-5 (1960) 1962 NU31 Seri NU31

225 In fishing for turtle, one man stands at the bow of the boat, holding the mainshaft and extension cord in one hand. When he sights a turtle, he propels the mainshaft at the animal's carapace, retaining a firm grip on the mainshaft and the extension cord. If it is struck, the turtle lurches away, loosening the foreshaft and unplugging it from the mainshaft. Tired eventually by the tension [411] applied by the fisherman on the extension cord, the turtle is finally stunned by a wooden club and lifted into the boat.

225 There is evidence that the turtle-fishing complex has consider-175 able time depth and stability. The Seri were using similar apparatus and methods at least as early as 1825 (Hardy 1829: 296-297). At [501] this time they employed balsa boats rather than wooden boats with outboard motors and torches of cactus fibers instead of kerosene lamps. The complex continued, apparently with little change, through 1896 (McGee 1898: 187-193). Wooden boats and kerosene [177] lamps began to be adopted during the 1920s, and outboard motors were introduced in the 1940s.

411 During the entire period of 135 years (1825-1960), however, the harpoon tackle underwent only one important innovation. The 225 gasket on the foreshaft was introduced by a Seri Indian about the 176 year 1935. The addition of the gasket was related to, and coincided [439] in time with, the first attempts of the Seri to supply turtles to the commercial market. When they caught turtles solely for their own use, they did not need to keep the animals alive for very long, but when they began to sell them it became important to preserve them alive until they reached the market. The gasket acts like the hilt on a sword, preventing the entrance of the foreshaft hafting into the turtle's body. Through its contact with the carapace, it restricts the rotation of the point within the animal's body and provides a seal which inhibits the loss of blood, and thus prevents early death. After the turtle is stunned with a club and lifted into the boat, the foreshaft is removed and the hole which it made is stuffed with a piece of cloth.

124 Seri men were shown a harpoon foreshaft from a museum archive and asked what it was for and whether they themselves made similar 411 ones. If an informant acknowledged that he made them, he was asked, at the minimum, to detail the materials he used, the procedures he followed, and the approximate amount of time it would take him to produce one. Later he was requested to show the field worker examples of the foreshafts he had made. Of the approximately 40 adult Seri males, about 25 were available for questioning. Of these, approximately ten did not make foreshafts or had made them in the past but did so no longer; they were mainly older men and those [474] engaged in the administration of the Sociedad Cooperative de Pro-[887] duccion Pesquera Seri. Five men either would not or could not volunteer information. Data were obtained from the remaining ten adult men and from one eight-year-old boy; they include 21 foreshafts made by these eleven people.

411 The materials from which a foreshaft can be shaped and as-325 sembled vary within what is available in the Seri environment. Iron

Sitalkin E-5 (1953-1955)1962 NU31 Seri NU31

226 411 177 commercial origin are their main instruments of fishing. To this they added dynamite, sometimes with disastrous results to themselves, mostly as a way of securing bait. Single-pointed fish-spears which loomed so importantly in McGee's account have gone the way of the Dodo for its original purpose and transformed into iron bar lances, now used largely as weapons against rattlesnakes that, men encounter in their desert roamings. However, in the forties, when the Seris spent a great deal of time getting sharks and huge rays, they killed them with these weapons.

226 411 What retain some importance are the harpoon and the two-pronged spear called "puiero." The two-pronged spear is one of their oldest weapons. The construction is much the same as when McGee visited them. The spear is used mainly to stab large-size fish, the giant *bais* or *mero* for example, after it has been brought up on the line. The [225] harpoon is now exclusively a weapon for the turtle hunt.

226 177 [157] An interesting fate met an effort to teach these Indians net fishing in 1947. They tried, ruined the nets and never took it up since. The instigators were Mexicans, the fish traders. I suspect that Seri individualism had a great deal to do with their lack of interest in net fishing which after all demands a certain amount of cooperation. With the hook and line fishing, men can have much more their own way.

501 177 648 An added "tool" of the Seris is the plank boat. The balsa which McGee still observed during his visit, had already vanished by the time Kroeber came to the Seriland and had been replaced by these boats. The boats are flat bottomed but good sized. The material was provided by the Mexican government. Boats are usually propelled by 5 hp. motors leased from the Mexicans (no Seri is rich enough to purchase [439] one) who also sell them gasoline and oil at exorbitant prices and in return buy Seris' catch of fish and sea turtle for low prices. At the time of my visits these amounted roughly to less than a peso [435] per kilo of the flayed, degutted and cleaned fish (less than 8 cents) with fluctuation up and down the scale depending on the kind of the fish, and to about 30-50 pesos for medium to large size "cahuama," the live marine turtle.

501 648 The Seri boats are also propelled by paddles and sail—this is always the case with the families who wish to stay away on Tiburon for some time. The Mexicans will not lease them their motors for such trips even if the Seri, some of them at least, have enough knowledge of the motors to repair minor stoppages—a demonstration of the fallacy [114] of McGee's idea that they are genetically unable to handle tools. In this respect, Kroeber's (1930: 25) estimate of them is closer to the truth.

462 Sexual division of labor in procuring food goes on, much the same as it had 70 and 30 years ago, with the sole exception of the imported goods. [439] Here purchases are made either by men or women or by children, depending on who at the time has the cash and what one wishes to buy.

Fishing is still done by men and so is hunting. Women still concentrate on gathering, whether of

237 On the other hand, the hides of all of these three animals had been traded off to the Mexicans, [439] but this again was now discarded. This would [182] merely indicate the fluctuation of collapse of the demand from the outside rather than any intrinsic change in the Seri values.

Incidental use of the horns of the bighorn had been denied by all of the younger informants although admitted by Miguel Barnett. However, as [415] I observed, the horns of this sheep are sometimes used as drinking cups. Several of them were [181] lying around in the usual disorderly way of the Seris, now and then picked up for drinking and then again discarded. But the use of them struck me as most casual.

224 *Hunting:* Hunting takes a variety of forms 411 and includes a variety of weapons, from .22 caliber and .30/.30 caliber rifles to spear, stone and throwing stick. Bighorn and deer are followed on foot but without dogs, probably because without dogs they may be easier to surprise. This hunt takes place in daytime. But the peccary is hunted with both the spear and the rifle and with a pack [231] of dogs, and only by the adult men. There is an [885] emphasis on the "adult," this surely owing to the certain amount of danger connected with the chase of the peccaries. The weapons of the chase dwindle to the throwing stick or a stone when it comes to the jackrabbit. Badgers, I was told, are also killed with the same weapons. But formerly, the informants said, bow and arrow was much instrumental in hunting the smaller beasts.

* 825 Other animals, according to the Seris, are not [224] hunted now, nor had they been in the past. Justification for this ranged from the usual "because it isn't done" to the more specific reasons. The skunk is "neither hunted nor eaten because it stinks." The whale is considered "too big to kill" [225] while the killer whale is "too fierce." The harmless *tonita* (dolphin)[1] was reported somewhat hazily as "sometimes killed" but the comments were inconclusive and were denied by other informants.

[224] Two other species had been reported as hunted in the past but not at the present time. The Ringtail cat was supposedly hunted with the slings while the sea lion was hunted down "with a rifle [225] or rock but not with the harpoon because of its great strength, it would break the harpoon." This, however, was "perhaps 25 years ago." Why the sea lion is no longer pursued is uncertain, unless there is again a lack of demand from the outside while the Serian economy is so much centered on fishing.

231 *Pets:* How many species of animals are kept as pets on and off is difficult to say. Like most hunting and gathering groups the Seris are fond of pets but their interest in them depends entirely on an accidental capture. Among the wild mammals of the region there are few that could be captured and tamed easily. The badger which I mentioned already was the only mammal I saw

[237] [1] I have seen bones of beached whales used for stools and [352] also the skull of the *tonita* used as a chair." But it must be remembered that these animals got stranded on the beach. They were not deliberately hunted down.

[P 10 B]

½ [deer, bighorn and peccary - Analyst]

9:Malkin B-5 (1953-1955)1982 NU31 Seri NU31

Sex Differentiation

*825 Only a few kinds of differences do the Seris recognize between the male and the female mammals. Size differences have been indicated for 16 species out of 21. Of these, in nine species male are supposedly larger than the females (sea lion, cougar, killer whale, mule deer, fox, kangaroo rat, peccary, badger, bighorn). In four species the sexes are equal in size (porcupine, grey whale, ringtail cat and the desert cottontail) and in two the answer was "I do not know." These last two are the porcupine and the skunk, both of which are rare in the Serian territory and it is possible that the rarity of the animal prevents the formation of any decisive idea on the subject.

No data had been obtained for the remaining species but from the general drift of the replies, the general trend would probably be similar to that for the rest of the animals. This trend is obvious. To the Seris, the male mammal is larger than the female and in most instances this is true. But there also is a basic conviction that this should be so. In the *Cetacea* actually the females are larger than the males in varying degrees, but even here the Indians asserted that the dolphin's and the killer whale's male is larger than the female, and in the grey whale the sexes are supposedly equal in size. Since these animals are [225] not hunted and only in the rare opportunity can the Seris examine specimens in the beached individuals the unknown situation then is covered by the blanket idea—the males are larger than the females.

In coloration no sexual differences were indicated at all. In such instances where the answer had been provided it has been pointed out that the colors of both sexes were identical. On the other hand, in some of the land mammals presence of "dos suevos," that is testicles in the males, has been indicated, in the coyote and fox in that number. Presence of a penis in the male is considered another structural difference in some of the animals, among them, the kangaroo rat.

In several instances size and weight differences have been indicated quite specifically. For the three most important economic species, the peccary, the deer and the bighorn, the figures in weight and size for both sexes came remarkably close to the actual dimensions of these animals. Reasons for the Seris' ability to estimate the weight of an animal will be explained later on.

Few other structural differences were given. The Seri recognize very well that the male deer bears horns for at least part of the year and that the female is horn-less. They also indicated the differences in the size and the shape of the bighorn horns, those of the male being large and curved, those of the females being small and almost straight.

No temperamental differences were indicated between the male and the female mammals, with the exception of the deer. Here the Seris say the males are very belligerent and engage in combat duals in November, the mating season as some of the Indians suggested. But they also said that the bucks rarely fought during the rest of the year.

[P 11 B]

9344alkin E-5 (1953-1955)1962 NU31 Seri NU31

V

REPTILES AND AMPHIBIANS

136 fore it was impossible to check the Seris' ability
* [825] to distinguish between these.

As for the marine turtles, there are several possible species in the area. There is no mistake about the loggerhead. I have seen one carapace and boner taken at Campo Vivora, while with the Seris. The others could be any two of the several species common in the Gulf.

Economic Uses

* 825 In 1956 I published data concerning economic
114 exploitation of the reptiles by the Seris which need correction. Eleven species out of 25 had been reported as used economically. Additional work done in 1955 and after the completion of the MS. indicated a much higher percentage: 17 species out of 26 are used. Thus the percentage increases from 44% to 65%. The percentage of the species actually used will probably rise with additional
[262] field work because some of the informants are dis-
inclined to admit eating certain animals or will
[124] simply say, "these had been eaten in the past but not now." However, close inspection and observation often contradict these statements.

262 The list of species reported as eaten is as follows:

Turtles and tortoises: all species
Snakes: both racers, patch nosed snake and both rattlesnakes
Lizards: both chuckawallas, Gila monster, race runner, northern crested lizard

This listing shows how much dependent are the Seris on the desert habitat for food. Even today, with all the available ready-made manufactured
[198] food or imported food from the *tienda*, they gather evidently most of the common reptiles to increase their menu.

Of the species in the list, only two, both smaller species of sea turtles, figure as really important items. McGee believed that here was by far the most important part of the Seri menu, with the marine birds running second.* Now, the importance of the sea turtles has declined, no doubt through a variety of outside influences. I doubt (on the basis of my observation) if altogether it comes to more than 10% of their total diet. The turtles had been replaced as number one food by
[177] the fish (with the introduction of hook and line fishing). But anther factor evidently is the depletion of the turtle population. The third species, the huge loggerhead, is so rare that during the entire
● [225] summer of 1953, only one of them had been harpooned and that at Camp Vivora away from Desemboque. The two smaller species have also become very rare and hardly ever show up near the village. They can be taken on more distant expedi-

*Eggs of the turtles are considered a delicacy, especially of the smaller of the two. The Seris say that the loggerhead has been eaten once but now almost never, because it became so rare.

[P.22 B]

9:Malkin E-5 (1959-1955)1962 NU31 Seri NU31

262 tions to San Esteban or San Lorenzo. The turtles
[225] now are as much a food as a "cash crop." While
[439] the Seris are camped at Desemboque, most of the turtle catch is sold alive to the Mexican fish traders who are headquartered in Nogales and Hermosillo and take the catch along with the fishes to the markets in these towns and sometimes even as far as Phoenix and Tucson.

Of the remainder, the most frequent items that show up on the Seri table are probably the rattlesnakes and the desert tortoises. The rattlers are eaten with relish—only the heads and the tails are discarded as poisonous. The larger chuckawalla is considered a particular delicacy but is rarely caught because it lives in a somewhat distant region. The remainder of the animals listed as "eaten" are collected only incidentially.

It is probable that very few species are really left alone and not taken as food at various times, especially when famine distress overruns the camp. As far as I could determine, only three species are rejected as altogether unfit to eat: the gecko, the night lizard and the toad. All three are believed to be highly toxic "in flesh and blood" although real harm could be caused only by the toad. Besides, the two lizards are really tiny creatures and would make little difference when a survival is at stake.

*825 Few reptilians are ever used as anything but
[439] food. The sea turtles in a way are at certain times,
237 that is, when they are sold for hard cash to the Mexican traders, whether live or sliced and salted. The only other creature I ever heard about as being used for anything at all was the coral snake. At least one informant suggested that in the past its hide has been used for hat decoration. But coral snakes are scarce and this again could be only incidental. It may be that the rattlesnake hide, especially of the large specimens of the western
[439] diamondback, is sold occasionally to a passing visitor but this again is a rare occurance."

Food Preparation

252 Food preparation of the majority of animals in this group is no different than of most other ani-
[263] mals. They are simply skinned, tossed into a pot of boiling water and cooked, occasionally with salt as the only ingredient. Larger individuals, notably turtles, will be quartered and then boiled or roasted on a grill. The chuckawalla and the desert tortoise are said to be fried, but whether this is the usual procedure I can't say, because only a few of them had been brought into camp in my presence. The tail of the Gila monster supposedly had been fried in oil "in the past."

Food Preferences and Taboos

262 It is obvious that some creatures in this group are considered better food than others. The chuckawalla is especially favored. When several were brought in from San Esteban, I couldn't persuade the owners to part with them, although I offered a huge price (for local conditions). The captors took

[291] Another use in the past—snake-skin belt worn. It is illustrated by McGee (1898:170, Fig. 7).

[P.23A]

Spicer E-5 (1953-1955)1962 MU31 Seri MU31

262 them to their shelter and held them there for several days before they and their families finally ate them up. The turtles are also a well-liked item.

As already indicated in some instances there exists preference for a particular part of an animal. Of the Gila monster only the fat tail was said to have been eaten, and of both rattlers, the head and the tail are discarded on the grounds
* [825] that they contain toxin. Finally the toad and the gecko and *Xantusia* are all rejected as completely venomous.

178 262 It is also evident that changes in the Seri taste have occured in the course of the past several decades. Some animals are on their way out as food, and here we have the Gila monster, the whipcoach, the red racer and smaller lizards. In several cases, and this includes the Gila monster, the responses indicated that the animal had been eaten in the past. I also observed that on the sly, the Seris would eat them when other food was in short order. But they are reluctant to admit this and often altogether denied it.

Hunting

224 Most reptiles are captured by hand or else killed
● [225] with a stick, stone or pea-shooter. Except for the turtles, the Seris will not make special expeditions. But it is certain that if they find themselves on any of the islands near the shores of Baja California they will go ashore deliberately in search of the chuckawalla.

225 The turtles are another matter. Here now, just as in the past, special expeditions are made in order to get them. These expeditions take place
[501] nowadays in the usual flat-bottomed plank boats, either motor or oar propelled. The hunt takes place only during unusually quiet and dark nights, when the Gulf is smooth and calm and there is neither wind nor ripple. With the slightest disturbance,
[354] turtle fishing is impossible. It is all done with the
[411] torch lights or Coleman lanterns. The principal and only weapon is the harpoon, identical with that described and illustrated by McGee. The turtles are then harpooned, dragged into the boat and either left alive, when the hunters have a sale of live ones in mind, or pounded to death with a
[251] club or oar, quartered and then either consumed on the spot or else dried and salted.[1]

[224] While the collecting of the smaller animals us-
[462] ually falls to the children or women, turtle hunting is men's job. Men, too, usually get the chuckawalla because they usually visit more distant islands.

Pets

231 None of the reptiles are pets in a real sense. Those few that might be kept are only held until the day when they are butchered and eaten. It is motivated more by the wish to preserve fresh food than by any affection for the animal. The turtles, the tortoises and the chuckawalla belong here. Occasionally a Seri boy will string a lizard, a *Seri-*

[1] The loggerhead is hunted in the daytime because, owing to its great strength, night hunt would be too dangerous. Two harpoons are always used on it, while for the smaller species, one harpoon usually suffices.

226 and, from all accounts, also from the Japanese
177 whose trawlers worked in the Gulf in the late
1930's. Today, hook and line fishing from plank
[411] boats almost completely replaces earlier methods,
the spear (pueiro) and the harpoon (barilla).
[225] Harpooning is still done in hunting marine turtles
while spears are occasionally used on larger
groupers and also on sharks and mantas. Har-
poons were also used in connection with the lat-
ter. But since World War II the shark fishing
has declined, owing to the development of syn-
thetic vitamins and abandonment of sharks and
mantas' liver oil as a source of vitamins. In these
operations, the Seris were for a while involved
to a considerable extent. But now they have com-
pletely switched to commercial fishing which sup-
[439] plies not only food but also ready-made cash from
the Mexican traders, and with it the Seris can pur-
chase luxuries of life in the Mexican *tienda*.

262 Altogether, out of 42 species listed here, the
Seris reported taking for food 20 species which
are as follows:

Malacosteuus zonifer
Pirella simplicidens
Aniosotremus davidsoni
Paralabrax maculafasciatus
Lythrulon flaviguttatus
Mugil sp.
Cynoscion parvipinnis
Anchovia macrolepidota
Hairdiella iciatina
Stereolepis gigas
Mycteroperca jordani
Cynoscior macdonaldi
Epinephalus analogus
???? (Pescara)
Trachinotus paitensis
Verruculus polylepsis
Gymnothorax castaneus
Hypsoblennis gentilis vickettsi
Abudefduf saxatilis

The most important of these are the groupers,
the *baya*, *pinto*, *totuava* and *mero*—the latter a
giant fish often in excess of 150 kg. and nearly
three meters long. The most important of these is
the *baya*, a medium size fish taken daily in vary-
[226] ing amounts. I suspect that this fish accounts for
more than half or maybe even 2/3 of the total Seri
catch, weight-wise. Of others, none is of any
importance except seasonally.

* 825 Another sort of use is made of the sharks and
mantas in connection with the already mentioned
exploitation for liver. Five species of sharks and
the horned manta were listed by the Seris, with
chato, *gato* and *composo* most frequent and per-
haps most important.

Trading, as already mentioned, is of consider-
able importance to the Seris. Some fish are eaten
[439] only occasionally, but they may be traded off to
the Mexicans.

262 Not all fish are eaten. In most cases no particu-
lar explanation had been offered for the rejection.
But, in some, specific reasons were mentioned.
The *Scorpaena sonorae* and *Cetengraulis mystice-
tus* are so rejected because they "are too bony to
eat." *Gillichthys seta* are considered unfit to eat
because of its tiny size while *Sphoeroides annula-
tus* is refused because of its supposed toxicity, of
which more later. Finally, the sharks are not eat-

[B32A]

123 handed to show their friendliness.

142 One was a young man with rather pleasant features, his braided
291 hair hanging below his shoulders. His name was Antonio Herrera. The
123 other was a wild-looking specimen called Ramon Blanco. His hair was a
[302] tangled mat with a short braid behind, suspicious black piercing eyes,
[311] long sparse moustache and chin-beard hiding a broad cruel mouth. He wore the remnants of an old sweater, a short dirty kilt, or skirt, nearly to his knees, a belt full of cartridges, mostly empty, and a long knife in a rawhide scabbard.

123 The young man had been baptized and given a name by Roberto, who
[785] had acted as godfather or *patrona*, many years ago. He wore a hat,
[291] jacket, and pants of blue denim, and *guaraches*, or sandals of rawhide.

We shook hands all around and then they called and halloed in the brush and soon three women and a lot of children, wild and half-
[415] clothed, filed into camp. The women were tall, gaunt, unkempt, ragged
[482] and barefooted, paying us not the slightest notice. They were bearing
[422] on their heads large baskets filled with all their earthly posses-
[854] sions---cooking ollas, scraps of cloth, pieces of turtle meat, bone
[231] brads, hair brushes, and odds and ends. They carried, also, an infant or two wrapped in odd bits of rags. Several gaunt dogs followed in their wake.

342 In all, three families came trailing in, removed their household
equipment from their heads and resumed their interrupted and primitive
[592] housekeeping. Each family occupied its apartment in the row of brush shelters, separated from each other only by brush partitions with a total lack of privacy. These shelters, always open to the sea, serve as shade from the fierce rays of the sun, and also as windbreaks, but
[361] are no protection from infrequent rains. They are occupied only for a brief period and then their nomadic tenants move on to fresh *cahuaas*, or sea turtle range.

123 Soon, a third man arrived while we were near the huts, Manuel
[412] Encina. He was a man of sixty-five, gray hair and mustache, seamed features, and not evil looking. He was out of breath. He had gone for water to the same water hole where we had been yesterday, struck our tracks, had left his water cans and hurried back to warn his people. He was greatly relieved to find friends.

Since he had gone for water, inquiry revealed there had been no water in camp for two days, and six adults and one girl of thirteen and six children were thirsty. We gladly gave them one of our five-
[225] gallon cans of water and they were very grateful. They had caught a
[262] sea turtle the day before and gave us some turtle steaks which looked like beef or mutton.

312 As the camp was without water and we were running short, the young
402 man and Encina offered to get some. Each took a *palanca*, or short
123 shoulder pole with knotched ends, fitted empty five-gallon cans in

157 The women are virtuous and faithful and perform all the duties of
152 wife and mother and bear their share of hardships. The hard life,
[145] exposure and struggle for existence soon causes hard features, wrinkles
[165] and ugliness. Many babies die young and the tribe probably numbers
[167] only about two hundred.

The dancing by the driftwood fires continued as we turned in to
123 rest, our eyes constantly drawn to the flame and the glittering eyes in the wild dark faces, while the waves of the sea accompanied the chanting in that mysterious isle of Seriland.

• 225
133

Seris - off to the fishing grounds - December 1934. Alcatraz Island in distance.

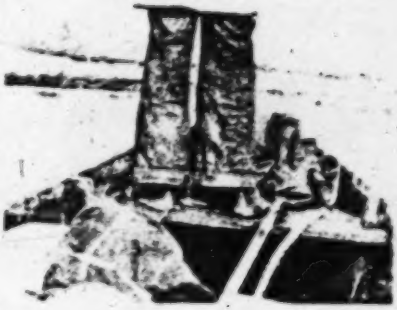
222 In Seriland most of the food comes from the sea. During April and May, at the time of my first visit, a green grass growing on the sea bottom was detached and washed ashore. The women dragged it up on the bank near camp and spread it out to dry. Some of the stalks contained about seven fine green seeds the size of a pin head. When dry, the women threshed them out with sticks on a piece of canvas. These are
[285] cleaned by the deft use of the *batea*, or winnowing basket, of which these people are pastmasters.

252 A pint of these fine seeds were parched in an olla over coals of driftwood and constantly stirred to prevent burning. It was then ground
262 on a flat rock like a *metate*---any flat rock---into a green meal which was very nourishing. This was cooked in an olla with turtle oil, making a porridge like thick green paint. It was then drunk or eaten with the fingers. If there is plenty, two fingers are used; if not, only one finger.

10: Davis E-5 (1922-ca.1939) 1965 NU31 Seri NU31

• 225
291
411

Poised for harpooning sea turtles off Tiburon Island - 1936



[302
142
136]

The catch

262 The Seris also eat the fruit of the *cholla* cactus, *pitahalla* and *sag-*
222 *uaro*, and probably many other plants in season, but they are wild to get flour. But the principal diet is *cahuama*, or sea turtle.

225 After a day or so with the Seris, their food supply became exhaust-
123 ed and they made arrangements to take our boat (all they had was a
[177] *balsa*) and get a sea turtle. So at four o'clock in the morning, with Roberto and Nene, his brother, and myself, they shoved off for the fishing ground. It took two hours of hard rowing to reach the Sonora
[133] side, as the tide was racing up the *Infernillo*. Most of the waters are shallow, with patches of dark and light sandy bottom, with seaweed or grass. On this green grass the turtle feeds; it is their alfalfa field, and it takes a keen-practised eye to see a turtle at the bottom and harpoon him before he escapes.

225 Once on the Hunting ground, water, one of the Seris stood in the
[411] bow with a harpoon twenty feet long, a detachable barb on the end of it, and a heavy line attached. The Seri in the bow motioned with his hand this way or that, slow or fast, and watched the bottom. At last he plunged his spear and withdrew the pole. The turtle swam awhile
[411] until exhausted, and then he was drawn alongside, his head pounded with an ironwood club, and then he was turned on his back and drawn on board. This called for great skill in balancing the cranky, smooth-bottomed boat to keep it from shipping a wave.

225 When a Seri goes in his native *balsa*, which only holds one man, he
501 straddles the middle part on his knees, resting them on seaweed. The craft is light and is a good sea craft, but it is low in the water and the man is wet all the time. He uses a double-bladed paddle, and his harpoon rests against pegs set in the *carriso*. A rock which serves to quiet the turtle, two pointed stakes and a heavy fish line complete the equipment. He has to paddle across to the other side in that cramped position, say eight or ten miles, very early in the morning, then watch his chance to harpoon. If successful he brings up the turtle, knocks him on the head with the rock, pulls him on the end of the craft by skillful manipulation, cut slots in the front flippers, put stakes through and into the *carriso*, pinning him firmly in place, then paddle back.

225 The wind came up strong when we started to return from our turtle
123 hunt and with wind and tide against us we rowed across the Island. Bob and his brother disembarked and took it afoot for camp, a distance of ten miles, reaching there at two p.m. The Seris made a tump line and towed the boat, one towing and two warping off-shore until we arrived at camp about four p.m.

When the bow was run up on the shore everybody came down, the women and children talking a steady stream in their strange jargon.
123 They soon jerked the heavy turtle out, dragged him up the beach on
262 his back, and began immediately to cut him up. Bob spoke for the breast, which is a white plate on the underside of the turtle with

[text continues on p. 168]

[123] gunwales, and then in trying to balance, she would dip the other way.

As we got to the point, the swells were larger and the danger so imminent we stopped the boat in lee of the point nearest Sonora, and Bob and I landed.

Old Blanco had paddled his *balsa* with some of the freight to the Sonora side. The boat put off again, and rode the sea better and it landed all right on Sonora side. In the meantime, several of the women and children, with their loads, had reached the Seri point ready to be ferried across. The boat returned with two Seris paddling. We loaded a lot of Indian junk, Bob and I and several children, the Chief and a woman. Nine in all. We reached the Sonora side, all right.

By this time breakfast had been cooked and we sat down to drink black coffee and eat rice and onions. The wild-looking Seris sat around us watching each mouthful, hungrily. When we finished we gave them all that was left and they cleaned it up.

[23] As we left the Seri point, and as their masters left, the dogs trotted to the water's edge and howled. Bob said that when all had crossed, the dogs would plunge in and swim across the swift current.
[134] The water was infested with sharks, so it was possible that some of them would not reach shore. At last everybody got across, dogs and all.

[192] The Indians carried their packs; the men with the shoulder sticks and the women balancing their loads with marvelous dexterity on their heads. Two men packed twenty gallons of water in five-gallon cans.

When we had all our things in the boat, Juan Tomas jumped in with his pack. We were well loaded before, but this made us a little too deeply laden. Nevertheless, we pushed off and raised the sail to take advantage of the wind. We sailed parallel to the shore for a few miles until the waves got too overpowering and the boat had a lot of water in her. The mast was unstepped---a very delicate operation---and we made for the shore after shipping some of the waves.

My heart was in my mouth most of the time as each time the boat rolled, one side almost dipped up a wave. It was a matter of personal safety as well as safety of what few things I had already collected. One olla I had bought was smashed. The waves looked like clear green paint.

We finally landed without mishap and pulled the boat up, but it was so rocky we had great difficulty in walking in our bare feet. Our legs and feet were bare when we were in the boat and mine were badly scalded by the sun.

The Seris had made camp one quarter of a mile down the beach from us, and the old Chief shouldered his pack and strode down to them. We were very thankful.

[225] Soon some of the men came back to borrow the boat to hunt for

123 *cahuamas*, or sea turtle. After two or three hours' use of the boat they had harpooned two and brought them to shore. Then the whole bunch 225 went to the shore and dragged them out and began cutting them up as they were all hungry and had had nothing to eat hardly. They gave us one breast, the most delicate part of the turtle. It is tender juicy white meat.

123 We soon had the boat loaded again, paddled to the Indian camp, and took the *carriso* boat in tow. We raised the sail and a good wind sprung up and we made a fast run before the breeze. This also whipped up a nasty sea, and the great green rollers would come and slop against the freeboard to an inch of coming on board. At a critical time our slight tow-line parted and we stood a good chance of being swamped in order to hold the *balsa* until we could bend a heavy fish line with great fishhooks which we jabbed into it.

The boat, all the time, was ripping through the water, the boom was slopping in the waves, and each green roller threatened to come on board. We dared not spit overboard for fear of dipping up a wave. The wind and waves got so nasty we decided to make a landing. To add to our anxiety, the *balsa* had broken loose again, but we held it with our hands despite the waves. We unstepped the mast after dropping the sail, and just in time, as the seas got bigger and the wind stronger. We were so cramped we could not row, so the paddles were used, and eventually we reached a sandy beach, all safe and sound, and pulled the boats up out of the water.

I had sent a note ahead, in English and Spanish, to the car to meet us at a designated place on the coast to the south about fifteen or twenty miles. He had stopped to eat *cahuamas* to give him strength. He was a big raw-boned man, Chico Romero, son of the Chief.

123 On the two points nearest Tiburon and Sonora, the most beautiful 133 rocks had been washed up by the sea, that I ever saw. All colors of the rainbow were represented, but lavender and violet prevailed. The sands were a delicate lavender while the shore at Tinajanita, up the bay, was a deep lavender. Many beautiful shells were left by the tide as well as various colored pumice.

Our present camp was at the foot of the granite hills, and the sand was almost white. It was made much whiter by tiny shell fragments only as large as grains of sand.

600 Ten or twelve years ago Bob's uncle and cousin were captured by the Yaquis. They suffered the most inhuman tortures. The soles of their feet were sliced off and they were made to walk over sharp rocks. Their eyes were gouged out and they were scalped.

Another captive was used like a piece of beef. He was staked out and one Yaqui would ask the other:

"What cut would you like?"

so all the other flies could see and also come to this dead thing.''

A few weeks ago, Antonio Herrera had a very vivid dream. He dreamed that he was hunting in the mountains for deer and came across a cave. (These volcanic mountains are pitted with caves.) He went into the cave and saw all kinds of things dear to the heart of a Seri---plenty of rifles, lots of cartridges, knives, *manta* (unbleached cotton), necklaces, red bandannas, blue overalls, *plata*, or silver, and many other things.

When he awoke he sought his father Manuel Encinas, who is a medicine man and interpreter of dreams, to explain his dream to him. The price demanded by Manuel was six *tiras*---or 30-30 cartridges, a very high price, according to Seri standard. The explanation was this:

It was true that the cave was there and all the things in it just as seen and described by Antonio, but in order to find it he would have to fast nine days and go without water that length of time also, in the heat of summer. Then the way would appear to reach the cave. So far, Antonio has not attempted the fast.

I witnessed the operation of making a certain kind of pitch or tar which the Seris use to make the seams in their canoes or boats tight. The women pound up the dried pulp next to the outside skin of a dead *pitahalla* cactus (organ cactus). This is very dry and brown in color and the pieces are pounded up to a dry powder with a wash or shore rock in a dried deer hide. This is placed in a *batello*, or flat basket, and manipulated so that the coarse pieces come to the top and are scraped off and thrown away. The fine powder is then put in a five gallon can and some porpoise or sea-lion oil or horse oil is poured on it and stirred into a thick gummy mass. When thoroughly mixed it is put over the fire, in an olla, to boil and continually stirred for an hour or two until it is the consistency and has the appearance of coal tar. While being worked it is kept heated and applied to seams inside and outside the boat. It hardens just like tar and answers the same purpose.

Since the corn, which had kept this band of Seris in food, disappeared two days before we came, and they had barely kept going on seeds and a few fish, and they all had decided to leave camp with us in the morning---the women walking and the men and some children in boats---it was necessary to supply them with some food to take them to the hunting grounds of the *cahuama*, or sea turtles, and land them on the Island. The *cahuama* would furnish them meat---their favorite and national food, and the shores would supply them with clams, oysters, crabs and other sea food.

So the whole band was called around our camp and each family was furnished with two cups of corn, two of beans, some green coffee and a cup of cube sugar. For the first time our camp was free of Indians, and we ate and went to bed in peace.

The amenities of civilization were laid aside and forgotten in

Ir McGee E-5 (1894-1895)1898 NU31 Seri NU31

bottoms literally writhing with fishes stranded among beds of mollusks and slimy with the abounding plankton of a fecund coast. The region is one of ample, albeit lowly, food supply, where every experience tends toward inert reliance on providential chance, and where the stimulus of consistently conscious necessity seldom stirs the inventive faculty. 227

Closely connected with fish as a Seri food-source are the various mollusean and crustacean forms collectively called shellfish; and these contribute a considerable share of the sustenance of the tribe. 262

Apparently the most important constituent of this class of foods is the Pacific coast clam, which abounds in the broad mud-flats bordering Laguna La Cruz and other lagoons of Seriland, and which was still more abundant during a subrecent geologic epoch, to judge from the immense accumulation of the shells in Punta Antigualla. The clams are usually taken at low tide, without specialized apparatus. They are located by feeling with the feet in shallow water, and caught either with toes or with fingers, to be tossed into any convenient receptacle. When the water is entirely withdrawn from the flats, they are located by means of their holes, and are extricated either with a shell-cup or with some other improvised implement. Frequently the entire mess is thrown into a fire until the shells open, when they are withdrawn and the mollusks devoured practically raw; perhaps more commonly the shells are opened by blows of the hupf, and eaten without semblance of cooking; and, except on the surface, no trace of roasting was found among the vast accumulations of shells in Punta Antigualla. 226 [252]

Perhaps second to the clam in frequency of use is the local oyster, which abounds about the more sheltered shores of Tiburon. It is gathered with the hands, aided perhaps by a stone or stick for dislodging the shells either from the extended offshore beds at extreme low water, or from the roots of a mangrove-like shrub at a medium stage. The shells, like those of the clam, are frequently opened by partial roasting; and shells, sometimes scorched, are extensively scattered over the interior, indicating that the oyster is a favorite portable food. The popularity of this bivalve is shared by the Noah's-ark (*Arca*), to which some mystical significance is apparently ascribed; and the abundant limpets and bivalves and other mollusks are eaten indiscriminately, to judge from the abundance of their shells in the middens. The ordinary crab, too, is a favorite article of food, and its claws are numerous in camp and house refuse; while the lobster-like deep-water crab is introduced into the menu whenever brought to the surface by storms, as shown by its massive remains in the middens. [262] [252] 262

On the whole, shellfish form a conspicuous factor in Seri economy by reason of the considerable consumption of this class of food; but, viewed in the broader industrial aspect, the produce is notably primitive, and significant chiefly as indicating the dearth of mechanical and culinary devices.

2: Kroeber E-5 (1930) 1931 NU31 Seri NU31

sounds like an expectable enough mythic idea, but seems involved with McGee's dubious conceptions as to totemism, discussed below. 114 193

The two-pointed fish-spear, with serrated points 6 inches long and spreading 5°, seen by Hardy (McGee, p. 193), is interesting because seemingly unreported in or near the area. 114 227

"Fishing" with staked pelicans who are then fed by free birds, is authenticated by the statement of Venegas for lower California, (McGee, p. 193). [226 231]

No fish nets, hooks, or lines were seen by McGee among the abandoned effects on Tiburon (p. 194). This is in accord with my observation. The abundance of sharks may interfere with net or deep water fishing.

The bow (p. 200) is of *palo blanco;* the release (pls. 28, 29), Mediterranean; the archer's position (pl. 29), with elbow above head, suggests a quick downward shot at a target or game lying on the ground not far away. 114 411

Mesquite, according to McGee (p. 207), is ground on the metate. Sr. Thomson told me of its being pounded in a hole in the ground. The Seri gave me the name a'kata for what I understood to be this earth mortar. According to Sr. Thomson's description, the flour from the first beans cakes and lines the cavity firmly, so that the bulk of the material is secured quite cleanly. In general, mesquite is mortar-pounded rather than metate-ground by the tribes from whom we have records, as is expectable from the woody nature of the beans. 114 252

McGee (p. 207) noted the viznaga cactus, Echinocistus, as rare in the Seri habitat, presumably owing to its use for water by the natives. I made the same observation on the mainland, but Sr. Thomson stated that along the roads the plant is being gathered for candying. 114 137

The one basket described by McGee (p. 208, fig. 24) is bundle-coiled and plain. The only one I saw in use among the Seri was ornamented with a plain reddish band. Sr. Thomson presented me with two which bear patterns (fig. 13), and showed me a photograph of a collection made by Mr. Davis for the Museum of the American Indian, Heye Foundation, nearly all of which were decorated, some fairly elaborately. Several of these are shown by courtesy of that institution in figure 12. As McGee observes, there is obvious resemblance to Southwestern baskets; especially of the Papago, Pima, and Apache. Southern California basketry is less similar. That of Baja California is unknown from specimens, though the mention of water-tight vessels used for winnowing and parching suggests a coiled tray of Seri type. The surviving tribes of Sonora other than the Seri use few baskets distinguishable from those of the non-Indian population. 114 285 [171]

Class	Species Reported	Species Exploited	Percentages
Mammals	21	9	43
Birds	24	6	25
Reptiles and Amphibians	25	11	44
Fish	44	23	52
Molluscs	36	21	58
Crustaceans	10	2	20
Total:	160	72	45

These figures show clearly the dependence of the Seris on marine life for a major source of their diet. Today, pista, baya, culen and sardineta are their primary source of income with meat and sea-turtles ranking second in importance. Several species of clams, limpets and gastropods supplement this diet.

All other animals represent only incidental additions to the menu. During the last war, sharks and mantas were hunted extensively for their liver, then a source of vitamin D. But since the war, the demand for shark liver has declined and because of this, a considerable income for the Seris has been lost. Shark and manta fishing have been abandoned for these fish were taken only for the commercially profitable liver and not for their flesh.

Fishing and Hunting

Seri fishing techniques are simple. In the past they used double-pronged spears and for the larger fish, harpoons. Today the spears are employed chiefly in fishing while the harpoons are reserved exclusively for sea-turtles. Hook and line fishing was introduced after 1930, as Kroeber (1931) saw none during his visit to Kino in 1930, and it is now the standard method of fishing. An abortive and unsuccessful attempt was made several years ago with net fishing. Another change has occurred within the past fifty years. The old balsas have been replaced by flat-bottomed plank boats outfitted with five-horsepower motors or sails. These motors, incidentally, are leased from the Mexican fish traders because none of the Seris are rich enough to own one.

Bait is obtained by dynamiting schools of small fish in coastal waters or by collecting them at low tide in the tidal pools and from under rocks. Fishing usually begins at dawn and lasts until noon when, as a rule, all of the "pangas", as the boats are called, return to Desemboque. In stormy weather no fishing expeditions are made and when this occurs, starvation becomes a real menace. Harpooning of sea-turtles takes place far out in the Gulf. It is done only at night in exceptionally calm weather by the light of torches or Coleman lanterns.

Hunting as it is done today has changed from the time of McGee's visit in 1894-95. The bow and arrow has disappeared completely except for a crude and diminutive form used as a toy by small boys. Iron spears once used in shark and manta hunting are now carried primarily as a weapon against the numerous and much feared rattlesnakes. They are said to be used occasionally in the peccary hunt. Old .22s or 30/30 rifles are owned by several of the men, some of whom specialize in hunting.

224 Game pursuit is usually done on foot, mostly in the winter and very little in the summer. The intense heat of the desert in the summer makes hunting unattractive. The most frequent trophies are the Sonoran bighorn, peccary, cottontail and jack-rabbits. Sometimes, semi-wild burros, running loose on the adjacent extensive Mexican "rancherias", are poached for meat. The peccary is the only animal hunted with the aid of dogs. Large rodents are dispatched by [223 417] sling-shot, stick, stone, or shot with a .22 caliber rifle. Birds, such as sea-gulls, ducks and pelicans, are clubbed, stoned or shot with a small caliber rifle.

462 While fishing and hunting are primarily men's occupations, the gathering 234 of the terrestrial and marine animals is almost exclusively women's work. 226 Rattlesnakes and other reptiles are often killed and brought to the encampments by the women from their morning trek into the desert after firewood and fruit. Small fish and marine invertebrates in the tidal pools are collected by women, aided by children of both sexes.

252 Preparation of meat is quite simple. It is either boiled in hot water with salt added as the only seasoning or else roasted whole, if small enough, over an open fire with or without a grill. The use of spices such as tomato sauce, [263] chili, peppers, and the like, depend upon the tastes of the individuals and also upon the availability of money.

225 In individual competence as hunters or fishermen the men show a great deal 224 of variability. Some excel in fishing while others do so in hunting. Hand in 226 hand with this, goes the degree of knowledge of the local natural history and, as expected, the best fishermen lead in the knowledge of fishes while the best hunters possess the most extensive knowledge of terrestrial animals and insects. It has also been observed that boys were far ahead of adults in their knowledge of inconspicuous or otherwise commercially unimportant creatures such as insects, obscure marine invertebrates and small fishes. Interest in the commercially or otherwise economically important forms of animals unquestionably becomes overwhelming in adult life while much of the natural history lore learned in youth is forgotten.

Food Preferences and Taboos

262 A number of animals were reported as being a part of their diet in the past but which were not used at the present time. Several species of shells collected from kitchen middens along the coast were thus identified. In some instances it has been denied that a certain animal was used for food; yet, later when such a beast was brought to the camp, it would be added to the menu. Undoubtedly, some of the species were held in low esteem as food and the Seris preferred not to admit eating them.

Large fishes, especially pinta and baya, sea-turtles, and the very large chuckawalla lizard, which is brought back from rare expeditions to San Esteban Island, are the preferred cuisine. Cochi fish, also called puercos, are disdained. Large catches of these were frequently brought in from the sea, only to be unceremoniously dumped on the beach and left to the dogs and the vultures. But when other fish were scarce, the puercos were eaten. Pelicans, once an

[89 cont.]

000 abundant flying and, especially, marine fauna.

For a modern technology, their region has great resources,
511 but for the culture of the Seri it is frankly inhospitable. The standard of living is exceedingly low, as is proclaimed by natives and foreigners and as is demonstrated by the illnesses and hunger that weaken the population.

[90] The Seri truly form part of our Western society, in
226 so far as they catch fish, with fishhooks and motorboats, to sell
439 in the markets of Hermosillo, Nogales, and Tucson, and they
[177] obtain payments in national specie and coin. The part that
182 they form, however, has its own internal structure, which regulates the relations with the environment and among its mem-
[161] bers, even though a group of 218 persons, which suffers severe alterations in percentages from disasters like the sinking of a boat or strokes of good luck like the establishment of a prosperous fishing camp, is almost insignificant for the nation.

Most probably they have never been much more numerous, and they must not have had great cohesion in the past, a situation explicable in view of their nomadic gathering economy.
621 Toward the close of the 18th century they were divided into bands, of which it is known that the most important were the Guaymas, Upanguaymas, Tepocas, Tiburones, and Salineros.
[648] They banded together at various times in order to defend themselves and to attack the nuclei of Mexicans of the zone, achieving combined action, but without effective political unity.

619 At present they seem to form a single group without marked subdivisions, although they recognize affiliations like that of "Tiburones," "half-Papago," etc., which appear to have little real classificatory significance.

184 There is great uniformity: they speak a single language
619 incomprehensible to the rest of humanity; they have a relatively uniform culture, and there is tribal unification for matters involving sexual exchange.

961 The most obvious relations are spatial; they have important settlements that sprung up around the fishing establishments and are more or less permanently occupied. Of these, "El Desemboque," close to the mouth of a river from which they have been displaced, is the most important, with 80 per cent of the Seri

[92 cont.]

156 854 155 They are principally the result of influences that act during the first years of life: constant contact of the skin with that of adults; immobilization of the extremities by cloth wrappings; provision of a permanent support in the form of a cradle to which the child is fastened; constant attention to his alimentary needs, and continuous supervision of his actions.

155 156 "Give me bread," "give me coffee," "you have food, I am hungry," "why do you keep food?" "that's the way things are," etc., are very common expressions that manifest the Seri personality.

000 On the other hand, from the practical point of view (3),

● 226 439 3. For the present fishing promoters, the Seri personality is a serious obstacle: because of the wealth of marine fauna, the competent Seri obtain a good catch in a few hours, and their earnings permit them to live several days, which would be multiplied if the yori would not resort to the sale of marijuana at excessive prices to obligate them to work. [276]

it has to be greatly altered, above all in so far as it influences the personality, in order to raise the Seri standard of living, changing their habits, ideas, and values.

POPULATION ABLE TO WORK
(between 11 and 65 years)

Men, 74 or 69% of the masculine population.
Women, 76 or 70% of the feminine population.

We can add that, at least as far as the male population is concerned, the figure of 69% with a potential work capacity is equivalent, in general terms, to the percentage of the population economically active, since one of the singular characteristics of the Seri population is the fact that they constitute a community fully occupied: all the men of working age have a place set aside in the fishing activities; this is an advantageous position for increasing economic development of the tribe. With relation to the women the situation is not the same, since the majority of girls of marriageable age carry on very few productive activities; it could be said that economic responsibility begins with matrimony.

If it is true that all the Seri men are fishermen, it is also true that there is the beginning of some specialization of jobs, which are carried on complementing or as an accessory to the principal occupation. Thus we have among the men:

Carpenters, constructors of *piraguas* (a kind of canoe)	6
Medicine men	14
Farmers	2

And among the women:

Seamstresses	4
Farmers	1
Midwives	22

The relatively high number of medicine men and midwives should not be surprising; Seri popular medicine is very well known and depends principally on magical propitiation and since the magic powers are acquired in a variety of ways, including dreams, and the healing rites are, on the other hand, very simple, it is not strange that medicine men should abound. As for the midwives, it can be said that every woman who has undergone the experience of childbirth feels herself able to help at a birth; nevertheless, it is said that the more experienced women are those best able to take care of those giving birth.

Problems which should be attended to

In addition to the sanitary problem mentioned above, mention should also be made of the problem of agriculture, linked with the necessity for supplying food to an Indian population which since economically it depends principally on fishing, needs to complement its diet with agricultural products to achieve a better one. In close relation

7: Marroquin E-5 (1955) 1957 NU31 Seri NU31

with this problem is the lack of legal title to the lands which the Seris own in fact but which legally belong to the nation.

Insofar as the economic problem, it is necessary to better the fishing techniques, doing away with old process of obtaining the catch through dynamite explosions. Finally, as Dr. Marroquin says, the fact should be noted that the Seris on passing from the nomadic economy to exchange economy lack the necessary knowledge to achieve success in their operations within the national and international market.

It is thus necessary to take care of these and other problems, to save this Indian group from complete extinction, succeeding on the other hand in raising their living conditions, making of them citizens capable of contributing to the progress of the State of Sonora and the Republic of Mexico as a whole.

NEW DIRECTOR OF THE SUMMER INSTITUTE OF LINGUISTICS IN MEXICO

For the next two years the Director of the Summer Institute of Linguistics in Mexico will be Dr. Benjamin Elson. Dr. Elson first came to Mexico in 1942 and began linguistic field work among the Sierra Popoluca Indians of the State of Veracruz. Sierra Popoluca has been the principal object of his linguistic studies since that time, and various articles have resulted from these researches. He took his degree from Cornell University with the thesis "Sierra Popoluca Morphology". He has on other occasions served as Associate Director of the Institute in Mexico.

The Associate Director will be Mr. H. J. Klassen. Mr. Klassen has done linguistic field work on Lowland Mixteco in the State of Oaxaca. He has served as Interim Director of the Institute on previous occasions.

VII ROUND TABLE OF ANTHROPOLOGY HELD IN THE CITY OF OAXACA FROM SEPTEMBER 1ST. TO 7TH.

During the month of September, the VII Round Table of Anthropology, dedicated to the study of the Indian cultures of Oaxaca, was held in the city of Oaxaca, capital of the state of the same name. Since at the present time there exists in this state a large proportion of Indians, and since during its pre-Hispanic past such important cultures as the Zapotec and Mixtec flourished there, the interest of this Round Table is evident.

Lack of space makes it impossible to present here a complete report of this anthropological meeting; therefore, we will limit our coverage to a summary of the most important points, taken from the Report of the recording secretary, Prof. Wigberto Jiménez Moreno. This report was made available to us through the kindness of Mrs. Carmen Cook de Leonard, Vice-President of the Center of Anthropological Investigations of Mexico. The complete version in English may be seen in the *Boletín* of the Center of Anthropological Investigations (Nº 4, Oct., 1957, pp. 43-49).

8: Ascher E-5 (1960) 1962 NU31 Seri NU31

McGee (1898:214)

estimated that maritime resources provided two-thirds of the Seri diet. Kroeber (1931: 20), approximately 30 years later, estimated the proportion at about three-fifths. In the winter of 1960, 30 years after Kroeber's visit, the Seri were obtaining at least three-fifths of their food from the sea.

In pursuit of their main source of subsistence, the Seri travel up and down the narrow coastal band. In the winter of 1960 they were occupying one temporary camp toward the southern end of the band and a permanent camp at the northern extreme. Seri women and children gather mollusks; fishing is a male occupation. In addition to gathering and fishing for their own needs, the Seri dispose of a portion of their catch on the commercial market. This enterprise began about 1930, and was encouraged by the establishment, in 1958, of the Sociedad Cooperative de Produccion Pesquera Seri with the cooperation of the Mexican government.

The Pacific green turtle constitutes the largest single item in the Seri diet for at least six months of the year—from January to June—and it is also caught occasionally at other seasons. In 1896 McGee estimated that it provided 25 per cent of the total food supply. Emphasizing the intimate ecological relationship between the Seri and the turtle, McGee (1898: 186-187) wrote:

> ... perhaps half of the aggregate life of the tribe is spent within easy reach of its [the turtle's] feeding and breeding grounds, and tribesman and turtle have entered into an inimical communality something like that of the Siouan Indian and buffalo in olden time. ...

Kroeber (1931: 20) believed that McGee stressed the Seri-turtle relationship too strongly and overestimated its contribution to the diet. McGee (1898: 187), in support of the importance of the turtle to the Seri, points to the fact that the turtle carapace is used for, among other things, a house covering and buckler, a cradle, a coffin, and footgear. The carapace is currently used for supporting and roofing houses and as a starvation food. The contribution of the turtle to the diet varies from year to year, but observations made in 1960 suggest a range of from 15 to 20 per cent as a reasonable estimate.

Seri men fish for turtle from boats, which are manned by two or three men and are propelled by oars, sails, outboard engines, or any combination of the three. The boats operate either individually or in groups. The men fish by night or day, depending on the weather and sea conditions. When they fish at night, they use a kerosene lamp to attract turtles to the surface. The principal implement is the harpoon.

The harpoon tackle of the Seri is illustrated in Figure 1. It consists of a foreshaft (c-h), a mainshaft (j-k), and an extension cord (i). The component parts of the foreshaft are a projectile point (c), a gasket (d), a wrapping cord (f), a hafting base (g), and a lead cord (e and h). In preparation for turtle fishing, the hafting base (g) is plugged into the socket (j) on the main shaft (k), and the extension cord (i) is looped through the lead cord (h).

262 I have no idea, of course, what the diet may
178 have been in the past since only archaeology can suggest the answer. But I am sure that there has been much change in their diet since Kroeber saw them, not in the basic pattern but in the composition. With the introduction of hook and line
[177] fishing, the percentages swung in favor of fish,
[226] while decimation of the marine turtle cut down the importance of this animal. Simultaneously,
262 the Seris now have available manufactured or
[177] imported Mexican food items: flour, sugar, rice,
[439] potato (when no one is looking; potatoes are not supposed to be sold to them because they make *tepache* from them which makes them grossly fish in cans, coffee and tea. Dependence on the products of the desert has dwindled. Rattlesnakes, desert turtles and chuckawalla still find their way to the Seri kitchen but not too frequently. Pelican and sea gull will be eaten only when rough times beset them but are disdainfully refused at other times. My own estimates, impressions not supported by any attempt to measure their diet, are as follows:

fish	50+%
turtle	8-
Mexican import	20
desert plant	7
desert land animals incl. stock	5
shellfish	10
total marine origin	68+
total desert origin	12
imported origin	20

224 Another important change in the pattern is the
178 unquestionable decrease of hunting (other than marine animals) in Seri life, as of the domestic
[685] stock stealing, the place of which has been taken in a way by the dependence on manufactured foods and items. Hunting nowadays is done rarely and only few individuals will devote some months out of the year to it. Stealing of domestic stock
[685] has ceased for practical purposes, since in the past it lead to virtual extermination of these Indians. Occasionally the Seri kill off a semi-wild burro, herds of which run about loose in the desert or they'll get leavings off one, hunted down by a Mexican trader or fishermen.

411 The Seris' basic tools of game procurement have
224 changed. Bow and arrow were still much in evidence and in use in McGee's time but seem to have gone out soon after. Kroeber did not mention them
[857] and by now they are quite extinct, except as clumsy toys little boys use to play with. The throwing stick is still used on rabbits—any stick one can scrounge on a moment's notice will do for the purpose. If any traps or falls had been used we do not know of them. Accidental stones may be used much in the same way as throwing sticks. In gen-
[177] eral, various sorts of fire arms, mostly .22 and .38 caliber are owned by a good many Seri men and have replaced other weapons in the terrestrial hunt.

226 More important are changes in the fishing pro-
411 cedures. Formerly spear and detachable harpoon
177 were their only marine weapons. Even as late as 1930, during Kroeber's visit, the Seris made no use of hook and line. But now, hook and line of

[P. 7A]

apparently a line of type has been omitted here-Analyst]

226 411 177 commercial origin are their main instruments of fishing. To this they added dynamite, sometimes with disastrous results to themselves, mostly as a way of securing bait. Single-pointed fish-spears which loomed so importantly in McGee's account have gone the way of the Dodo for its original purpose and transformed into iron bar lances, now used largely as weapons against rattlesnakes that men encounter in their desert roamings. However, in the forties, when the Seris spent a great deal of time getting sharks and huge rays, they killed them with these weapons.

226 411 What retain some importance are the harpoon and the two-pronged spear called "puiero." The two-pronged spear is one of their oldest weapons. The construction is much the same as when McGee visited them. The spear is used mainly to stab large-size fish, the giant *bais* or *mero* for example, after it has been brought up on the line. The [225] harpoon is now exclusively a weapon for the turtle hunt.

226 177 [157] An interesting fate met an effort to teach these Indians net fishing in 1947. They tried, ruined the nets and never took it up since. The instigators were Mexicans, the fish traders. I suspect that Seri individualism had a great deal to do with their lack of interest in net fishing which after all demands a certain amount of cooperation. With the hook and line fishing, men can have much more their own way.

501 177 648 An added "tool" of the Seris is the plank boat. The balsa which McGee still observed during his visit, had already vanished by the time Kroeber came to the Seriland and had been replaced by these boats. The boats are flat bottomed but good sized. The material was provided by the Mexican government. Boats are usually propelled by 5 hp. motors leased from the Mexicans (no Seri is rich enough to purchase [434] one) who also sell them gasoline and oil at exorbitant prices and in return buy Seris' catch of fish and sea turtle for low prices. At the time of my visits these amounted roughly to less than a peso [435] per kilo of the flayed, degutted and cleaned fish (less than 8 cents) with fluctuation up and down the scale depending on the kind of the fish, and to about 30-50 pesos for medium to large size "cahuama," the live marine turtle.

501 648 The Seri boats are also propelled by paddles and sail—this is always the case with the families who wish to stay away on Tiburon for some time. The Mexicans will not lease them their motors for such trips even if the Seri, some of them at least, have enough knowledge of the motors to repair minor stoppages—a demonstration of the fallacy [114] of McGee's idea that they are genetically unable to handle tools. In this respect, Kroeber's (1930: 25) estimate of them is closer to the truth.

462 [434] Sexual division of labor in procuring food goes on, much the same as it had 70 and 30 years ago, with the sole exception of the imported goods. Here purchases are made either by men or women or by children, depending on who at the time has the cash and what one wishes to buy.

Fishing is still done by men and so is hunting. Women still concentrate on gathering, whether of

9:Malkin E-5 (1953-1955)1962 NU31 Seri NU31

VI

FISHES

Taxonomy

* 825 The Seri have considerable skill in differentiating between different species of fishes. There are two main groups which they recognize but which in their own mind are entirely unrelated, the fishes and the sharks. It is also certain that they consider the mantas and sting rays as creatures allied to the sharks and not to the fishes. To the Seri sharks and mantas are not fishes at all but entities of their own. It appears that there are two bases for this distinction. Fishes, as Seri see it, always lay eggs; sharks and mantas do not but instead deliver young alive (in fact some do and some don't). Secondly, the peculiar dimorphic structure in the sharks and mantas, the claspers present in the males of both, not only suggest to the Seri the male sex but also an association with another group.

On the whole, the Seris were able to distinguish as separate species almost all of the fishes for which they were questioned. There is confusion in a few instances. Although *Totuava* and the *Pinta* they think are separate, the evidence suggests that here they actually distinguish merely individuals of different age that belong to the same species *Epinephalus analogus* and that the mature individuals are called *Totuava* and the immature *Pinta*.

An interesting situation arises with the *Myrichtys tigrinus*. This peculiar and remarkably snake-like fish is considered not a fish at all but a snake. The Seri know nothing more about it, and this is where the association ends in their mind. For taxonomic purposes, this fish is included among the fishes but it should be remembered that this is not what the Seris think.

With the exception of three more species of fishes, *Ogilbia*, *Lutjanus argentiventris* and *Conodon serifer*, the Seris had at least some knowledge of the natural history of each species. But in these four cases they could say nothing, nor have they recognized the last three.

Economic Uses

●226 177 According to McGee, the sea turtles and the marine molluscs are most important in the Seri economy, with the fish coming in the third place perhaps. Today the situation has changed radically. The fish became the very basis of the Seri subsistence, with the marine molluscs falling into third or fourth place in order of importance. One good reason for the change has been the revolution wrought in their fishing method with the introduction of the hook and line. This must have come into the fore after 1930 and became the dominant method of fishing after 1940. The Seris did learn to use hook and line from the Mexicans

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226 177 [411] [225] and, from all accounts, also from the Japanese whose trawlers worked in the Gulf in the late 1930's. Today, hook and line fishing from plank boats almost completely replaces earlier methods, the spear (pueiro) and the harpoon (barilla). Harpooning is still done in hunting marine turtles while spears are occasionally used on larger groupers and also on sharks and mantas. Harpoons were also used in connection with the latter. But since World War II the shark fishing has declined, owing to the development of synthetic vitamins and abandonment of sharks and mantas' liver oil as a source of vitamins. In these operations, the Seris were for a while involved to a considerable extent. But now they have completely switched to commercial fishing which supplies not only food but also ready-made cash from [439] the Mexican traders, and with it the Seris can purchase luxuries of life in the Mexican *tienda*.

262 Altogether, out of 42 species listed here, the Seris reported taking for food 20 species which are as follows:

Malacosteuus zonifer
Firella simplicidens
Anisostremus davidsoni
Paralabrax maculafasciatus
Luthrulon flavigultatus
Mugil sp.
Cynoscion parvipinnis
Anchovia macrolepidota
Bairdiella icistius
Stereolepis gigas
Mycteroperca jordani
Cynoscior macdonaldi
Epinephalus analogus
???? (Pescara)
Trachinotus paitensis
Verruculus polylepsis
Gymnothorax castaneus
Hypsoblennis gentilis ricketti
Abudefduf saxatilis

The most important of these are the groupers, the *baya*, *pinto*, *totuava* and *mero*—the latter a giant fish often in excess of 150 kg. and nearly three meters long. The most important of these is the *baya*, a medium size fish taken daily in vary- [226] ing amounts. I suspect that this fish accounts for more than half or maybe even 2 3 of the total Seri catch, weight-wise. Of others, none is of any importance except seasonally.

* 825 Another sort of use is made of the sharks and mantas in connection with the already mentioned exploitation for liver. Five species of sharks and the horned manta were listed by the Seris, with *chata*, *gato* and *composo* most frequent and perhaps most important.

Trading, as already mentioned, is of considerable importance to the Seris. Some fish are eaten [439] only occasionally, but they may be traded off to the Mexicans.

262 Not all fish are eaten. In most cases no particular explanation had been offered for the rejection. But, in some, specific reasons were mentioned. The *Scorpaena sonorae* and *Cetengraulis mysticetus* are so rejected because they "are too bony to eat." *Gillichthys seta* are considered unfit to eat because of its tiny size while *Sphoeroides annulatus* is refused because of its supposed toxicity, of which more later. Finally, the sharks are not eat-

[P.32 A]

262 en simply because their flesh is disliked and unfit for human consumption. But it may also well be that some of them, especially of the giant variety, are not eaten simply because they are far too large to tackle and the Seris fear hunting them.

The Seris indicated also in some cases that larger specimens of fishes are eaten when they reach the size which would justify the effort. This is true of *Malacoctenus zonifer* which they indicated is "eaten when large," that is when at least 10 cm. long.

●[226] Although only sometimes did the Seris specifically indicate that certain fishes are used for bait, it is very likely that almost all small or lesser fishes are so used.

262 178 In some cases the Indians indicated changes in preference for given fishes, with the time. For unexplained reason *Gymnothorax castaneus*, the morene, has been claimed to have been eaten in the past but not for the last 11 years. It isn't clear why the figure of 11 had been used and why suddenly in the early 40's they should stop eating it while the Mexican drool over it. But it may be also that here we have merely personal preference of the informants, as so often happens. As for the *pescara* it was formerly taken for food [439] but now it is merely sold to the Mexicans. This practice is increasing also to include the immense *mero*, even larger than the *pescara*. The fish is mainly sold but rarely eaten by the Seris themselves.

Food Preparation and Preferences

252 Food preparation is simple and in the main differs not at all from the preparation of other animal diet. The fish are either boiled whole or in part or else are roasted over slow fire on a grill. The entrails are usually discarded, but otherwise the beasts are eaten entire, eyes, brains and the rest, while the tiny fishlets are eaten complete with the scales and guts.

262 As for the preferences, as expected, there are some fishes that the Seri like better than others. The *bam* in the first place and the *pinto* in the second lead the list. The Seri prefer them to all others and consider them a real delicacy. On the other hand, there are some fishes that they'll eat only under protest, meaning when times are hard. *Girella simplicidens* is one such creature. The *Puerco* or *Cochi* is another. I have seen boat loads of puercos brought in with the other fish and un- [231] ceremoniously dumped out on the beach to the dogs. Literally! The Seris took to this fish only when fishing was poor during the wintry days when they were held ashore by the weather. Even [183] then, they tried to eat the despised creatures on the sly, avoiding being seen doing this, and when I or the Mexicans picked up fresh fish from the beach to take home they laughed saying that we acted as a *cochi* (pig) would!

Other Economic Uses

* 825 237 322 One use made of fish concerns two species of sharks, the *chato* and *camposo*. Here, the informants claimed, the oil from their liver had been used in earlier times for polishing wood. This is

* 825 quite possible but I couldn't substantiate the story
237 from contemporary evidence. Perhaps during the
height of the shark hunting for the liver oil, the
[322] Seris used the oil also for wood polish, although
it isn't very clear just what sort of artifact they
make would require such treatment. The wooden
tools or artifacts among them are in short supply
at all times. Finally, the huge horned manta was
supposedly hunted also for its hide but just in
what circumstances it was not explained. It is the
only fish which the Seri ever mentioned as having
been put to such use.

Fishing

●226 As already mentioned, fishing nowadays is
largely accompanied from flat-bottomed boats
with hook and line. The old ways of getting fish by
spearing are almost gone for good. Recently, an
[177] attempt has been made to teach the Seris siene
fishing, but 10 years of these endeavors accom-
plished only ruination of a number of expensive
nets and of much fishing gear and the desertion
[157] of the project by the Indians. It may be that their
individualistic and almost anarchistic attitudes
preclude cooperation, essential in this type of
fishing.

The bait is obtained in any one of the three
ways: by dynamiting fish in tide pools or
along the shore, or by catching small fry with
small hook and line, or finally by collecting small
fishlets in the tide pools, prying them out from
[857] under rocks or simply—and here the Seri boys ex-
cel—by shooting them in the tide pools with tiny
toy arrows or simply spearing them with a stick.
[177] The dynamiting is done with the purchased sticks
of dynamite which the Seris obtain in the tiendas.
The procedure is often risky and down right dan-
gerous. Some of the Seris have blown themselves
up with dynamite. I have seen one of them, who
lost both arms and had a jaw broken during a
dynamiting trial. He went about with a dirty rag
tied up over his head to support the wrecked
[164] jaw-bone. He was carried off by measles two years
later in the 1955 epidemic.

226 The Seris' commercial fishing is pretty much
648 controlled and exploited by the two or three Mexi-
439 can fish traders from Nogales and Hermosillo.
These have their tiendas in Desemboque, which
443 at set price sell things to the villagers. They also
provide the Indians with the five horse-power mo-
[501] tors for fishing trips and pleasure cruises and with
the oil and gasoline essential to run these—also
at set price. They finally purchase the fish—at a
set price—and from the proceeds the Seris pur-
chase goods at the tiendas, completing the cycle.
Not all Seris are compelled to work for the Mexi-
cans, and, in fact, they do not always do so. Some
[501] families stay away from Desemboque and depend
on the sail and oars for propulsion. They come to
the village only once every few months to obtain
supplies. Even when in the village, the Seris make
little effort to fish for more than they wish to get
in order to satisfy their immediate needs.

226 Fishing expeditions usually take place in the
morning. Most Seris will set off before daybreak
and will return with the catch by 11 a.m. or noon.

●226 Occasionally they'll stay a little longer and when far off in the Gulf, they will return only in the afternoon. But this is not frequent. Some of the bait catching is done during the night by the light of torches or Colemans.

As already mentioned, unfavorable weather may put off fishing for several days and when that happens, famine becomes a real menace to the Indians because they have no supply of food stored away for the lean day and no cash for such purposes.

[731]
[251]

Sexing

*825 Sex differences in fishes have been observed by the Seri probably in the majority of the species from the list, although for several there is no data available. The tabulation breaks down by the number of species as follows:

	number of species
Sex differences observed	22
Sexes alike in all respects	6
Didn't know what differences there are	6
No data	8

The six species in which sexes are considered indistinguishable in size and color and in other respects are *Pescara*, *Pinta*, *Baya*, *Pinturera*, *Smyrna* and the undertermined shark *sp. C*. The inclusion here of the most important economic species such as *Pinta* and *Pescara* and of the sharks is interesting. It shows, in the main, probable lack of information rather than ignorance of differences on the part of the Indians. It was probably an oversight in questioning, for surely the sharks' sexual differences are usually known to them and it is improbable that they could never tell the difference between the sexes of their most important marine game.

The species in which they expressed puzzlement over the differences and simply indicated that they didn't know the answer were largely little known forms about which they could tell very little anyway, either because they occurred far away from their territory like, for example, the flying fish and the tuna, or otherwise were obscure species, too small to pay attention to, or finally, the huge monsters, too big for them to hunt and approach for more careful inspection.

In more detail, a number of different sexing criteria seem to be employed by the Indians. These differences are tabulated below:

Males larger	Females wider, larger in bulk, but length the same
Abudefduf saxatilis	*Cydoscion macdonaldi*
Gymnothorax castaneus	*Trachinotus paitensis*
Girella amplicidens	*Cynoscion parvipinnis*
Aniaotremus davidsoni	*Mugil sp.*
Gillichthys seta	*Bairdiella incistius*
Sphoeroides annulatus	**Males more brightly colored**
Parcques viola	*Paralabrax maculofasciatus*
Females larger	*Hypsoblennius gentilis*
Epinephalus analogus	

Other sex differences considered by the Seri are structural and appy to the sharks. They associate the presence of the "2 penises" in the sharks and mantas with the males and their absence with the females. The "penises" are, of course, sex claspers present near the vent in the male sharks which aid them in holding up the female during the mating. These differences had been observed

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*825 fishes, the larger the species, the larger prey it takes. *Lisa*, *sardina*, *sardinera*, small *pinta*, *puerco* were most frequently mentioned as victims of predation. The *sardinera* is supposed to feed on the sardina, hence, they say, it takes its own vernacular Spanish name. Finally, in the upper size limit, among the largest, mantas and sharks, they say there are no enemies—the size of the fish eliminates any danger.

●226 The frequency of predation has been noticed by the Indians and, as a result, they often use appropriate kind of bait for the kind of species they wish to capture. Thus different kind of fish or an octopus will be used as a bait for the species they think feeds on these rather than on other animals.

Development

*825 The division of fishes into viviparous and oviparous is clear cut. Of the 33 species for which detailed responses are available 23 are considered oviparous and 10 viviparous. All of the latter are sharks and mantas. The knowledge of this fact stems unquestionably for the most part from the relatively recent experience in hunting these animals for the liver. Even though at present this occupation went into disuse, the knowledge gained in the course of it still persists.

The responses indicated that the larger the shark or the manta, the fewer young it will have. And, in fact, the informant indicated this by a blanket statement to this effect. The largest creatures in this group has, they say, two young as a rule; the smallest, a dog-fish, will have 12-14. An exception is the smaller sting ray which they claim will have 1-2 young .

The rest of the fishes carry roe and deliver eggs. The number of the eggs has always been indicated as "many" but sometimes a stab at a figure was made and, for example, *Anisostremus davidsoni* is supposed to have about 1000 of them. It appears that the Seris were convinced that a fish which is not a member of the shark family is automatically an oviparous creature. Even when not familiar with the roe of a certain species of fish they were apt to indicate that it must have it.

There were few negative responses and these were largely associated with the little known forms. Tuna, flying fish and the snake-like fish *Myrichthys tigrinus* which they think is a snake and not a fish belong to this category. Exceptionally, one of the better known fishes, the *corvina*, was also in this group and it is difficult to explain this ignorance of its natural history.

When the fishes mate is a mystery to the Seris, and, for some reason, there is little association between the mating and delivery of the eggs. This is all the more strange, because mating takes place immediately after the delivery of the roe. This suggests that the conventionalized Seri idea includes a time lapse between mating and delivery of the egg or the live offspring in most animals. How this works could be seen in the birds and mammals. The only instance when mating season has been pinpointed by the informants concerns the horned manta which they say mates

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analysis of the data given for the individual species. Where such data are available, for 21 species, fully 15 show preference for this kind of habitat and only six, it is said, prefer sandy bottoms. In many instances, such ecological preferences had been very emphatically pointed out and the informants denied that the animal lives over either rocky or sandy bottom, as the case might be. Geographical distribution has often also been indicated in the same manner, and explanation for the presence or absence of a fish in a certain place has been represented in just these terms. But this will be discussed later on. On the whole, the rock-loving fishes are all of the small species and economically not particularly important. The six sand loving species are:

Sphoeroides annulatus
Lythrulon flaviguttatum
Myrichtys tigrinum
Mugil sp.
Cynoscion parvipinnis
Bairdiella incistius

There are a few more factors introduced into the ecological considerations. Sometimes ecological preferences had been indicated for the large and immature individuals of the same species. Thus the big *mero* "live in deeper water 25 meters or more deep" while the "little *meros* go to the Esteros." The large shark *pinturera* is said to be absent from Desemboque because "it is too shallow there" and this presumably holds true also for other sharks. A similar situation pertains to the sting ray where the smaller individuals do come to the bank. Sometimes the fish may keep to the deeper waters but stay on its surface, and here, the Seris say, belongs the *choveta*, a small fishlet, traveling about in countless schools.

Distribution

The distribution charts of fishes indicate in the main the Seris' familiarity with the coast. The locality near which they live or places where they fish show the great number of species listed by them as present. The further away from Desemboque and Tiburon, the fewer species are listed. The Seris do not go to the coast of Baja California to fish, hence no species are listed for it. Those that are marked so are the species which the informants included under a blanket statement "present everywhere." The basis for this kind of statement seems to be the frequency and numbers of fishes that are encountered.

[484]
[226]

On the other hand, there are a number of such records that are indicative of the ecological preferences and frequently a fish might be marked

[P. 37 A]
1 [see category 116 - pp 63-64. - Analyst.]

*825 for Desemboque or Porto Libertad but marked negatively for Porto Kino and reverse. Kino is sandy, Desemboque is rocky. Hence the difference.

With two exceptions, all sharks are marked as ubiquitous but sticking to the deeper waters of the Gulf or as the Seri would express it "found in the Gulf." This sort of thing is hard to mark on the chart and therefore a blanket statement covering all such is indicated.

Toxic or Dangerous Fishes

Very few fishes are considered really dangerous or aggressive. There is a generalized notion, undoubtedly not entirely unfounded, that the large sharks are dangerous and that they'll make dinner of humans if given an opportunity. They are also feared for their strength and for the size of their teeth, regardless of whether or not they are aggressive. The huge sharks, most likely the whale sharks, had not been hunted by the Seris, so the informants say, owing to their size and brute strength. Larger real fishes, *mero* and *totuava*, are also considered large enough to throw men into water, though not aggressive. The same goes for the manta. [226]

The smaller mantas and the sting ray are greatly feared, owing to their possession of a nasty spine with which they can sting badly. The smaller sting rays are particularly feared in this respect because they bury themselves in the shallow sandy beaches and cannot be seen. The sting is painful and is also considered toxic although the toxicity is actually due to the accumulation of slime and danger of infection.

Two other fishes are considered toxic but harmless. *Myrichthys tigrinus*, which, as already mentioned, is believed to be a snake, is said to have venom but is harmless because it does not bite. *Scorpaea sonorae* is also believed to be venomous and "the venom is located in the spines in the fins." This creature, the Indians say, may inflict pain which will last for a full day. Finally there is the odd case of the little *Sphoeroides annulatus*. This one is thought to be venomous in the flesh and therefore dangerous to eat. The explanation for this was offered as follows: "100 years ago a Seri man ate one and died of its venom. It was very long ago. Maybe 100 years." [262]

It is difficult to account for this story unless someone actually ate a fishlet so utterly rotten that septic reaction set in and the man died of food poisoning. It is also not likely that such a trivial event would be remembered as far back as 100 years ago.

[P. 39 B]

MOLLUSCA

VII

USES

Species	Food		Decoration		Trade		Bait
	Pres.	Past	Pres.	Past	Pres.	Past	
Octopus bimaculatus	x	x				x	x
Codakia distinguenda		x					
Laviocardium elatum		x			x[1]		
Carditamera affinis	x	x					
Acmaea dalliana			x	x	x		
Crucibulum spinosum		x	x	x	x		
Chione undatella	x	x					
Chione californiensis	x	x					
Pteria peruviana	x	?	x	?	x		
Volsella capax	x	x					
Olivella dama			x	x	x		
Cypraea annettae				x[2]			
Tegula rugosa		x		x		x	
Conus regularis		x[3]		x	x	?	
Phyllonotus erythrostomus		x				x	
Turritella brodeiana		x[3]			x	?	
Polinices reclusiana	x	x					
Chlamys subnudosa	x	?					
Atrina maura	x	?			x[4]		
Navicula pacifica		x					
Turbo fluctuosa	x	?			x		
Solenostira pallida			x	?	x		
Ceritium stercusmuscarum			x				
Trivia radians			x				
Ficus ventricosus	x						
Nioche bistrinnoca	x	x					

[1]Occasionally used as dip spoon
[2]Supposedly used in the past for money
[3]In the past "giants of 300-400 maybe years ago have eaten it."
[4]Only pearls

These figures show then 26 out of 37 species exploited economically in some way, that is 70%. These figures show increase over the figures I have published previously (1956) which were 21 out of 36 species and 58% respectively. The corrected figures are the result of brief additional field work in 1955.

Food

A good part of the molluscan forms are used as food. Altogether 19 species are listed as such, although out of these, only 11 were reported as being part of the diet today while the remainder only in the past. It is obvious that there has been progressive decrease in the Seris' dependence on the molluscan diet within the past few generations.

Four of the species reported as part of the Seri diet at various times had been collected from the kitchen-middens. There are: *Pteria peruviana*, *Chlamys subdudosa*, *Volsella capax*, and *Navicula pacifica*. Of these four, *Navicula* has been reported as eaten in the past "maybe 100 years ago, but not

[P. 38 B]

301 + 825 worn. I have observed women wearing necklaces of the former and women and very young boys of the latter. The olive shell, incidentally, is made into two sorts, the natural, unroasted shells which retain a greenish-purple, mottled color and the white. The white pallid color is achieved by roasting the shells over fire. The necklaces are mostly made up of either colored or white but occasionally they may be made of mixed shells and then they are usually alternately interlaced, now with one, now with another.

+ 825 b) *Utensils:* Two species had been reported used as occasional drinking or dipping cups and spoons. *Lavicardium elatum* and *Ficus ventricosus*. *Ficus* is presently discarded, but the *Lavicardium* is still occasionally used so. There is no doubt that the incidental use of these shells increases during longer fishing expeditions when the Seris are apt to lose some of their gear. [412] [415]

[436] c) *Money:* Interestingly, the brown cowry was supposed to have been used as a means of exchange, as money—in the past. If this is so, then the selection of this shell for such purpose is not [171] surprising considering its widespread use throughout the world.

439 + 825 d) *Trade:* Altogether 12 species had been reported as traded off either in the past or present. The trade importance of various species of shells varies with the demand of the market and sometimes may be only sporadic and short-lived. Only a few of the species had been indicated as having been of any trade importance in the past, and it may well be that the Seris did not register the species which may have been briefly sold to and outsiders during the short-lived fads of demand. It may be said in general that the trade importance of the shells increases and that greater variety of them are exploited now than formerly. This is surely owing to the increasing accessibility of the Seri country and the increasing tourism, not only visitors from Hermosillo, [177] but also from such far flung places as Tucson, Phoenix and even Los Angeles.

In some instances, the Seris had no idea what the shells were sold for. The augur shell is on and off sold to some American traders who show up in Desemboque once in a while and for whom the Seri women accumulate these shells. But what uses were made of these, the Indians surely didn't know. Neither did they know what uses were made of the *Murex* shell and the *Turbo*, both of which were periodically sold in bulk to Hermosillo. On the other hand, they had some idea what uses were made of some other shells. *Pteria* and *Atrina* contain pearls and these are much desired. Especially the pearls of *Atrina* which are sold to the [435] Mexicans or to the visitors for 25-50 pesos each and therefore have immense value, for the local market. The *Pteria* shells are said to be used for [237] button making, and the Seris themselves claim that they make buttons of this shell. The most important of all, however, at least at the time of my visits in 1953 and 1955, was the olive shell. It was easily the most commonly and most numerously collected shell of all that the Seris ever [226] collected. Owing to the scarcity of it in Desembo-

*825 439 [226] [415] [435] que (as a result of the ecology of the coastal waters) it is gathered in huge quantities largely on the shores of Tiburon where it is said to occur in great numbers. This animal is gathered in large bulk in 5 gallon gasoline cans and then sold either as finished necklaces at the rate of five pesos each, or as bulk, by the liters, with 20 liters for each gasoline can. There is a steady market for these shells.

226 e) *Bait:* Only the octopus has been reported as used for fish bait for the *pinta*, *baya* and *pescara*, and I have seen it used in that manner. But it is certain that on occasion the Seri will use also for bait the flesh of some of the shelled smaller molluscs, especially when they wish to capture live fishlets for bait.

Hunting

[462] [857] Collecting of molluscs is almost invariably a job of adult women and of the children of both sexes who at low tides scavenge the exposed mud flats and gather or dig out various marine animals. Some are collected on the surface only. Among those that must be excavated are the octopus and *Nioche* which hide in burrows or mud, respectively. A large shell is usually used as a tool to pry the *Nioche* out.

Taxonomy

*825 Molluscs on the whole are recognized as one group of animals. However, this does not include the octopus and the chitons which are considered as different sort of creatures. Some sort of feeble association between the *Pelecypods* and the *Gastropods* is recognized and various species of both are placed together. I noticed a tendency to consider some of the *Gastropods*, the limpets and *Crepidula* for example, as supposedly having two valves while in fact they are both univalves. The explanation offered for this was "it lost one side," meaning one valve.

Although *Chitons* spend most of their time motionless attached to rocks they are both considered animals. The motions of these animals may not [857] have been observed by the adult, but the Indians, young boys especially, certainly noticed the changed positions after a period of time.

In some instances the Seris observed quite small differences between animals—recognizing them as different species. In the *Neritina* two different forms were correctly identified as representative of the same species, although they differed considerably in size and color. On the other hand *Columbella* and *Solenostira* had been given the same Seri name palémex[x] but were recognized as different kinds of animals.

Sexing

A distinct tendency to consider the molluscan males larger than the females emerges readily from the Seri answers. This can be shown in the table below:

[P. 40 A]

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VIII

CRUSTACEA

Scientific	Common Name
Cirripedia	Barnacle
Axius vivesi	Mud-shrimp
Leptodius occidentalis	
Microphyrus platisoma	
Speleophorus schmitti	
Petrolistus armatus	
Callinectes arcuatus	
Glyptoxanthus meandricus	
Pilumnus townsendi	

All animals in this group are considered live animals—and not plants. This interestingly includes the barnacle. The only way one may account for this is probably the Seris' observation of the cracked barnacles and of the moving flesh inside. Barnacles growing on the marine turtles are also classed as animals, though of a different kind than the barnacles growing on rocks or on the mangroves. They are called *piojos de cahuama*, literally, turtle lice.

The Seris regard *Glyptoxanthus* and *Pilumnus* as the same kind of animal. *Pilumnus* is considered to be merely a large specimen and "maybe an adult," the other *Pilumnus* "is young." When questioned about the reason for the identity the informants pointed out the hairiness of both crabs.

On the other hand, although *Spelenophorus* and *Microphyrus* have the same Seri name, they are considered two different species.

Economy

Crustaceans play little role in the Seri diet. Very few are eaten at all and when they are, the amounts are insignificant and they are considered an inferior sort of food. The informants denied that they have eaten any of them in recent years, but allowed that two species, *Callinectes* and *Axius*, had been part of their diet in the past, although how long ago they didn't specify. There is no doubt, however, that in time of frequent sub-famines, the Indians resort to these lowly creatures.

In addition to this, *Microphyrus* had been mentioned as a fish bait. It is possible that in a pinch other forms are also so used. Finally, the most frequent function that the crustaceans play in the Seri life is as objects of play for the boys who spear them with the miniature two-pronged "puieros."

Sexing

For three species of the crustaceans the Seris indicated distinction differences between the sexes. In the two crabs, *Callinectes* and *Leptodius*, the males have narrow center plate while the female's center plate is wide, which in fact is a well-known sex difference in crab. In *Glyptoxanthus* and *Lep-*

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XI

SUMMARY

In 1956 (Malkin 1956:74) I published tables indicating the degree of economic exploitation of the animal world by the Seris. These tables were incomplete and also need corrections. Therefore below I am reproducing the revised version.

Class	Species Reported	Species Exploited	Percentages
Mammalia	21	9	40
Birds	24	6	25
Reptiles and Amphibia	25	17	68
Fishes	44	23	52
Molluscs	37	27	70
Crustacea	10	2	20
Insects	92	—	—
Miscellaneous	9	—	—
Totals	262	82	30

These figures show as yet remarkable degree of exploitation of the products of the sea and also of the reptiles with correspondingly lesser interest in the terrestrial animals in general. Of course, mere listing of animals does not tell the whole story. In the first place, it does not indicate the changes that took place nor does it suggest the relative importance of any group or species. Historically, the situation is different now. Out of nine species of mammals reported as eaten only six still figure out in the diet. The reduction is even more striking in birds where only three are admittedly eaten and two of these only furtively. More yet, only 12 species of marine molluscs out of 27 are eaten while the rest get discarded. All this is tied up then with the changes in the economy, with the importation and increase of the trade foods and goods and also with increasing preoccupation with the commercial fishing at the expense of hunting and gathering.

Individually, by far the most important in the Seri diet and economy are the fishes with half a dozen large commercially lucrative species leading the list. Next come the marine turtles and following these for the third place tie the molluscs, the mammals (lagomorphs, bighorn and peccary) and probably the rest of the reptiles of which the rattlers are probably most important by volume. Insects do not figure any longer in the Seri economy in any way, although at one time they probably had some significance. On the other hand, while the food importance of the molluscs decreased immensely, their trade importance is on the upswing owing to the demand from the outside. Thus the basic changes in the Seri patterns of exploitation of animals has been a result largely of an outside stimulus.

Fishing and Hunting

Fishing is practiced mostly to satisfy the immediate needs, of petty cash and food: Once these are satisfied, there is no incentive to fish until the need arises again.

[P. 54 A]

123 As a concrete result of that first trip to Tiburon, I secured a
115 *balsa* (boat) made of *carrizo* canes lashed together with native fibre,
501 which *balsa* Mr. Heye said it was the finest one in North America.

• [226] This *balsa* was given to me without hesitation, although it furnished one or two families with sea food.

115 I wish to pay tribute to Senor Roberto Thomson who has been my constant companion, friend, guide and interpreter during the past twenty years, on all my trips to Tiburon and various parts of Mexico. I found him absolutely dependable, using excellent judgment in critical situations. He was honest, fair, intelligent, looking out constantly for my safety and comfort always, enduring hardships cheerfully. A better all-round out-door man I have never seen equaled. In short, he is a real *hombre*, and *muy simpatico*.

131 Tiburon, or *Shark Island*, long noted for its evil reputation as
181 the home of the most savage and treacherous Indians of North America,
193 lies in latitude 29°north and 112°30' west longitude, in the Gulf of California. It is shaped like a parallelogram about thirty-five miles long and eighteen to twenty miles wide, and lies parallel to the coast of Sonora, Mexico, of which, no doubt, at some remote period, it once formed a part.

It is separated from the mainland, for the most part, by a strait called *El Infernillo*, or The Little Hell, through which the rising
[137] tides pour a resistless flood. It is a desert island and supports a desert arboreal vegetation which includes several varieties of the cactus family and the *mesquite, palo verde, palo fierro, torote, palo blanco, ocotillo* and others. The giant *saguaro, zarbaso* and *pitahalla (pit-a-haya)* cactus are found here also.

Two desert ranges run lengthwise of the Island, which, on its westward or windward side, terminate in sea-worn cliffs against whose ramparts dash the heavy breakers of the Gulf, and on its eastern side, by long alluvial aprons from the foot of the mountains, sloping gently down to the lovely shell-strewn beaches. From this side the foot of the mountains lies from two to five miles distant. On this, the leeward side of Tiburon, the sea is much calmer, and often, in the early morning, it is as smooth and placid as a lake, reflecting each rosy, lavender and purple tint of the rugged Sierra Seri along the Sonoran coast, as in a mirror. The exquisite loveliness of marvelous sunrises over the pure limpid waters of the *Estrecho Infernillo* is mystical.

134 The soil is loose and sandy, unsuitable for cultivation, and im-
241 possible for producing domestic crops of any
142 kind.

123 484 it from shore by a paddle. A little child in the boat sat still as a mouse. No matter how the boat rocked, it never whimpered or cried. All the children stayed perfectly quiet in the frail crafts, in the very positions in which they were placed.

123 484 136 220 Once the boat approached shore to secure a small octopus for fish bait. One was finally located by Stanley, who could see its eyes shining with a baleful purple light under a large boulder in about eighteen inches of water. The Seri got out and pinned it down with an oar, while Roberto pounded it time and time again with another oar. Even then it escaped in a cloud of sepia which it discharged. Its tentacles were easily a foot in length, and its color was the bottom of the sea. If it once gets a grip on a rock it is practically impossible to tear it loose.

Schools of porpoises played close to the boat each day, curving up to breathe and throw spray and then diving lazily below the surface, frequently gliding like a dark shadow below the waves. Sometimes, in the sheer joy of living, they would leap clear of the water and splash back in a spray of foam.

123 484 [208] We soon reached the extreme point where it juts from the Sonora shore, landed and set a signal smoke to notify other Seris on the Island. (A dry *pitahalla* cactus was selected for a black smoke.) No answering signal came. We crossed the narrow channel, the Infernillo, a little over a mile wide, the water like a mill pond, and landed on the sheltered side and unloaded on the stony beach. For miles the beach was covered by windrows of round wave-worn rocks and pebbles of all beautiful colors and sizes mingled with strange shells and seaweed. Here we made camp and stayed overnight.

The Indian canoe landed its cargo of women, children and dogs a little later, and established a camp adjoining. Three little boys were commissioned to secure us some clams and they returned in a while with a pail of clams, one crab and some oysters. These were boiled in salt water, the meat extracted and Pancho Oliverria cooked them in rice for supper. The crab was my especial delicacy.

123 Roberto and Stanley walked off after dinner to hunt in the mountains a few miles back from the coast, and they returned long after dark very weary from carrying, for seven miles, a young burro deer which they had shot. The Indians soon gathered around it chattering volubly, as both they and ourselves had eaten no meat for several days. We gave them nearly three-fourths of it, reserving a hind quarter and some ribs for ourselves. Rafael Feliz and Chico, with skill born of long practice, skinned and unjointed the animal in a very short time, and devoured a good part of their share in a cooking pot a little later, although they had eaten only a little while before. The boys cracked the bones and scraped the marrow, eating it like candy.

[484] At six thirty the next morning, we were crowded in the boats again

Band V

642 [226] [501] [721] These people were apparently hunters, gatherers, and fishermen. It is said that they speared fish from the shore since they did not use *balsas*. They too apparently raided the ranches. Their warring nature has already been discussed; it resulted in the [582] [628] acquisition of few friends. However, several marriages between members of this band and members of subdivision 2 of Band III are said to have occurred.

Band VI

[131] [342] [601] [411] [262] The members of Band VI lived on San Esteban Island and were the most primitive of the tribe. They lived in huts made of driftwood and in caves and made extensive use of the *balsa*. Although they did not have the bow and arrow, they did become expert in the use of the spear. The people depended mainly on a seafood, iguana, and maguey diet.

621 628 578 [157] Perhaps it was due to the confined living space on the small island with the accompanying lack of fresh water that relations between the four subdivisions were precarious and fights broke out frequently. The Seri today stress the fact that the members of this band were impetuous and unpredictable.

642 [574] [628] Their relations with the other bands were generally good however. Seri from Band III were free to visit San Esteban where they were well treated.

[484] [191] [648] The San Esteban people seldom traveled to the mainland, and, since they spoke no Spanish, it is probable that they made no peaceful contact with non-Seri groups.

COLLAPSE OF THE BAND SYSTEM

642 628 578 648 Internal strife in the Seri tribe was probably a major factor in the establishment of the band system. External strife was a major factor in its downfall.

[921] Reference has been made to the plundering, killings and rustling of cattle to which certain of the bands were dedicated. The concern of the Sonora government was aroused, and steps were taken to crush the rebellious groups. According to the present-day Seri, military action by army units and rancher outfits against the various bands resulted in the near-destruction of the whole tribe.[11]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

one of the huts. The condition of the remains and the various indications connected with the rancheria corroborated the tradition that the great creature had afforded unlimited and acceptable food for many moons; and various expressions of the tradition indicated that the event, though the most memorable of its class, was not unique in Seri lore.

A few bones and fragments of skin of the seal were found in and about the rancherias on Isla Tiburon, and an old basket rebottomed with sealskin was picked up in a recently abandoned jacal on Rada Ballena; a few bones provisionally identified with the porpoise (which haunts Boco Infierno in shoals) were also found amid the refuse about the old rancheria at the base of the long sand-spit terminating in Punta Tormenta; but nothing was learned specifically concerning the chase and consumption either of these animals or of the abundant sharks from which the island is named.

FIG. 21.—Fish-spearhead.

Among the exceedingly limited food supplies brought from the coast by the Seri group at Costa Rica in 1894, were rank remnants of partly desiccated fish, usually gnawed down to heads and tails; and Maahém and others spoke of fish as a habitual food, while Señor Encinas regarded it as the principal element of the tribal dietary. The harder bones and heavier scales of several varieties of fish were also found abundantly among the middens of both mainland and Tiburon shores in 1895. None of the remains bore noticeable traces of fire; and all observations, including those of Señor Encinas, indicate that the smaller varieties of fish are habitually eaten raw, either fresh or partially dried, according to the state of appetite at the time of taking—or the condition of finding when picked up as beach flotsam. But a single piscatorial device was observed, i. e., the barbed point and foreshaft, shown in figure 21—the iron point being, of course, accultural, and probably obtained surreptitiously. This harpoon, which measures 6 inches in length over all, is designed for use in connection with the main shaft of a turtle-catching tackle; and it is evidently intended for the larger varieties, perhaps porpoises or sharks. In 1827 Hardy observed a related device:

> They have a curious weapon which they employ for catching fish. It is a spear with a double point, forming an angle of about 5°. The insides of these two points, which are 6 inches long, are jagged, so that when the body of a fish is forced between them, it can not get away on account of the teeth.[1]

Don Andrés Noriega, of Costa Rica, described repeatedly and circumstantially a method of obtaining fish by aid of pelicans, in which a

[1] Travels, p. 220.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

young or crippled fowl was roped to a shrub or stone, to be fed by his fellows; when at intervals a youth stole out to rob the captive's pouch. At first blush this device would seem to rise above the normal industrial plane of the Seri and to lie within the lower stages of zoeculture, like the cormorant fishing of China if not the hawking of medieval Europe; yet on the whole it may be deemed fairly consistent with that cruel yet mutually beneficial toleration between tribesmen and pelicans attested by the preservation of the avian communal, as already noted. Moreover, Don Andrés observations are in accord with early notes of the exceedingly primitive aborigines of California, from whom the Seri have undoubtedly borrowed various cultural suggestions; thus Venegas quotes Padre Torquemada as saying:

> I accidentally found a gull tied with a string and one of his wings broke. Around this maimed bird lay heaps of excellent pilchards, brought thither by its companions; and this, I found, was a stratagem practiced by the Indians to procure themselves a dish of fish; for they lie concealed while the gulls bring these charitable supplies, and when they think that little more is to be expected they seize upon the contributions.

The padre says also of these gulls that "they have a vast craw, which in some hangs down like the leather bottles used in Peru for carrying water, and is it they put their captures to carry them to their young ones"—from which it is evident that he refers to the pelican. Venegas adds, "Such are the mysterious ways of Providence for the support of his creatures!"[1] And in the margin of his accompanying "Mapa de la California", he introduces a vigorous picture of a captive fowl, its free fellow, and the mess of fish, the cut being headed "Alcatrazes" (pelicans).

Despite these devices, the dearth of fishing-tackle among the Seri is evidently extreme. Save in the single specimen figured, no piscatorial apparatus of any sort was found among the squalid but protean possessions at the Costa Rica rancheria; neither nets nor hooks nor rods nor lines nor any other device suitable for taking the finny game were found in the scores of jacales containing other artifacts on Tiburon; while Señor Encinas was conversant only with the simple method of taking fish by hand from the pools and shallows left by receding breakers or ebbing tides. This dearth of devices is significantly harmonious with other Seri characteristics: it accords with the leading place assigned the turtle in their industry and their lore; it is in harmony with that primitive and nonmechanical instinct which leads them to rely on bodily strength and skill and swiftness rather than on extracorporeal artifacts in their crude and incomplete conquest of nature; and it is a manifest expression of relation with their distinctive physical environment—for the ever-thundering breakers of their gale-swept coast are abundant, albeit capricious, bringers of living grist, while the offshore gales at low tide lay bare hundreds of acres of shoaler

[1] History of California, 1759, vol. 1, p. 61.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

bottoms literally writhing with fishes stranded among beds of mollusks, and slimy with the abounding plankton of a fecund coast. The region is one of ample, albeit lowly, food supply, where every experience tends toward inert reliance on providential chance, and where the stimulus of consistently conscious necessity seldom stirs the inventive faculty.

Closely connected with fish as a Seri food-source are the various molluscan and crustacean forms collectively called shellfish; and these contribute a considerable share of the sustenance of the tribe.

Apparently the most important constituent of this class of foods is the Pacific coast clam, which abounds in the broad mud-flats bordering Laguna La Cruz and other lagoons of Seriland, and which was still more abundant during a subrecent geologic epoch, to judge from the immense accumulation of the shells in Punta Antigualla. The clams are usually taken at low tide, without specialized apparatus. They are located by feeling with the feet in shallow water, and caught either with toes or with fingers, to be tossed into any convenient receptacle. When the water is entirely withdrawn from the flats, they are located by means of their holes, and are extricated either with a shell-cup or with some other improvised implement. Frequently the entire mess is thrown into a fire until the shells open, when they are withdrawn and the mollusks devoured practically raw; perhaps more commonly the shells are opened by blows of the hupf, and eaten without semblance of cooking; and, except on the surface, no trace of roasting was found among the vast accumulations of shells in Punta Antigualla.

Perhaps second to the clam in frequency of use is the local oyster, which abounds about the more sheltered shores of Tiburon. It is gathered with the hands, aided perhaps by a stone or stick for dislodging the shells either from the extended offshore beds at extreme low water, or from the roots of a mangrove-like shrub at a medium stage. The shells, like those of the clam, are frequently opened by partial roasting; and shells, sometimes scorched, are extensively scattered over the interior, indicating that the oyster is a favorite portable food. The popularity of this bivalve is shared by the Noah's-ark (*Arca*), to which some mystical significance is apparently ascribed; and the abundant limpets and bivalves and other mollusks are eaten indiscriminately, to judge from the abundance of their shells in the middens. The ordinary crab, too, is a favorite article of food, and its claws are numerous in camp and house refuse; while the lobster-like deep-water crab is introduced into the menu whenever brought to the surface by storms, as shown by its massive remains in the middens.

On the whole, shellfish form a conspicuous factor in Seri economy by reason of the considerable consumption of this class of food; but, viewed in the broader industrial aspect, the produce is notably primitive, and significant chiefly as indicating the dearth of mechanical and culinary devices.

2: Kroeber E-5 (1930) 1931 NU31 Seri NU31

sounds like an expectable enough mythic idea, but seems involved with McGee's dubious conceptions as to totemism, discussed below. 114 193

The two-pointed fish-spear, with serrated points 6 inches long and spreading 5", seen by Hardy (McGee, p. 193), is interesting because seemingly unreported in or near the area. 114 227

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No fish nets, hooks, or lines were seen by McGee among the abandoned effects on Tiburon (p. 194). This is in accord with my observation. The abundance of sharks may interfere with net or deep water fishing.

The bow (p. 200) is of *palo blanco;* the release (pls. 28, 29), Mediterranean; the archer's position (pl. 29), with elbow above head, suggests a quick downward shot at a target or game lying on the ground not far away. 114 411

Mesquite, according to McGee (p. 207), is ground on the metate. Sr. Thomson told me of its being pounded in a hole in the ground. The Seri gave me the name a'kata for what I understood to be this earth mortar. According to Sr. Thomson's description, the flour from the first beans cakes and lines the cavity firmly, so that the bulk of the material is secured quite cleanly. In general, mesquite is mortar-pounded rather than metate-ground by the tribes from whom we have records, as is expectable from the woody nature of the beans. 114 252

McGee (p. 207) noted the viznaga cactus, Echinocistus, as rare in the Seri habitat, presumably owing to its use for water by the natives. I made the same observation on the mainland, but Sr. Thomson stated that along the roads the plant is being gathered for candying. 114 137

The one basket described by McGee (p. 208, fig. 24) is bundle-coiled and plain. The only one I saw in use among the Seri was ornamented with a plain reddish band. Sr. Thomson presented me with two which bear patterns (fig. 13), and showed me a photograph of a collection made by Mr. Davis for the Museum of the American Indian, Heye Foundation, nearly all of which were decorated, some fairly elaborately. Several of these are shown by courtesy of that institution in figure 12. As McGee observes, there is obvious resemblance to Southwestern baskets; especially of the Papago, Pima, and Apache. Southern California basketry is less similar. That of Baja California is unknown from specimens, though the mention of water-tight vessels used for winnowing and parching suggests a coiled tray of Seri type. The surviving tribes of Sonora other than the Seri use few baskets distinguishable from those of the non-Indian population. 114 285 [171]

5:Dawson N-5 (1940) 1944 . NU31 Seri NU31

DESERT
PLANT LIFE

SIXTEENTH YEAR NUMBER 9

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SOME ETHNOBOTANICAL NOTES ON THE SERI INDIANS

105 121 If the natural resources of a region may be said to reflect the degree of cultural and social development of its aboriginal people, we may easily understand why the Seris of Sonora, now approaching extinction and with much modified habits and culture, are considered the most primitive and savage of American Indians. Certainly the arid coast of Sonora, destitute [133] of water but for a few widely separated, stagnant holes, with a dry, rocky soil habitable only by the most frugal and thorny of desert vegetation, presents little in the way of resources to a native people. It was, indeed, [242] only along the ocean shore that the Seris found animal food sufficient to sustain them, principally, the sea turtle and the pelican. This food source proved adequate to support a tribe of some 2000 in pre-Columbian times, but the limited habitat of the pelican and turtle brought about extreme isolation of the people. Thirty-mile-long Tiburon Island became their principal home, separated from the mainland by the narrow but tempestuous channel, El Infiernillo, across which they frequently voyaged in their buoyant balsas to search out vegetal supplements to their monotonous sea food diet. It is this use of vegetable materials, not only as food but in other phases of the domestic economy of these people in earlier times, with which these notes are particularly concerned.

225 Primary occupation of the Seris aside from their continual movement to and from the water holes was, necessarily, their search for food, for they cultivated nothing and conserved little. Fish were exceedingly abundant in the waters around their island, but their very limited tool sense, pro- [228] viding them with almost no fishing devices, excluded much of this food from their diet. Clams and other shellfish were to be had, but it was the abundant green sea turtle, feeding upon luxuriant growths of marine grass, *Ruppia maritima*, in the shallow, sandy lagoons along El Infiernillo, that provided their meat staple. The turtles could be captured with ease during egg laying season as they crawled over the beach, but at other times they had to be 396 speared from a watercraft. No sizable timber grows in Seriland and before the advent of flotsam boards and hoop-iron it would have strained the

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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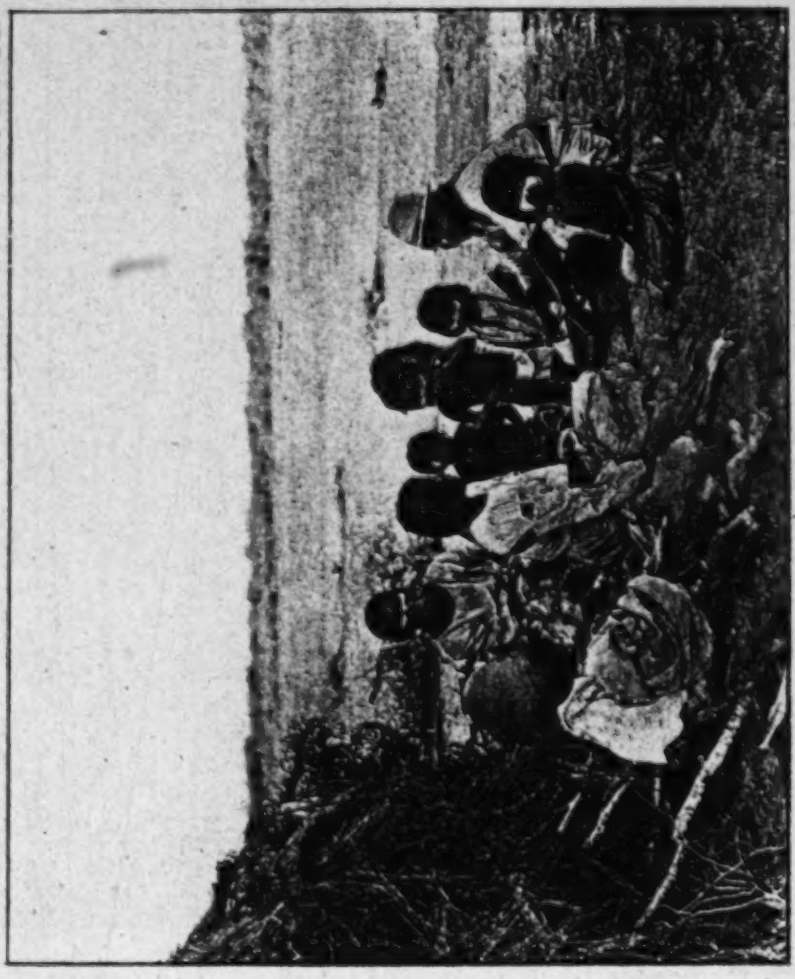

SERI FAMILY GROUP

SEVENTEENTH ANNUAL REPORT PL. XIV

BUREAU OF AMERICAN ETHNOLOGY

[FACING P. 139]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

blocks or metates, though it is manifest that most of the camps were fireless and many fireless. It is particularly noteworthy that even the more temporary resting-places are seldom if ever less than a mile or two from the nearest fresh water. In short, the Seri are not a domiciliary folk, but rather homeless wanderers, customarily roving from place to place, frequently if not commonly sleeping where overtaken by exhaustion or storm, ordinarily slumbering through a part of the day and watching by night, habitually avoiding fresh waters save in hurried and stealthy visits, and apparently gathering in their flimsy huts only on special occasions. 361 [312]

In conformity with their rovingness the Seri are notable burden-bearers. They habitually carry their entire stock of personal belongings (arms, implements, utensils, and bedding), as well as their stock of food and—weightiest burden of all—the water requisite for prolonged sustenance amid scorching deserts, in all their wanderings, the water being borne chiefly by women, in ollas, either balanced on the head singly or slung in pairs on rude yokes like those of Chinese coolies. And they have never grasped the idea of imposing their burdens on their bestial associates; their coyote-curs are not harnessed or even led; when they surround and capture horses, burros, and kine they make no use of ropes, never think of mounting even when pursued by vaqueros, but immediately break the necks or club out the brains of the beasts, perchance to tear the writhing body into quarters and flee for their lives with the reeking flesh still quivering on their sturdy heads and brawny shoulders—and scores of vaqueros agree in the affirmation (wholly incredible as it would be if supported by fewer witnesses) that even when so burdened the Seri skim the sand wastes of Desierto Encinas more rapidly than avenging horsemen can follow. 482 [231] 224 177 [481]

The hardly conceivable fleetness of the Seri is conformable with their habitual rovingness and their ability as burden-bearers; and this faculty is established by cumulative evidence so voluminous and consistent as to outweigh the presumption arising from the standards attained among other peoples. A few minutes after they were photographed, the group of boys shown in plate XVI, with several others of about the same size, provided themselves with a stock of their favorite human-hair cords, "rounded up" a dozen mongrel coyote-dogs haunting the rancheria at Costa Rica, and herded the unwilling animals toward a shrubbery-free space a quarter of a mile away, in order to rope them in imitation of the work of the Mexican cowboys earlier in the morning. From time to time as they went a frightened cur sneaked or broke through the cordon of boys, and made for distant shrub-tufts at top speed; yet in every case a boy darted from the ring, headed off the animal within one or two hundred yards, and lashed it back to its place. On arriving at their miniature rodeo the boys widened their ring, and at a signal scattered and frightened the dogs; then, when the fleeing animals had a fair start, each selected his victim and fol- 177 231 481 857

1; McGee E-5 (1894-1895)1898 NU31 Seri NU31

857 481 [177] [231]

lowed it, yelling and swinging his light lasso, until, after much doubling and dodging and many unsuccessful casts, he caught and dragged the howling beast back to the open; and it was only after half a dozen repetitions that enough dogs had escaped to spoil the sport. As the boys lounged chattering back toward the rancheria their course lay between two clumps of the usual desert shrubbery, so placed that when the first was obliquely left and 40 or 50 feet distant from them, the other was obliquely right and 100 feet away. At this point a bevy of small birds (perhaps blackbirds—at any rate corresponding to blackbirds in size and flight) fluttered suddenly out of the nearer clump toward the more distant one, when, too instantaneously for the untrained eye to catch exchange of signal or beginning of movement, the boys lunged forward in a common effort to seize the birds; and though none were entirely successful, one exultantly displayed a tuft of feathers clutched by his fingers as the bird darted into and through the thorny harbor. When the distances were paced it was found that, although the birds had the advantage of the start, the boys covered at least 90 per cent of their distance in the same time; while the spontaneity of the impulse demonstrated habitual chase of flying game under fit conditions.

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While obtaining the Seri vocabulary with Mashém's aid, advantage was taken of every opportunity to secure collateral information concerning the actual use of the terms, and thereby of gaining insight into the tribal habits. Through his naïve explanations, usually repeated and corroborated by the elderwoman of the Turtle clan (Juana María) and others of the tribe, it was learned that half-grown Seri boys are fond of hunting hares (jack-rabbits); that they usually go out for this purpose in threes or fours; that when a hare is started they scatter, one following it slowly while the others set off obliquely in such manner as to head it off and keep it in a zigzag or doubling course until it tires; and that they then close in and take the animal in their hands, frequently bringing it in alive to show that it was fairly caught—for it is deemed discreditable, if not actually wrong, to take game animals without giving them opportunity for escape or defense by exercise of their natural powers. Similarly, Mashém described the chase of the bura and other deer as ordinarily conducted by five persons (of whom one or two may be youths), who scatter at sight of the quarry, gradually surround it, bewilder it by confronting it at all points, and finally close in either to seize it with their hands, or perhaps to brain it with a stone or short club; the former being held the proper way and the latter a partial failure. This hunting custom, described as a commonplace by Mashém, is established by the vaqueros who had frequently witnessed it from a distance; and the same extra-tribal observers described still more striking feats of individual Seri hunters: Don Manuel, son of Señor Encinas, and Don Ygnacio Lozania were endeavoring to train to work a robust Seri (one of a band sojourning temporarily at Costa

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3:Davis & Dawson E-5 (1922-1940) 1945
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[294]
[482]
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[853]

FIG. 12. SERI MOTHER AND BABE
SERI MOTHERS COMMONLY HAVE TOO MUCH MILK AND FREQUENTLY RELIEVE THEMSELVES BY SUCKLING AN ORPHANED PUPPY OR SOMETIMES EVEN A BABY PIG.

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ing, and were carried in cane tubes. The paints were carefully prepared, applied, and preserved, and, as indispensable feminine accompaniments even on the longest journeys, were among the most highly prized of the people's possessions. The importance of the face-painting custom, established in the old tribal life, remained strong even as the slaughter of the warring tribe progressed

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[p. 201(B)]

178 of sea lion oil and powdered cactus skeleton,
396 was launched. It was the largest craft they had ever possessed and came to be called the "battleship," for its size.

114 After having established firm friendship with the tribe in 1922, it was possible two
221 years later to carry out an extensive plan to learn the habits of the Seris by living among them, sharing their comradeship along with their privations. At this time they still had no homes that could even be called semi-permanent. Moving here and there in response to fluctuations of their precarious food supply, household things were not accumulated, and life continued to be reduced to its very simplest elements and absolute necessities. Baskets made of fiber from the torote tree, some tin cooking and water ves-
[415] sels (the handmade olla was seldom any longer made), some patched and filthy rags which served as blankets to the fortunate few, constituted the family possessions (Fig. 15). Starved, bony family dogs were abun-
● 231 dant, as always, every Indian having one or two (Fig. 16). Each day they could be seen gnawing on some old fish head long since

[p. 264 (B)]
[Text continues on p. 265 (N)]

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FIG. 16. FAMILY DOGS ARE OFTEN MORE NUMEROUS THAN THE PEOPLE
HERE A GROUP OF SEVEN SERIS IN THE VILLAGE NEAR KINO KEEPS TEN OR MORE OF THE MONGREL CANINES.

[p. 264(C)]

3:Davis & Dawson E-5 (1923-1940) 1945
NU31 Seri NU31

[342]
[415]
[732]

FIG. 17. SERI BLIND MAN
BEING LED BY A BOY. NOTE THE CRUDE SHELTER OF POLES AND BRUSH SERVING AS AN AIRY DWELLING.

231 destitute of nourishment, tough and strong as rawhide; but hope springs eternal in an Indian dog's stomach, and again and again he will search out and mouth the same old pelican bone or fish head, discouraged never. The dogs, beside keeping the camp clean, lick all the cooking utensils when they are not tended, and also are allowed to lick clean the infants after they have performed their natural defecations. A Seri girl was seen placing [312] a small can of water for a dog to drink from, afterward drinking some of the remainder herself and then pouring the rest back into the family five-gallon can.

732 734 Although the conditions of existence for the Seris had from time immemorial been too precarious to permit of anyone living who was unable by physical disability to hunt or fish to get his meat, there were two or three men, blind or nearly so, whose wives got an uncertain living for them by the hardest struggle (Fig. 17). If a Seri, however, became ill of a disease which the tribe feared, he was often taken into the desert and left with a little food and water, either to get well and return or to perish.

[P. 265(A)]

262 important source of meat for the Seris, and sea-gulls are occasionally killed and likewise abandoned, except when famine threatens. The above examples most likely apply to other varieties of animals as well.

No specific food taboos were discovered in the course of field work except the unexplained reluctance to eat certain species. McGee (1898) reports a taboo on eating sea-lions but my informants asserted that these mammals were hunted in the past for both their flesh and hide. All of my informants denied that the Seris eat cougars, and this abhorrance has been confirmed by the Mexicans. Yet the Mexicans themselves do hunt and eat these big cats. McGee
225 (1898:196, 202) again casually mentions cougars and jaguars as being hunted by by the Indians but gives no evidence for this. It should be mentioned that only a few Seris know what sort of an animal the jaguar is, and these know it only from hearsay as "huge animal inhabiting the mountains far in the interior". There are occasionally some migrant jaguars in Seri territory.

Pets

231 The Seris have only a limited variety of pets. Dogs are very numerous, each family keeping many of them. Although they maintain that the dogs are acquired in order to keep the coyotes away from the camps, there is nothing in their camps that a coyote would want to steal. There are a few cats and several species of wild desert doves which are often caged. Wild animals in captivity are, as a rule, those which accidentally come into the hands of the Indians. On one occasion a badger was kept tied to a house post for a couple of weeks and fed on fish heads, snakes, lizards and water until one night when it made its escape,

257 Of the insects, only the singing male Cicadas are captured by the roving Seri boys. These are tied to a long thread and having their fore-wings partly clipped, they are released into the air like kites. Local Mexicans also provide a similar kind of toy for their children.

Classification of Animals

215 Seri taxonomic notions of the animal world are vague and indistinct. No conscious classification exists and perhaps none should be expected of non-literate people. But there is a random association of animals based on the external similarities of form, habits and habitat. A clear distinction is made between plants and animals. Quite obscure animals, for example, the Echinoderms, Holothurians, Coelenterates or barnacles, are classed as animals and not as plants. It seems that voluntary movement is used here to distinguish the two categories. Thus, informants insisted that sea-anemones and jelly-fish are animals and not plants. One difficulty arises in the case of sessile barnacles. It is hard to account why those growing on the sea-turtles are classified as animals and are called "turtle fleas".

In the assemblage of major animals, the mammals form one group and birds and fish others. Since general similarity of form and not real structural affinities are the primary reason for these associations, the bats "are not birds, but are probably mammals because they have fur". Thus, sharks and

5:Dawson N-5 (1940) 1944 NU31 Seri NU31

ingenuity of a modern shipbuilder to have constructed a boat. These simple, desert people, however, through centuries of struggle for life in their desolate realm had learned to use every natural material available to them, however laborious the tasks and inefficient the products. The carrizal reed, *Phragmites communis*, grows about the few permanent water holes of Seriland, and from countless numbers of these slender, buoyant canes they built their watercraft. The reeds were stripped of leaves and gathered in long bundles, bound together and gradually augmented by more and more interlaced canes until a bundle 18 to 30 feet long and 1½ feet in diameter, tapering at both ends, was made. Three of these were then bound together with cords of fiber or human hair, making a maneuverable one or two man raft, easily transported to the shores.

The mesquite tree, *Prosopis juliflora*, provided fiber for cords. The flexible outer tissues of the roots were stripped off, soaked and progressively pounded, split and worked between hand and mouth until very slender, fibrous threads were obtained which were then twisted into cords. In some cases a coarse, rough fabric was woven from these fibers, but most garments were made of pelican skins. The strips of workable mesquite root or sometimes yucca fiber were also used in making doughnut-shaped head pads which aided in balancing the capacitous earthen water jars as they were carried on the heads of the women over rough and stony trails from water hole to camp site.

While occupying the turtle fishing camps on El Infiernillo during the good season, vegetable supplements to the fishy diet were few. Every nourishing seed or woody fruit yielded by the desert was carefully gathered; even the tiny seeds of the sea grass, *Ruppia*, were sorted from beach drift and made into meal. Never did the Seris learn to cultivate any crop or domesticate any animals other than the half wild coyote dogs that lived in mutual toleration with them. Even had they done so, their success in the barren, waterless land would have been small.

Sterile as is the Seri's hinterland, for a time each summer the thorny plants with which it is so profusely stocked ripen an abundant crop of fruit. The cacti in particular yield a wonderful harvest of luscious and succulent fruits, and toward this fortuitous supply the Seris were accustomed to move in June and July. The foothills of Sierra Seri on the mainland are adorned with great numbers of giant cacti, *Pachycereus Pringlei*, *Carnegiea gigantea* and *Lemaireocereus Thurberi* from which the luscious pitahayas were readily knocked down when ripe. The Indians wandered into the cactus forest and after a simple ritual marking the beginning of the feast, proceeded to gorge themselves for weeks on the succulent fruit until waning supply and cloying appetite drove them back to more severe food-getting activity by the sea. They did not customarily find it necessary to leave the cactus forest, however, as soon as the supply of fruits was no longer sufficient, for by the time the fruiting season was ended they had provided themselves with a second harvest. The pitahayas, gorged in such tremendous quantity throughout the season, were very imperfectly digested; the miriads of hard seeds, particularly, passed through the system unchanged and with the preservation of these in mind the Indians carefully collected with the aid of large sea shells all such seedy discharges and let them dry in the desert sun. Thus, as the supply of fresh fruit faded they proceeded to the use of this hoard

In general, the Seris have a healthy appearance; the most frequent complaints are gastro-intestinal and visual defects due to avitaminosis. It is very possible that given the difficult living conditions resulting from the desert environment, a rigorous selective process among the newborn takes place so that only those who possess exceptional physical qualities survive. This explains why the majority of them retain the physical characteristics described by Hardy more than a century ago: "the Indians of Isla Tiburón are tall, healthy and well built". 164 147 142

In spite of attempts at education, the Seris do not practice the elemental rules of hygiene; their way of life, neglecting this aspect, contributes to increase the unhealthy foci which exist in the places where they have established themselves. 515 751

Dwellings.—The Seris retain many vestiges of their nomadic life, among them the hut which serves as their living quarters; many of them are simple provisional arrangements for sheltering themselves from wind and sun, and they bear no relationship to the stability and durability of our dwellings. The Seri hut was made to meet the necessities of a nomadic people who had no reason to spend much time nor work on making a dwelling which would only be used for a season (one, two or at the most three months). Nevertheless, some innovations have been introduced in the last 20 years, so that we must distinguish between two types of houses. The primitive model consists of a series of scrub pine arches interwoven with branches from the same shrub almost totally covered by foliage, tortoise shells, *zacate*, etc., with only a small hole in one of its ends as an entrance (this type of hut is the same that McGee saw in 1894 when the Seris still led a nomadic life). 342 [221] [177]

In the new model more resistent woods are used, like *sahueso*, *torote*, etc., and poles, between which is laid a layer mud. The house is rectangular, without windows; with only one entrance, but always larger than the entrance to the brush hut. Other models would have to be added to these two, due to the incorporation and utilization of tents made in the United States which some U. S. tourists or the Society of Friends have given them. The tent is used as permanent living quarters; or sometimes combined with branches to cover the primitive type huts. 342 178 [177]

Domestic Animals.—The Seris are very fond of domestic animals like the dog, cat, and finally, the chicken. For all practical purposes these animals live together with the family; they rest on the piles of rags and sand which serve the Indians as beds; lick the plates and cooking utensils; dirty the house; increase the household fauna with their fleas and other vermin thus contributing to create and unhealthy atmosphere in the home. 231 [136]

Problems of Intoxication.—Their dealings with the fish buyers, in whose stores are sold beer, mezcal and tequila, has turned them to the consumption of these drinks. The Seri drinks liquor in an uncontrolled 273 [275]

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III

MAMMALS

Scientific	Common Name
Antrozous pallidus	Pallid bat
Bassariscus astutus	Ringtail cat (Cacomistle)
Spilogale gracilis	Spotted skunk
Taxidea taxus	Badger
Urocyon cinereoargenteus or *Vulpes macrotis*	Grey fox or kit fox
Canis latrans	Coyote
Felis concolor	Mountain Lion.
Felis onca	Jaguar
Felis cyra	Juguarundi
Zalophus californianus	California sea lion
Dipodomys sp.?	Kangaroo rat
Erethizon dorsatum	Porcupine
Lepus californicus	Blacktailed rabbit
Sylvilagus auduobonii	Desert cottontail
Pecari angulatus	Peccary
Odocoileus hemionus	Mule Deer
Ovis canadensis	Bighorn
Eschrichtius glaucus	California grey whale
Orcinus rectipinna	Killer whale
Tursiops gillii	Bottlenosed dolphin

Identification here has been obtained largely with an aid of field guides or by mentioning a colloquial local name of the mammal in Spanish. All these were later checked by Dr. Robert T. Orr of the California Academy of Sciences. While there is no doubt of the identity of the most common forms, such as peccary or sea-lion, there are also several of the identifications which can't be certain either because of inadequate line drawings or lack of specimens, either alive at a distance or even parts of them. In this somewhat dubious category are Ringtail cat, Jaguarundi and the Killer whale.

On the other hand, there is no doubt as to the identity of the following: Pacific pale bat, badger, bighorn, coyote, kangaroo rat, blacktail rabbit, cottontail jackrabbit, deer and dolphin. Live, free or captive individuals, or part of them, such as horns, hide or skulls were available.

Economic Uses

Food: Only 6 out of 21 species for which information is available are used today as food. Three more were mentioned as "eaten in the past" and one more as "possibly eaten in the past." Since the oldest of the informants who provided this data, Miguel Barnett, is a man in his fifties (and it is he who talked most often about the animals "eaten in the past but not now") we may surmise that these were part of the Seri diet 25-45 years ago, that is between 1910-1930.

Five species are important as a supplementary source of food: the bighorn, the deer, peccary and both species of rabbits. Some, the deer especially, are considered to be delicacies. The sixth species is the badger but it appears neither important nor frequently killed. I saw one badger captured by José Juan Moreno. The animal was tied to the pole, and kept as a pet, fed on fish, snake and

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III

MAMMALS

262 water for a week until it escaped. There was
[231] no intent to do away with it and serve it up for dinner later on.

The 3 species reported as eaten in the past are kangaroo rat, sea lion and the ringtail cat or
[252] cácomistle. Of these the little rodent had been supposedly "boiled in hot water with salt" which
[261] method of preparation may indicate that it happens quite recently yet. It is quite possible that in times of famine this animal is still used. The sea
[432] lion has been reported as "eaten once a long time ago. All of it. But not now. Its hide was once sold
[114] also but now it isn't used at all." This conflicts with McGee's statement (McGee, 189:202) that there was a taboo on eating sea lions among the Seris and there is no way to reconcile the information.

[114] McGee's report may be as truthful as are the uncertain and hazy comments of the present day Indians.

224 On the other hand, the cougar belongs to a very dubious category, unless we can rely on Miguel Barnett's memory. All 4 of the younger informants emphatically deny that the cougar has ever been hunted for meat. But Miguel Barnett claimed that this has been done in the past, although he could not tell how long ago. Kroeber says nothing about this animal and this makes it difficult to date the events. At the time of Kroeber's visit, Miguel was at least 25 years old and the cougar could have been hunted either
[262] then or earlier. But today the Seris do not eat the flesh of the big cat and their abhorrence of it has been confirmed by the Mexicans to whom I talked about the subject, and who relish cougars' meat. This apparent distaste for the *el tigre's* flesh may
[178] well be a recent development quite unconnected with the lack of weapons. McGee (1894: *loc. cit.*) casually mentions that the Seris hunt both cougars
[411] and the jaguars but cites no evidence for it. Yet
[177] in his time Seris' almost only weapons were the bow and arrow and a lance which today has been replaced by firearms. I am unable to explain this contradictory behaviour.

262 Finally, there is the Ringtail cat or cácomistle. Although this beast has been reported as part of the diet, the information isn't too reliable. I had
[124] no way of checking whether this was the animal the Indians had in mind. Their description of it seemed to answer some other unspecified animal and their answers were confused. The fact is that the Ringtail cat does occur in the Seri territory and they are surely familiar with it.

Of the remaining 11 species none were ever mentioned by any of the informants as having been ever eaten. Their denial of eating the coyotes were most vehement. Coyote figures out probably

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237 On the other hand, the hides of all of these three animals had been traded off to the Mexicans, [439] but this again was now discarded. This would [182] merely indicate the fluctuation of collapse of the demand from the outside rather than any intrinsic change in the Seri values.

Incidental use of the horns of the bighorn had been denied by all of the younger informants although admitted by Miguel Barnett. However, as I observed, the horns of this sheep are sometimes [415] used as drinking cups. Several of them were [181] lying around in the usual disorderly way of the Seris, now and then picked up for drinking and then again discarded. But the use of them struck me as most casual.

224 *Hunting:* Hunting takes a variety of forms 411 and includes a variety of weapons, from .22 caliber and .30/.30 caliber rifles to spear, stone and throwing stick. Bighorn and deer are followed on foot but without dogs, probably because without dogs they may be easier to surprise. This hunt takes place in daytime. But the peccary is hunted [231] with both the spear and the rifle and with a pack [885] of dogs, and only by the adult men. There is an emphasis on the "adult," this surely owing to the certain amount of danger connected with the chase of the peccaries. The weapons of the chase dwindle to the throwing stick or a stone when it comes to the jackrabbit. Badgers, I was told, are also killed with the same weapons. But formerly, the informants said, bow and arrow was much instrumental in hunting the smaller beasts.

* 825 Other animals, according to the Seris, are not [224] hunted now, nor had they been in the past. Justification for this ranged from the usual "because it isn't done" to the more specific reasons. The skunk is "neither hunted nor eaten because it [225] stinks." The whale is considered "too big to kill" while the killer whale is "too fierce." The harmless *tonita* (dolphin)[2] was reported somewhat hazily as "sometimes killed" but the comments were inconclusive and were denied by other informants.

[224] Two other species had been reported as hunted in the past but not at the present time. The Ringtail cat was supposedly hunted with the slings while the sea lion was hunted down "with a rifle [225] or rock but not with the harpoon because of its great strength, it would break the harpoon." This, however, was "perhaps 25 years ago." Why the sea lion is no longer pursued is uncertain, unless there is again a lack of demand from the outside while the Serian economy is so much centered on fishing.

●231 *Pets:* How many species of animals are kept as pets on and off is difficult to say. Like most hunting and gathering groups the Seris are fond of pets but their interest in them depends entirely on an accidental capture. Among the wild mammals of the region there are few that could be captured and tamed easily. The badger which I mentioned already was the only mammal I saw

[237] [2] I have seen bones of beached whales used for stools and
[352] also the skull of the *tonita* used as a chair. But it must be remembered that these animals got stranded on the beach. They were not deliberately hunted down.

1/2 Lie - deer, bighorn and peccary - Analyst]

231 which was kept around as a pet and it was interesting that the Indians who held it captive took considerable pains to look after it. This I noticed also with such few pet birds as they had. On the contrary, the large number of dogs which these Indians keep are left much to their own devices and are rarely fed. They are treated with lordly indifference and are treated as one Indian said to me "as you treat the dogs" which meant with a kick, stone and fist and forced to feed on the offal left on beaches. Yet, no Seri would ever think of deliberately killing a dog, unless drunk. Although there is obviously little use for the dogs, each family keeps many of them. Sometimes as many as a dozen of these miserable curs live in the compound of one Serian family. [273]

Taxonomy and Recognition

825 From the responses given, the Seri tend to split the mammals into two groups, the mammals proper and the group of animals which to them seem neither mammals nor fish. Evidently the possession of fur is of paramount importance here because it had been mentioned as a mammalian feature for several of the species. The Seri then put the *Cetacea* in a group of their own perhaps on these grounds. To be sure, the designation is somewhat hazy. The whale, the informants said, "is not fish nor mammal." The killer whale has also been referred to by them as a "whale-like animal." Finally, the dolphin one of the informants said was "like a shark. It lays eggs like a shark." But another informant thought it was "a mammal-like whale" although his response was obviously uncertain. That the presence of fur must be the main distinguishing feature is obvious in that they have no doubt about the mammalian position of the sea lion and that, while uncertain about the position of the bat, they are inclined to classify it with the mammals. As one informant put it "it can be of smilar kind to the coyote. It is not a bird because it has fur. Fur is not what the birds have."

Otherwise they are fairly good at the recognition of those individual species that are well known to them or that are frequently encountered in the area. The jaguar, called also *el tigre*, is known from hearsay only, owing to its extreme rarity in the immediate area of Desemboque. Porcupine is well recognized due to its peculiar features. But it must be rare and José Juan Moreno who saw it only once thought it was a "mammal." But he had no difficulty in recognizing a picture of it or associating the Spanish name *porcospino* with it. A somewhat moot point is the cacomistle. This animal evidently is not well known and, from the report, had been surely confused with some other creature. Finally, while the jaguarundi is surely found in the area it is also little known. Having to work with pictures I cannot in any way verify the Seri responses, especially since the picture used was not of the best kind for the identification purposes. A Mexican trader had a multilated skin of one, but he sold it to a visitor before I had time to query the informants about it. [124]

[P. 11 A]

262 pelicans are not; they are regarded as "bad food," unfit for eating. No further explanation has been offered here and it might be that the same sort of prejudice works here as in the case of the adult birds. Otherwise, reasons for rejecting eggs for food are probably a matter of mere customary attitude without any particular rationalization. In a few instances, the dove being one example, the eggs were said to have been rejected because they were "too small to bother."

237 Other economic uses made of the birds are ex-
271 tremely few. At one time, the pelican skins were used for clothing and, in fact, in McGee's time they represented, perhaps, the most important item of clothing for the Seris, having been worn in shape of wrap-around robes, usually covering the lower part of the body. Moreno reported these robes as still is use "30 years ago or more," in the early twenties, but in Kroeber's time these
[177] robes were already discarded in favor of the European garment. The Seri, nevertheless, still pre-
[439] serve skins of these birds—the white pelican, larger of the two, always had been favored here—and occasionally sell them to the visitors. Another
237 use made of the feather is in the arrows. The
411 cormorants, heron and the owls had been especially mentioned in this connection. But it is certain that they were not the only birds so exploited and also that this particular use went out of business along with the disappearance of the bow and arrow as the principal weapons. The use of feather for arrows may well continue into the present in a somewhat degraded form. The Seri boys play a
[857] great deal with bows and arrows, shooting them at any moving available target. They'll pick up any available feathers.

Pets

●231 Somewhat desultory use is made of birds as pets. During my visit I have seen doves and an egret kept in houses as pets by the adults and fed quite frequently. The number and variety of birds which may become pets in households may well
* 825 be larger. Pelicans and sea-gulls are less fortun-
857 ate. They are often shot at and over-powered by the boys. But instead of taking them to the households, the boys stage games, shooting them at point blank from bows and arrows and pea- shooters. These somewhat bloody executions take place almost every day. The pattern is the same. Only the subject of the game changes, depending on the available species of bird or animal.

Hunting

223 It is hard to speak of hunting in connection with birds, because there is so little effort made to go out and get them. The main exception is the duck and this, as I already mentioned, is hunted on Isla Patos and clobbered at night with sticks and stones in great numbers. This is one of the few instances in which the Seris will go out of their way to get a bird. Sea-gulls and cormorants and, more rarely, pelicans are dispatched by pea-
[411] shooter (stone), sticks, small clubs and, on occasion, with a shot from a .22 caliber rifle.

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262 them to their shelter and held them there for several days before they and their families finally ate them up. The turtles are also a well-liked item.

As already indicated in some instances there exists preference for a particular part of an animal. Of the Gila monster only the fat tail was said to have been eaten, and of both rattlers, the head and the tail are discarded on the grounds
* [825] that they contain toxin. Finally the toad and the gecko and *Xanthusia* are all rejected as completely venomous.

178 It is also evident that changes in the Seri
262 taste have occured in the course of the past several decades. Some animals are on their way out as food, and here we have the Gila monster, the whipcoach, the red racer and smaller lizards. In several cases, and this includes the Gila monster, the responses indicated that the animal had been eaten in the past. I also observed that on the sly, the Seris would eat them when other food was in short order. But they are reluctant to admit this and often altogether denied it.

Hunting

224 Most reptiles are captured by hand or else killed
[225] with a stick, stone or pea-shooter. Except for the turtles, the Seris will not make special expeditions. But it is certain that if they find themselves on any of the islands near the shores of Baja California they will go ashore deliberately in search of the chuckawalla.

225 The turtles are another matter. Here now, just as in the past, special expeditions are made in order to get them. These expeditions take place
[501] nowadays in the usual flat-bottomed plank boats, either motor or oar propelled. The hunt takes place only during unusually quiet and dark nights, when the Gulf is smooth and calm and there is neither wind nor ripple. With the slightest disturbance,
[354] turtle fishing is impossible. It is all done with the
[411] torch lights or Coleman lanterns. The principal and only weapon is the harpoon, identical with that described and illustrated by McGee. The turtles are then harpooned, dragged into the boat and either left alive, when the hunters have a sale of live ones in mind, or pounded to death with a
[251] club or oar, quartered and then either consumed on the spot or else dried and salted.[10]

[224] While the collecting of the smaller animals us-
[462] ually falls to the children or women, turtle hunting is men's job. Men, too, usually get the chuckawalla because they usually visit more distant islands.

Pets

● 231 None of the reptiles are pets in a real sense. Those few that might be kept are only held until the day when they are butchered and eaten. It is motivated more by the wish to preserve fresh food than by any affection for the animal. The turtles, the tortoises and the chuckawalla belong here. Occasionally a Seri boy will string a lizard, a *Scel-*

[10]The loggerhead is hunted in the daytime because, owing to its great strength, night hunt would be too dangerous. Two harpoons are always used on it, while for the smaller species, one harpoon usually suffices.

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●231 *oporus* or a *Cnemidophorus*, but even so, the life of the captive is short. Sooner or later it'll be slaughtered like any other beast played with by the Indian boy.

Taxonomy

* 825 In general the Seri recognize the major groupings of this class. Thus we have the lizards, snakes, turtles, sea turtles and toads. All these do correspond to the natural groupings with the sole exception of the horned toad. For some reason it is not classed together with the lizards but is supposed to be an entirely different animal. Some of the informants tend to keep the "vivoras," that is the rattlers, separate from the snakes but others think they are just a different kind of snake.

In distinguishing between one species and another, the Seris showed remarkable acuity. Out of 26 species listed here, they confused only two, both relatively small and similar looking Utas.[11] On the other hand, they were able to associate correctly specimens of the different sizes and often also colors of the same species. I frequently mixed up large number of specimens without telling them anything about them and yet invariably the informants were able to sort them out correctly.

124
* 825

It is also interesting that, when I showed to Barnett and Moreno a specimen of a small toad I brought along pickled from Needles, California, they both identified it with the *B. alvarious*, the local toad.

* 825 Moreno also told me that there are two species of *Dipsosaurus* on San Esteban and the one I had was the smaller of the two. I am unable to check this information and it may be that what he had in mind was the larger chuckawalla. I have obtained information about the chuckawalla from other informants but not from him. There are no larger lizards in the area other than the chuckawalla and the Gila monster; therefore this suspicion is justified.

Sexing

All reptiles or amphibians, according to the Seri, do have the male and the female sex and in most cases highly specific traits in the two sexes of the same species were indicated. Actually sex differentiating data had been obtained for 23 out of 26 species. The three species for which no data on this are available were spotted race runner, western diamondback and the red racer. For the first two it may be an oversight on my part in the course of questioning. As for the red racer, the answer simply was "I don't know" or "I can't tell." It is possible that other individuals could have provided a more specific answer.

In general a multitude of criteria to differentiate the sex in the animals were employed; size, color pattern, presence or absence of specific structures all were used either individually or together. For 16 species the informants indicated either differences in size or similarity in size;

[11] Gecko and *Xantusia* go under identical Seri name, but, they say, they are different forms. However, they do separate the two racers, black and red variety, even if taxonomists today lump them as color forms of the same species.

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262 en simply because their flesh is disliked and unfit for human consumption. But it may also well be that some of them, especially of the giant variety, are not eaten simply because they are far too large to tackle and the Seris fear hunting them.

The Seris indicated also in some cases that larger specimens of fishes are eaten when they reach the size which would justify the effort. This is true of *Malacoctenus zonifer* which they indicated is "eaten when large," that is when at least 10 cm. long.

[226] Although only sometimes did the Seris specifically indicate that certain fishes are used for bait, it is very likely that almost all small or lesser fishes are so used.

262 178 In some cases the Indians indicated changes in preference for given fishes, with the time. For unexplained reason *Gymnothorax castaneus*, the morene, has been claimed to have been eaten in the past but not for the last 11 years. It isn't clear why the figure of 11 had been used and why suddenly in the early 40's they should stop eating it while the Mexican drool over it. But it may be also that here we have merely personal preference of the informants, as so often happens. As for the *pescara* it was formerly taken for food [439] but now it is merely sold to the Mexicans. This practice is increasing also to include the immense *mero*, even larger than the *pescara*. The fish is mainly sold but rarely eaten by the Seris themselves.

Food Preparation and Preferences

252 Food preparation is simple and in the main differs not at all from the preparation of other animal diet. The fish are either boiled whole or in part or else are roasted over slow fire on a grill. The entrails are usually discarded, but otherwise the beasts are eaten entire, eyes, brains and the rest, while the tiny fishlets are eaten complete with the scales and guts.

262 As for the preferences, as expected, there are some fishes that the Seri like better than others. The *bava* in the first place and the *pinto* in the second lead the list. The Seri prefer them to all others and consider them a real delicacy. On the other hand, there are some fishes that they'll eat only under protest, meaning when times are hard. *Girella simplicidens* is one such creature. The *Puereo* or *Cochi* is another. I have seen boat loads of puercos brought in with the other fish and un- ceremoniously dumped out on the beach to the [231] dogs. Literally! The Seris took to this fish only when fishing was poor during the wintry days when they were held ashore by the weather. Even [183] then, they tried to eat the despised creatures on the sly, avoiding being seen doing this, and when I or the Mexicans picked up fresh fish from the beach to take home they laughed saying that we acted as a *cochi* (pig) would!

Other Economic Uses

* 825 237 322 One use made of fish concerns two species of sharks, the *chato* and *camposo*. Here, the informants claimed, the oil from their liver had been used in earlier times for polishing wood. This is

[P. 32B]

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X

INSECTS AND ARACHNOIDS

Altogether information has been collected concerning 92 species of insects, scorpions, ticks, myriapods and arachnoids.

Economic uses

McGee says that "good many insects" are part of the Seri diet, although he does not specify just which they were nor how significant. There is no doubt that in his days, the insects played some role in the Seris' food and that they were probably far more important in the distant past, in the XVIII and early XIX centuries, before large flocks of livestock, horses and cattle of the Spanish rancheros offered excellent opportunities to supplement the usual diet.

Of all this but minor traces remain today. The Seris even have forgotten which insects had been eaten by their ancestors. Apart from the bees, only the Sphingid caterpillar has been indicated as "eaten in the past, but not now." As for the bees, their honey still is part of the Seri diet. But with the availability of sugar, even this addiction dwindles.

Other than this I have been unable to discover any uses whatever, except perhaps as playthings of little boys, with the usual torture in view. The *Cicada* is most significant of these, of which more later.

Pets

The only insect pet is a *Cicada*. This insect is usually tied to a long thread, its forewings partly clipped off and then released into the air like a kite. Local Mexicans also provide their own boys with a similar kind of toy.

Hunting

Only bees are hunted. They are usually flushed out of the cave shelters in the mountains. The operation is accomplished without the use of smoke. The honey is cut out with a knife.

Taxonomy

Seris' ideas of association of various insects are very loose. Few insects are recognized to form natural groupings; bees, butterflies, wasps, spiders are most distinct. However, there are all sorts of gradations blending confusedly with each other, often dependent on the knowledge and interest of particular informants.

Simple recognition is not always present. Out of 92 forms, 13 the informants could not identify, simply saying that they didn't know them. *Cicindela lemniscata*, *Melanotus cribricollis*, *Horistonotus*, *Meloid*, *Oxacis*, both species of *Cymatodera*, *Photopis*, *Scolopsella*, tiny Scarab, *Leptoremus*, *Homolocerus*, and *Reduviid*—all these were in the

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XI

SUMMARY

224 Hunting is very decidedly secondary to fishing, although it is still much practiced by certain individuals and in a desultory way probably by all.

462 There is a clean cut division of labor in all these occupations. Fishing and hunting are men's occupations, gathering of the desert animals and beachcombing for the intertidal animals is largely the job of women and children. Boys get broken [868] into men's occupations in adolescence, girls into women's jobs very much earlier.

224 Avoidance of fishing or hunting certain creatures appears much more a matter of custom than of well defined and socially rationalized attitude. Frequently an animal is not hunted simply because the Seri feel it is too big and too strong for them to tackle.

157 Through all these activities, Seri individualism is curiously woven and accounts for the failure of anything that might resemble a collective effort.

Food Preferences and Preparation

252 Seri food is prepared in a simplest sort of way. [263] Boiling in water is usual with salt and sometimes a few other spices added. While most food is prepared that way, snakes and fishes are usually fried, without any ingredients. There has been a [178] notable shift toward greater fanciness in the ingredients, as they have become more readily available.

262 There are many preferences. Animals are scaled in desirability. Some fishes, marine turtles, chuckawalla, deer and peccary and duck are at the top of the list; lower animals, smaller fishes including puerco in the middle, while the sea gull and the pelican are probably at the very bottom of the pit. This again reflects temporal changes in tastes [178] although not necessarily a direct influence from the Mexicans.

Pets

231 Few pets are kept, other than dogs. Such animals as come are those captured accidentally. In most cases they are bird nestlings.

Taxonomy

* 825 Differential criteria are applied in the classification of different groups. There is less tendency to group birds than to group different mammals and classificatory ideas break down almost completely in smaller animals, especially insects and molluscs. Considering the economic importance of the molluscs, poor ability to distinguish the Gastropods from the Pelecypods is striking.

The classificatory criteria differ for different groups. Mammals are generally recognized by the furiness, birds by the ability to fly and the pres-

[D·54 B]

123 handed to show their friendliness.

142 291 123 [302] [411] One was a young man with rather pleasant features, his braided hair hanging below his shoulders. His name was Antonio Herrera. The other was a wild-looking specimen called Ramon Blanco. His hair was a tangled mat with a short braid behind, suspicious black piercing eyes, long sparse moustache and chin-beard hiding a broad cruel mouth. He wore the remnants of an old sweater, a short dirty kilt, or skirt, nearly to his knees, a belt full of cartridges, mostly empty, and a long knife in a rawhide scabbard.

123 [745] [291] The young man had been baptized and given a name by Roberto, who had acted as godfather or *patrona*, many years ago. He wore a hat, jacket, and pants of blue denim, and *guaraches*, or sandals of rawhide.

We shook hands all around and then they called and halloed in the brush and soon three women and a lot of children, wild and half-clothed, filed into camp. The women were tall, gaunt, unkempt, ragged and barefooted, paying us not the slightest notice. They were bearing on their heads large baskets filled with all their earthly possessions---cooking ollas, scraps of cloth, pieces of turtle meat, bone [415] [482] [422] [854] [23] brads, hair brushes, and odds and ends. They carried, also, an infant or two wrapped in odd bits of rags. Several gaunt dogs followed in their wake.

342 [542] In all, three families came trailing in, removed their household equipment from their heads and resumed their interrupted and primitive housekeeping. Each family occupied its apartment in the row of brush shelters, separated from each other only by brush partitions with a total lack of privacy. These shelters, always open to the sea, serve as shade from the fierce rays of the sun, and also as windbreaks, but [561] are no protection from infrequent rains. They are occupied only for a brief period and then their nomadic tenants move on to fresh cahuesa, or sea turtle range.

123 [42] Soon, a third man arrived while we were near the huts, Manuel Encina. He was a man of sixty-five, gray hair and mustache, seamed features, and not evil looking. He was out of breath. He had gone for water to the same water hole where we had been yesterday, struck our tracks, had left his water cans and hurried back to warn his people. He was greatly relieved to find friends.

Since he had gone for water, inquiry revealed there had been no water in camp for two days, and six adults and one girl of thirteen and six children were thirsty. We gladly gave them one of our five-gallon cans of water and they were very grateful. They had caught a [225] [262] sea turtle the day before and gave us some turtle steaks which looked like beef or mutton.

312 487 123 As the camp was without water and we were running short, the young man and Encina offered to get some. Each took a *palanca*, or short shoulder pole with knotched ends, fitted empty five-gallon cans in

wear ceremonial feathers as did our western Indians. I saw no skin or cutaneous disease, or evidence of tuberculosis or of trachoma---the curse of our Indians.

One boy-child of five years was a handsome child---fat, round, sturdy, with roving great black eyes, large thick lips, a picture of perfect health. He was almost naked. His hair was done in a pigtail with a red string braided into it. His face like all the others was dirty, but he waded into the shallow water with a short spear and I saw him catch two crabs with his little harpoon. The water did not bother his face.

They had no plates or eating tools, except large deep clam shells, cast up by the sea, which served as cups and dippers. Their long, keen belt knives were used for cutting, carving or skinning, and always the fingers for eating. They gathered in a circle around an olla of seeds of long grass growing on the sea bottom prepared by winnowing, parching and grinding, and then cooked with turtle oil. Each one dipped his or her fingers into the olla and conveyed them to the mouth without losing a drop, and licked them off with great relish.

The dogs eat with the family. There were six or seven half-starved ones. If someone picked up a piece of turtle flipper the dog often took the first lick at it, bit off a piece or licked it before it reached the owner's mouth. The dogs were not punished. They were just slapped to keep them out of the pots.

We had a great time that evening in Seriland. The young man played his violin. This consisted of a hollow box cut out of a *palo verde* tree, and a piece of pine about sixteen inches long; terminating in a hollow where a single peg was fitted. The one string was twisted deer sinew, and the bridge was a small round clam shell at the far end. The bow was a small bent stick and some black horsehair. On the handle was a wad of rosin fastened underneath. By fingering this string a few weak squeaky notes were made, and this was the classical music of the Seris.

Manuel Encina seized his gourd rattle and began chanting. Herrera tapped a tin can and I beat on an inverted basket and the orchestra was in full swing. A young girl, Rosa, dragged out a turtle shell and standing on it began to dance. This dance consisted of stepping up and down quickly with each foot alternately, and this stamping, barefooted, emitted a hollow sound. Every once in a while I let out an Indian yell which pleased the Seris very much. For two hours they had a real swell time. We took one flashlight of the proceeding.

Each family was in their hut, which afforded very slight shelter as they were only partially roofed over and the sides were broken down in places. The huts were all adjoining and each had a little campfire, which did not give much illumination, so the dancing was in semi-darkness.

(text continues on p. 163)

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123 the flesh attached. This we roasted, or broiled, by standing it on
262 edge against two stakes in front of the fire. The breast was white and tender, somewhat like roast pig, but much more delicious.

242 The Seris cut off the great flippers, dug out the entrails, and
252 whenever there was a crack in the crowd of men, women and children, there was a dog lapping the blood and chewing a shred of meat before being driven off. Men, women and children tore off pieces of the tender
[251] meat and ate it raw. The blood which gathered in the hollow of the shell was baled out and saved in an olla.

A woman took out the coils of entrails, ripped them open with her finger, squeezed out the half-digested sea grass, which resembled closely-packed boiled greens, and rinsed them in the sea. The head
[251] was skillfully disjointed, and with flippers, entrails and liver, put up on the brush roof away from the sand and dogs.

Then began the feast; half the turtle being devoured immediately.
[244] To see Blanco, which name fits neither his complexion or character, gnaw the bone and tear away the raw flesh of a turtle flipper with his strong white teeth and cruel mouth, would not require much imagination to substitute the shin bone of a human being.

All parts of the sea turtle are utilized except the bones and portions of the head. The white, flexible under-shell is roasted and eaten, but how they can masticate and digest it is a mystery. I tried it and gave it up, as did all our party. It might have been a Goodyear tire, for all the impression we made on it, but even the Seri children
237 eat it. The carapace is broken into small pieces and dried out in an olla, and this yields a green oil. The shell is nearly one-half inch thick and filled with minute cells which carry oil. This oil is evidently a provision of nature to prevent barnacles and marine growths from attaching to the shell. This oil is poured into a previously cleaned section of intestine, fastened at one end, and then is bottled, ready for transportation or use.

The skin of the flippers is used for sandals. The broken pieces of carapace are also used for firing ollas. The shells are used for windbreaks, for receptacles for transporting household things on women's heads, and possibly for other needs. The stomachs are stretched, probably with sand, and when dried are used for transporting water, the same as we use a canteen.

185 The Seris are always improvident. They raise no cattle. They plant
261 nothing and the only crops they raise are children and dogs. They store no food away, eat when there is plenty, go hungry when there is
[231] nothing to eat. When they will eat raw turtle meat like animals, their
[234] taste is not refined. This is evidenced when they will eat a horse or
[262] burro dead, several days---scrape off the maggots to get a chance at it.

[123] gunwales, and then in trying to balance, she would dip the other way.

As we got to the point, the swells were larger and the danger so imminent we stopped the boat in lee of the point nearest Sonora, and Bob and I landed.

Old Blanco had paddled his *balsa* with some of the freight to the Sonora side. The boat put off again, and rode the sea better and it landed all right on Sonora side. In the meantime, several of the women and children, with their loads, had reached the Seri point ready to be ferried across. The boat returned with two Seris paddling. We loaded a lot of Indian junk, Bob and I and several children, the Chief and a woman. Nine in all. We reached the Sonora side, all right.

By this time breakfast had been cooked and we sat down to drink black coffee and eat rice and onions. The wild-looking Seris sat around us watching each mouthful, hungrily. When we finished we gave them all that was left and they cleaned it up.

[231] As we left the Seri point, and as their masters left, the dogs trotted to the water's edge and howled. Bob said that when all had crossed, the dogs would plunge in and swim across the swift current. [136] The water was infested with sharks, so it was possible that some of them would not reach shore. At last everybody got across, dogs and all.

[112] The Indians carried their packs; the men with the shoulder sticks and the women balancing their loads with marvelous dexterity on their heads. Two men packed twenty gallons of water in five-gallon cans.

When we had all our things in the boat, Juan Tomas jumped in with his pack. We were well loaded before, but this made us a little too deeply laden. Nevertheless, we pushed off and raised the sail to take advantage of the wind. We sailed parallel to the shore for a few miles until the waves got too overpowering and the boat had a lot of water in her. The mast was unstepped---a very delicate operation---and we made for the shore after shipping some of the waves.

My heart was in my mouth most of the time as each time the boat rolled, one side almost dipped up a wave. It was a matter of personal safety as well as safety of what few things I had already collected. One olla I had bought was smashed. The waves looked like clear green paint.

We finally landed without mishap and pulled the boat up, but it was so rocky we had great difficulty in walking in our bare feet. Our legs and feet were bare when we were in the boat and mine were badly scalded by the sun.

The Seris had made camp one quarter of a mile down the beach from us, and the old Chief shouldered his pack and strode down to them. We were very thankful.

[225] Soon some of the men came back to borrow the boat to hunt for

123 We were up long before the sun, the following day the eighth of
261 March, but the baking of bread delayed our breakfast, so that while we ate, forty Indians were looking on at us. Little ones with streaming hair and fluttering shirt tails, paddled over the sand hills as fast as their brown legs could carry them in their fear of being late. Women in patched and ragged skirts hurried and plowed through the sand and over thorny mesquite brush to be in time---for what? To see the *gringos* eat their breakfast and to possibly pick up a few crumbs. Each grain of corn, each bean, even a piece of dough half the size of a dime is precious and carefully garnered and eaten.

To eat under the devouring eyes of these people who rarely have enough to eat and most of the time not half enough, to see the hungry dog-like look as I tried to swallow a piece of bread, to see the children half start up as if to run and seize it and watch the mothers jerk them back, to see them eye hungrily our sacks of provisions and not dart to touch them, is enough to make one choke.

Any bread left over we broke into little chunks and gave to the children. I then gave each child two lumps of cube sugar. A little later, as they would hide their sugar and try to repeat, I lined up fifteen or twenty eager, frowsy bare-legged boys and girls and gave each an orange.

123 Later, the mother would trade a basket or a hair brush for an
439 orange, a knife for two oranges. They brought Pelican skin rugs made from six Pelican hides sewed together which used to form their kilts. For these I traded four yards of *manta*, or cotton goods, of which they made garments.

I soon had a thriving trade on hand, especially in necklaces. I had bought a few cheap glass bead necklaces at fifteen cents each. These set them wild. For native necklaces of seeds I traded the bead ones. I secured most of the necklaces, and when they ran out the children were sent by their mothers into the brush to gather more beans and seeds. These were hastily strung and hung around the neck and exposed to my admiring gaze, but it was useless as I would not trade any more beads. I had to save them for the Seris on the Island. I would have given everything away there.

Also, I had to consider the moral effect of them securing things without effort on their part. Only for service, must we pay in food or goods. For bringing food, water, to go hunting for us, or for trade---except giving things to the little children. It was heartbreaking, but they were lucky to have water. Like many others less primitive, they work, hunt, fish, only when hunger drives them.

231 With the people were a crowd of undersized, starved, bony dogs. A Seri cleans up everything and the dogs get the rest. Each day they are gnawing on some old fish head that is long past having any nourishment, and is tough and strong as rawhide, but hope springs eternal in an Indian dog's heart or stomach, and again and again, will they search out an old fish head or Pelican bone. Discouraged, never!

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Santo Blanco and Edward H. Davis - this hombre gambled away his only shirt - Sonora - 1929

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Seri method of carrying infant

123 Then Chico Romero and his load of children and dogs arrived and
484 he unloaded his impediments on the beach, and soon the women came walking along the beach and joined the party. The boats carrying the heavy things and children; the women, with their babies and a few light things on their heads, walk along the beach when possible and follow the boats, which hug the shore to avoid the strong currents and tide. The boats are propelled by paddles mostly, though some of
501 the Indians use oars. The women are slightly built, slender and in-
142 clined to be gaunt, owing to the hard life and lack of food. Their cheek bones are quite prominent and their profiles present protruding lips.

422 Having no permanent homes, moving hither and thither for their
[964] various food supply, household things are not accumulated and life is reduced to its very simplest elements and absolute necessities.

Crude baskets made from shoots of the torote tree, vessels in which to cook, and some patched rags in place of Pelican skins to serve as blankets to the fortunate few, constitute the family pos-
• 231 sessions. Strange to relate, many of the women have an over-supply of
[853] milk, and according to Roberto have puppies nurse what the babies cannot take. One woman was known to nurse a baby pig on one side and a puppy on the other.

[247] Family dogs lick all cooking vessels which is unnecessary as they
[854] are thoroughly clean when the Seris are through with them, and also lick the infants clean after performing their natural functions, so they are quite indispensable. I saw a Seri girl place on the sand a small can of water for a dog and then saw her drink some of the remainder and pour the rest back in a five-gallon can. Dogs frequently swim across the Infernillo to join their masters.

732 Asked about cripples and incompetents, Roberto said they probably did not exist. The conditions of survival were too precarious to admit of anyone living who was unable, by physical disability, to hunt or fish. There are two or three men who are nearly blind or so. The wives of these men eke an uncertain living for them by the hardest
262 struggle. The sea turtle is the staple; one man and one good boat can
433 secure a living for five families. There are now nine boats, but one
501 boat to a family would practically free them from continual want.
262 With the exception of four bones in the flippers and the bones of the
237 head, all the sea turtle is used---the meat, blood, entrails, shell which furnishes food and oil, skin of flippers which furnishes sandals, sinew for strings. Nothing is wasted except contents of the entrails.

123 Again, we laid our blankets on the clean white sand of the shore and were lulled to rest by the murmuring sea.

123 Daylight found us up the next morning, and we breakfasted, rolled
484 up our blankets, pushed the boats into the sea and were off by the time the sun rose over the mountains and shone over a glassy sea. Two Seris towed their boat by a tump line, while a boy of twelve steered

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the vessel to Guaymas. With the aid of a group of Yaqui, some of these women were said to have been permitted to go to Hermosillo and eventually to return to their home on Tiburon. Others of their group are said to have remained near Guaymas. The women who returned to Tiburon reported that the San Esteban women and children were put aboard another ship which sailed southward.

BANDS I, III, AND IV

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As opposition from the Papago and government forces increased, the members of Band I were forced to seek refuge on Tiburon Island. The mainland members of Band III (subdivisions 11 and 12) were also forced, especially during the Encinas Wars, to flee to Tiburon. There the combined forces of Bands I, III, and IV sought to cope with the military expeditions sent out through the years to exterminate them. Tiburon Island is an adverse battlefield for the uninitiated; some expeditions were turned back due to lack of potable water or because of failure to make contact with the enemy in the mountainous terrain. Some expeditions did encounter the Seri, however, and many natives were either killed or captured.

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Through the years, then, these military encounters, along with smallpox and measles epidemics, were responsible for reducing the Seri tribe to a small remnant. The band and clan systems lost their functional relevance as the people continued to live together for mutual protection. Shortly after the turn of the century, the expeditions and raids had practically ceased.

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SIGNIFICANCE OF BANDS TODAY

With the dissolution of the band system, the rule of descent shifted from patrilineal to bilateral, and the rule of residence shifted from patrilocal to neolocal.

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Although the substance of the band system is no longer a reality, the concept of land ownership still remains. A young Seri of today may choose to be associated with either the territory of his father or that of his mother. He is said to inherit part ownership of the area. It is recalled by one informant that in former times ownership of a mountain was especially important. Sometimes ownership of a mountain was included as part payment for a bride. Thus a person might 'own' a mountain in a subdivision other than his own.

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A custom exists even today whereby a person names his dog after a mountain or other geographical point located in his subdivision. Although the person may re-use the name, each dog so named must be of the same sex as the first.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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SPONGE USED FOR HOUSE COVERING, TIBURON ISLAND

[p. 112 A]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

301 [304] The second mutilation was the only corporeal modification noted by early missionaries and explorers—it was the perforation of the nasal septum for the insertion of a skewer, perhaps of polished stone (though doubtless more commonly of bone), to which swinging objects were attached. One of the most useful records is that of the Jesuit, Padre [114] Joseph Och, who described the nasal attachment as a small, colored stone suspended by cords from the perforated septum, and guarded with such jealous veneration that "one must give them at least a horse or a cow for one" (ante, p. 78); while according to Hardy's record, the nasal fetish is "a small, round, white bone, 5 inches in length, tapering off at both ends, and rigged something like a cross-jack yard."[1]

[237] [291]

FIG. 7.—Snake-skin belt.

The custom is apparently obsolete, and nothing is known directly of details or motives.

301 304 Excepting these mutilations the corporeal decoration of the Seri is apparently limited to the face-painting: among the 60 individuals at Costa Rica in 1894 there was no trace of tattooing or scarification of face, limbs, or body; there were no labrets or earrings, and neither lips nor ears were pierced, nor were nasal septa observed to be perforated in accordance with the reputed ancient custom; the teeth were neither filed nor drilled; no indications of amputation or other maiming (save the removal of the incisors) were observed—indeed, the instinct for physical markings of symbolic or decorative character, which seems to be normal to primitive men, was apparently satisfied by the prevalent and persistent face-painting among the females.

291 The extra-corporeal decorative devices are of a meagerness and pov-

[1] Travels, p. 286.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

29/ erty even transcending the poor apparel, flimsy habitations, and generally ill-developed artifacts of the lowly tribe.

[237] The most prominent personal possession is the pelican-skin robe; it is usually made of six skins, slightly dressed and in full plumage, sewed together with sinew in a conventional pattern of such sort as to give the greatest possible expanse consistent with the irregular outlines of the individual skins, and at the same time to display a conventional color pattern on the feathered side, the colors ranging from the dorsal slate to the ventral white of the fowl (as indicated in plate XXIII); sometimes there are only four skins and rarely there are eight, but the conventional arrangement is maintained. Before the beginning of a

[301] [824]

FIG. 5.—Dried flower necklace.

[177] fairly regular barter at Rancho de Costa Rica, and hence before the introduction of manta and other stuffs, the pelican-skin robes were supplemented by kilts made of mesquite root or other fibers, spun and twisted in the fingers and woven probably on some primitive device no longer in use; but so far as is known these native fabrics were devoid of decorative patterns in color or weave. Less habitually a short wammus or shirt, with long sleeves, made of a material similar to that of the kilt, was worn; but it, too, was without ornamentation, so far as can be ascertained. The remaining article of utilitarian apparel is the belt, usually consisting of a strip of skin (of deer, rabbit, peccary, etc), slightly dressed with the hair on; frequently this is replaced by a cord or braided band of human hair, while the favorite belt of some of the

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1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

life of the tribe rotates: since the clans never reside and rarely camp nearer than 3 to 15 miles from the aguaje, a large part of the water consumed must be transported great distances in these vessels; since the region is one of extreme aridity, the lives of small parties often depend on the integrity of the olla and on the care with which the fragile vessel is protected from shock or overturning; and hence the utensil must occupy a large if not a dominant place in everyday thought—indeed, the fact that it does so is attested by constant custom and also by its employment as the most conspicuous among

FIG. 14—Rattlesnake necklace.

the mortuary sacrifices. Thus, the relation of the Seri olla to its makers and users is parallel with that of the ever-present earthen pot to the Pueblo people, or that of the cooking basket to the acorn-eaters of California, save that its relative importance is enhanced by the fewness of activital lines and motives in Seri life. Moreover, this most characteristic utensil is established and hallowed in Seri thought by immemorial associations: its sherds are sown over the hundred thousand square miles of ancient "despoblado" from Tiburon to Caborca, Magdalena, Rio Opodepe, and Cerro Prieto, and are scattered through the 20 feet of shells forming Punta Antigualla (perhaps the oldest shell mound of America); and all the sherds from the range

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

dishes, or even as kettles, in the rare culinary operations of the tribe (as shown in plate X); but the entire vessels appear to be religiously devoted to their primary purpose.

While some three-fourths of the observed fictile ware of the Seri and a still larger proportion of the scattered sherds represent conventional ollas, there are a few erratic forms. The most conspicuous of these is a smaller, thicker-walled, and larger-necked type, of which three or four examples were observed; two of these were in use (one is represented lying at the left of the jacal in plate X), and another was found cracked and abandoned on the desert east of Playa Noriega. The vessels of this type are used primarily as kettles and only incidentally as canteens. In both form and function they suggest accultural origin; but the ware is much like that of the conventional type. Another erratic type takes the form of a deep dish or shallow bowl, of rather thick walls and clumsy form, which may be accultural; a single example was observed in use (it is shown in plate XIV). There are also mortuary forms, including a miniature olla (figure 39) and bowl (figure 41), and such still smaller examples as those illustrated in figures 17 and 18. In addition to the utensils a few fictile figurines were found. Most of these were crude or distorted animal effigies, and one (broken) was a rudely shaped and strongly caricatured female figure some 2 inches high, with exaggerated breasts and pudenda. Analogy with neighboring tribes suggests that the very small vessels and the figurines are fetishistic appurtenances to the manufacture of the pottery; e. g., that the fetish is molded at the same time and from the same material as the olla, and is then burned with it, theoretically as an invocation against cracking or other injury, but practically as a "draw-piece" for testing the progress of the firing.

FIG. 17.—Symbolic mortuary olla.

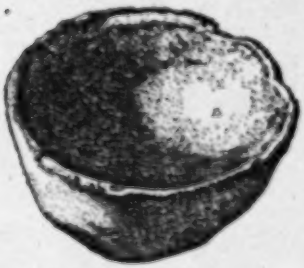

FIG. 18.—Symbolic mortuary dish.

By far the most numerous of the utensils connected with potable water are drinking-cups and small bowls or dishes; but these are merely molluscan shells of convenient size, picked up alongshore, used once or oftener, and either discarded or carried habitually without other treatment than the natural wear of use (an example is illustrated in figure 19). Larger bowls or trays are improvised from entire carapaces of the tortoise (probably *Gopherus agassizii*), which are carried considerable distances; and still larger emergency water-vessels consist of carapaces of the green turtle (*Chelonia agas-*

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

sizii), laid inverted in the jacales; these shells also being used in natural condition. No wrought shells, molluscan or chelonian, were observed in use or found either in the jacales or on the hundreds of abandoned sites; but the vicinage of the rancherias, the abandoned camps and house sites, and the more frequented paths are bestrewn with slightly worn shells, evidently used for a time and then lost or discarded. The relative abundance of the fictile ware and this natural shell ware in actual use is about 1:3; i. e., each adult female usually possesses a single olla of the conventional type, and there may be one or two extra ollas and two or three clay dishes in each band or clan, while each matron or marriageable maid is usually supplied with two to four shell-cups and each little girl with one or two; and there are twice as many carapace trays as clay dishes. The disproportion of

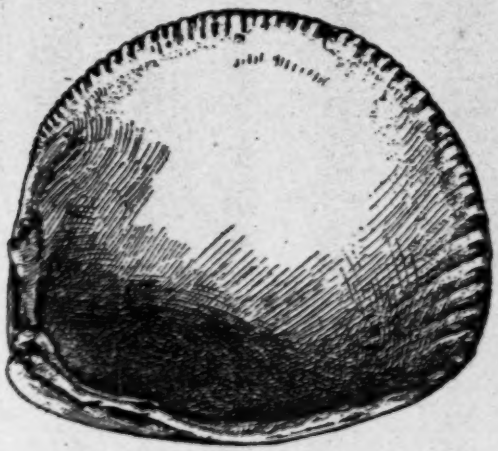

FIG. 19—Shell-cup.

pottery and shell about the abandoned sites is naturally much greater; for the former is the most highly prized industrial possession of the women, while the shells are easily gained and lightly lost.

With respect to solid food the Seri may be deemed omniverous though their adjustment to habitat is such that they are practically carniverous.

The most conspicuous single article in the dietary of the tribe is the local green turtle. This chelonian is remarkably abundant throughout Gulf of California; but its optimum habitat and breeding-place would appear to be El Infiernillo, whose sandy beaches are probably better adapted to egg laying and hatching than any other part of the coast. Here it has been followed by the Seri; perhaps half of the aggregate life of the tribe is spent within easy reach of its feeding and breeding grounds, and tribesman and turtle have entered into an inimical com-

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

munalty something like that of Siouan Indian and buffalo in olden time, whereby both may benefit and whereby the more intelligent communal certainly profits greatly. The flesh of the turtle yields food; some of its bones yield implements; its carapace yields a house covering, a convenient substitute for umbrella or dog-tent, a temporary buckler, and an emergency tray or cistern, as well as a comfortable cradle at the beginning of life and the conventional coffin at its end; while the only native foot-gear known is a sandal made from the integument of a turtle-flipper.

FIG. 20.—Turtle-harpoon.

Doubtless the eggs and newly hatched young of the turtle are eaten, and analogy with other peoples indicates that the females are sometimes captured at the laying grounds or on their way back to water; but observation is limited to the taking of the adult animal at sea by means of a specialized harpoon. A typical specimen of this apparatus, as constructed since the introduction of flotsam iron, is illustrated in figure 20. It comprises a point 3 or 4 inches long, made from a nail or bit of stout wire, rudely sharpened by hammering the tip (cold) between cobbles, and dislodging the loosened scales and splinters by thrusts and twirlings in the ground; this is set firmly and cemented with mesquite gum into a foreshaft of hard wood, usually 4 or 5 inches long, notched to receive a cord and rounded at the proximal end; the rounded end of this foreshaft fits into a socket of the main shaft, which may be either a cane-stalk (as shown in the figure) or a section of mesquite root; while a stout cord is firmly knotted about the foreshaft and either attached to the distal portion of the main shaft or carried along it to the hand of the user. The main shaft is usually 10 or 12 feet long, with the harpoon socket in the larger end, and is manipulated by a fisherman sitting or standing on his balsa. On catching sight of a turtle lying in the water, he approaches stealthily, preferably from the rear yet in such wise as not to cast a frightening shadow, sets the foreshaft in place, guides the point close to the carapace, and then by a quick thrust drives the metal through the shell. The frictional resistance between the chitin and the metal holds the point in place, and although the foreshaft is jerked out at the first movement of the transfixed animal the cord prevents escape; and after partial tiring

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

monly the carapace and the longer bones from the flippers of the larger specimens are preserved entire for other uses, and are cleaned only by teeth and talons and tongues, aided by time but not by fire; but the plastron, unless broken up and consumed immediately, is subjected to a cooking process in which it serves at once as skillet and cutlet—it is laid on the fire, flesh side up, and at intervals the shriveling tissues are clawed off and devoured, while at last the scorched or charred scutes themselves are carried away to be eaten at leisure.[1]

Perhaps the most significant fact connected with the Seri turtle-fishing is the excellent adaptation of means to ends. The graceful and effective balsa is in large measure an appurtenance of the industry; the harpoon is hardly heavier and is much simpler than a trout-fishing tackle, yet serves for the certain capture of a 200-pound turtle; and the art of fishing for a quarry so shy and elusive that Caucasians may spend weeks on the shores without seeing a specimen is reduced to a perfection even transcending that of such artifacts as the light harpoon and fragile olla. Hardly less significant is the nonuse of that nearly universal implement, the knife, in every stage of the taking and consumption of the characteristic tribal prey; for it may fairly be inferred that the comparative inutility of the knife in dissevering the hard and horny chelonian derm, and the comparative effectiveness of the shell-breaking and bone-crushing hapf, have reacted cumulatively on the instincts of the tribe to retard the adoption of cutting devices. Of much significance, too, is the limited cooking process; for the habitual consumption of raw flesh betokens a fireless ancestry at no remote stage, while the crude cooking of (and in) that portion of the shell not consecrated to other uses might well form the germ of broiling or boiling on the one hand and of culinary utensils on the other hand. On the whole, the Seri turtle industry indicates a delicate adjustment of both vital and activital processes to a distinctive environment, in which the abundant chelonian fauna ranks as a prime factor.

Analogy with other primitive peoples would indicate that the flesh of the turtle is probably tabu to the Turtle clan, that the consumption of the quarry is preceded by an oblation, and that there are seasonal or other ceremonial rites connected with turtle-fishing; but no information has been obtained on any of these points save a few vague and unwilling suggestions from Mashém tending to establish the analogy.

Flotsam and stolen metal have played a rôle in the industries of Seriland so long that it is difficult to learn much of the turtle-fishing

[1] These details were furnished largely by Mashem and Señor Encinas, but were verified in essentials by personal observation of dietetic customs at Costa Rica in 1895; and they were corroborated by observations on both shores of El Infiernillo and Bahía Kunkaak in 1895. Especially significant were the remnants of a turtle feast on the southern beach of Punta Miguel interrupted by the approach of the exploring party. The indications were clear that the turtle had been landed and largely consumed before the fire was kindled, and that the cooking of the firmer portions had hardly been commenced before the camp was abandoned so hurriedly that not only the nearly eaten turtle and the glowing embers, but the harpoon (the specimen illustrated in figure 39), the still bloody coal greasy hapf (that represented in plate LIV), and the fire-sticks were left behind. Gnawed fragments of charred plastrons are common relics about hastily abandoned camps generally.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

174 177 411 during prenatal times; but an intimation from Mashém that the old men thought it much better to take the turtle with the teeth of an "animal that goes in the water", and the similarity in terms for "harpoon" (or arrow) and "teeth" both suggest that the aboriginal point may have been a sea-lion tooth, and that the foreshaft itself may have been a larger tooth of seal or cetacean. While the modern harpoon is shaped with the aid of metal (hoop-iron, etc.), the forms are quite evidently vestigial of knifeless manufacture, in which a naturally rounded or abraded or fire-shaped foreshaft was fitted into the natural socket afforded by a cane-stalk broken at its weakest point—i. e., just below the joint; and both function and socket arrangement (as well as the linguistic evidence) strongly suggest the cylindrical tooth as the germ of the apparatus.

223 It is probable that water-fowl, considered collectively, stand second in importance as Seri prey; and the foremost fowl is undoubtedly the pelican, which serves not only as a fruitful food-supply but as the chief source of apparel.

The principal haunt and only known breeding ground of the pelican in the Gulf of California is Isla Tasmo, an integral part of Seriland; and while the great birds are doubtless taken occasionally in Bahia Kunkaak, El Infiernillo, Bahia Tepoka, and other Seri waters, this island is the principal pelican hunting ground. According to Mashém's account, the chase of the pelican here is a well-organized collective process: at certain seasons, or at least at times deemed propitious by the shamans, pelican harvests are planned; and after some days of preparation a large party assemble at a certain convenient point (presumably Punta Antigualla) and await a still evening in the dark of the moon. When all conditions are favorable they set out for the island at late twilight, in order that it may be reached after dark; on approaching the shore the balsas are left in charge of the women, while the warriors and the larger boys, armed only with clubs, rush on the roosting fowls and slaughter them in great numbers—the favorite coup de grâce being a blow on the neck. The butchery is followed by a gluttonous feast, in which the half-famished families gorge the tenderer parts in the darkness, and noisily carouse in the carnage until overcome by slumber. Next day the matrons select the carcasses of least injured plumage and carefully remove the skins, the requisite incisions being made either with the edge of a shell-cup or with a sharp sliver of cane-stalk taken from an injured arrow or a broken balsa-cane. The feast holds for several days, or until the last bones are picked and the whole party sated, when the clans scatter at will, laden with skins and lethargic from the fortnight's food with which each maw is crammed.

[231] [281]

Mashém's recital gave no indication as to whether the Pelican clan participate in the hunting orgies, though it clearly implies that the chase and feast are at least measurably ceremonial in character; and this implication was strengthened by the interest and comparative

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

224 While by far the larger share of Seri sustenance is drawn from the sea, a not inconsiderable portion is derived from the land; for the warriors and striplings and even the women are more skilful hunters than fishers.

The larger objects of the feral chase are deer of two or three species (the bura, or mule-deer, being most conspicuous and easiest taken), antelope, and mountain sheep; to which the puma, the jaguar, and perhaps two or three other carnivores might be added. The conventional method of taking the bura and other deer is a combination of stalking and coursing, usually conducted by five of the younger warriors, though three or four may serve in emergency; any excess over five being regarded as superfluous, or as a confession of inferiority. The chase is conducted in a distinctly ceremonial and probably ritualistic fashion, even when the finding of the game is casual, or incidental to a journey: at sight of the quarry, the five huntsmen scatter stealthily in such manner as partially to surround it; when it takes fright one after the other strives to show himself above the shrubbery or dunes in order to break its line of flight into a series of zigzags; and whether successful in this effort or not they keep approximate pace with it until it tires, then gradually surround it, and finally rush in to either seize it in their hands or cripple it with clubs—though the latter procedure is deemed undignified, if not wrong, and hardly less disreputable than complete failure. When practicable the course is laid toward the ranchería or camp; and in any event the ideal finish is to bring the animal alive into the family group, where it may be dissected by the women, and where the weaklings may receive due share of the much-prized blood and entrails. The dissection is merely a ravenous
264 rending of skin and flesh, primarily with the teeth (perhaps after oblique bruising or tearing by blows with the hupf over strongly flexed joints), largely with hands and fingers aided anon by a foot planted on the carcass, and partly with some improvised device, such as a horn or tooth of the victim itself, the serrated edge of a shell-cup, or perhaps a sharp-edged cane-splint from a broken arrow carried for emergency's sake. Commonly the entire animal, save skin and harder bones, is gulped at a sitting in which the zeal of the devotee and the frenzy of the carnivore blend; but in case the group is small and the quarry large, the sitting is extended by naps or prolonged slumberings, and
[252] the more energetic squaws may even trouble to kindle a fire and partially cook the larger joints, thereby inciting pallid appetite to new
[237] efforts. Finally the leg bones are split for the marrow and their ends preserved for awls; the horns are retained by the successful huntsmen
[281] as talisman-trophies; while the skin is stretched in the desert sun, scratched and gnawed free of superfluous tissue, rubbed into partial
224 pliability, and kept for bedding or robe or kilt.
857 The chase of the hare is closely parallel to that of the deer save that it is conducted by striplings, who thereby serve apprenticeship in hunt-

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

uniform in size and texture; an inferior example appears in figure 34. The manes and tails of horses and other stock are also converted into cordage, of which the chief known application is in toy riatas. It is of no small significance that the most highly prized cordage material is human hair, and that its chief uses are connected with the person; that the next in order of diminishing preciousness is that derived from the fibrous plants, which is used in balsa-making, bowstrings, harpoon cords, etc, as well as in the native fabrics; and that the least prized material is that derived from imported animals, which is largely limited in its utilization to youthful imitation of Caucasian industries; for the association of material with function reflects a distinctive feature of

FIG. 34.—Mesquite-fiber rope.

primitive thought, akin to that displayed in somewhat higher culture as synecdochic magic, the doctrine of signatures, etc.

Partly because of that decadence of aboriginal devices correlated with acculturation, partly by reason of imperfect observation, practically nothing is known of Seri spinning and weaving, and little of Seri sewing. The religiously-guarded hair-combings are twisted in the fingers and wound on stick-bobbins without aid of mechanical appliances; and, so far as has been observed, the final making of hair cords is merely a continuation of the strictly manual process. The agave stipes and mesquite roots are alleged by vaqueros to be retted in convenient lagoons and barrancas (a statement corroborated by the finding of half a dozen sections of mesquite root soaking in a lagoon near Punta Anti-

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

283 gualla by the 1895 expedition), and then hatcheled with the hupf or the edge of a shell; when the fibers are gathered in slender wisps or loosely wound coils, both of which were among the possessions of the Seri matrons at Costa Rica in 1894. So far as could be ascertained, the final processes parallel those of hair-cord making, i. e., the fibers are patiently sorted into strands, sized in the fingers and twisted by rolling on the thigh, the strands being subsequently combined in similar fashion.[1]

286 Neither the weaving nor the woven fabrics of the Seri have ever been seen by technologic students so far as known, though the fabrics are shown in Von Bayer's photographs and have been described by various observers. According to Señor Encinas, they resemble coarse bagging, and are woven or netted quite plainly. The ordinary sewing material is sinew, used in connection with a bone awl (a good example of which is illustrated in figure 35), a fish

FIG. 35.—Bone awl.

FIG. 36.—Wooden awls.

spine or bone, a cactus thorn, or either the mandible of a water-bird or a hard-wood skewer shaped after this natural needle (figure 36 *a* and *b*). Sometimes hair or vegetal fiber is substituted for the sinew; and for certain purposes an agave thorn, with the fibers naturally attached, serves for needle and thread.

[524] [1] A rope-twisting device of the Seri commonly employed by southwestern Indians was found in use by the Seri boys at Costa Rica in 1894, and was included in the Seri collection; but the indications were that the device was a mere toy used, like the horse-hair snake made by its aid, only in youthful sports.

1: McGee E-5 (1894-1895)1898 NU31 Ser. NU31

activities; i. e., in developed industries the tool is a primary factor, while in nascent industries it is but a collateral. 000

The tools of any primitive tribe may be defined as appliances used primarily in the production of implements and utensils, and incidentally in preparing food, making habitations, manufacturing apparel, building vehicles or vessels, etc—in short, the appliances used in producing devices for the maintenance of active life. The definition emphasizes both the dearth and the undifferentiated character of Seri tools; for the appliances used in the production of devices are exceedingly few, and are commonly employed also in food-getting or in other vital industries. 412

Perhaps the most conspicuous general fact in connection with Seri tools and their uses is the prevalence of natural objects employed either (1) in ways suggested by natural functions or (2) in ways determined by the convenience of users; the former grading into artificial devices shaped in similitude of natural objects and employed in ways suggested by natural functions.

Prominent among the natural objects employed in natural ways are mandibles of birds, used in piercing pelts and fabrics; fish spines and bones, also used as piercers; thorns of cacti and mimosas, used in similar ways; teeth and horns of game animals, used in rending their own tissues, and afterward in miscellaneous industrial processes; together with cane splints, used for incising. Frequently the employment of such objects is mere improvisation; yet, so far as could be ascertained through direct observation at Costa Rica, through Mashém's incomplete accounts, and through inquiries from residents on the frontier, even the improvisations are made in accordance with regular custom firmly fixed by associations—quite in the way, indeed, of primitive life generally, and of the physiologic and psychic processes from which primitive custom is so largely borrowed. With these objects may be grouped the turtle-shells and pelican-pelts used as shields against alien and animal enemies or as protectors against the elements; and the Seri sages would class with them the deer-head masks and deer-hoof rattles worn in the dance to at once symbolize and invoke strength and swiftness. One of the most striking among the artificial devices of symbolic motive is the piercer, or awl, of wood or bone, shaped in imitation of the avian mandible; yet still more significant in a vestigial way (provided the most probable inference as to genesis be valid) is the hard-wood foreshaft of arrow and harpoon, shaped and used in trenchant symbolism of the deadly tooth. [237] [237]

There are two conspicuous classes of natural objects employed in ways determined largely by the convenience of the users, viz, (*a*) marine shells and (*b*) beach pebbles. 237 412 415

The marine shells applied industrially comprise the prevailing local genera, *Cardium*, *Mactra*, *Area*, *Chama*, and others. They are used ordinarily as drinking-cups, dishes, dippers, receptacles for fats and fare-

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

237 412 [415] paints, and as small utensils generally; and they are used nearly as commonly for scraping skins, severing animal and plant tissues, digging graves and waterholes, propelling balsas, and especially for scraping reeds and sticks and okatilla stems in the manufacture of arrows, harpoons, bows, balsas, and jacal-frames—indeed, the seashell is the Seri familiar, the ever-present handmate and helper, the homologue of the Anglo-Saxon Jack with his hundred word-compounds, a half-personified reflex of habitual action and thought. Ordinarily—always, so far as is known—the shells are used in the natural state, i. e., either in the condition of capture and opening for the removal of the animal, or in the condition of finding on the beach. For certain purposes the fresh and sharp-edged shell is doubtless preferable, and for others the well-worn specimen (like the paint cup illustrated in plate XXVII) is chosen; but everything indicates that the need for smoothed shells is met by selecting wave-worn specimens, and nothing indicates that the value of the appliance is deemed to be enhanced by wear of use—in fact, the abundance of abandoned shells about the rancherias and camp sites, and over all Seriland for that matter, indicates that the objects are discarded as easily as they are found along the prolific shores.

412 Next to the shells, the most abundant industrial appliances of the Seri are beach pebbles or cobbles. They are used for crushing shell and bone, for rending the skins of larger animals, for severing tendons and splintering bones, as well as for grinding or crushing seeds, uprooting canes, chopping trees and branches, driving stakes, and for the multifarious minor purposes connected with the manufacture of arrows and balsas and jacales; they are also the favorite women's weapons in warfare and the chase, and are sometimes used in similar wise by the warriors. The material for these appliances paves half the shores of Seriland, and is available in shiploads; and its use not only illustrates Seri handicraft in several significant aspects, but illumines one of the more obscure stages in the technologic development of mankind.

The cobble-stone implements of the Seri range from pebbles to bowlders, and there is a corresponding range in function from light hand-implements at one end of the series to unwieldy anvils and metates at the other end. The intermediate sizes are not infrequently utilized, and are customarily used interchangeably, the smaller of any two used in conjunction serving as the hand implement and the larger as the anvil or metate; yet there is a fairly definite clustering of the objects about two types, a larger and more stationary class, and a smaller and more portable one.

192 412 The Seri designation for the larger stone implement is that applied to rock generally, viz, *ahat* (the vowel broad, as in "father"); and it seems probable that the term is onomatopoetic, or mimetic of the sound produced in the use of the implement as a metate, and that its application to rocks generally is secondary. The designation applied to the

8: Ascher E-5 (1960) 1962 NU31 Seri NU31

McGee (1898:214)

262 estimated that maritime resources provided two-thirds of the Seri diet. Kroeber (1931: 20), approximately 30 years later, estimated the proportion at about three-fifths. In the winter of 1960, 30 years after Kroeber's visit, the Seri were obtaining at least three-fifths of their food from the sea.

226 In pursuit of their main source of subsistence, the Seri travel up
[221] and down the narrow coastal band. In the winter of 1960 they were
[361] occupying one temporary camp toward the southern end of the band
[462] and a permanent camp at the northern extreme. Seri women and
[867] children gather mollusks; fishing is a male occupation. In addition to gathering and fishing for their own needs, the Seri dispose of a
226 portion of their catch on the commercial market. This enterprise
439 began about 1930, and was encouraged by the establishment, in 1958,
474 of the Sociedad Cooperative de Produccion Pesquera Seri with the cooperation of the Mexican government.

225 The Pacific green turtle constitutes the largest single item in the
262 Seri diet for at least six months of the year—from January to June—and it is also caught occasionally at other seasons. In 1896 McGee estimated that it provided 25 per cent of the total food supply. Emphasizing the intimate ecological relationship between the Seri and the turtle, McGee (1898: 186-187) wrote:

> ... perhaps half of the aggregate life of the tribe is spent within easy reach of its [the turtle's] feeding and breeding grounds, and tribesman and turtle have entered into an inimical communality something like that of the Siouan Indian and buffalo in olden time. ...

[114] Kroeber (1931: 20) believed that McGee stressed the Seri-turtle relationship too strongly and overestimated its contribution to the diet.
237 McGee (1898: 187), in support of the importance of the turtle to the Seri, points to the fact that the turtle carapace is used for, among other things, a house covering and buckler, a cradle, a coffin, and footgear. The carapace is currently used for supporting and roofing houses and as a starvation food. The contribution of the turtle to
262 the diet varies from year to year, but observations made in 1960 suggest a range of from 15 to 20 per cent as a reasonable estimate.

225 Seri men fish for turtle from boats, which are manned by two or
[501] three men and are propelled by oars, sails, outboard engines, or any combination of the three. The boats operate either individually or in groups. The men fish by night or day, depending on the weather
[416] and sea conditions. When they fish at night, they use a kerosene lamp to attract turtles to the surface. The principal implement is the harpoon.

411 The harpoon tackle of the Seri is illustrated in Figure 1. It consists of a foreshaft (c-h), a mainshaft (j-k), and an extension cord (i). The component parts of the foreshaft are a projectile point (c), a gasket (d), a wrapping cord (f), a hafting base (g), and a lead cord (e and h). In preparation for turtle fishing, the hafting base (g) is plugged into the socket (j) on the main shaft (k), and the extension cord (i) is looped through the lead cord (h).

Coyote figures out probably

as an important and perhaps disreputable figure in the mythology although nothing but scraps and bits of information suggest this. It is possible that there is actually a taboo on eating this animal or perhaps it is so disreputable that eating its flesh would put a gourmant in an inferior position.

How important is the Seri mammalian diet is hard to tell. It certainly looms more heavily during the winter, because in the cool season hunting is easier than during the heat of the summer and in fact this is when most of it is done by the ardent hunters. Too, winter subjects the Seris to greater hazards and is apt to increase their dependence on the desert resources over that during the summer, even if these resources are scantier at that time.

To all of these animals one should add the semi-wild burros running about the extensive Mexican rancherias. The Indians poach on them frequently using their fire arms, usually the .22 caliber rifles. In any case, it appears that during the summer when the field work was carried out, the mammalian diet figures quite lightly on the Seri table.

Food preparation: Very little is done in the preparation of the mammalian meat. All that I could observe was the boiling of it in hot water spiced with salt. The Indians were saying that in order to have the meat of a peccary, deer or bighorn ready to eat one must boil it 2-3 hours. The same procedure is followed with the meat of the burros. In contrast to this, as shall be seen later, fish are boiled as well as roasted while the turtles are also dried and salted. Preparation of meat is done by women, certainly at least in the encampments when they are present.

Food preferences: Some of the Seri food preferences have already been mentioned. At the top of the list as the desirables are the peccary, the deer, the bighorn and the blacktail jackrabbit; at the bottom is the badger, whose meat "is not much good." There is also preference by sex. Females of both the bighorn and peccary are preferred over the males "because they do not have the bad odor like the males." This sort of favoritism also occurs among the Mexicans. However, the Indians did not elaborate beyond this point.

Other economic uses: Apart from meat, hides are also used. The hides of the deer, bighorn and peccary had been used for sleeping mats although this matter has been expressed in the past tense. Miguel Barnett also suggested that the bighorn hides had been used for clothing by the Indians in the past—but he neglected to say how long ago. During Kroeber's stays, no Seris went about in the animal or bird (pelican) skins but earlier when McGee visited them they went about in these simple garments. Judging then by Miguel's memory, the use of the bighorn hide for clothing must be pushed back to the period of World War I or even earlier.[1]

[1] Miguel Barnett indicated that the "fur" of the bighorn had once been worn for the cold season "but not now."

[P 10 A]

237 On the other hand, the hides of all of these three animals had been traded off to the Mexicans, [439] but this again was now discarded. This would [182] merely indicate the fluctuation of collapse of the demand from the outside rather than any intrinsic change in the Seri values.

Incidental use of the horns of the bighorn had been denied by all of the younger informants although admitted by Miguel Barnett. However, as I observed, the horns of this sheep are sometimes [415] used as drinking cups. Several of them were [181] lying around in the usual disorderly way of the Seris, now and then picked up for drinking and then again discarded. But the use of them struck me as most casual.

224 *Hunting:* Hunting takes a variety of forms 411 and includes a variety of weapons, from .22 caliber and .30/.30 caliber rifles to spear, stone and throwing stick. Bighorn and deer are followed on foot but without dogs, probably because without dogs they may be easier to surprise. This hunt takes place in daytime. But the peccary is hunted [231] with both the spear and the rifle and with a pack [885] of dogs, and only by the adult men. There is an emphasis on the "adult," this surely owing to the certain amount of danger connected with the chase of the peccaries. The weapons of the chase dwindle to the throwing stick or a stone when it comes to the jackrabbit. Badgers, I was told, are also killed with the same weapons. But formerly, the informants said, bow and arrow was much instrumental in hunting the smaller beasts.

* 825 Other animals, according to the Seris, are not [224] hunted now, nor had they been in the past. Justification for this ranged from the usual "because it isn't done" to the more specific reasons. The skunk is "neither hunted nor eaten because it [225] stinks." The whale is considered "too big to kill" while the killer whale is "too fierce." The harmless *tonita* (dolphin)[1] was reported somewhat hazily as "sometimes killed" but the comments were inconclusive and were denied by other informants.

[224] Two other species had been reported as hunted in the past but not at the present time. The Ringtail cat was supposedly hunted with the slings while the sea lion was hunted down "with a rifle [225] or rock but not with the harpoon because of its great strength, it would break the harpoon." This, however, was "perhaps 25 years ago." Why the sea lion is no longer pursued is uncertain, unless there is again a lack of demand from the outside while the Serian economy is so much centered on fishing.

231 *Pets:* How many species of animals are kept as pets on and off is difficult to say. Like most hunting and gathering groups the Seris are fond of pets but their interest in them depends entirely on an accidental capture. Among the wild mammals of the region there are few that could be captured and tamed easily. The badger which I mentioned already was the only mammal I saw

[237] [1] I have seen bones of beached whales used for stools and [352] also the skull of the *tonita* used as a chair. But it must be remembered that these animals got stranded on the beach. They were not deliberately hunted down.

[P. 10 B]

½ [Lie - deer, bighorn and peccary - Analyst]

262 pelicans are not; they are regarded as "bad food," unfit for eating. No further explanation has been offered here and it might be that the same sort of prejudice works here as in the case of the adult birds. Otherwise, reasons for rejecting eggs for food are probably a matter of mere customary attitude without any particular rationalization. In a few instances, the dove being one example, the eggs were said to have been rejected because they were "too small to bother."

237 291 Other economic uses made of the birds are extremely few. At one time, the pelican skins were used for clothing and, in fact, in McGee's time they represented, perhaps, the most important item of clothing for the Seris, having been worn in shape of wrap-around robes, usually covering the lower part of the body. Moreno reported these robes as still is use "30 years ago or more," in the early twenties, but in Kroeber's time these [177] robes were already discarded in favor of the European garment. The Seri, nevertheless, still preserve skins of these birds—the white pelican, [439] larger of the two, always had been favored here—and occasionally sell them to the visitors. Another 237 use made of the feather is in the arrows. The 411 cormorants, heron and the owls had been especially mentioned in this connection. But it is certain that they were not the only birds so exploited and also that this particular use went out of business along with the disappearance of the bow and arrow as the principal weapons. The use of feather for arrows may well continue into the present in a somewhat degraded form. The Seri boys play a [857] great deal with bows and arrows, shooting them at any moving available target. They'll pick up any available feathers.

Pets

231 Somewhat desultory use is made of birds as pets. During my visit I have seen doves and an egret kept in houses as pets by the adults and fed quite frequently. The number and variety of birds which may become pets in households may well * 825 be larger. Pelicans and sea-gulls are less fortunate. They are often shot at and over-powered by 857 the boys. But instead of taking them to the households, the boys stage games, shooting them at point blank from bows and arrows and pea- shooters. These somewhat bloody executions take place almost every day. The pattern is the same. Only the subject of the game changes, depending on the available species of bird or animal.

Hunting

223 It is hard to speak of hunting in connection with birds, because there is so little effort made to go out and get them. The main exception is the duck and this, as I already mentioned, is hunted on Isla Patos and clobbered at night with sticks and stones in great numbers. This is one of the few instances in which the Seris will go out of their way to get a bird. Sea-gulls and cormorants and, more rarely, pelicans are dispatched by pea-shooter (stone), sticks, small clubs and, on occa- [411] sion, with a shot from a .22 caliber rifle.

[P.18A]

9:Malkin E-5 (1953-1955)1962 NU31 Seri NU31

262 tions to San Esteban or San Lorenzo. The turtles
[225] now are as much a food as a "cash crop." While
the Seris are camped at Desemboque, most of the
[439] turtle catch is sold alive to the Mexican fish traders who are headquartered in Nogales and Hermosillo and take the catch along with the fishes to the markets in these towns and sometimes even as far as Phoenix and Tucson.

Of the remainder, the most frequent items that show up on the Seri table are probably the rattlesnakes and the desert tortoises. The rattlers are eaten with relish—only the heads and the tails are discarded as poisonous. The larger chuckawalla is considered a particular delicacy but is rarely caught because it lives in a somewhat distant region. The remainder of the animals listed as "eaten" are collected only incidentially.

It is probable that very few species are really left alone and not taken as food at various times, especially when famine distress overruns the camp. As far as I could determine, only three species are rejected as altogether unfit to eat: the gecko, the night lizard and the toad. All three are believed to be highly toxic "in flesh and blood" although real harm could be caused only by the toad. Besides, the two lizards are really tiny creatures and would make little difference when a survival is at stake.

*825 Few reptilians are ever used as anything but
food. The sea turtles in a way are at certain times,
[439] that is, when they are sold for hard cash to the
Mexican traders, whether live or sliced and salted.
● 237 The only other creature I ever heard about as being used for anything at all was the coral snake. At least one informant suggested that in the past its hide has been used for hat decoration. But coral snakes are scarce and this again could be only incidental. It may be that the rattlesnake hide, especially of the large specimens of the western
[439] diamondback, is sold occasionally to a passing visitor but this again is a rare occurance.*

Food Preparation

252 Food preparation of the majority of animals in
this group is no different than of most other ani-
[263] mals. They are simply skinned, tossed into a pot of boiling water and cooked, occasionally with salt as the only ingredient. Larger individuals, notably turtles, will be quartered and then boiled or roasted on a grill. The chuckawalla and the desert tortoise are said to be fried, but whether this is the usual procedure I can't say, because only a few of them had been brought into camp in my presence. The tail of the Gila monster supposedly had been fried in oil "in the past."

Food Preferences and Taboos

262 It is obvious that some creatures in this group
are considered better food than others. The chuck-
awalla is especially favored. When several were brought in from San Esteban, I couldn't persuade the owners to part with them, although I offered a huge price (for local conditions). The captors took

*Another use in the past—snake-skin belt worn. It is illustrated by McGee (1898:170, Fig. 7).

[291]

[P. 23A]

262 en simply because their flesh is disliked and unfit for human consumption. But it may also well be that some of them, especially of the giant variety, are not eaten simply because they are far too large to tackle and the Seris fear hunting them.

The Seris indicated also in some cases that larger specimens of fishes are eaten when they reach the size which would justify the effort. This is true of *Malacoctenus zonifer* which they indicated is "eaten when large," that is when at least 10 cm. long.

[226] Although only sometimes did the Seris specifically indicate that certain fishes are used for bait, it is very likely that almost all small or lesser fishes are so used.

262 178 In some cases the Indians indicated changes in preference for given fishes, with the time. For unexplained reason *Gymnothorax castaneus*, the morene, has been claimed to have been eaten in the past but not for the last 11 years. It isn't clear why the figure of 11 had been used and why suddenly in the early 40's they should stop eating it while the Mexican drool over it. But it may be also that here we have merely personal preference of the informants, as so often happens. As for the *pescara* it was formerly taken for food [439] but now it is merely sold to the Mexicans. This practice is increasing also to include the immense *mero*, even larger than the *pescara*. The fish is mainly sold but rarely eaten by the Seris themselves.

Food Preparation and Preferences

252 Food preparation is simple and in the main differs not at all from the preparation of other animal diet. The fish are either boiled whole or in part or else are roasted over slow fire on a grill. The entrails are usually discarded, but otherwise the beasts are eaten entire, eyes, brains and the rest, while the tiny fishlets are eaten complete with the scales and guts.

262 As for the preferences, as expected, there are some fishes that the Seri like better than others. The *bava* in the first place and the *pinto* in the second lead the list. The Seri prefer them to all others and consider them a real delicacy. On the other hand, there are some fishes that they'll eat only under protest, meaning when times are hard. *Girella simplicidens* is one such creature. The *Puerco* or *Cochi* is another. I have seen boat loads of puercos brought in with the other fish and un- [231] ceremoniously dumped out on the beach to the dogs. Literally! The Seris took to this fish only when fishing was poor during the wintry days when they were held ashore by the weather. Even [183] then, they tried to eat the despised creatures on the sly, avoiding being seen doing this, and when I or the Mexicans picked up fresh fish from the beach to take home they laughed saying that we acted as a *cochi* (pig) would!

Other Economic Uses

* 825 ● 237 322 One use made of fish concerns two species of sharks, the *chato* and *camposo*. Here, the informants claimed, the oil from their liver had been used in earlier times for polishing wood. This is

[P. 328]

quite possible but I couldn't substantiate the story from contemporary evidence. Perhaps during the height of the shark hunting for the liver oil, the Seris used the oil also for wood polish, although it isn't very clear just what sort of artifact they make would require such treatment. The wooden tools or artifacts among them are in short supply at all times. Finally, the huge horned manta was supposedly hunted also for its hide but just in what circumstances it was not explained. It is the only fish which the Seri ever mentioned as having been put to such use.

Fishing

As already mentioned, fishing nowadays is largely accompanied from flat-bottomed boats with hook and line. The old ways of getting fish by spearing are almost gone for good. Recently, an attempt has been made to teach the Seris siene fishing; but 10 years of these endeavors accomplished only ruination of a number of expensive nets and of much fishing gear and the desertion of the project by the Indians. It may be that their individualistic and almost anarchistic attitudes preclude cooperation, essential in this type of fishing.

The bait is obtained in any one of the three ways: by dynamiting fish in tide pools or along the shore, or by catching small fry with small hook and line, or finally by collecting small fishlets in the tide pools, prying them out from under rocks or simply—and here the Seri boys excel—by shooting them in the tide pools with tiny toy arrows or simply spearing them with a stick. The dynamiting is done with the purchased sticks of dynamite which the Seris obtain in the tiendas. The procedure is often risky and down right dangerous. Some of the Seris have blown themselves up with dynamite. I have seen one of them, who lost both arms and had a jaw broken during a dynamiting trial. He went about with a dirty rag tied up over his head to support the wrecked jaw-bone. He was carried off by measles two years later in the 1955 epidemic.

The Seris' commercial fishing is pretty much controlled and exploited by the two or three Mexican fish traders from Nogales and Hermosillo. These have their tiendas in Desemboque, which at set price sell things to the villagers. They also provide the Indians with the five horse-power motors for fishing trips and pleasure cruises and with the oil and gasoline essential to run these—also at set price. They finally purchase the fish—at a set price—and from the proceeds the Seris purchase goods at the tiendas, completing the cycle. Not all Seris are compelled to work for the Mexicans, and, in fact, they do not always do so. Some families stay away from Desemboque and depend on the sail and oars for propulsion. They come to the village only once every few months to obtain supplies. Even when in the village, the Seris make little effort to fish for more than they wish to get in order to satisfy their immediate needs.

Fishing expeditions usually take place in the morning. Most Seris will set off before daybreak and will return with the catch by 11 a.m. or noon.

301 worn. I have observed women wearing necklaces
+ 825 of the former and women and very young boys of the latter. The olive shell, incidentally, is made into two sorts, the natural, unroasted shells which retain a greenish-purple, mottled color and the white. The white pallid color is achieved by roasting the shells over fire. The necklaces are mostly made up of either colored or white but occasionally they may be made of mixed shells and then they are usually alternately interlaced, now with one, now with another.

X 825 b) *Utensils:* Two species had been reported used as occasional drinking or dipping cups and spoons. *Lavicardium elatum* and *Ficus ventricosus*. *Ficus* is presently discarded, but the *Lavicardium* is still occasionally used so. There is no doubt that the incidental use of these shells increases during longer fishing expeditions when the Seris are apt to lose some of their gear.

[412] [415]

[436] c) *Money:* Interestingly, the brown cowry was supposed to have been used as a means of exchange, as money—in the past. If this is so, then the selection of this shell for such purpose is not surprising considering its widespread use throughout the world.

[171]

439 d) *Trade:* Altogether 12 species had been re-
+ 825 ported as traded off either in the past or present. The trade importance of various species of shells varies with the demand of the market and sometimes may be only sporadic and short-lived. Only a few of the species had been indicated as having been of any trade importance in the past, and it may well be that the Seris did not register the species which may have been briefly sold to and outsiders during the short-lived fads of demand. It may be said in general that the trade importance of the shells increases and that greater variety of them are exploited now than formerly. This is surely owing to the increasing accessibility of the Seri country and the increasing tourism, not only visitors from Hermosillo, but also from such far flung places as Tucson, Phoenix and even Los Angeles.

[177]

In some instances, the Seris had no idea what the shells were sold for. The augur shell is on and off sold to some American traders who show up in Desemboque once in a while and for whom the Seri women accumulate these shells. But what uses were made of these, the Indians surely didn't know. Neither did they know what uses were made of the *Murex* shell and the *Turbo*, both of which were periodically sold in bulk to Hermosillo. On the other hand, they had some idea what uses were made of some other shells. *Pteria* and *Atrina* contain pearls and these are much desired. Especially the pearls of *Atrina* which are sold to the Mexicans or to the visitors for 25-50 pesos each and therefore have immense value, for the local market. The *Pteria* shells are said to be used for button making, and the Seris themselves claim that they make buttons of this shell. The most important of all, however, at least at the time of my visits in 1953 and 1955, was the olive shell. It was easily the most commonly and most numerously collected shell of all that the Seris ever collected. Owing to the scarcity of it in Desembo-

[435]

● [237]

[226]

000 wear ceremonial feathers as did our western Indians. I saw no skin or
164 cutaneous disease, or evidence of tuberculosis or of trachoma---the curse of our Indians.

142 One boy-child of five years was a handsome child---fat, round,
302 sturdy, with roving great black eyes, large thick lips, a picture of
[241] perfect health. He was almost naked. His hair was done in a pigtail
[657] with a red string braided into it. His face like all the others was dirty, but he waded into the shallow water with a short spear and I saw him catch two crabs with his little harpoon. The water did not bother his face.

415 They had no plates or eating tools, except large deep clam shells,
412 cast up by the sea, which served as cups and dippers. Their long, keen
264 belt knives were used for cutting, carving or skinning, and always the
[239] fingers for eating. They gathered in a circle around an olla of seeds of long grass growing on the sea bottom prepared by winnowing, parching and grinding, and then cooked with turtle oil. Each one dipped his or her fingers into the olla and conveyed them to the mouth without losing a drop, and licked them off with great relish.

231 The dogs eat with the family. There were six or seven half-starved
244 ones. If someone picked up a piece of turtle flipper the dog often took the first lick at it, bit off a piece or licked it before it reached the owner's mouth. The dogs were not punished. They were just slapped to keep them out of the pots.

123 We had a great time that evening in Seriland. The young man played
534 his violin. This consisted of a hollow box cut out of a *palo verde*
[229] tree, and a piece of pine about sixteen inches long; terminating in a
[283] hollow where a single peg was fitted. The one string was twisted deer
[237] sinew, and the bridge was a small round clam shell at the far end. The
[533] bow was a small bent stick and some black horsehair. On the handle was a wad of rosin fastened underneath. By fingering this string a few weak squeaky notes were made, and this was the classical music of the Seris.

Manuel Encina seized his gourd rattle and began chanting. Herrera tapped a tin can and I beat on an inverted basket and the orchestra
535 was in full swing. A young girl, Rosa, dragged out a turtle shell and
123 standing on it began to dance. This dance consisted of stepping up and down quickly with each foot alternately, and this stamping, barefooted, emitted a hollow sound. Every once in a while I let out an
[24] Indian yell which pleased the Seris very much. For two hours they had a real swell time. We took one flashlight of the proceeding.

[342] Each family was in their hut, which afforded very slight shelter
[343] as they were only partially roofed over and the sides were broken
[354] down in places. The huts were all adjoining and each had a little
[361] campfire, which did not give much illumination, so the dancing was in semi-darkness.

[text contineus on p. 163]

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123 the flesh attached. This we roasted, or broiled, by standing it on
262 edge against two stakes in front of the fire. The breast was white and tender, somewhat like roast pig, but much more delicious.

262 The Seris cut off the great flippers, dug out the entrails, and
252 whenever there was a crack in the crowd of men, women and children, there was a dog lapping the blood and chewing a shred of meat before being driven off. Men, women and children tore off pieces of the tender
[25] meat and ate it raw. The blood which gathered in the hollow of the shell was baled out and saved in an olla.

A woman took out the coils of entrails, ripped them open with her finger, squeezed out the half-digested sea grass, which resembled closely-packed boiled greens, and rinsed them in the sea. The head
[25] was skillfully disjointed, and with flippers, entrails and liver, put up on the brush roof away from the sand and dogs.

Then began the feast; half the turtle being devoured immediately.
[264] To see Blanco, which name fits neither his complexion or character, gnaw the bone and tear away the raw flesh of a turtle flipper with his strong white teeth and cruel mouth, would not require much imagination to substitute the shin bone of a human being.

All parts of the sea turtle are utilized except the bones and portions of the head. The white, flexible under-shell is roasted and eaten, but how they can masticate and digest it is a mystery. I tried it and gave it up, as did all our party. It might have been a Goodyear tire, for all the impression we made on it, but even the Seri children
• 237 eat it. The carapace is broken into small pieces and dried out in an olla, and this yields a green oil. The shell is nearly one-half inch thick and filled with minute cells which carry oil. This oil is evidently a provision of nature to prevent barnacles and marine growths from attaching to the shell. This oil is poured into a previously cleaned section of intestine, fastened at one end, and then is bottled, ready for transportation or use.

The skin of the flippers is used for sandals. The broken pieces of carapace are also used for firing ollas. The shells are used for windbreaks, for receptacles for transporting household things on women's heads, and possibly for other needs. The stomachs are stretched, probably with sand, and when dried are used for transporting water, the same as we use a canteen.

185 The Seris are always improvident. They raise no cattle. They plant
261 nothing and the only crops they raise are children and dogs. They
[23] store no food away, eat when there is plenty, go hungry when there is
[23] nothing to eat. When they will eat raw turtle meat like animals, their
[26] taste is not refined. This is evidenced when they will eat a horse or burro dead, several days---scrape off the maggots to get a chance at it.

285 [324] I watched a woman make a basket. She used young branches from the terote tree, I think *terote blanco*. The bark was peeled and shredded into two parts, the heart taken out and kept separate. The coils of the round part were put in a pot of hot water to soften, and the edge of the basket was soaked a little in hot water. The center of the coils or woof consisted of six or eight strips of heart while the outer sap wood was woven around in regular coil-weave fashion.

[287] [414] A brad of deer shin-bone sharpened on pumice to a needle point was used as a brad. With this brad she split the fiber, held one piece in her mouth, and stripped the back down. Then she punched a hole in the bone brad, inserted the sharp end of the fiber and pulled it almost through. She then repeated the operation, adding a strip of heart once in a while. These baskets are coarse and unattractive, but they are hard and tough and stand heavy use.

323 [237] [372] Cooking vessels consist of two or three cooking ollas that nest together to facilitate transportation. These are made of coarse clay, solely for utility without regard for beauty of shape, color or design. In burning these ollas they use the shell of the sea turtle. The cells of the shell are filled with a fine oil and this burns the ollas. On most of the other places on the mainland, the Indians use cow chips, or dried droppings to fire the clay.

283 484 123 [277] We proposed to shift camp to Tinajanita, our first landing place, where Herrera was to meet us in two days with the Chief and some of his men. Since it was blowing, he said the men couldn't fish and they would be on land probably hunting, so he would be able to see them. At this time they gathered *sescal* on an island off the west coast to make the liquor they used at fiestas, weddings and other celebrations.

Herrera left at five o'clock in the morning, with a swinging gait, for the opposite side of the Island. The distance around by boat would be fifty miles, and across, only about twenty or twenty-five---a full day's trip and hard, as mountains would have to be crossed and the rocks were sharp and the way difficult.

123 We had breakfast on rice and bread. Our rations are running low and we expect to move this morning. We made arrangements about the native boat and saw Blanco trot off with two five-gallon cans for water, a distance of ten miles. We went to the camp to get a few things---an old basket, a Pelican hide and other things, and then we asked the help of everybody to get the boat down to water---the tide was very low. The one man, the women and five of us were required to drag and push the boat to water.

We waved goodbye, loaded her up and then rowed against the tide and wind for miles, and finally landed in a lovely sheltered lagoon, built our fire and had lunch. A few crabs were speared, and late in the afternoon the wind shifted. We loaded the boat again and pushed off for Tinajanita, our first landing place. After rowing, we raised

[text continues on p.174]

123 Then Chico Romero and his load of children and dogs arrived and
484 he unloaded his impedimenta on the beach, and soon the women came walking along the beach and joined the party. The boats carrying the heavy things and children; the women, with their babies and a few light things on their heads, walk along the beach when possible and follow the boats, which hug the shore to avoid the strong currents and tide. The boats are propelled by paddles mostly, though some of
501 the Indians use oars. The women are slightly built, slender and in-
142 clined to be gaunt, owing to the hard life and lack of food. Their cheek bones are quite prominent and their profiles present protruding lips.

422 Having no permanent homes, moving hither and thither for their
[364] various food supply, household things are not accumulated and life is reduced to its very simplest elements and absolute necessities.

Crude baskets made from shoots of the torote tree, vessels in which to cook, and some patched rags in place of Pelican skins to serve as blankets to the fortunate few, constitute the family pos-
281 sessions. Strange to relate, many of the women have an over-supply of
[853] milk, and according to Roberto have puppies nurse what the babies cannot take. One woman was known to nurse a baby pig on one side and a puppy on the other.

[264] Family dogs lick all cooking vessels which is unnecessary as they
[894] are thoroughly clean when the Seris are through with them, and also lick the infants clean after performing their natural functions, so they are quite indispensable. I saw a Seri girl place on the sand a small can of water for a dog and then saw her drink some of the remainder and pour the rest back in a five-gallon can. Dogs frequently swim across the Infernillo to join their masters.

732 Asked about cripples and incompetents, Roberto said they probably did not exist. The conditions of survival were too precarious to admit of anyone living who was unable, by physical disability, to hunt or fish. There are two or three men who are nearly blind or so. The wives of these men eke an uncertain living for them by the hardest
262 struggle. The sea turtle is the staple; one man and one good boat can
433 secure a living for five families. There are now nine boats, but one
501 boat to a family would practically free them from continual want.
262 With the exception of four bones in the flippers and the bones of the
237 head, all the sea turtle is used---the meat, blood, entrails, shell which furnishes food and oil, skin of flippers which furnishes sandals, sinew for strings. Nothing is wasted except contents of the entrails.

123 Again, we laid our blankets on the clean white sand of the shore and were lulled to rest by the murmuring sea.

123 Daylight found us up the next morning, and we breakfasted, rolled
484 up our blankets, pushed the boats into the sea and were off by the time the sun rose over the mountains and shone over a glassy sea. Two Seris towed their boat by a tump line, while a boy of twelve steered

Chico Romero - Seri dressed in Pelican skins - 1926

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Seri Concha in Pelican skin robe or skirt - 1926

10: Davis E-5 (1922-ca. 1939) 1965 NU31 Seri NU31

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Edward H. Davis and Pelican skin robe made for him by Seri Indians - 1934

ingenuity of a modern shipbuilder to have constructed a boat. These simple, desert people, however, through centuries of struggle for life in their desolate realm had learned to use every natural material available to them, however laborious the tasks and inefficient the products. The carrizal reed, *Phragmites communis*, grows about the few permanent water holes of Seriland, and from countless numbers of these slender, buoyant canes they built their watercraft. The reeds were stripped of leaves and gathered in long bundles, bound together and gradually augmented by more and more interlaced canes until a bundle 18 to 30 feet long and 1½ feet in diameter, tapering at both ends, was made. Three of these were then bound together with cords of fiber or human hair, making a maneuverable one or two man raft, easily transported to the shores.

The mesquite tree, *Prosopis juliflora*, provided fiber for cords. The flexible outer tissues of the roots were stripped off, soaked and progressively pounded, split and worked between hand and mouth until very slender, fibrous threads were obtained which were then twisted into cords. In some cases a coarse, rough fabric was woven from these fibers, but most garments were made of pelican skins. The strips of workable mesquite root or sometimes yucca fiber were also used in making doughnut-shaped head pads which aided in balancing the capacitous earthen water jars as they were carried on the heads of the women over rough and stony trails from water hole to camp site.

While occupying the turtle fishing camps on El Infiernillo during the good season, vegetable supplements to the fishy diet were few. Every nourishing seed or woody fruit yielded by the desert was carefully gathered; even the tiny seeds of the sea grass, *Ruppia*, were sorted from beach drift and made into meal. Never did the Seris learn to cultivate any crop or domesticate any animals other than the half wild coyote dogs that lived in mutual toleration with them. Even had they done so, their success in the barren, waterless land would have been small.

Sterile as is the Seri's hinterland, for a time each summer the thorny plants with which it is so profusely stocked ripen an abundant crop of fruit. The cacti in particular yield a wonderful harvest of luscious and succulent fruits, and toward this fortuitous supply the Seris were accustomed to move in June and July. The foothills of Sierra Seri on the mainland are adorned with great numbers of giant cacti, *Pachycereus Pringlei*, *Carnegiea gigantea* and *Lemaireocereus Thurberi* from which the luscious pitahayas were readily knocked down when ripe. The Indians wandered into the cactus forest and after a simple ritual marking the beginning of the feast, proceeded to gorge themselves for weeks on the succulent fruit until waning supply and cloying appetite drove them back to more severe food-getting activity by the sea. They did not customarily find it necessary to leave the cactus forest, however, as soon as the supply of fruits was no longer sufficient, for by the time the fruiting season was ended they had provided themselves with a second harvest. The pitahayas, gorged in such tremendous quantity throughout the season, were very imperfectly digested; the miriads of hard seeds, particularly, passed through the system unchanged and with the preservation of these in mind the Indians carefully collected with the aid of large sea shells all such seedy discharges and let them dry in the desert sun. Thus, as the supply of fresh fruit faded they proceeded to the use of this hoard

[TEXT CONTINUES ON P. 136--Analyst]

7: Marroquin E-5 (1955) 1957 NU3. Seri NU31

POPULATION ABLE TO WORK
(between 11 and 65 years)

Men, 74 or 69% of the masculine population. 464
Women, 76 or 70% of the feminine population. 162
462

We can add that, at least as far as the male population is concerned, the figure of 69% with a potential work capacity is equivalent, in general terms, to the percentage of the population economically active, since one of the singular characteristics of the Seri population is the fact that they constitute a community fully occupied: all the men of working age have a place set aside in the fishing activities; this is an advantageous position for increasing economic development of the tribe. With relation to the women the situation is not the same, since the majority of girls of marriageable age carry on very few productive activities; it could be said that economic responsibility begins with matrimony. [226]

If it is true that all the Seri men are fishermen, it is also true that there is the beginning of some specialization of jobs, which are carried on complementing or as an accessory to the principal occupation. Thus we have among the men: 463 462 162

Carpenters, constructors of *piraguas* (a kind of canoe)	6
Medicine men	14
Farmers	2

And among the women:

Seamstresses	4
Farmers	1
Midwives	22

The relatively high number of medicine men and midwives should not be surprising; Seri popular medicine is very well known and depends principally on magical propitiation and since the magic powers are acquired in a variety of ways, including dreams, and the healing rites are, on the other hand, very simple, it is not strange that medicine men should abound. As for the midwives, it can be said that every woman who has undergone the experience of childbirth feels herself able to help at a birth; nevertheless, it is said that the more experienced women are those best able to take care of those giving birth. 755 756 844

Problems which should be attended to

In addition to the sanitary problem mentioned above, mention should also be made of the problem of agriculture, linked with the necessity for supplying food to an Indian population which since economically it depends principally on fishing, needs to complement its diet with agricultural products to achieve a better one. In close relation 185 [262] [241] [423]

9:Malkin E-5 (1953-1955)1962 NU31 Seri NU31

II

OUTLINE OF SERI CULTURE

161 At the moment their number should have increased again, after a disastrous epidemic in the 164 spring of 1955.

Biological Background

142 The Seris are somewhat atypical among the peoples of the general area in that they represent a very slender, sinewy, tall type. This is true of both men and women. This physical type in general is apt to be associated with the desert habitat and the Seris answer the requirements very well. As shall be seen, their economy also repre-433 sents characteristic adaptation to the desert conditions of pre-agricultural people.

Economy

The Seris readily fell into the category of the pre-agricultural hunters and gatherers with one variant, dependence on the produce of the sea, whether marine turtles, fish or littoral invertebrates.

● [241] Here the Seri provide another exception for the region. They are the only group that never had any agriculture. McGee has pointed out their lack of agricultural sense and this has also been mentioned by Kroeber and by incidental Mexican visitors. Of late years, some efforts have been made by the Mexican government and the American Friends' Service Committee to persuade them [648] toward agriculture, but to no avail. The Seris [464] occasionally hire out to the surrounding Mexican or American rancher-farmers but grow restless after a few days of cotton picking and retire, with their advanced pay lost to the employer. On the other hand, efforts to teach them related practices, well digging for example, also failed to interest them. To this day they remain much in the original pattern of economy.

262 McGee (1898:214) who had a chance to observe 114 them from the first hand and who also had access to valuable information from the outsiders gives the following figures for their diet:

land game, large and small (incl. stolen stock)	21%
waterfowl and eggs, incl. pelican	13
sea-turtles	25
fish	15
shellfish	10
cactus fruit	9
other plants	6
miscellaneous	2
total animal 84%	marine 65%

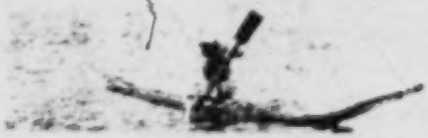
Kroeber (1930:20) questions these figures and thinks that shellfish represents greater percentage than McGee indicated. He also thinks the use of turtles had been exaggerated. He figures the dependence on the animal diet as 75% and on marine 60% but he suspects that these figures are too high for a band with ready access to countless cacti and mesquite.

[P6B]

123 As a concrete result of that first trip to Tiburon, I secured a
115 *balsa* (boat) made of *carrizo* canes lashed together with native fibre,
581 which *balsa* Mr. Heye said it was the finest one in North America.

[226] This *balsa* was given to me without hesitation, although it furnished one or two families with sea food.

115 I wish to pay tribute to Senor Roberto Thomson who has been my constant companion, friend, guide and interpreter during the past twenty years, on all my trips to Tiburon and various parts of Mexico. I found him absolutely dependable, using excellent judgment in critical situations. He was honest, fair, intelligent, looking out constantly for my safety and comfort always, enduring hardships cheerfully. A better all-round out-door man I have never seen equaled. In short, he is a real *hombre*, and my *simpatico*.



13 Tiburon, or *Shark Island*, long noted for its evil reputation as
181 the home of the most savage and treacherous Indians of North America,
193 lies in latitude 29° north and 112°30' west longitude, in the Gulf of California. It is shaped like a parallelogram about thirty-five miles long and eighteen to twenty miles wide, and lies parallel to the coast of Sonora, Mexico, of which, no doubt, at some remote period, it once formed a part.

It is separated from the mainland, for the most part, by a strait
[127] called *El Infernillo*, or The Little Hell, through which the rising tides pour a resistless flood. It is a desert island and supports a desert arboreal vegetation which includes several varieties of the cactus family and the *mesquite, palo verde, palo fierro, torote, palo blanco, ocotillo* and others. The giant *saguaro, zarbuzo* and *pitahalla (pit-a-haya)* cactus are found here also.

Two desert ranges run lengthwise of the Island, which, on its westward or windward side, terminate in sea-worn cliffs against whose ramparts dash the heavy breakers of the Gulf, and on its eastern side, by long alluvial aprons from the foot of the mountains, sloping gently down to the lovely shell-strewn beaches. From this side the foot of the mountains lies from two to five miles distant. On this, the leeward side of Tiburon, the sea is much calmer, and often, in the early morning, it is as smooth and placid as a lake, reflecting each rosy, lavender and purple tint of the rugged Sierra Seri along the Sonoran coast, as in a mirror. The exquisite loveliness of marvelous sunrises over the pure limpid waters of the *Estrecho Infernillo* is mystical.

134 The soil is loose and sandy, unsuitable for cultivation, and im-
241 possible for producing domestic crops of any
142 Kind.

123 the flesh attached. This we roasted, or broiled, by standing it on
262 edge against two stakes in front of the fire. The breast was white and tender, somewhat like roast pig, but much more delicious.

262 The Seris cut off the great flippers, dug out the entrails, and
252 whenever there was a crack in the crowd of men, women and children, there was a dog lapping the blood and chewing a shred of meat before being driven off. Men, women and children tore off pieces of the tender
[251] meat and ate it raw. The blood which gathered in the hollow of the shell was baled out and saved in an olla.

A woman took out the coils of entrails, ripped them open with her finger, squeezed out the half-digested sea grass, which resembled closely-packed boiled greens, and rinsed them in the sea. The head
[251] was skillfully disjointed, and with flippers, entrails and liver, put up on the brush roof away from the sand and dogs.

Then began the feast; half the turtle being devoured immediately.
[264] To see Blanco, which name fits neither his complexion or character, gnaw the bone and tear away the raw flesh of a turtle flipper with his strong white teeth and cruel mouth, would not require much imagination to substitute the shin bone of a human being.

All parts of the sea turtle are utilized except the bones and portions of the head. The white, flexible under-shell is roasted and eaten, but how they can masticate and digest it is a mystery. I tried it and gave it up, as did all our party. It might have been a Goodyear tire, for all the impression we made on it, but even the Seri children
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The skin of the flippers is used for sandals. The broken pieces of carapace are also used for firing ollas. The shells are used for windbreaks, for receptacles for transporting household things on women's heads, and possibly for other needs. The stomachs are stretched, probably with sand, and when dried are used for transporting water, the same as we use a canteen.

185 The Seris are always improvident. They raise no cattle. They plant
261 nothing and the only crops they raise are children and dogs. They store no food away, eat when there is plenty, go hungry when there is
[231] nothing to eat. When they will eat raw turtle meat like animals, their
[234] taste is not refined. This is evidenced when they will eat a horse or
[262] burro dead, several days---scrape off the maggots to get a chance at it.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU3

miles in search of it, and acute enough to follow trails and indications. Naturally the meager water-supply serves as a mechanism for sorting out and preserving the strong and the acute, and for eliminating the weakly and the dull; and hence the tribe have developed a faculty, or perhaps a potentiality, of distinctive sort—the potentiality of providing against thirst-death by a reserve power in the organism itself rather than in the form of mechanical devices such as characterize higher culture. Quite similar are the relations to the resource of second importance, i. e., ordinary food. Habituated to dispensing with storage and transportation of their primary resource, and accustomed to finding food whenever forced to sufficiently active effort to obtain it, the Seri have never grasped that first principle of thrift expressed in the accumulation of food supplies; and accordingly they intuitively rely on successful fishing or chase or search of vegetal edibles for sustenance, and habitually delay effort until they are stirred into activity by the pangs of hunger. Naturally this improvidence serves as another mechanism for perpetuating families of stored vitality, and especially those able to prevail over swift or strong or cunning quarry by sustained vigor and alertness after prolonged deprivation; and the effect of this mechanism, too, is to develop a reserve power in the organism itself, in lieu of the material reserve made through thrift in higher culture. Similar in their consequences are the relations of the individual organisms to the third industry of Seriland, i. e., navigation of the gale-swept and tide-troubled waters. Even the buoyant balsa can not weather the williwaws or ride the tiderips of El Infiernillo without exercise of the utmost strength and skill on the part of the navigators; while the often persistent storms may delay for days embarkation on voyages in quest of fresh water or food. Naturally, the frequent delays and not infrequent perils of such navigation constitute a mechanism for selecting navigators possessed of reserve powers adequate to meet desperate emergencies with vigor and judgment even after enervating waits for wind and tide, while those not so well endowed are either brought up to standard in their hard training school or expelled from their class by drowning or dashing on the rocks, as may happen; so that the effect of this mechanism also is to preserve individuals and perpetuate generations characterized by reserve power, and hence to develop latent potentiality in the tribe. Now, the normal product of these and other natural mechanisms immediately reflecting environmental conditions is capacity for spurts, or for intense functioning under severe stress, despite accentuation of the stress by thirst or hunger or exhaustion, or by all combined—i. e., the effect of habitat and habit is to produce precisely such a somatic regimen as that so conspicuously displayed by the Seri folk. So the intensified activity with long intervals of inertness, simulating the habits of carnivorous and some other lower animals, and hence suggesting primitive condition, would appear to be largely a phylogenetically acquired character expressing specific adjustment to environment.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

the turtle is either drowned or driven ashore, or else lifted on the craft.[1] Immediately on landing the quarry, the plastron is broken loose by blows of the hupf[2] and torn off by vigorous wrenches of the warriors and their strong-taloned spouses in the impetuous fury of a fierce blood-craze like that of carnivorous beasts; the blood and entrails and all soft parts are at once devoured, and the firmer flesh follows at a rate depending on the antecedent hunger, both men and women crushing integument and tendon and bone with the hupf, tearing other tissues with teeth and nails, mouthing shreds from the shells, and gorging the whole ravenously if well ahungered, but stopping to singe and smoke or even half roast the larger pieces if nearer satiety. If the quarry is too large for immediate consumption and not too far from a ranchería the remnants (including head and flippers and shells) are hoisted to the top of the jacal immediately over the open end—the conventional Seri larder—to soften in the sun for hours or days; and on these tough and gamey tidbits the home-stayers, especially the youths, chew luxuriously whenever other occupations fail. In times of plenty, such sun-ripened fragments of rocking feasts are rather generally appropriated first to the children and afterward to the coyote-dogs; and it is a favorite pastime of the toddlers to gather about an inverted carapace on hands and knees, crowding their heads into its noisome depths, displacing the rare scavenger beetles and blowflies of this arid province, mumbling at the cartilaginous processes, and sucking and swallowing again and again the tendonous strings from the muscular attachments, until, overcome by fulness and rank effluvia, they fall asleep with their heads in the trough—to be stealthily nudged aside by the cringing curs attached to the ranchería. Com-

[1] A lively and explicit account of Seri turtle-fishing appears in Hardy's Travels in the Interior of Mexico, 1829, pp. 396-397: "Bruja's bay is of considerable extent, and there are from five to three fathoms water close to Arnold's island, in the neighborhood of which the Indians catch abundance of turtle in a singular manner. I have already described their canoes, which in Spanish are called 'balsas'. An Indian paddles himself from the shore on one of these by means of a long, slender pole of about 12 or 14 feet in length, the wood of which is the root of a tree, Cahuesquite, growing near the coast; and although the branches of this tree are extremely brittle, the underground roots are as pliable as whalebone and nearly as dark in color. At one end of this pole there is a hole an inch deep, into which is inserted another bit of wood, in shape like an anvil, having a square bit of iron 6 inches long fastened to it, the other end of the iron being pointed. Both the bolt and cup are first moistened and then tightly inserted one within the other. Fast to the iron is a cord of very considerable length, which is brought up along the pole, and both are held in the left hand of the Indian. So securely is the nail thus fixed in the pole that although the latter is used as a paddle it does not fall out.

"A turtle is a very lethargic animal, and may frequently be surprised in its watery slumbers. The balsa is placed nearly perpendicularly over one of these unsuspecting sleepers, when the fisherman, softly sliding the pole through the water in the direction of the animal till within a foot or two of it, he suddenly plunges the iron into its back. No sooner does the creature feel itself wounded than it swims hastily forward and endeavors to liberate itself. The slightest motion of the turtle displaces the iron point from the long pole, which would otherwise be inevitably broken and the turtle would as certainly be lost; but in the manner here described it is held by the cord fastened on to the iron which has penetrated its back till, after it has sufficiently exhausted its strength, it is hoisted on board the canoe by the fisherman, who proceeds to the shore in order to dispose of his prize."

[2] The universal stone implement of the Seri, improvised from a cobblestone and used in nearly every industrial occupation (see pocket, p. 216); the designation is mimetic, or onomatopoetic, from the sound of the stroke, particularly on animal tissues.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

extreme lightness in proportion to capacity, a quality due to the spongy character of the torute coil and to the thinness of the splints used in the woof. The inside dimensions, weight, and dry-measure capacity (filled to the level of the brim with rice) of two typical specimens approaching extremes in size are indicated in the accompanying table. As noted elsewhere, the ware is absolutely without decorative devices in weave, paint, or form; it is baldly utilitarian, a model of economy in material and in the balance between structure and function, approaching in this respect the thin-walled cantern olla, the graceful balsa, and the light but effective harpoon. The structural correspondence of the ware to a widespread type and its limited use among the tribe suggest an accultural origin for the Seri basketry; but the delicate adjustment of means to ends in the manufacture and the strictly local character of the material quite as strongly suggest an indigenous development.

Museum No.	Diameter	Depth	Weight	Capacity
174339....	38 cm.(15 in.)	9.5 cm.(3¾ in.)	482 g.(17 oz.)	6.25 l. (6.6 qt.)
174326a ..	23 cm.(9 in.)	5.0 cm.(2 in.)	142 g.(5 oz.)	1 l. (1.06 qt.)

It is impossible to portray justly the food habits of the Seri without some reference to a systematic scatophagy, which seems to possess ritual as well as economic features. In its simplest aspect this custom is connected with the tuna harvests; the fruits are eaten in enormous quantity, and are imperfectly digested, the hard-coated seeds especially passing through the system unchanged; the feces containing these seeds are preserved with some care, and after the harvest is passed the hoard (desiccated, of course, in the dry climate) is ground between hupf and ahst, and winnowed in baskets precisely as are the mesquite beans; and the product is then eaten either dry or in the form of atole like the mesquite meal. In superficial view this food factor is the precise homologue of the "second harvest" of the California Indians as described by Clavigero, Baegert,[1] and others; but it gains importance, among

[1] An Account of the Aboriginal Inhabitants of the Californian Peninsula, as given by Jacob Baegert, a German Jesuit missionary. . . . Translated and arranged for the Smithsonian Institution by Charles Rau; Ann. Rep. Smithsonian Inst. for 1863, pp. 352-369. Baegert's account of foods (pp. 363-367) is so apposite as to be worthy of quotation nearly entire:

"Notwithstanding the barrenness of the country, a Californian hardly ever dies of hunger, except, perhaps, now and then an individual that falls sick in the wilderness and at a great distance from the mission, for those who are in good health trouble themselves very little about such patients, even if these should happen to be their husbands, wives, or other relatives, and a little child that has lost its mother or both parents is also occasionally in danger of starving to death, because in some instances no one will take charge of it, the father being sometimes inhuman enough to abandon his offspring to its fate.

"The food of the Californians, as will be seen, is certainly of a mean quality, yet it keeps them in a healthy condition, and they become strong and grow old in spite of their poor diet. The only period of the year during which the Californians can satisfy their appetite without restraint is the season of the pitahayas, which ripen in the middle of June and abound for more than eight weeks. The gathering of this fruit may be considered as the harvest of the native inhabitants. They can eat as much of it as they please, and with some this food agrees so well that they become corpulent during that period, and for this reason I was sometimes unable to recognize at first sight individuals, otherwise perfectly

222 forests of giant cacti (Fig. 9) provide during this season an unlimited supply of "pitahayas" toward which the tribespeople customarily moved to accomplish the annual harvest. The fruits were readily knocked down by means of long poles and, when ripe, the spines were easily brushed off, leaving a luscious pulp as big as a fig. During the height of the season all the clans withdrew from the coast and gave their undivided attention to the collection and consumption of the cactus fruit, gorging tremendous quantities for weeks until waning supply and cloying appetite drove them back to the more severe hunt for turtle and pelican.

252 Perhaps the only germ of thriftiness in the
262 Seris is shown by a peculiar custom with
514 respect to the pitahayas. The fruits, eaten in such enormous quantity, were imperfectly digested, the hard-coated seeds particularly passing through the body unchanged. Using
[415] large seashells, the feces containing these
[251] seeds were collected and preserved with some care. Thus, when the harvest of fresh fruits was over, there remained a hoard of these dry, nutritious discharges which were ground on the stone abst, winnowed in a shallow basket and made into a meal to be eaten, either dry, as a watery atole, or mixed with turtle grease to form a thick paste.

614 Although the Seri's omnipresent problems of food-getting and of personal subsistence have been of particular interest, the lost social customs of the tribe deserve a moment's attention. Before the death of all
[161] but a few of the 2,000–3,000 Seris at the hands of invading Spaniard and Mexican, the tribe consisted of a number of conspicuous maternal clans, each of which was presided over by a zoic tutelary such as the Pelican, the Turtle, the Rattlesnake, or the Badger. The totemic symbols denoting the
302 various beast-gods and incidentally indicat-
386 ing the blood-carriers of clans dedicated to
614 them, consisted of elaborate designs painted upon the face (Fig. 10). In accord with their savagery in which the social organization was based on blood kinship reckoned in the female line, under ordinary circumstances, the faces only of the females were painted. Colored minerals pounded to powder afforded the pigments for the paint-

[p. 201(A)]

Coyote figures out probably

as an important and perhaps disreputable figure in the mythology although nothing but scraps and bits of information suggest this. It is possible that there is actually a taboo on eating this animal or perhaps it is so disreputable that eating its flesh would put a gourmant in an inferior position.

How important is the Seri mammalian diet is hard to tell. It certainly looms more heavily during the winter, because in the cool season hunting is easier than during the heat of the summer and in fact this is when most of it is done by the ardent hunters. Too, winter subjects the Seris to greater hazards and is apt to increase their dependence on the desert resources over that during the summer, even if these resources are scantier at that time.

To all of these animals one should add the semi-wild burros running about the extensive Mexican rancherias. The Indians poach on them frequently using their fire arms, usually the .22 caliber rifles. In any case, it appears that during the summer when the field work was carried out, the mammalian diet figures quite lightly on the Seri table.

Food preparation: Very little is done in the preparation of the mammalian meat. All that I could observe was the boiling of it in hot water spiced with salt. The Indians were saying that in order to have the meat of a peccary, deer or bighorn ready to eat one must boil it 2-3 hours. The same procedure is followed with the meat of the burros. In contrast to this, as shall be seen later, fish are boiled as well as roasted while the turtles are also dried and salted. Preparation of meat is done by women, certainly at least in the encampments when they are present.

Food preferences: Some of the Seri food preferences have already been mentioned. At the top of the list as the desirables are the peccary, the deer, the bighorn and the blacktail jackrabbit; at the bottom is the badger, whose meat "is not much good." There is also preference by sex. Females of both the bighorn and peccary are preferred over the males "because they do not have the bad odor like the males." This sort of favoritism also occurs among the Mexicans. However, the Indians did not elaborate beyond this point.

Other economic uses: Apart from meat, hides are also used. The hides of the deer, bighorn and peccary had been used for sleeping mats although this matter has been expressed in the past tense. Miguel Barnett also suggested that the bighorn hides had been used for clothing by the Indians in the past—but he neglected to say how long ago. During Kroeber's stays, no Seris went about in the animal or bird (pelican) skins but earlier when McGee visited them they went about in these simple garments. Judging then by Miguel's memory, the use of the bighorn hide for clothing must be pushed back to the period of World War I or even earlier.[1]

[1] Miguel Barnett indicated that the "fur" of the bighorn had once been worn for the cold season "but not now."

[P 10 A]

262 them to their shelter and held them there for several days before they and their families finally ate them up. The turtles are also a well-liked item.

As already indicated in some instances there exists preference for a particular part of an animal. Of the Gila monster only the fat tail was said to have been eaten, and of both rattlers, the head and the tail are discarded on the grounds
* [825] that they contain toxin. Finally the toad and the gecko and *Xanthusia* are all rejected as completely venomous.

178 It is also evident that changes in the Seri
262 taste have occured in the course of the past several decades. Some animals are on their way out as food, and here we have the Gila monster, the whipcoach, the red racer and smaller lizards. In several cases, and this includes the Gila monster, the responses indicated that the animal had been eaten in the past. I also observed that on the sly, the Seris would eat them when other food was in short order. But they are reluctant to admit this and often altogether denied it.

Hunting

224 Most reptiles are captured by hand or else killed
[225] with a stick, stone or pea-shooter. Except for the turtles, the Seris will not make special expeditions. But it is certain that if they find themselves on any of the islands near the shores of Baja California they will go ashore deliberately in search of the chuckawalla.

225 The turtles are another matter. Here now, just as in the past, special expeditions are made in order to get them. These expeditions take place
[501] nowadays in the usual flat-bottomed plank boats, either motor or oar propelled. The hunt takes place only during unusually quiet and dark nights, when the Gulf is smooth and calm and there is neither wind nor ripple. With the slightest disturbance,
[354] turtle fishing is impossible. It is all done with the
[411] torch lights or Coleman lanterns. The principal and only weapon is the harpoon, identical with that described and illustrated by McGee. The turtles are then harpooned, dragged into the boat and either left alive, when the hunters have a sale of live ones in mind, or pounded to death with a
● [251] club or oar, quartered and then either consumed on the spot or else dried and salted.[10]

[224] While the collecting of the smaller animals us-
[462] ually falls to the children or women, turtle hunting is men's job. Men, too, usually get the chuckawalla because they usually visit more distant islands.

Pets

231 None of the reptiles are pets in a real sense. Those few that might be kept are only held until the day when they are butchered and eaten. It is motivated more by the wish to preserve fresh food than by any affection for the animal. The turtles, the tortoises and the chuckawalla belong here. Occasionally a Seri boy will string a lizard, a *Scel-*

[10] The loggerhead is hunted in the daytime because, owing to its great strength, night hunt would be too dangerous. Two harpoons are always used on it, while for the smaller species, one harpoon usually suffices.

[P.23B]

226 Occasionally they'll stay a little longer and when far off in the Gulf, they will return only in the afternoon. But this is not frequent. Some of the bait catching is done during the night by the light of torches or Colemans.

As already mentioned, unfavorable weather may put off fishing for several days and when that happens, famine becomes a real menace to the Indians because they have no supply of food stored away for the lean day and no cash for such purposes.

[731]
[251]

Sexing

*825 Sex differences in fishes have been observed by the Seri probably in the majority of the species from the list, although for several there is no data available. The tabulation breaks down by the number of species as follows:

	number of species
Sex differences observed	22
Sexes alike in all respects	6
Didn't know what differences there are	6
No data	8

The six species in which sexes are considered indistinguishable in size and color and in other respects are *Pescara*, *Pinta*, *Baya*, *Pinturera*, *Smyrna* and the undertermined shark *sp. C*. The inclusion here of the most important economic species such as *Pinta* and *Pescara* and of the sharks is interesting. It shows, in the main, probable lack of information rather than ignorance of differences on the part of the Indians. It was probably an oversight in questioning, for surely the sharks' sexual differences are usually known to them and it is improbable that they could never tell the difference between the sexes of their most important marine game.

The species in which they expressed puzzlement over the differences and simply indicated that they didn't know the answer were largely little known forms about which they could tell very little anyway, either because they occurred far away from their territory like, for example, the flying fish and the tuna, or otherwise were obscure species, too small to pay attention to, or finally, the huge monsters, too big for them to hunt and approach for more careful inspection.

In more detail, a number of different sexing criteria seem to be employed by the Indians. These differences are tabulated below:

Males larger	Females wider, larger in bulk, but length the same
Abudefduf saxatilis	*Cydoscion macdonaldi*
Gymnothorax castaneus	*Trachinotus paitensis*
Girella amplicidens	*Canoscion parvipinnis*
Anisotremus davidsoni	*Mugil sp.*
Gillychthys seta	*Bairdiella inciatina*
Sphoroides annulatus	**Males more brightly colored**
Parcanes viola	*Paralabrax maculofasciatus*
Females larger	*Hypsoblennius gentilis*
Epinephalus analogus	

Other sex differences considered by the Seri are structural and appy to the sharks. They associate the presence of the "2 penises" in the sharks and mantas with the males and their absence with the females. The "penises" are, of course, sex claspers present near the vent in the male sharks which aid them in holding up the female during the mating. These differences had been observed

[P. 33 B]

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262 edge against two stakes in front of the fire. The breast was white and tender, somewhat like roast pig, but much more delicious.

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1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

ripening); most of the larger muscles were already gnawed away, leaving loose ends of fiber and strings of tendon clinging to the bone, the condition being such that the remaining flesh might easily have been cut and scraped away by means of a knife; yet whenever a warrior or woman or youth hungered he or she took down the heavy joint, squatted or sat on the ground with back to one side of the doorway, held the mass at the height of the mouth, and gnawed, sucked, and swallowed, frequently tearing the tissue by twisting and backward jerks of the head, and not only masticating, but swallowing the free ends of tendons still attached to the bone. This process was varied only by seizing with the hands and tearing off a strip of flesh or skin already loosened by the teeth; and it was continued until the bones were practically clean, when they were wrenched apart by the stronger men in order that the cartilaginous cushions and epiphyses might be gnawed away. The only approach to cooking or carving was a parboiling of the foot, after the leg was wrenched off at the hock, until the hoof was sufficiently softened to be knocked off with the protolithic hupf[1] shown in plate XLIII, when half a dozen matrons and well-grown maidens gathered about to gnaw the gelatinous tissue (already softened by incipient decay as well as by the parboiling) investing the coffin bone. The entire procedure in this as in many other cases proclaimed the absence of knife-sense. The Caucasian huntsman does not have to think of his knife when game is to be bled or skinned or dissected; his habit-trained hand knows where to find the implement, how to seize it, and in most cases how to wield it advantageously; but the Seri hand possesses no such cunning, and uses the knife only clumsily and at second thought, if at all. The Seri huntsman, on the other hand, does not have to think of nails and teeth, for they are trained and coordinated by hereditary habit to spontaneously act in unison and with the utmost possible or needful vigor; while the Caucasian at least has completely lost the claw-and-teeth instinct of offense and defense.

Conformably with their striking independence of knives, the Seri are conspicuously unskilful in all mechanical operations involving the use of tools. Their most elaborate manufacture is the balsa, made from reeds broken at the butts and with the leaves and tops removed by the hands or by fire, bound together with hand-made cords; next in elaborateness come the bow and arrow, normally made without cutting tools; then follows their fictile ware, which is made wholly by hand, without aid of the simple molds and paddles and other devices used by neighboring tribes; while their primitive fabrics were apparently of hand-extracted fibers, twisted and woven wholly by hand, with the aid of wood or bone perforators in sewing and possibly in weaving. Practically the Seri possess but a single tool, and this is applied to a peculiarly wide variety of purposes—it is the originally natural cobble used for crushing bones and severing tendons, for grinding seeds and

[1] Defined postea, p. 188.

1: McGee £-5 (1894-1895)1898 NU31 Ser1 NU31

Com-

monly the carapace and the longer bones from the flippers of the larger specimens are preserved entire for other uses, and are cleaned only by teeth and talons and tongues, aided by time but not by fire; but the plastron, unless broken up and consumed immediately, is subjected to a cooking process in which it serves at once as skillet and cutlet—it is laid on the fire, flesh side up, and at intervals the shriveling tissues are clawed off and devoured, while at last the scorched or charred scutes themselves are carried away to be eaten at leisure.[1]

Perhaps the most significant fact connected with the Seri turtle-fishing is the excellent adaptation of means to ends. The graceful and effective balsa is in large measure an appurtenance of the industry; the harpoon is hardly heavier and is much simpler than a trout-fishing tackle, yet serves for the certain capture of a 200-pound turtle; and the art of fishing for a quarry so shy and elusive that Caucasians may spend weeks on the shores without seeing a specimen is reduced to a perfection even transcending that of such artifacts as the light harpoon and fragile olla. Hardly less significant is the nonuse of that nearly universal implement, the knife, in every stage of the taking and consumption of the characteristic tribal prey; for it may fairly be inferred that the comparative inutility of the knife in disseverring the hard and horny chelonian derm, and the comparative effectiveness of the shell-breaking and bone-crushing hupf, have reacted cumulatively on the instincts of the tribe to retard the adoption of cutting devices. Of much significance, too, is the limited cooking process; for the habitual consumption of raw flesh betokens a fireless ancestry at no remote stage, while the crude cooking of (and in) that portion of the shell not consecrated to other uses might well form the germ of broiling or boiling on the one hand and of culinary utensils on the other hand. On the whole, the Seri turtle industry indicates a delicate adjustment of both vital and activital processes to a distinctive environment, in which the abundant chelonian fauna ranks as a prime factor.

Analogy with other primitive peoples would indicate that the flesh of the turtle is probably tabu to the Turtle clan, that the consumption of the quarry is preceded by an oblation, and that there are seasonal or other ceremonial rites connected with turtle-fishing; but no information has been obtained on any of these points save a few vague and unwilling suggestions from Mashém tending to establish the analogy.

Flotsam and stolen metal have played a rôle in the industries of Seriland so long that it is difficult to learn much of the turtle fishing

[1] These details were furnished largely by Mashem and Sahor Encinas, but were verified in essentials by personal observation of dietetic customs at Costa Rica in 1894, and they were corroborated by observations on both shores of El Infiernillo and Bahia Kanhack in 1895. Especially significant were the remnants of a turtle feast on the southern beach of Punta Miguel interrupted by the approach of the exploring party. The indications were clear that the turtle had been landed and largely consumed before the fire was kindled, and that the cooking of the firmer portions had hardly been commenced before the camp was abandoned so hurriedly that not only the nearly eaten turtle and the glowing embers, but the harpoon (the specimen illustrated in figure 39), the still bloody and greasy hupf (that represented in plate LXV), and the fire-sticks were left behind. Gnawed fragments of charred plastrons are common relics about hastily abandoned camps generally.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

262 Probably second in importance among Seri prey, as a food-source merely, stand the multifarious fishes with which the waters of Seriland teem, particularly if the class be held to comprise the cetaceans and seals and selachians ranked as leaders of the fish fauna in Seri lore.

225 Naturally, whales lie outside the ordinary range of Seri game, yet they are not without place in the tribal economy. During the visit to the Seri rancheria near Costa Rica in 1894, it was noted that various [173] events—births, deaths, journeys, etc—were referred to "The Time of the Big Fish"; and it was estimated from apparent ages of children and the like that this chronologic datum might be correlated roughly with the year 1887. The era-marking event was memorable to Mashém, to the elderwomen of the Turtle clan, and to other mature members of the group, because they had been enabled thereby to dispense with hunting and fishing for an agreeably long time, and because they had moved their houses; but the providential occurrence was not interpreted at the time. On visiting Isla Tiburon in 1895, the interpretation became clear; along 172 the western shore of Rada Ballena, near the first sand-spit north of the bight, lay the larger bones of a whale, estimated from the length of the mandibles and the dimensions of the vertebræ to have been 75 or 80 feet long. It was evident that the animal had gone into the shoal water at exceptionally high tide and had stranded during the ebb; while the condition of the bones suggested an exposure to the weather of perhaps half a dozen years. On the shrubby bank above the beach, [361] hard by the bleaching skeleton, stood the new rancheria, the most extensive seen in Seriland, comprising some fifteen or twenty habitable jacales; and fragments of ribs and other huge bones about and within the huts[1] attested transportation thither after the building, while the shallowness of the trails and the limited trampling of the fog 172 shrubbery gave an air of freshness to the site and surroundings. The 262 traditions and the relics together made it manifest that "The Time of the Big Fish" had indeed marked an epoch in Seri life; that when the leviathan landed (whether through accident or partly through efforts of balsa men) it was quickly recognized as a vast contribution to the Seri larder; and that some of the clans, if not the entire tribe, gathered to gorge first flesh and blubber, next sun-softened cartilage and chitin, and then epiphyses and the fatter bones. Some of the ribs were splin- [252] tered and crushed, evidently by blows of the hupf, in order to give access to the cancellate interiors; several of the vertebræ were battered and split, and nearly all of the bones bore marks of hupf blows, aimed to loosen cartilaginous attachments, start epiphyses, or remove spongy and greasy processes. Little trace of fire was found; in one case a mandible was partly scorched, though the burning appeared to be fortuitous and long subsequent to the removal of the flesh; and a bit of charred and gnawed epiphysis, much resembling the fragments of half-cooked turtle plastron scattered over Seriland, was picked up in

[1] One of the smaller vertebræ and part of a rib are shown in the upper figure of plate VI.

1: McCee E-5 (1894-1895)1898 NU31 Seri NU31

bottoms literally writhing with fishes stranded among beds of mollusks and slimy with the abounding plankton of a fecund coast. The region is one of ample, albeit lowly, food supply, where every experience tends toward inert reliance on providential chance, and where the stimulus of consistently conscious necessity seldom stirs the inventive faculty.

Closely connected with fish as a Seri food-source are the various mollusean and crustacean forms collectively called shellfish; and these contribute a considerable share of the sustenance of the tribe.

Apparently the most important constituent of this class of foods is the Pacific coast clam, which abounds in the broad mud-flats bordering Laguna La Cruz and other lagoons of Seriland, and which was still more abundant during a subrecent geologic epoch, to judge from the immense accumulation of the shells in Punta Antigualla. The clams are usually taken at low tide, without specialized apparatus. They are located by feeling with the feet in shallow water, and caught either with toes or with fingers, to be tossed into any convenient receptacle. When the water is entirely withdrawn from the flats, they are located by means of their holes, and are extricated either with a shell-cup or with some other improvised implement. Frequently the entire mess is thrown into a fire until the shells open, when they are withdrawn and the mollusks devoured practically raw; perhaps more commonly the shells are opened by blows of the hupf, and eaten without semblance of cooking; and, except on the surface, no trace of roasting was found among the vast accumulations of shells in Punta Antigualla.

Perhaps second to the clam in frequency of use is the local oyster, which abounds about the more sheltered shores of Tiburon. It is gathered with the hands, aided perhaps by a stone or stick for dislodging the shells either from the extended offshore beds at extreme low water, or from the roots of a mangrove-like shrub at a medium stage. The shells, like those of the clam, are frequently opened by partial roasting; and shells, sometimes scorched, are extensively scattered over the interior, indicating that the oyster is a favorite portable food. The popularity of this bivalve is shared by the Noah's-ark (*Arca*), to which some mystical significance is apparently ascribed; and the abundant limpets and bivalves and other mollusks are eaten indiscriminately, to judge from the abundance of their shells in the middens. The ordinary crab, too, is a favorite article of food, and its claws are numerous in camp and house refuse; while the lobster-like deep-water crab is introduced into the menu whenever brought to the surface by storms, as shown by its massive remains in the middens.

On the whole, shellfish form a conspicuous factor in Seri economy by reason of the considerable consumption of this class of food; but, viewed in the broader industrial aspect, the produce is notably primitive, and significant chiefly as indicating the dearth of mechanical and culinary devices.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

224 While by far the larger share of Seri sustenance is drawn from the sea, a not inconsiderable portion is derived from the land; for the warriors and striplings and even the women are more skilful hunters than fishers.

The larger objects of the feral chase are deer of two or three species (the bura, or mule-deer, being most conspicuous and easiest taken), antelope, and mountain sheep; to which the puma, the jaguar, and perhaps two or three other carnivores might be added. The conventional method of taking the bura and other deer is a combination of stalking and coursing, usually conducted by five of the younger warriors, though three or four may serve in emergency; any excess over five being regarded as superfluous, or as a confession of inferiority. The chase is conducted in a distinctly ceremonial and probably ritualistic fashion, even when the finding of the game is casual, or incidental to a journey: at sight of the quarry, the five huntsmen scatter stealthily in such manner as partially to surround it; when it takes fright one after the other strives to show himself above the shrubbery or dunes in order to break its line of flight into a series of zigzags; and whether successful in this effort or not they keep approximate pace with it until it tires, then gradually surround it, and finally rush in to either seize it in their hands or cripple it with clubs—though the latter procedure is deemed undignified, if not wrong, and hardly less disreputable than complete failure. When practicable the course is laid toward the rancheria or camp; and in any event the ideal finish is to bring the animal alive into the family group, where it may be dissected by the women, and where the weaklings may receive due share of the much-prized blood and entrails. The dissection is merely a ravenous
264 rending of skin and flesh, primarily with the teeth (perhaps after oblique bruising or tearing by blows with the hupf over strongly flexed joints), largely with hands and fingers aided anon by a foot planted on the carcass, and partly with some improvised device, such as a horn or tooth of the victim itself, the serrated edge of a shell cup, or perhaps a sharp-edged cane-splint from a broken arrow carried for emergency's sake. Commonly the entire animal, save skin and harder bones, is gulped at a sitting in which the zeal of the devotee and the frenzy of the carnivore blend; but in case the group is small and the quarry large, the sitting is extended by naps or prolonged slumberings, and
[252] the more energetic squaws may even trouble to kindle a fire and partially cook the larger joints, thereby inciting pallid appetite to new
[23?] efforts. Finally the leg bones are split for the marrow and their ends
[28] preserved for awls; the horns are retained by the successful huntsmen as talisman-trophies; while the skin is stretched in the desert sun,
224 scratched and gnawed free of superfluous tissue, rubbed into partial
857 pliability, and kept for bedding or robe or kilt.

The chase of the hare is closely parallel to that of the deer save that it is conducted by striplings, who thereby serve apprenticeship in hunt-

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

There is no such well-studied and semiceremonial apparatus for tuna gathering as, for example, the Papago device made from the ribs of the dead saguaro in accordance with traditional formula. 222 [412]

Perhaps second in importance among the vegetal constituents of Seri diet is the mesquite bean, which is gathered in random fashion whenever a well-loaded tree is found and other conditions favor. The woody beans and still woodier pods are roughly pulverized by pounding with the hupf on any convenient stone used as an ahst (metate or mortar), or, if suitable stones are not at hand, they are carried in baskets or improvised bags to the nearest shore or other place at which stones may be found. The half-ground grist is winnowed in the ordinary way of tossing in a basket; and the grinding and winnowing continue alternately until a fairly uniform bean meal is obtained. So far as was actually observed this is eaten raw, either dry in small pinches or, more commonly, stirred in water to form a thin atole; but expressions at Costa Rica indicated that the meal is sometimes stirred in boiling water or pot-liquor, and thus partially cooked, in times of rest and plenty. [262] 252

Other vegetal products used as food comprise a variety of seeds collected from sedges and grasses growing about the mud-flats of Laguna La Cruz and other portions of the province, as well as the seeds and nuts of the scant shrubbery of shores and mountains; while a local seaweed or kelp is eaten in small quantity, apparently as a condiment, and is sometimes carried on journeys even as far as Costa Rica, where specimens were obtained in 1894. 262

It is of interest to note that one of the most distinctive constituents of the Sonoran flora, and one intimately connected with human life in the great neighboring province of Papaguería, is of negligible rarity in Seriland; this is the visnaga (*Echinocactus*, probably of two or three species), the thorniest of the cacti and the only one containing consumable pulp and sap. This peculiar plant is of no small interest in itself as a striking example of the inverse relation between protective devices of chemical sort (culminating in acrid, offensive, or toxic juices) and the mechanical armaments so characteristic of desert plants;[1] it is of still deeper interest economically as the sole source of water over broad expanses of the desert, and one to which hundreds of pioneers and travelers have been indebted for their lives; and it is of interest, too, as a factor of Papago faith, in which the visnaga ranks among the richer guerdons of the rain gods. Throughout most of Papaguería this cactus is fairly abundant; usually there are several specimens to the square mile of suitable soil (it is not found in playas or on the ruggeder sierras), so that it is always within reach of the sagacious traveler; but it diminishes in abundance toward the borders of Seriland, and not more than a dozen examples were found in the portions of that province traversed by the 1895 expedition. Its rare occurrence, 137

[1] Cf. The Beginning of Agriculture. The American Anthropologist, vol. VIII, Oct., 1895, pp. 350-375.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

extreme lightness in proportion to capacity, a quality due to the spongy character of the torote coil and to the thinness of the splints used in the woof. The inside dimensions, weight, and dry-measure capacity (filled to the level of the brim with rice) of two typical specimens approaching extremes in size are indicated in the accompanying table. As noted elsewhere, the ware is absolutely without decorative devices in weave, paint, or form; it is baldly utilitarian, a model of economy in material and in the balance between structure and function, approaching in this respect the thin-walled canteen olla, the graceful balsa, and the light but effective harpoon. The structural correspondence of the ware to a widespread type and its limited use among the tribe suggest an acultural origin for the Seri basketry; but the delicate adjustment of means to ends in the manufacture and the strictly local character of the material quite as strongly suggest an indigenous development.

Museum No.	Diameter	Depth	Weight	Capacity
174529....	38 cm.(15 in.)	9.5 cm.(3¾ in.)	482 g.(17 oz.)	6.25 l. (6.6 qt.)
174530a ..	23 cm.(9 in.)	5.0 cm.(2 in.)	142 g.(5 oz.)	1 l. (1.06 qt.)

It is impossible to portray justly the food habits of the Seri without some reference to a systematic scatophagy, which seems to possess fiducial as well as economic features. In its simplest aspect this custom is connected with the tuna harvests; the fruits are eaten in enormous quantity, and are imperfectly digested, the hard-coated seeds especially passing through the system unchanged; the feces containing these seeds are preserved with some care, and after the harvest is passed the hoard (desiccated, of course, in the dry climate) is ground between hupf and abst, and winnowed in baskets precisely as are the mesquite beans; and the product is then eaten either dry or in the form of atole like the mesquite meal. In superficial view this food factor is the precise homologue of the "second harvest" of the California Indians as described by Clavigero, Baegert,[1] and others; but it gains importance, among

[1] "An Account of the Aboriginal Inhabitants of the Californian Peninsula, as given by Jacob Baegert, a German Jesuit missionary. . . . Translated and arranged for the Smithsonian Institution by Charles Rau: Ann. Rep. Smithsonian Inst. for 1863, pp. 361-399. Baegert's account of foods (pp. 382-387) is so apposite as to be worthy of quotation nearly entire:

"Notwithstanding the barrenness of the country, a Californian hardly ever dies of hunger, except, perhaps, now and then an individual that falls sick in the wilderness and at a great distance from the colonies, for those who are in good health trouble themselves very little about such patients, even if these should happen to be their husbands, wives, or other relations, and a little child that has lost its mother or both parents is also occasionally in danger of starving to death, because in some instances no one will take charge of it, the father being sometimes inhuman enough to abandon his offspring to its fate.

"The food of the Californians, as will be seen, is certainly of a mean quality, yet it keeps them in a healthy condition, and they become strong and grow old in spite of their poor diet. The only period of the year during which the Californians can satisfy their appetite without restraint is the season of the pitahayas, which ripen in the middle of June and abound for more than eight weeks. The gathering of this fruit may be considered as the harvest of the native inhabitants. They can eat as much of it as they please, and with none this food agrees so well that they become corpulent during that period; and for this reason I was sometimes unable to recognize at first sight individuals, otherwise perfectly

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

262 514 the Seri at least, as the sole method of storing or preserving food-supplies, and hence as the germ of industrial economy out of which a

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050 familiar to me, who visited me after having fed for three or four weeks on these pitahayas. They do not, however, preserve them, and when the season is over they are put again on short rations. Among the roots eaten by the Californians may be mentioned the yuka, which constitutes an important article of food in many parts of America, as, for instance, in the island of Cuba, but is not very abundant in California. In some provinces it is made into a kind of bread or cake, while the Californians, who would find this process too tedious, simply roast the yukas in a fire like potatoes. Another root eaten by the natives is that of the aloe plant, of which there are many kinds in this country. These species of this vegetable, however, which afford nourishment—for not all of them are edible—do not grow so plentifully as the Californians might wish, and very seldom in the neighborhood of water; the preparations, moreover, which are necessary to render this plant eatable, require much time and labor. . . . I saw the natives also frequently eat the roots of the common reed, just as they were taken out of the water. Certain seeds, some of them not larger than those of the mustard, and different sorts of pods that grow on shrubs and little trees, and of which there are, according to Father Piccolo, more than sixteen kinds, are likewise diligently sought; yet they furnish only a small quantity of grain; and all that a person can collect with much toil during a whole year may scarcely amount to 12 bushels.

"It can be said that the Californians eat, without exception, all animals they can obtain. Besides the different kinds of larger indigenous quadrupeds and birds, they live nowadays on dogs and cats; horses, asses, and mules; flies, on owls, mice, and rats; lizards and snakes; bats, grasshoppers, and crickets; a kind of green caterpillar without hair, about a finger long, and an abominable white worm of the length and thickness of the thumb, which they find occasionally in old rotten wood, and consider as a particular delicacy. The class of game, such as deer and rabbits, furnishes only a small portion of a Californian's provisions. Supposing that for 100 families 200 deer are killed in the course of a year, which is a very favorable estimate, they would supply each family only with three meals in three hundred and sixty-five days, and thus relieve but in a very small degree the hunger and the poverty of these people. The hunting for snakes, lizards, mice, and field-rats, which they practice with great diligence, is by far more profitable and supplies them with a much greater quantity of articles for consumption. Snakes, especially, are a favorite sort of small game, and thousands of them find annually their way into the stomachs of the Californians.

"In catching fish, particularly in the Pacific, which is much richer in that respect than the Gulf of California, the natives use neither nets nor hooks, but a kind of lance—that is, a long, slender, pointed piece of hard wood—which they handle very dexterously in spearing and killing their prey. Sea-turtles are caught in the same manner.

"I have now mentioned the different articles forming the ordinary food of the Californians; but, besides these, they reject nothing that their teeth can chew or their stomachs are capable of digesting, however tasteless or unclean and disgusting it may be. Thus they will eat the leaves of the Indian fig-tree, the tender shoots of certain shrubs, tanned or untanned leather, old straps of rawhide, with which a horse was tied together for years; fern, the bones of poultry, sheep, goats, and calves; putrid meat or fish swarming with worms, damaged wheat or Indian corn, and many other things of that sort which may serve to appease the hunger they are almost constantly suffering. Anything that is thrown to the hogs will be also accepted by a Californian, and he takes it without feeling offended, or thinking for a moment that he is treated below his dignity. For this reason no one took the trouble to clean the wheat or maize, which was cooked for them in a large kettle, of the black worms and little bugs, even if the numbers of these vermin had been equal to that of the grains. By a daily distribution of about 150 bushels of bran (which they are in the habit of eating without any preparation) I could have induced all my parishioners to remain permanently in the mission, excepting during the time when the pitahayas are gathered.

"I saw one day a blind man, 70 years of age, who was busily engaged in pounding between two stones an old shoe made of raw deerskin, and whenever he had detached a piece he transferred it promptly to his mouth and swallowed it; and yet this man had a daughter and seven grandchildren. As soon as any of the cattle are killed and the hide is spread out on the ground to dry, half a dozen boys or more will instantly rush upon it and commence to work with knives, flints, and their teeth, tearing and scratching off pieces, which they eat immediately, till the hide is full of holes or scattered in all directions. In the mission of St. Ignatius and in others farther toward the south there are persons who will attach a piece of meat to a string and swallow it and pull it out again a dozen times in succession, for the sake of prolonging the enjoyment of the taste.

171 262 514 252 "I must here ask permission of the kind reader to mention something of an exceedingly disgusting and almost indecent nature, the like of which probably never has been recorded of any people in the world, but which demonstrates better than anything else the whole extent of the poverty, uncleanness, and voracity of these wretched beings. In describing the pitahayas I have already stated that they contain a great many small seeds resembling grains of powder. For some reason unknown to me these seeds are not consumed in the stomach, but pass off in an undigested state, and in order to save them the natives collect during the season of the pitahayas that which is discharged from the

1: McGee E-5 (1894-1895)1896 NU31 Seri NU31

feeble thrift-sense may be regarded as emerging. And the rise of thrift in Seriland, like esthetic and industrial beginnings generally, is shaped

human body, separate the seeds from it, and roast, grind, and eat them, nothing more than their barbarous mode, which the Spaniards therefore call the second harvest of the Californians. [This statement is corroborated in all particulars by Clavigero in his Storia della California, Venice, 1789, vol. i, p. 127.] When I first heard that such a filthy habit existed among them I was disinclined to believe the report, but to my utter regret I became afterwards repeatedly a witness to the proceeding, which they are unwilling to abandon, like many other bad practices [probably because of the bloated character of the contents.—W J M.]. Yet I must say in their favor that they have always abstained from human flesh, contrary to the horrible usage of so many other American nations who can obtain their daily food much easier than these poor Californians.

"They have no other drink but the water, and however to protect that they are unacquainted with such strong beverages as are distilled in many American provinces from Indian corn, the aloë, and other plants, and which the Americans in these parts merely drink for the purpose of intoxicating themselves. When a Californian conversazione during his wanderings a pond or pool, and feels a desire to quench his thirst, he lies flat on the ground and applies his mouth directly to the water. Sometimes the horns of cattle are used as drinking vessels.

"Having thus far given an account of the different articles used as aliment by the aborigines of the peninsula, I will now proceed to describe in what manner they prepare their victuals. They do not cook, boil, or roast like people in civilized countries, because they are neither acquainted with those methods nor possessed of vessels and utensils to employ for such purposes; and, besides, their patience would be taxed beyond endurance if they had to wait till a piece of meat is well cooked or thoroughly roasted. Their whole process simply consists in burning, singeing, or roasting in an open fire all such victuals as are not eaten in a raw state. Without any formalities, the piece of meat, the fish, bird, snake, field mouse, lizard, or whatever it may be is thrown into the flames or on the glowing embers, and left there to smoke and to sweat for about a quarter of an hour; after which the article is withdrawn, in most cases only burned or charred on the outside, but still raw and bloody within. As soon as it has become sufficiently cool, they shake it a little in order to remove the adhering dust or sand, and eat it with great relish. Yet I must add here, that they do not previously take the trouble to skin the mice or disembowel the rats, nor deem it necessary to clean the half-emptied entrails and maws of larger animals, which they have to cut in pieces before they can roast them. Seeds, locusts, grasshoppers, green caterpillars, the white worms already mentioned, and similar things that would be lost, on account of their smallness, in the embers and flames of an open fire, are parched on hot rocks, which they constantly throw up and shake in a turtle shell or a kind of frying pan woven out of a certain plant. What they have parched or roasted in this manner is ground to powder between two stones, and eaten in a dry state. Roots are treated in like manner.

"They eat everything unsalted, though they might obtain plenty of salt; but since they cannot dine every day on roast meat and constantly change their quarters, they would find it too cumbersome to carry always a supply of salt with them.

"The preparation of the *aloë*, also called *mezcale* or *magney* by the Spaniards, requires more time and labor. The roots, after being properly separated from the plants, are roasted for some hours in a strong fire, and then buried, twelve or twenty together, in the ground, and well covered with hot stones, hot ashes, and earth. In this state they have to remain for twelve or fourteen hours, and when dug out again they are of a fine yellow color, and perfectly tender, making a very palatable dish, which has served me frequently as food when I had nothing else to eat, or as dessert after dinner in lieu of fruit. But they act at first as a purgative on persons who are not accustomed to them, and leave the throat somewhat rough for a few hours afterwards.

"To light a fire the Californians make use of wood and flint, but obtain it by the friction of two pieces of wood. One of them is cylindrical, and pointed on one end, which fits into a round cavity in the other, and by turning the cylindrical piece with great rapidity between their hands, like a twirling stick, they succeed in igniting the lower piece if they continue the process for a sufficient length of time.

"The Californians have no fixed time for any sort of business, and eat, consequently, whenever they have anything, or feel inclined to do so, which is nearly always the case. I never asked one of them whether he was hungry who failed to answer in the affirmative, even if his appearance indicated the contrary. A meal in the middle of the day is the least to see among them, because they all set out early in the morning for their foraging expeditions, and return only in the evening to the place from which they started, if they do not choose some other locality for their night quarters. The day being thus spent in running about and searching for food, they have no time left for preparing a dinner at noon. They start always empty-handed; for if provisions something remains from their evening repasts they certainly eat it during the night in walking moments or on the following morning before leaving. The Californians can endure hunger easier and much longer than other people; whereas they will eat enormously if a chance is given. I often tried to buy a piece of venison from them when the skin had but lately been stripped off the deer, but regularly received the answer that nothing was left; and I knew well enough that the hunter who killed the animal needed no assistance

2: Kroeber E-5 (1930) 1931 NU31 Seri NU31

sounds like an expectable enough mythic idea, but seems involved with McGee's dubious conceptions as to totemism, discussed below. 114 193

The two-pointed fish-spear, with serrated points 6 inches long and spreading 5°, seen by Hardy (McGee, p. 193), is interesting because seemingly unreported in or near the area. 114 227

"Fishing" with staked pelicans who are then fed by free birds, is authenticated by the statement of Venegas for lower California, (McGee, p. 193). [226 231]

No fish nets, hooks, or lines were seen by McGee among the abandoned effects on Tiburon (p. 194). This is in accord with my observation. The abundance of sharks may interfere with net or deep water fishing.

The bow (p. 200) is of *palo blanco;* the release (pls. 28, 29), Mediterranean; the archer's position (pl. 29), with elbow above head, suggests a quick downward shot at a target or game lying on the ground not far away. 114 411

Mesquite, according to McGee (p. 207), is ground on the metate. Sr. Thomson told me of its being pounded in a hole in the ground. The Seri gave me the name a'kata for what I understood to be this earth mortar. According to Sr. Thomson's description, the flour from the first beans cakes and lines the cavity firmly, so that the bulk of the material is secured quite cleanly. In general, mesquite is mortar-pounded rather than metate-ground by the tribes from whom we have records, as is expectable from the woody nature of the beans. 114 252

McGee (p. 207) noted the viznaga cactus, Echinocistus, as rare in the Seri habitat, presumably owing to its use for water by the natives. I made the same observation on the mainland, but Sr. Thomson stated that along the roads the plant is being gathered for candying. 114 137

The one basket described by McGee (p. 208, fig. 24) is bundle-coiled and plain. The only one I saw in use among the Seri was ornamented with a plain reddish band. Sr. Thomson presented me with two which bear patterns (fig. 13), and showed me a photograph of a collection made by Mr. Davis for the Museum of the American Indian, Heye Foundation, nearly all of which were decorated, some fairly elaborately. Several of these are shown by courtesy of that institution in figure 12. As McGee observes, there is obvious resemblance to Southwestern baskets; especially of the Papago, Pima, and Apache. Southern California basketry is less similar. That of Baja California is unknown from specimens, though the mention of water-tight vessels used for winnowing and parching suggests a coiled tray of Seri type. The surviving tribes of Sonora other than the Seri use few baskets distinguishable from those of the non-Indian population. 114 285 [171]

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225 through the shell. The foreshaft was jerked out at the first movement of the animal which was held by the fisherman's line until tired, after which it was either driven ashore or lifted onto the balsa.

No sooner was the quarry landed than the soft undershell was crushed and broken loose with a cobblestone "hupf," and then torn off
264 by the tribespeople with the impetuous fury of blood-crazed carnivorous beasts. The entrails and soft, bloody gore were first consumed, followed, depending upon the proximity of the last meal, by the firmer flesh, all but the infants of the household pounding, tearing and chewing their raw, grisly
[252] chunks, stopping to singe or half roast larger pieces only if near satiety. If immediate consumption of the prey was not accomplished, the remnants were carried to the rancheria and there lifted to the top of the jacal to soften in the sun. The reeking carapace was often left indefinitely beside the

[197]

Photo by J. B. Harrison

FIG. 9. PITAHAYA AND SAGUESO CACTI
PROVIDE A RICH HARVEST OF FRUITS IN SUMMER.

[p. 199(A)]

2:Davis & Dawson E-8 (1922-1940) 1945
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222 forests of giant cacti (Fig. 9) provide during this season an unlimited supply of "pitahayas" toward which the tribespeople customarily moved to accomplish the annual harvest. The fruits were readily knocked down by means of long poles and, when ripe, the spines were easily brushed off, leaving a luscious pulp as big as a fig. During the height of the season all the clans withdrew from the coast and gave their undivided attention to the collection and consumption of the cactus fruit, gorging tremendous quantities for weeks until waning supply and cloying appetite drove them back to the more severe hunt for turtle and pelican.

252 262 514 Perhaps the only germ of thriftiness in the Seris is shown by a peculiar custom with respect to the pitahayas. The fruits, eaten in such enormous quantity, were imperfectly digested, the hard-coated seeds particularly passing through the body unchanged. Using [415] [251] large seashells, the feces containing these seeds were collected and preserved with some care. Thus, when the harvest of fresh fruits was over, there remained a hoard of these dry, nutritious discharges which were ground on the stone abst, winnowed in a shallow basket and made into a meal to be eaten, either dry, as a watery atole, or mixed with turtle grease to form a thick paste.

614 Although the Seri's omnipresent problems of food-getting and of personal subsistence have been of particular interest, the lost social customs of the tribe deserve a moment's attention. Before the death of all [161] but a few of the 2,000–3,000 Seris at the hands of invading Spaniard and Mexican, the tribe consisted of a number of conspicuous maternal clans, each of which was presided over by a sole tutelary such as the Pelican, the Turtle, the Rattlesnake, or the Badger. The totemic symbols denoting the 302 386 614 various beast-gods and incidentally indicating the blood-carriers of clans dedicated to them, consisted of elaborate designs painted upon the face (Fig. 10). In accord with their savagery in which the social organization was based on blood kinship reckoned in the female line, under ordinary circumstances, the faces only of the females were painted. Colored minerals pounded to powder afforded the pigments for the paint-

[p. 201(A)]

648 on the settlements of Sonora. Many expeditions, fitted out at great expense, were sent
726 against them, but in that barren land, destitute of water, the military parties suffered greatly in their campaigns, and succeeded little in their efforts to conquer the wary natives.

177 By 1850 probably every Seri between in-
648 fancy and decrepitude had seen the proprietor and other inhabitants of the rancho of Don Pascual Encinas at Costa Rica where the Seris were abnormally tolerated and even encouraged to make themselves useful and unobjectionable. They yielded to indolent scavengering more than ever before; they substituted cast-off rags and barter-bought cotton cloth for their pelican robes and other primitive garments. They ate cooked food when it fell their way; half heartedly they adopted metal cutting implements and sought or stole nails and hoop-iron for arrow
[191] points. Some acquired a smattering of Spanish and many came to sport Spanish names. Never, however, did more than one or two Seris come to live in a house, nor even to encompass the idea of making adobe. They had not learned to ride horses nor to burden them, but only to use them for immediate slaughter and consumption. They were acquainted with firearms, but it was not until years later that they learned to use them. In and about Rancho Costa Rica the Seris and the Mexicans lived for a time in mutual tolerance, certain depredations being allowed the Indians just as were the rodents of the rancheria.

When, in 1855, Don Pascual Encinas ex-
648 perienced the loss of unusually large num-
721 bers of stock from Seri raids, he was aroused into announcing that a Seri head would be taken for each head of stock stolen. For a while the Indians seemed to acquiesce, but within a few days a group of Seri women "milled" a band of horses, caught and threw one so that its neck was broken, whereupon
[252] they immediately sucked its blood, gorged on its intestines, and buried its quarters to "ripen" according to their custom. The vaqueros of the settlement were instructed to shoot the first Seri seen on the llano. Within two days the tribe was on the warpath and the war raged for a decade.

[p.262(B)]

Game pursuit is usually done on foot, mostly in the winter and very little in the summer. The intense heat of the desert in the summer makes hunting unattractive. The most frequent trophies are the Sonoran bighorn, peccary, cottontail and jack-rabbits. Sometimes, semi-wild burros, running loose on the adjacent extensive Mexican "rancherias", are poached for meat. The peccary is the only animal hunted with the aid of dogs. Large rodents are dispatched by sling-shot, stick, stone, or shot with a .22 caliber rifle. Birds, such as sea-gulls, ducks and pelicans, are clubbed, stoned or shot with a small caliber rifle.

While fishing and hunting are primarily men's occupations, the gathering of the terrestrial and marine animals is almost exclusively women's work. Rattlesnakes and other reptiles are often killed and brought to the encampments by the women from their morning trek into the desert after firewood and fruit. Small fish and marine invertebrates in the tidal pools are collected by women, aided by children of both sexes.

Preparation of meat is quite simple. It is either boiled in hot water with salt added as the only seasoning or else roasted whole, if small enough, over an open fire with or without a grill. The use of spices such as tomato sauce, chili, peppers, and the like, depend upon the tastes of the individuals and also upon the availability of money.

In individual competence as hunters or fishermen the men show a great deal of variability. Some excel in fishing while others do so in hunting. Hand in hand with this, goes the degree of knowledge of the local natural history and, as expected, the best fishermen lead in the knowledge of fishes while the best hunters possess the most extensive knowledge of terrestrial animals and insects. It has also been observed that boys were far ahead of adults in their knowledge of inconspicuous or otherwise commercially unimportant creatures such as insects, obscure marine invertebrates and small fishes. Interest in the commercially or otherwise economically important forms of animals unquestionably becomes overwhelming in adult life while much of the natural history lore learned in youth is forgotten.

Food Preferences and Taboos

A number of animals were reported as being a part of their diet in the past but which were not used at the present time. Several species of shells collected from kitchen middens along the coast were thus identified. In some instances it has been denied that a certain animal was used for food; yet, later when such a beast was brought to the camp, it would be added to the menu. Undoubtedly, some of the species were held in low esteem as food and the Seris preferred not to admit eating them.

Large fishes, especially pinta and baya, sea-turtles, and the very large chuckwalla lizard, which is brought back from rare expeditions to San Esteban Island, are the preferred cuisine. Cochi fish, also called puercos, are disdained. Large catches of these were frequently brought in from the sea, only to be unceremoniously dumped on the beach and left to the dogs and the vultures. But when other fish were scarce, the puercos were eaten. Pelicans, once an

ingenuity of a modern shipbuilder to have constructed a boat. These simple, desert people, however, through centuries of struggle for life in their desolate realm had learned to use every natural material available to them, however laborious the tasks and inefficient the products. The carrizal reed, *Phragmites communis*, grows about the few permanent water holes of Seriland, and from countless numbers of these slender, buoyant canes they built their watercraft. The reeds were stripped of leaves and gathered in long bundles, bound together and gradually augmented by more and more interlaced canes until a bundle 18 to 30 feet long and 1½ feet in diameter, tapering at both ends, was made. Three of these were then bound together with cords of fiber or human hair, making a maneuverable one or two man raft, easily transported to the shores.

The mesquite tree, *Prosopis juliflora*, provided fiber for cords. The flexible outer tissues of the roots were stripped off, soaked and progressively pounded, split and worked between hand and mouth until very slender, fibrous threads were obtained which were then twisted into cords. In some cases a coarse, rough fabric was woven from these fibers, but most garments were made of pelican skins. The strips of workable mesquite root or sometimes yucca fiber were also used in making doughnut-shaped head pads which aided in balancing the capacitous earthen water jars as they were carried on the heads of the women over rough and stony trails from water hole to camp site.

While occupying the turtle fishing camps on El Infiernillo during the good season, vegetable supplements to the fishy diet were few. Every nourishing seed or woody fruit yielded by the desert was carefully gathered; even the tiny seeds of the sea grass, *Ruppia*, were sorted from beach drift and made into meal. Never did the Seris learn to cultivate any crop or domesticate any animals other than the half wild coyote dogs that lived in mutual toleration with them. Even had they done so, their success in the barren, waterless land would have been small.

Sterile as is the Seri's hinterland, for a time each summer the thorny plants with which it is so profusely stocked ripen an abundant crop of fruit. The cacti in particular yield a wonderful harvest of luscious and succulent fruits, and toward this fortuitous supply the Seris were accustomed to move in June and July. The foothills of Sierra Seri on the mainland are adorned with great numbers of giant cacti, *Pachycereus Pringlei*, *Carnegiea gigantea* and *Lemaireocereus Thurberi* from which the luscious pitahayas were readily knocked down when ripe. The Indians wandered into the cactus forest and after a simple ritual marking the beginning of the feast, proceeded to gorge themselves for weeks on the succulent fruit until waning supply and cloying appetite drove them back to more severe food-getting activity by the sea. They did not customarily find it necessary to leave the cactus forest, however, as soon as the supply of fruits was no longer sufficient, for by the time the fruiting season was ended they had provided themselves with a second harvest. The pitahayas, gorged in such tremendous quantity throughout the season, were very imperfectly digested; the miriads of hard seeds, particularly, passed through the system unchanged and with the preservation of these in mind the Indians carefully collected with the aid of large sea shells all such seedy discharges and let them dry in the desert sun. Thus, as the supply of fresh fruit faded they proceeded to the use of this hoard

5:Dawson N-5 (1940) 1944 NU31 Seri NU31

of nutritious material which was ground to powder on their stone ahsts, winnowed in shallow baskets and made into a meal or paste.

The abundant cacti of many species served several other functions in the domestic economy of the Seris. The thorny cholla whose insipid fruits were not fit to eat and whose spines were a constant threat to the unprotected bodies of the Seris, found one use, nevertheless, in the burial procedure. After a body was partly covered with earth in the three foot deep grave, it was densely overlaid with chollas before leveling, to discourage the coyotes from digging for the body.

The dry skeletons of the giant cacti provided the long, cylindrical poles used in knocking off ripe pitahayas as well as in all other instances in which a straight, slender pole was needed. Since the advent of the open boat in modern times, the cactus skeleton has come in for a new use, for after trituration between stone ahst and hupf, it was found to yield a satisfactory caulking compound when mixed with sea-lion oil.

The barrel cacti, *Ferocactus Wislizenii* and *F. Coulteri*, though ordinarily abundant on the Sonoran desert are rare in Seriland and practically absent from Isla Tiburon where they may easily have been exterminated by the improvident Seris during their centuries of occupancy on account of their recognized value as water providers on the wastelands over which the Seris so frequently ventured.

These Indians found housing no problem, for, living under a climate in which frost is rare and rain infrequent, they found little need for shelters except for protection against the blazing desert sun. Camps that were occupied for more than a day or two, however, usually saw the appearance of a group of crude sun shelters. These were usually made of long, flexible ocotillo branches, *Fouquieria splendens*, stuck in the sand and fashioned into an arched framework over which a more or less complete covering of brush was piled. If, by the sea, a windbreak were desired, the brush top and siding were usually augmented by the addition of several empty turtle shells.

On the delta plain of the Rio Sonora, the mesquite, *Prosopis juliflora*, grows in remarkable luxuriance, these gnarled, spiny trees forming an almost continuous open forest 20-40 feet high. Its fruit, consisting of small, hard beans borne in slender, woody pods forms a concentrated, starchy food that the Seris found highly nutritious if not appetizing. In late summer when all fresh vegetable food had withered and disappeared, provided the turtle fisheries had not yet attracted them back to their island, they often spent some weeks gathering the beans and grinding them into a meal which was eaten as a watery atole or as a paste mixed with sea-lion oil. The more straggly and thorny cat's claw mesquite, *Acacia Greggii*, and the ironwood, *Olneya tesota*, also yielded woody beans in limited quantity.

In the deeper gorges of the mountains the Seris found *Guaiacum Coulteri* yielding a berry of medicinal properties and also *Jacquinia pungens* which produced a nut, edible when not quite ripe, and forming a favorite rattlehead when dry.

Along sandy washes, particularly on the lower flood plain of the llano grows a low, shrubby weed, *Hymenoclea monogyra*. Although during times of drought it shrinks to stunted tussocks, after periods of heavy rain its flourishing fens produce abundant seeds eaten both by the beasts of the plain and formerly by the Seris.

Before the advent of the tin can and the cardboard carton, basketry was

[TEXT CONTINUES ON P. 138 ...QUAYSP]

9:Malkin E-5 (1953-1955)1962 NU31 Seri NU31

III

MAMMALS

262 water for a week until it escaped. There was
[231] no intent to do away with it and serve it up for dinner later on.

The 3 species reported as eaten in the past are kangaroo rat, sea lion and the ringtail cat or
[252] cácomistle. Of these the little rodent had been supposedly "boiled in hot water with salt" which
[261] method of preparation may indicate that it happens quite recently yet. It is quite possible that in times of famine this animal is still used. The sea
[432] lion has been reported as "eaten once a long time ago. All of it. But not now. Its hide was once sold
[114] also but now it isn't used at all." This conflicts with McGee's statement (McGee, 189:202) that there was a taboo on eating sea lions among the Seris and there is no way to reconcile the information.

[114] McGee's report may be as truthful as are the uncertain and hazy comments of the present day Indians.

224 On the other hand, the cougar belongs to a very dubious category, unless we can rely on Miguel Barnett's memory. All 4 of the younger informants emphatically deny that the cougar has ever been hunted for meat. But Miguel Barnett claimed that this has been done in the past, although he could not tell how long ago. Kroeber says nothing about this animal and this makes it difficult to date the events. At the time of Kroeber's visit, Miguel was at least 25 years old and the cougar could have been hunted either
[262] then or earlier. But today the Seris do not eat the flesh of the big cat and their abhorrence of it has been confirmed by the Mexicans to whom I talked about the subject, and who relish cougars' meat. This apparent distaste for the *el tigre's* flesh may
[178] well be a recent development quite unconnected with the lack of weapons. McGee (1894: *loc. cit.*) casually mentions that the Seris hunt both cougars
[411] and the jaguars but cites no evidence for it. Yet in his time Seris' almost only weapons were the
[177] bow and arrow and a lance which today has been replaced by firearms. I am unable to explain this contradictory behaviour.

262 Finally, there is the Ringtail cat or cácomistle. Although this beast has been reported as part of the diet, the information isn't too reliable. I had
[124] no way of checking whether this was the animal the Indians had in mind. Their description of it seemed to answer some other unspecified animal and their answers were confused. The fact is that the Ringtail cat does occur in the Seri territory and they are surely familiar with it.

Of the remaining 11 species none were ever mentioned by any of the informants as having been ever eaten. Their denial of eating the coyotes were most vehement. Coyote figures out probably

[P.98]

Coyote figures out probably

as an important and perhaps disreputable figure in the mythology although nothing but scraps and bits of information suggest this. It is possible that there is actually a taboo on eating this animal or perhaps it is so disreputable that eating its flesh would put a gourmant in an inferior position.

How important is the Seri mammalian diet is hard to tell. It certainly looms more heavily during the winter, because in the cool season hunting is easier than during the heat of the summer and in fact this is when most of it is done by the ardent hunters. Too, winter subjects the Seris to greater hazards and is apt to increase their dependence on the desert resources over that during the summer, even if these resources are scantier at that time.

To all of these animals one should add the semi-wild burros running about the extensive Mexican rancherias. The Indians poach on them frequently using their fire arms, usually the .22 caliber rifles. In any case, it appears that during the summer when the field work was carried out, the mammalian diet figures quite lightly on the Seri table.

Food preparation: Very little is done in the preparation of the mammalian meat. All that I could observe was the boiling of it in hot water spiced with salt. The Indians were saying that in order to have the meat of a peccary, deer or bighorn ready to eat one must boil it 2-3 hours. The same procedure is followed with the meat of the burros. In contrast to this, as shall be seen later, fish are boiled as well as roasted while the turtles are also dried and salted. Preparation of meat is done by women, certainly at least in the encampments when they are present.

Food preferences: Some of the Seri food preferences have already been mentioned. At the top of the list as the desirables are the peccary, the deer, the bighorn and the blacktail jackrabbit; at the bottom is the badger, whose meat "is not much good." There is also preference by sex. Females of both the bighorn and peccary are preferred over the males "because they do not have the bad odor like the males." This sort of favoritism also occurs among the Mexicans. However, the Indians did not elaborate beyond this point.

Other economic uses: Apart from meat, hides are also used. The hides of the deer, bighorn and peccary had been used for sleeping mats although this matter has been expressed in the past tense. Miguel Barnett also suggested that the bighorn hides had been used for clothing by the Indians in the past—but he neglected to say how long ago. During Kroeber's stays, no Seris went about in the animal or bird (pelican) skins but earlier when McGee visited them they went about in these simple garments. Judging then by Miguel's memory, the use of the bighorn hide for clothing must be pushed back to the period of World War I or even earlier.

Miguel Barnett indicated that the "fur" of the bighorn had once been worn for the cold season "but not now."

[P 10 A]

9:Malkin E-5 (1963-1968)1982 NUXI Seri NUXI

IV

BIRDS

136 128 Woodpecker—There are several species in the area but Gila woodpecker (*Centurus uropygialis*) is certainly one of them.

Hummingbird—Unspecified species, one of several occurring in the area according to Dr. Orr.

Economic Uses

262 Such use as had been made of the birds is largely in the form of an addition to the diet. Reading McGee, one gets the impression that the importance of the birds in the Seri diet, in contrast to the marine animals of all description, has declined greatly. We do know that in the past various birds and, most especially, the seagulls and the pelicans represented a significant item. But today out of the basic list of 24 species, only six has been reported as eaten and all, with an exception of the duck, in the past tense. The duck *[825] evidently is the only bird which the Seri consider really fit to eat and yet, even here, there is temporary avoidance. Moreno told me that this bird "we eat only when we visit the island (Isla Patos). [223] But we do not eat it in September because it is too lean. We like it in December when it is fat. We [252] then kill it at night with stones. It is roasted."[1]

All other birds were reported as eaten only in the past and this has been expressed more or less as follows: sea-gull eaten a few years ago, cormorant 8-10 years ago, pelicans 30-35 years ago. This would mean that the pelicans had been discarded as food, at least according to the official Seri version, in the early twenties, before Kroeber's visit. But the Seri disclaimers on the subject 183 of the bird diet are not entirely correct and re- 262 flect less the total rejection and more only low esteem in which these birds are held. For I have seen myself the sea-gull and the pelican eaten on few occasions when times were tough, and the [261] food supply was non-existent, owing to the choppy and windy seas. The Seris caught in the act of *[825] cooking the meagre flesh of the pelican or the seagull were obviously apologetic.

262 It is interesting that some of the birds present in the area, the quail or the woodpeckers, are not eaten although these birds figure prominently in the diet of some of the other groups. It may well be that the Seris consider them too small to bother.

[252] As far as I could find out, eggs of only two species of birds, the sea-gull and the heron, are collected, boiled and eaten. But the eggs of the

[1] His statement requires some explanation. There is no taboo on eating duck but the bird does not occur in Desemboque or any other place known to the Seris, with the exception of Isla Patos. Here these birds winter, [136] arriving in September and arrive worn out and lean, to *[825] recoup the fat, a few months later. The Seri unfamiliarity with their eggs is another indication that the birds come to Isla Patos only for the winter.

262 tions to San Esteban or San Lorenzo. The turtles
[225] now are as much a food as a "cash crop." While
[439] the Seris are camped at Desemboque, most of the turtle catch is sold alive to the Mexican fish traders who are headquartered in Nogales and Hermosillo and take the catch along with the fishes to the markets in these towns and sometimes even as far as Phoenix and Tucson.

Of the remainder, the most frequent items that show up on the Seri table are probably the rattlesnakes and the desert tortoises. The rattlers are eaten with relish—only the heads and the tails are discarded as poisonous. The larger chuckawalla is considered a particular delicacy but is rarely caught because it lives in a somewhat distant region. The remainder of the animals listed as "eaten" are collected only incidentially.

It is probable that very few species are really left alone and not taken as food at various times, especially when famine distress overruns the camp. As far as I could determine, only three species are rejected as altogether unfit to eat: the gecko, the night lizard and the toad. All three are believed to be highly toxic "in flesh and blood" although real harm could be caused only by the toad. Besides, the two lizards are really tiny creatures and would make little difference when a survival is at stake.

*825 Few reptilians are ever used as anything but
[439] food. The sea turtles in a way are at certain times,
237 that is, when they are sold for hard cash to the Mexican traders, whether live or sliced and salted. The only other creature I ever heard about as being used for anything at all was the coral snake. At least one informant suggested that in the past its hide has been used for hat decoration. But coral snakes are scarce and this again could be only incidental. It may be that the rattlesnake hide, especially of the large specimens of the western
[439] diamondback, is sold occasionally to a passing visitor but this again is a rare occurance.[1]

Food Preparation

252 Food preparation of the majority of animals in
[263] this group is no different than of most other animals. They are simply skinned, tossed into a pot of boiling water and cooked, occasionally with salt as the only ingredient. Larger individuals, notably turtles, will be quartered and then boiled or roasted on a grill. The chuckawalla and the desert tortoise are said to be fried, but whether this is the usual procedure I can't say, because only a few of them had been brought into camp in my presence. The tail of the Gila monster supposedly had been fried in oil "in the past."

Food Preferences and Taboos

262 It is obvious that some creatures in this group are considered better food than others. The chuckawalla is especially favored. When several were brought in from San Esteban, I couldn't persuade the owners to part with them, although I offered a huge price (for local conditions). The captors took

[1] Another use in the past—snake-skin belt worn. It is illustrated by McGee (1898:170, Fig. 7).

[291] [P. 23A]

9:Malkin E-5 (1953-1955)1962 NU31 Seri NU31

262 en simply because their flesh is disliked and unfit for human consumption. But it may also well be that some of them, especially of the giant variety, are not eaten simply because they are far too large to tackle and the Seris fear hunting them.

The Seris indicated also in some cases that larger specimens of fishes are eaten when they reach the size which would justify the effort. This is true of *Malacoctenus zonifer* which they indicated is "eaten when large," that is when at least 10 cm. long.

[226] Although only sometimes did the Seris specifically indicate that certain fishes are used for bait, it is very likely that almost all small or lesser fishes are so used.

262 178 In some cases the Indians indicated changes in preference for given fishes, with the time. For unexplained reason *Gymnothorax castaneus*, the morene, has been claimed to have been eaten in the past but not for the last 11 years. It isn't clear why the figure of 11 had been used and why suddenly in the early 40's they should stop eating it while the Mexican drool over it. But it may be also that here we have merely personal preference of the informants, as so often happens. As for the *pescara* it was formerly taken for food [439] but now it is merely sold to the Mexicans. This practice is increasing also to include the immense *mero*, even larger than the *pescara*. The fish is mainly sold but rarely eaten by the Seris themselves.

Food Preparation and Preferences

● 252 Food preparation is simple and in the main differs not at all from the preparation of other animal diet. The fish are either boiled whole or in part or else are roasted over slow fire on a grill. The entrails are usually discarded, but otherwise the beasts are eaten entire, eyes, brains and the rest, while the tiny fishlets are eaten complete with the scales and guts.

262 As for the preferences, as expected, there are some fishes that the Seri like better than others. The *bass* in the first place and the *pinto* in the second lead the list. The Seri prefer them to all others and consider them a real delicacy. On the other hand, there are some fishes that they'll eat only under protest, meaning when times are hard. *Girella simplicidens* is one such creature. The *Puerco* or *Cochi* is another. I have seen boat loads of puercos brought in with the other fish and un- [231] ceremoniously dumped out on the beach to the dogs. Literally! The Seris took to this fish only when fishing was poor during the wintry days when they were held ashore by the weather. Even [183] then, they tried to eat the despised creatures on the sly, avoiding being seen doing this, and when I or the Mexicans picked up fresh fish from the beach to take home they laughed saying that we acted as a *cochi* (pig) would!

Other Economic Uses

* 825 237 322 One use made of fish concerns two species of sharks, the *chato* and *camposo*. Here, the informants claimed, the oil from their liver had been used in earlier times for polishing wood. This is

[P. 328]

262 now," while the *Volsella* has been eaten in the past
172 just as much as it is now. The find of these four species in great numbers in the kitchen-middens only indicates that they probably were an important part of the Seri past. Historical records are scarce and no archaeology had ever been done in the region, except for Gifford's (as yet unpublished) excavations at Caborca. But Caborca is far away from the coast. Strong circumstantial evidence suggests that a good many of the kitchen-middens represent relics of the Seris' past encampments.

262 The verbal data for the Seris' past use of some species of molluscs in their diet is uncertain or unavailable. But it is safe to assume that if the animal is eaten today, then it certainly had been [174] also eaten in the past. It is not probable that the Seris should suddenly develop a taste for obscure kinds of animal food, while the entire trend had been in the other direction.

Of the different species the augur shell and the cone shell were said to have been "eaten in the past by the giants. Maybe 300-400 years ago." It is [173] hard to account for this idea except that it probably refers to a myth.

Preparation

● 252 Preparation of the mulluscan food differs little, if at all, from any other food of animal origin. The animals are simply separated from the shell, the meat is dropped in water and boiled, usually [263] for half an hour. Few ingredients other than salt are added and their use depends entirely on the availability of cash and on the individual tastes of the Indians. As far as I could tell, there is no differentiation in this for people of different sexes 262 or ages. Also there is no preference for different parts of the body.

Preferences

Some species are more liked than others, but this is related to their size rather than anything else. There does not appear to be any belief in the toxicity of molluscs and the occasional justification of the inedibility has been expressed in terms of size. Some species, it had been asserted, are not eaten simply because they are too small * [825] to bother. Only *Cardium consors*, as one of the informants suggested, is venomous, but even this, to him, seemed uncertain and dubious for he said "maybe it is venomous."

Other Uses

301 a) *Decoration*: A considerable number of shells were reported as used for decoration. The tabu* 825 lation indicated altogether 10 species that had been or still are used for ornament. Three of these are discarded now, seven still in use. This is mostly in the form of various sorts of necklaces, which the women string on ordinary thread. *Solenosatira pallida* is supposed to be worn as such by women and children, while *Cerithium stercusmuscarum* by the boys only. But I have never seen either of them make use of it in any way. On the other hand, *Trivia radiana* and the *Olive shell* are much

[p. 39 A]

9:Malkin E-5 (1953-1968)1962 NU31 Seri NU31

XI

SUMMARY

224 Hunting is very decidedly secondary to fishing, although it is still much practiced by certain individuals and in a desultory way probably by all.

462 There is a clean cut division of labor in all these occupations. Fishing and hunting are men's occupations, gathering of the desert animals and beachcombing for the intertidal animals is largely the job of women and children. Boys get broken [868] into men's occupations in adolescence, girls into women's jobs very much earlier.

224 Avoidance of fishing or hunting certain creatures appears much more a matter of custom than of well defined and socially rationalized attitude. Frequently an animal is not hunted simply because the Seri feel it is too big and too strong for them to tackle.

157 Through all these activities, Seri individualism is curiously woven and accounts for the failure of anything that might resemble a collective effort.

Food Preferences and Preparation

252 Seri food is prepared in a simplest sort of way. [263] Boiling in water is usual with salt and sometimes a few other spices added. While most food is prepared that way, snakes and fishes are usually fried, without any ingredients. There has been a [178] notable shift toward greater fanciness in the ingredients, as they have become more readily available.

262 There are many preferences. Animals are scaled in desirability. Some fishes, marine turtles, chuckawalla, deer and peccary and duck are at the top of the list; lower animals, smaller fishes including puerco in the middle, while the sea gull and the pelican are probably at the very bottom of the pit. This again reflects temporal changes in tastes [178] although not necessarily a direct influence from the Mexicans.

Pets

231 Few pets are kept, other than dogs. Such animals as come are those captured accidentally. In most cases they are bird nestlings.

Taxonomy

825 Differential criteria are applied in the classification of different groups. There is less tendency to group birds than to group different mammals and classificatory ideas break down almost completely in smaller animals, especially insects and molluscs. Considering the economic importance of the molluscs, poor ability to distinguish the Gastropods from the Pelecypods is striking.

The classificatory criteria differ for different groups. Mammals are generally recognized by the furiness, birds by the ability to fly and the pres-

[P.54 B]

261 will exist on very small rations, bear burdens, and walk long dis-
262 tances. Their food is anything that walks, flies, crawls or swims,
[252] and they eat it raw with the same relish that we eat it cooked. There is but one thing they will not eat; they draw the line on the Gila monster. They are the most perfect type of human being adapted to desert conditions that exists today. Convey them blindfolded many miles into the heart of the desert, empty-handed, remove their blinders, and they will find both food and water where others would perish. The Papagos and Yaquis do almost as well."

302 We gave the women a small bag of flour and three or four cubes of
[123] sugar around, and the men three packets of tobacco each and two boxes of matches. Matches with them are very precious and are rarely used. Rather than use a match a woman came over to our fire and borrowed some coals to rebuild her fire. From this point the nearest matches are a good deal over one hundred and twenty miles distant, so they have to economize in every thing.

422 Each rag is valuable, and flour, sugar, coffee and rifle shells
[436] are absolutely priceless. While they know money, it has no value here.
[437] Only commodities go here. The most highly prized things are boards to
[389] make boats and rifle shells to get game and protect themselves. All empty shells are saved, the primer punched out, straightened, a match head put in, a little pinch of powder on top, the shell filled up, a long bullet inserted, the shell pinched tight, and a fresh set of ammunition is made.

142 The women and children certainly did look wild. Their hair was
291 frowsy and unkempt, their skirts and waists a patchwork of dirty rags
302 coming just below the knees; their features seamed and hard and cruel. Their complexion was very dark. They had no under garments. The children wore only a dirty shirt coming a little below their thighs, and even that is ragged. One or two of the women had a dirty bandanna over their heads. How I wished I could have seen them in their ancient, picturesque pelican-skin kilts!

302 I happened to witness the operation of a Seri beauty parlor. A
[029] mother brushed the hair of her thirteen-year-old daughter with a brush
[293] made from the fibrous roots of a certain grass tied together with
[515] sinew. During the operation if she came across a *piojo*, and she found several, she plucked him away from his feeding ground and dropped him in the fire.

The hair neatly brushed, the mother then mixed paint in a small vessel and with a tiny stick painted a bright blue design under the eyes and across the cheeks and nose, and then she added narrow white stripes, which, contrasting with the blue and the dark skin, produced a very striking effect. This paint is easily removed and the women often paint and remove three different face designs in one day.

304 I did not see tattoo work on either men or women, nor did they
301 wear ceremonial feathers as did our western Indians.

157 The women are virtuous and faithful and perform all the duties of
152 wife and mother and bear their share of hardships. The hard life,
[145] exposure and struggle for existence soon causes hard features, wrinkles
[165] and ugliness. Many babies die young and the tribe probably numbers
[167] only about two hundred.

123 The dancing by the driftwood fires continued as we turned in to rest, our eyes constantly drawn to the flame and the glittering eyes in the wild dark faces, while the waves of the sea accompanied the chanting in that mysterious isle of Seriland.

225
133

Seris - off to the fishing grounds - December 1934. Alcatraz Island in distance.

222 In Seriland most of the food comes from the sea. During April and May, at the time of my first visit, a green grass growing on the sea bottom was detached and washed ashore. The women dragged it up on the bank near camp and spread it out to dry. Some of the stalks contained about seven fine green seeds the size of a pin head. When dry, the
[285] women threshed them out with sticks on a piece of canvas. These are cleaned by the deft use of the *batea*, or winnowing basket, of which these people are past masters.

• 252 A pint of these fine seeds were parched in an olla over coals of
262 driftwood and constantly stirred to prevent burning. It was then ground on a flat rock like a *metate*---any flat rock---into a green meal which was very nourishing. This was cooked in an olla with turtle oil, making a porridge like thick green paint. It was then drunk or eaten with the fingers. If there is plenty, two fingers are used; if not, only one finger.

123 the flesh attached. This we roasted, or broiled, by standing it on
262 edge against two stakes in front of the fire. The breast was white and tender, somewhat like roast pig, but much more delicious.

262 The Seris cut off the great flippers, dug out the entrails, and
• 252 whenever there was a crack in the crowd of men, women and children, there was a dog lapping the blood and chewing a shred of meat before being driven off. Men, women and children tore off pieces of the tender
[251] meat and ate it raw. The blood which gathered in the hollow of the shell was baled out and saved in an olla.

A woman took out the coils of entrails, ripped them open with her finger, squeezed out the half-digested sea grass, which resembled closely-packed boiled greens, and rinsed them in the sea. The head
[251] was skillfully disjointed, and with flippers, entrails and liver, put up on the brush roof away from the sand and dogs.

Then began the feast; half the turtle being devoured immediately.
[264] To see Blanco, which name fits neither his complexion or character, gnaw the bone and tear away the raw flesh of a turtle flipper with his strong white teeth and cruel mouth, would not require much imagination to substitute the shin bone of a human being.

All parts of the sea turtle are utilized except the bones and portions of the head. The white, flexible under-shell is roasted and eaten, but how they can masticate and digest it is a mystery. I tried it and gave it up, as did all our party. It might have been a Goodyear tire, for all the impression we made on it, but even the Seri children
237 eat it. The carapace is broken into small pieces and dried out in an olla, and this yields a green oil. The shell is nearly one-half inch thick and filled with minute cells which carry oil. This oil is evidently a provision of nature to prevent barnacles and marine growths from attaching to the shell. This oil is poured into a previously cleaned section of intestine, fastened at one end, and then is bottled, ready for transportation or use.

The skin of the flippers is used for sandals. The broken pieces of carapace are also used for firing ollas. The shells are used for windbreaks, for receptacles for transporting household things on women's heads, and possibly for other needs. The stomachs are stretched, probably with sand, and when dried are used for transporting water, the same as we use a canteen.

185 The Seris are always improvident. They raise no cattle. They plant
261 nothing and the only crops they raise are children and dogs. They
[291] store no food away, eat when there is plenty, go hungry when there is
[231] nothing to eat. When they will eat raw turtle meat like animals, their
[262] taste is not refined. This is evidenced when they will eat a horse or burro dead, several days---scrape off the maggots to get a chance at it.

439 little gods I traded some muslin, a harmonica and some *panoche*. For
123 native hair brushes, I traded three fine-tooth combs for catching *piojos*, or lice, easier. I gave each woman a little round mirror and they were greatly pleased.

To the old Chief I presented a good pocket knife and a mirror. For the bow I traded a spark lighter. By striking the edge of a small wheel with milled edge it strikes a spark from a small flint and lights a wick.

123 We asked for a dance, and the Seris, using the bow and striking
635 sticks for music, the slender girl jumped up and down on a flat piece
[534] of tin which served, instead, of a turtle shell and also served for
[352] baking flour cakes upon also. A while before, Louis had seen a woman
[415] wash her head and that of a child in the chamber pot, empty the water and then cook in it.

After the girl had danced a while on the tin, old Manual Encina pushed her away and hopped on himself and did the double-shuffle for half an hour, after which we left for our camp.

197 The language of the Seris is the most difficult and peculiar I
194 have ever heard. It is spoken deep in the throat with the mouth open and sounds like no other language I have ever heard except that there are some sounds like Papago.

439 Even before breakfast of the next day we were still trading with
123 the Indians, and in an hour or so I possessed nearly everything they had except their rags. They seemed happy and contented and postponed their trip to Hermosillo. I left some stuff with Louis Thomson to be traded later for bows and arrows, Pelican skin dresses and baby cradles.

We then arranged our loads, said *Adios* to the Seris, and left for Hermosillo, where we arrived without accident about six-thirty p.m. The sun was very hot and the road heavy and the sun glaring, and we were all very tired when we reached town. I stored my stuff with Mr. Marks at Hotel Cohen, and will crate it before leaving for Yaqui River.

123 Before leaving the Seri Chief I told him that whenever he saw
202 this sign---Circle Bar D and left hand below it, it was me---their friend, and not to shoot at me. He said he would tell all the Seris, and I left him my card with the same sign on it. When will I see him again!

10: Davis E-5 (1922-ca. 1939) 1965 NU31 Seri NU31

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Seri Indians at home

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Seri Indians preparing their meal

123 223 [262] birds. As soon as the skin was off the breast was laid on top of the coals and roasted. The meat was red as raw beef, but it was free of fishy flavor and tasted excellent. The Indians ate pelican flesh till daylight.

252 [123] We gave them a generous helping of flour in a pail and this with water from a canteen, Santo stirred vigorously with a stick and then kneaded the dough with his hands until it was of the right consistency. He rolled hunks of this into little balls of dough about the size of golf balls, which he laid on his blanket. The boys picked these up, patted them flat like pancakes, scraped away ashes and sand from the edge of the fire, placed their pancakes in the hollow, covered them with hot ashes and hot sand, and in about three minutes pulled them out all baked brown. They shook the ashes and sand from them, leaving them clean and ready to eat. I am telling this in detail to show how simple cooking can be done without a dutch-oven, frying pan, or cooking grease, far from civilization.

281 [123] We were soon paddled across to their village on the shores of Kino Bay and the skins turned over to Mrs. Santo. The skins had been split down the back, leaving the breast unmarred. The wings and legs had already been removed, and she sewed the skins together with sinew recovered from the birds. The boys had secured an extra pelican making six, three to a side, then placed together and sewed lengthwise, making a robe three and a half feet wide by seven feet long.

[342] [291] [301]

Pegging out and drying a Pelican skin robe by a Seri Indian woman - 1936

Pinkley F-5 (1963-1965)1962 MU31 Seri MU31

III

MAMMALS

water for a week until it escaped. There was no intent to do away with it and serve it up for dinner later on.

The 3 species reported as eaten in the past are kangaroo rat, sea lion and the ringtail cat or cácomistle. Of these the little rodent had been supposedly "boiled in hot water with salt" which method of preparation may indicate that it happens quite recently yet. It is quite possible that in times of famine this animal is still used. The sea lion has been reported as "eaten once a long time ago. All of it. But not now. Its hide was once sold also but now it isn't used at all." This conflicts with McGee's statement (McGee, 189:202) that there was a taboo on eating sea lions among the Seris and there is no way to reconcile the information.

McGee's report may be as truthful as are the uncertain and hazy comments of the present day Indians.

On the other hand, the cougar belongs to a very dubious category, unless we can rely on Miguel Barnett's memory. All 4 of the younger informants emphatically deny that the cougar has ever been hunted for meat. But Miguel Barnett claimed that this has been done in the past, although he could not tell how long ago. Kroeber says nothing about this animal and this makes it difficult to date the events. At the time of Kroeber's visit, Miguel was at least 25 years old and the cougar could have been hunted either then or earlier. But today the Seris do not eat the flesh of the big cat and their abhorrence of it has been confirmed by the Mexicans to whom I talked about the subject, and who relish cougars' meat. This apparent distaste for the *el tigre's* flesh may well be a recent development quite unconnected with the lack of weapons. McGee (1894: *loc. cit.*) casually mentions that the Seris hunt both cougars and the jaguars but cites no evidence for it. Yet in his time Seris' almost only weapons were the bow and arrow and 'a lance which today has been replaced by firearms. I am unable to explain this contradictory behaviour.

Finally, there is the Ringtail cat or cácomistle. Although this beast has been reported as part of the diet, the information isn't too reliable. I had no way of checking whether this was the animal the Indians had in mind. Their description of it seemed to answer some other unspecified animal and their answers were confused. The fact is that the Ringtail cat does occur in the Seri territory and they are surely familiar with it.

Of the remaining 11 species none were ever mentioned by any of the informants as having been ever eaten. Their denial of eating the coyotes were most vehement. Coyote figures out probably

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IV

BIRDS

136 Woodpecker—There are several species in the area but
128 Gila woodpecker (*Centurus uropygialis*)
is certainly one of them.
Hummingbird—Unspecified species, one of several occurring in the area according to Dr. Orr.

Economic Uses

262 Such use as had been made of the birds is largely in the form of an addition to the diet. Reading McGee, one gets the impression that the importance of the birds in the Seri diet, in contrast to the marine animals of all description, has declined greatly. We do know that in the past various birds and, most especially, the seagulls and the pelicans represented a significant item. But today out of the basic list of 24 species, only six has been reported as eaten and all, with an exception of the duck, in the past tense. The duck
*[825] evidently is the only bird which the Seri consider really fit to eat and yet, even here, there is temporary avoidance. Moreno told me that this bird "we eat only when we visit the island (Isla Patos).
[223] But we do not eat it in September because it is
[252] too lean. We like it in December when it is fat. We then kill it at night with stones. It is roasted."[1]

All other birds were reported as eaten only in the past and this has been expressed more or less as follows: sea-gull eaten a few years ago, cormorant 8-10 years ago, pelicans 30-35 years ago. This would mean that the pelicans had been discarded as food, at least according to the official Seri version, in the early twenties, before Kroeber's visit. But the Seri disclaimers on the subject
183 of the bird diet are not entirely correct and re-
262 flect less the total rejection and more only low esteem in which these birds are held. For I have seen myself the sea-gull and the pelican eaten on
●[261] few occasions when times were tough, and the food supply was non-existent, owing to the choppy
*[825] and windy seas. The Seris caught in the act of cooking the meagre flesh of the pelican or the seagull were obviously apologetic.

262 It is interesting that some of the birds present in the area, the quail or the woodpeckers, are not eaten although these birds figure prominently in the diet of some of the other groups. It may well be that the Seris consider them too small to bother.

[252] As far as I could find out, eggs of only two species of birds, the sea-gull and the heron, are collected, boiled and eaten. But the eggs of the

[1]His statement requires some explanation. There is no taboo on eating duck but the bird does not occur in Desemboque or any other place known to the Seris, with the exception of Isla Patos. Here these birds winter, arriving in September and arrive worn out and lean, to recoup the fat, a few months later. The Seri unfamiliarity with their eggs is another indication that the birds come to Isla Patos only for the winter.

[136]
*[825]

9:Malkin F-5 (1953-1955)1962 NU31 Seri NU31

VIII

CRUSTACEA

136

Scientific	Common Name
Cirripedia	Barnacle
Axius vivesi	Mud-shrimp
Leptodius occidentalis	
Microphyrus platicoma	
Speleophorus schmitti	
Petrolisthus armatus	
Callinectes arcuatus	
Glyptoxanthus meandricus	
Pilumnus townsendi	

* 825 All animals in this group are considered live animals—and not plants. This interestingly includes the barnacle. The only way one may account for this is probably the Seris' observation of the cracked barnacles and of the moving flesh inside. Barnacles growing on the marine turtles are also classed as animals, though of a different kind than the barnacles growing on rocks or on the mangroves. They are called *piojos de cahuama*, literally, turtle lice.

The Seris regard *Glyptoxanthus* and *Pilumnus* as the same kind of animal. *Pilumnus* is considered to be merely a large specimen and "maybe an adult," the other *Pilumnus* "is young." When questioned about the reason for the identity the informants pointed out the hairiness of both crabs.

On the other hand, although *Speleophorus* and *Microphyrus* have the same Seri name, they are considered two different species.

Economy

262 Crustaceans play little role in the Seri diet. Very few are eaten at all and when they are, the amounts are insignificant and they are considered an inferior sort of food. The informants denied that they have eaten any of them in recent years, but allowed that two species, *Callinectes* and *Axius*, had been part of their diet in the past, although how long ago they didn't specify. There is no doubt, however, that in time of frequent sub-famines, the Indians resort to these lowly creatures. [261]

* 825 In addition to this, *Microphyrus* had been mentioned as a fish bait. It is possible that in a pinch [226] other forms are also so used. Finally, the most frequent function that the crustaceans play in the [857] Seri life is as objects of play for the boys who [411] spear them with the miniature two-pronged "puieros."

Sexing

For three species of the crustaceans the Seris indicated distinction differences between the sexes. In the two crabs, *Callinectes* and *Leptodius*, the males have narrow center plate while the female's center plate is wide, which in fact is a well-known sex difference in crab. In *Glyptoxanthus* and *Lep-*

[P.43 A]

123 nets of twisted fiber, hooked the nets in the ends of the notched
312 stick and started off nine or ten miles to the water hole in the heart
[492] of the mountains.

Water carried so far over loose, sandy soil, dodging cactus, threading a devious way among the *talus* thrown off the cliffs and slopes of canyon walls, with the water-bearer barefoot, acquires a value absolutely unknown to the man who draws an unlimited supply from a faucet.

The two men were gone six hours and when they returned they were almost staggering under the heavy loads of water, each man carrying at least one hundred and ten pounds of water, as the cans were full. In addition, one man had a canteen full.

The thirsty people drank sparingly, and a little Seri maid poured some of the precious liquid into a cooking olla for a thirsty dog. After the dog had lapped sufficient to allay his thirst, she carefully poured the residue back into the can, never losing a drop. One drop of water could not be spared after that arduous trip.

484 Bob says a man goes to Hermosillo occasionally and returns to the
147 coast, ninety miles, with two to five cans of *mescal*. It takes probably
648 four days to do it, but it is a wonderful feat of endurance. He said about thirty years ago a woman walked the ninety miles during one night, afoot, and reported to the Government House when it was opened at nine in the morning that about fifty of her people had been shot by Roberto's uncle at various times. This uncle was a very hard rough man and the Seris were fond of his mares and steers for meat, and used to steal, so he began shooting a goodly number. Fearing a man messenger would be shot, as men were frequently shot while going along the road, they sent a woman.

Ysabel was Governor at the time. Judgment was rendered against the uncle, and it is probable that a hanging squad would have been sent out to execute him. The Governor, a great friend of the family, sent for him, and he rode ninety miles at night on horseback and was saved with the Governor's help.

Roberto saw twelve Seris pack meat from two mares, two steers and two yearling heifers, for four or five miles to their boats. Their endurance and strength is phenomenal. The question naturally arises, "Why are not burros used by the Seris on the Island to ride and pack,
[492] as they are by their Mexican neighbors on the mainland?" It has been tried, but things were reversed; the Seris packed the burros around in their stomachs.

261 Roberto said: "These people, living on the verge of starvation,
262 never having a continuous food supply, would kill and eat every burro, and it is a common thing on the mainland, if a cow or horse dies, and Seris are in the neighborhood, they will try to beat the buzzards to it. They will gorge in times of plenty, and when food is scarce they

[text continues on p. 160]

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[262] burro dead, several days---scrape off the maggots to get a chance at it.

123 the same as do children and dogs, even though it may be hauled for
[132] six or eight miles on mule-back.
[137]

With gifts and hand-shaking all around, we bade goodbye to Lupe and the children and started on our way.

After leaving San Carlos we travelled through a cholla and giant cactus country until we reached Roberto's ranch at Santa Cruz. We had picked up Pancho Oliverria at San Carlos.

Just before leaving the ranch several men lifted a poor woe-begone mare to her feet. She was so poor and weak she could not get up by herself, but once up she managed to stand and finally staggered out into the *mesquital*, the place of mesquite. One eye was missing and watery matter was oozing out and running down her cheek. A night or two before, a lion caught and destroyed her colt, and probably in an effort to protect it the mare came too near the scene and the lion tore out her eye with one sweep of its paw.

Midway to Santa Cruz we stopped a moment at Blevens ranch *Costa Rica*. Blevens is a large, florid white-haired American who has lived in this country for fifteen or twenty years and hasn't much use for the Seris as they have killed so much of his stock.

• [24] At one time he noticed a dead cow which was all swelled up and badly spoiled. No white man could stand the smell. He told some Seris about it, and they flocked around it, and when they had finished all that was left were the hoofs and horns.

Nene's wife cooked dinner for us at their house which was composed of *carrizos* and mud roofed with earth, all supported by mesquite logs. Surrounding it was a hog tight mesquite fence, and in this corral was a fifty-foot deep well which furnished the water supply. Half a bull's hide laced on to an iron hoop and holding about fifteen or twenty gallons, was the water bucket. This was hauled up by a long rawhide rope passing through an over-head block drawn by a mule.

After leaving Santa Cruz with none added to our crew, we wended our way through a maze of mesquite, cottonwood and other timber, gradually working out of the timber to more open country where traveling was not so strenuous. The steering gear was worn so that the old truck would often head for a saguaro or mesquite and stop just short of being smashed.

At last we reached a region of flat baked lake-beds, covered in flood times. Sometimes we could travel fast at fifteen miles and then again we would go in the low where it was soft. About three miles from our destination we took off half our load and piled it to one side and jogged along through a wild desert country with no roads or trails, through chollas, desert brush and torote trees.

123 When we neared a hill of dark volcanic rock a number of Seri In-
312 dians darted out, and with their help we reached a camp near the coast
341 where Roberto had recently located a small well of sweet water.

123 We were up long before the sun; the following day the eighth of
• 261 March, but the baking of bread delayed our breakfast, so that while we ate, forty Indians were looking on at us. Little ones with streaming hair and fluttering shirt tails, paddled over the sand hills as fast as their brown legs could carry them in their fear of being late. Women in patched and ragged skirts hurried and plowed through the sand and over thorny mesquite brush to be in time---for what? To see the *gringos* eat their breakfast and to possibly pick up a few crumbs. Each grain of corn, each bean, even a piece of dough half the size of a dime is precious and carefully garnered and eaten.

To eat under the devouring eyes of these people who rarely have enough to eat and most of the time not half enough, to see the hungry dog-like look as I tried to swallow a piece of bread, to see the children half start up as if to run and seize it and watch the mothers jerk them back, to see them eye hungrily our sacks of provisions and not dart to touch them, is enough to make one choke.

Any bread left over we broke into little chunks and gave to the children. I then gave each child two lumps of cube sugar. A little later, as they would hide their sugar and try to repeat, I lined up fifteen or twenty eager, frowsy bare-legged boys and girls and gave each an orange.

123 Later, the mother would trade a basket or a hair brush for an
439 orange, a knife for two oranges. They brought Pelican skin rugs made from six Pelican hides sewed together which used to form their kilts. For these I traded four yards of *manta*, or cotton goods, of which they made garments.

I soon had a thriving trade on hand, especially in necklaces. I had bought a few cheap glass bead necklaces at fifteen cents each. These set them wild. For native necklaces of seeds I traded the bead ones. I secured most of the necklaces, and when they ran out the children were sent by their mothers into the brush to gather more beans and seeds. These were hastily strung and hung around the neck and exposed to my admiring gaze, but it was useless as I would not trade any more beads. I had to save them for the Seris on the Island. I would have given everything away there.

Also, I had to consider the moral effect of them securing things without effort on their part. Only for service, must we pay in food or goods. For bringing food, water, to go hunting for us, or for trade---except giving things to the little children. It was heart-breaking, but they were lucky to have water. Like many others less primitive, they work, hunt, fish, only when hunger drives them.

231 With the people were a crowd of undersized, starved, bony dogs. A Seri cleans up everything and the dogs get the rest. Each day they are gnawing on some old fish head that is long past having any nourishment, and is tough and strong as rawhide, but hope springs eternal in an Indian dog's heart or stomach, and again and again, will they search out an old fish head or Pelican bone. Discouraged, never!

262

262 DIET--staple and other foods consumed; seasonal changes in diet; proportion of various foods in diet; group differences in diet (e.g., by age, sex, social class); discriminations between edible and harmful foods; food preferences and avoidances; food taboos; etc. See also:

Food processing	25	Religious taboos	784
Nutritional balance	148	Food taboos during pregnancy	843
Standard of living	511	Infant feeding	853

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sizíi), laid inverted in the jacales; these shells also being used in natural condition. No wrought shells, molluscan or chelonian, were observed in use or found either in the jacales or on the hundreds of abandoned sites; but the vicinage of the rancherias, the abandoned camps and house sites, and the more frequented paths are bestrewn with slightly worn shells, evidently used for a time and then lost or discarded. The relative abundance of the fictile ware and this natural shell ware in actual use is about 1:3; i. e., each adult female usually possesses a single olla of the conventional type, and there may be one or two extra ollas and two or three clay dishes in each band or clan, while each matron or marriageable maid is usually supplied with two to four shell-cups and each little girl with one or two; and there are twice as many carapace trays as clay dishes. The disproportion of

FIG. 19—Shell-cup.

pottery and shell about the abandoned sites is naturally much greater; for the former is the most highly prized industrial possession of the women, while the shells are easily gained and lightly lost.

With respect to solid food the Seri may be deemed omniverous though their adjustment to habitat is such that they are practically carniverous.

The most conspicuous single article in the dietary of the tribe is the local green turtle. This chelonian is remarkably abundant throughout Gulf of California; but its optimum habitat and breeding-place would appear to be El Infiernillo, whose sandy beaches are probably better adapted to egg laying and hatching than any other part of the coast. Here it has been followed by the Seri; perhaps half of the aggregate life of the tribe is spent within easy reach of its feeding and breeding grounds, and tribesman and turtle have entered into an inimical com-

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munalty something like that of Siouan Indian and buffalo in olden time, whereby both may benefit and whereby the more intelligent communal certainly profits greatly. The flesh of the turtle yields food; some of its bones yield implements; its carapace yields a house covering, a convenient substitute for umbrella or dog-tent, a temporary buckler, and an emergency tray or cistern, as well as a comfortable cradle at the beginning of life and the conventional coffin at its end; while the only native foot-gear known is a sandal made from the integument of a turtle-flipper.

FIG. 20.—Turtle harpoon.

Doubtless the eggs and newly hatched young of the turtle are eaten, and analogy with other peoples indicates that the females are sometimes captured at the laying grounds or on their way back to water; but observation is limited to the taking of the adult animal at sea by means of a specialized harpoon. A typical specimen of this apparatus, as constructed since the introduction of flotsam iron, is illustrated in figure 20. It comprises a point 3 or 4 inches long, made from a nail or bit of stout wire, rudely sharpened by hammering the tip (eckl) between cobbles, and dislodging the loosened scales and splinters by thrusts and twirlings in the ground; this is set firmly and cemented with mesquite gum into a foreshaft of hard wood, usually 4 or 5 inches long, notched to receive a cord and rounded at the proximal end; the rounded end of this foreshaft fits into a socket of the main shaft, which may be either a cane-stalk (as shown in the figure) or a section of mesquite root; while a stout cord is firmly knotted about the foreshaft and either attached to the distal portion of the main shaft or carried along it to the hand of the user. The main shaft is usually 10 or 12 feet long, with the harpoon socket in the larger end, and is manipulated by a fisherman sitting or standing on his balsa. On catching sight of a turtle lying in the water, he approaches stealthily, preferably from the rear yet in such wise as not to cast a frightening shadow, sets the foreshaft in place, guides the point close to the carapace, and then by a quick thrust drives the metal through the shell. The frictional resistance between the chitin and the metal holds the point in place, and although the foreshaft is jerked out at the first movement of the transfixed animal the cord prevents escape; and after partial tiring

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262 Probably second in importance among Seri prey, as a food-source merely, stand the multifarious fishes with which the waters of Seriland teem, particularly if the class be held to comprise the cetaceans and seals and selachians ranked as leaders of the fish fauna in Seri lore.

225 Naturally, whales lie outside the ordinary range of Seri game, yet they are not without place in the tribal economy. During the visit to the Seri rancheria near Costa Rica in 1894, it was noted that various [173] events—births, deaths, journeys, etc—were referred to "The Time of the Big Fish"; and it was estimated from apparent ages of children and the like that this chronologic datum might be correlated roughly with the year 1887. The era-marking event was memorable to Mashém, to the elderwomen of the Turtle clan, and to other mature members of the group, because they had been enabled thereby to dispense with hunting and fishing for an agreeably long time, and because they had moved their houses; but the providential occurrence was not interpreted at the time. On visiting Isla Tiburon in 1895, the interpretation became clear; along 172 the western shore of Bada Ballena, near the first sand-spit north of the bight, lay the larger bones of a whale, estimated from the length of the mandibles and the dimensions of the vertebræ to have been 75 or 80 feet long. It was evident that the animal had gone into the shoal water at exceptionally high tide and had stranded during the ebb; while the condition of the bones suggested an exposure to the weather of perhaps half a dozen years. On the shrubby bank above the beach, [361] hard by the bleaching skeleton, stood the new rancheria, the most extensive seen in Seriland, comprising some fifteen or twenty habitable jacales; and fragments of ribs and other huge bones about and within the huts[1] attested transportation thither after the building, while the shallowness of the trails and the limited trampling of the big shrubbery gave an air of freshness to the site and surroundings. The 172 traditions and the relics together made it manifest that "The Time of 262 the Big Fish" had indeed marked an epoch in Seri life; that when the leviathan landed (whether through accident or partly through efforts of balsa men) it was quickly recognized as a vast contribution to the Seri larder; and that some of the clans, if not the entire tribe, gathered to gorge first flesh and blubber, next sun-softened cartilage and chitin, and then epiphyses and the latter bones. Some of the ribs were splin- [252] tered and crushed, evidently by blows of the hapf, in order to give access to the cancellate interiors; several of the vertebræ were battered and split, and nearly all of the bones bore marks of hapf blows, aimed to loosen cartilaginous attachments, start epiphyses, or remove spongy and greasy processes. Little trace of fire was found; in one case a mandible was partly scorched, though the burning appeared to be fortuitous and long subsequent to the removal of the flesh; and a bit of charred and gnawed epiphysis, much resembling the fragments of half-cooked turtle plastron scattered over Seriland, was picked up in

[1] One of the smaller vertebræ and part of a rib are shown in the upper figure of plate VI.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

172 one of the huts. The condition of the remains and the various indications connected with the rancheria corroborated the tradition that the 262 great creature had afforded unlimited and acceptable food for many moons; and various expressions of the tradition indicated that the event, though the most memorable of its class, was not unique in Seri lore.

225 A few bones and fragments of skin of the seal were found in and about the rancherias on Isla Tiburon, and an old basket rebottomed with sealskin was picked up in a recently abandoned jacal on Rada Ballena; a few bones provisionally identified with the porpoise (which haunts Boco Infierno in shoals) were also found amid the refuse about the old rancheria at the base of the long sand-spit terminating in Punta Tormenta; but nothing was learned specifically concerning the chase and consumption either of these animals or of the abundant sharks from which the island is named.

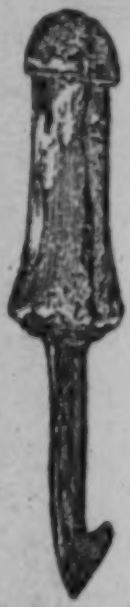

FIG. 21.—Fish-spear-head.

262 Among the exceedingly limited food supplies brought from the coast by the Seri group at Costa Rica in 1894, were rank remnants of partly desiccated fish, usually gnawed down to heads and tails; and Mashém and others spoke of fish as a habitual food, while Señor Encinas regarded it as the principal element of the tribal dietary. The harder bones and heavier scales of [172] several varieties of fish were also found abundantly among the middens of both mainland and Tiburon shores in 1895. None of the remains bore noticeable traces of fire; and all observations, including those of Señor Encinas, indicate that the smaller varieties of fish are habitually eaten raw, either fresh or partially dried, according to the state of appetite at the time of taking—or the condition of finding when picked up as beach flotsam. But a single piscatorial device was observed, 227 i. e., the barbed point and foreshaft, shown in figure 21,—the iron point being, of course, acultural, and probably obtained surreptitiously. This harpoon, which measures 6 inches in length over all, is designed for use in connection with the main shaft of a turtle-catching tackle; and it is evidently intended for the larger varieties, perhaps porpoises or sharks. In 1827 Hardy observed a related device:

> They have a curious weapon which they employ for catching fish. It is a spear with a double point, forming an angle of about 50°. The insides of these two points, which are 6 inches long, are jagged, so that when the body of a fish is forced between them, it can not get away on account of the teeth.[1]

222 325 Don Andrés Noriega, of Costa Rica, described repeatedly and circumstantially a method of obtaining fish by aid of pelicans, in which a

[1] Travels, p. 256.

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bottoms literally writhing with fishes stranded among beds of mollusks and slimy with the abounding plankton of a fecund coast. The region is one of ample, albeit lowly, food supply, where every experience tends toward inert reliance on providential chance, and where the stimulus of consistently conscious necessity seldom stirs the inventive faculty.

Closely connected with fish as a Seri food-source are the various molluscan and crustacean forms collectively called shellfish; and these contribute a considerable share of the sustenance of the tribe.

Apparently the most important constituent of this class of foods is the Pacific coast clam, which abounds in the broad mud-flats bordering Laguna La Cruz and other lagoons of Seriland, and which was still more abundant during a subrecent geologic epoch, to judge from the immense accumulation of the shells in Punta Antigualla. The clams are usually taken at low tide, without specialized apparatus. They are located by feeling with the feet in shallow water, and caught either with toes or with fingers, to be tossed into any convenient receptacle. When the water is entirely withdrawn from the flats, they are located by means of their holes, and are extricated either with a shell-cup or with some other improvised implement. Frequently the entire mess is thrown into a fire until the shells open, when they are withdrawn and the mollusks devoured practically raw; perhaps more commonly the shells are opened by blows of the hupf, and eaten without semblance of cooking; and, except on the surface, no trace of roasting was found among the vast accumulations of shells in Punta Antigualla.

Perhaps second to the clam in frequency of use is the local oyster, which abounds about the more sheltered shores of Tiburon. It is gathered with the hands, aided perhaps by a stone or stick for dislodging the shells either from the extended offshore beds at extreme low water, or from the roots of a mangrove-like shrub at a medium stage. The shells, like those of the clam, are frequently opened by partial roasting; and shells, sometimes scorched, are extensively scattered over the interior, indicating that the oyster is a favorite portable food. The popularity of this bivalve is shared by the Noah's-ark (*Arca*), to which some mystical significance is apparently ascribed; and the abundant limpets and bivalves and other mollusks are eaten indiscriminately, to judge from the abundance of their shells in the middens. The ordinary crab, too, is a favorite article of food, and its claws are numerous in camp and house refuse; while the lobster-like deep-water crab is introduced into the menu whenever brought to the surface by storms, as shown by its massive remains in the middens.

On the whole, shellfish form a conspicuous factor in Seri economy by reason of the considerable consumption of this class of food; but, viewed in the broader industrial aspect, the produce is notably primitive, and significant chiefly as indicating the dearth of mechanical and culinary devices.

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224 semiceremonial collective chase. The fleet but wary antelope, the pugnacious peccary, the wandering puma and jaguar, and the mountain sheep of the rocky fastnesses, are among the favorite objects of this style of chase; while the larger land birds and some of the water-fowl are taken in similar fashion.

The smaller land game comprises a tortoise or two, all the local

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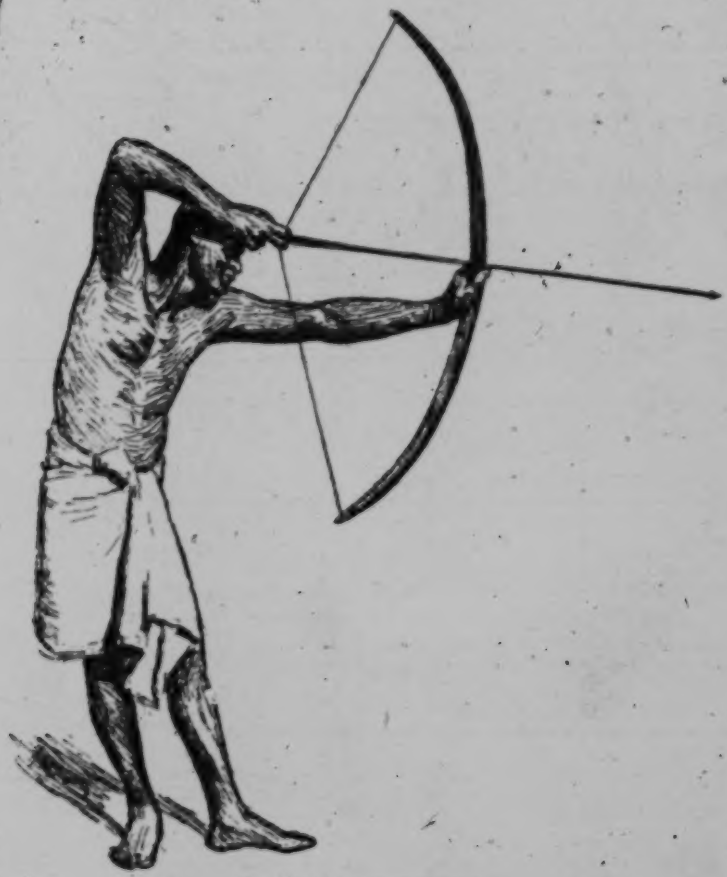

FIG. 23.—African archery posture.

snakes and lizards, and a good many insects, besides various birds, including hawks and owls, as well as the eaters of seeds and insects. The crow and vulture are also classed as edible, though they are rare in Seriland, probably because of the effective scavengering of the province by its human residents. It is a significant fact that the

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smaller rodents, especially the long-tail nocturnal squirrel, are excluded from the Seri menu by a rigidly observed tabu of undiscovered meaning. A general consequence of this tabu is readily observed on entering Seriland; there is a notable rarity of the serpents, the high-colored and swift efts, and the logy lizards and dull phrynosomas so abundant in neighboring deserts, as well as of song birds and their nests; and this dearth is coupled with a still more notable abundance of the rodents, which have increased and multiplied throughout Seriland so abundantly that their burrows honeycomb hundreds of square miles of territory. A special consequence of the tabu is found in the fact that the myriad squirrel tunnels have rendered much of the territory impassable for horses and nearly so for pedestrians, and have thereby served to repel invaders and enable the jealous tribesmen to protect their principality against the hated alien. Seriland and the Seri are remarkable for illustrations of the interdependence between a primitive folk and their environment; but none of the relations are more striking than that exemplified by the timid nocturnal rodent, which, protected by a faith, has not only risen to the leading place in the local fauna, but has rewarded its protectors by protecting their territory for centuries.

In both the collective and the strategic chase, constant advantage is taken of weakness and incapacity, whether temporary or permanent, of the prospective quarry; so that diseased and wounded as well as sluggish and stupid animals are eliminated. The effect of this policy on the fauna is undoubtedly to extinguish the less capable species and to stimulate and improve the more capable; i. e., the presence of the human factor merely intensifies the bitter struggle for existence in which the subhuman things of this desert province are engaged. At the same time, the entrance of the human folk into the struggle characteristic of subhuman species serves to bar them from one of the most helpful ways to the advancement of their kind—i. e., the way leading through cotoleration with animals to perfected zoöculture. The most avidly sought weanlings in the Seri chase are the helpless young, and the heavily gravid dams which are pursued and rent to fragments with a horrid fury doubtless reflecting the practical certainty of capture and the exceptionally zoöculent titbits afforded by the fetal flesh; naturally the cruel custom reacts on habitual thought in such wise that the very sight of pregnancy or travail or newborn helplessness awakens slumbering blood thirst and impels to ferocious slaughter. To such custom and deep-planted mental habit may be ascribed some of the most shocking barbarities in the history of Seri rapine, tragedies too terrible for repetition save in bated breath of survivors, yet explaining the utter horror in which the Seri marauder is held on his own frontier. At the same time the hunting custom and the mental habit explain the blindness of the Seri to the rudiments of zoöculture, and clarify their intolerance of all animal associates, save the sly coyote that habitually

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177 224 knives in severing the tough integuments and tendons of horses and kine, although the tendency has not yet resulted (as elsewhere noted, ante, pp. 153–154) in the development of a knife-sense; and although boys on the frontier play at roping dogs, no effort to use the riata or any form of rope is made in the actual chase. As naively explained by Mashém amid approving grunts from his clan-mates, they have no time for ropes or knives when hungry.

262 A quantitatively unimportant yet by no means negligible fraction of the normal diet of Seriland is vegetal; and while the sources of vegetal food are many and diverse, the chief constituent is a single product characteristic of American deserts, viz, the tuna, or prickly pear.

222 All of the cacti of the region yield tunas in considerable quantity. The pitahaya is perhaps the most abundant producer, and its name is often given to the fruit; the huge saguaro affords an enormous annual yield, and the still more gigantic saguesa is even more prolific, especially in its immense forests along the eastern base of Sierra Seri; the cina adds materially to the aggregate product, while the nopal, or common prickly pear, contributes a quota acquiring importance from the facility with which it may be harvested. The fruits of all these cacti are sometimes classed as sweet tunas, in contradistinction from the sour tunas yielded in great abundance by the cholla and consumed with avidity by stock, though seldom eaten by men. The edible tunas average about the size of lemons, and resemble figs save that their skin is beset with prickles. The portion eaten is a luscious pulp, filled with minute seeds like those of the fig save that they are too hard for mastication or digestion, its flavor ranging from the sickly sweet of the overcultivated fig to a pleasant acidity. While occasional tunas may be found at any time during the year, the normal harvest occurs about midsummer, or shortly before the July-August humid season, and lasts for several weeks. During the height of the season the clans withdraw from the coast and give undivided attention to the collection and consumption of the fruits, gorging them in such quantities that, according to the testimony of the vaqueros, they are fattened beyond recognition. Commonly the tunas are eaten just as they are gathered, and the families and larger bands move about from pitahaya to pitahaya and from valley to valley in a slovenly chase of this natural harvest, until waning supply and cloying appetite drive them back to the severer chase of turtle and pelican. The fruit is not cooked, and never preserved save in the noisome way of nature, and is rarely transported in quantities or over distances of industrial importance; yet the product may have some connection with the basketry of the tribe. The devices for collecting the fruits, especially from the lofty saguaro and saguesa, are mere improvisations of harpoon shafts, paloblanco branches, or chance cane-stalks carried primarily for arrow-making or balsa construction.

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There is no such well-studied and semiceremonial apparatus for tuna gathering as, for example, the Papago device made from the ribs of the dead saguaro in accordance with traditional formula.

Perhaps second in importance among the vegetal constituents of Seri diet is the mesquite bean, which is gathered in random fashion whenever a well-loaded tree is found and other conditions favor. The woody beans and still woodier pods are roughly pulverized by pounding with the hupf on any convenient stone used as an abat (metate or mortar), or, if suitable stones are not at hand, they are carried in baskets or improvised bags to the nearest shore or other place at which stones may be found. The half-ground grist is winnowed in the ordinary way of tossing in a basket; and the grinding and winnowing continue alternately until a fairly uniform bean meal is obtained. So far as was actually observed this is eaten raw, either dry in small pinches or, more commonly, stirred in water to form a thin atole; but expressions at Costa Rica indicated that the meal is sometimes stirred in boiling water or pot-liquor, and thus partially cooked, in times of rest and plenty.

Other vegetal products used as food comprise a variety of seeds collected from sedges and grasses growing about the mud-flats of Laguna La Cruz and other portions of the province, as well as the seeds and nuts of the scant shrubbery of shores and mountains; while a local seaweed or kelp is eaten in small quantity, apparently as a condiment, and is sometimes carried on journeys even as far as Costa Rica, where specimens were obtained in 1894.

It is of interest to note that one of the most distinctive constituents of the Sonoran flora, and one intimately connected with human life in the great neighboring province of Papagueria, is of negligible rarity in Seriland; this is the visnaga (*Echinocactus*, probably of two or three species), the thorniest of the cacti and the only one containing consumable pulp and sap. This peculiar plant is of no small interest in itself as a striking example of the inverse relation between protective devices of chemical sort (culminating in acrid, offensive, or toxic juices) and the mechanical armaments so characteristic of desert plants;[1] it is of still deeper interest economically as the sole source of water over broad expanses of the desert, and one to which hundreds of pioneers and travelers have been indebted for their lives; and it is of interest, too, as a factor of Papago faith, in which the visnaga ranks among the richer guerdons of the rain gods. Throughout most of Papagueria this cactus is fairly abundant; usually there are several specimens to the square mile of suitable soil (it is not found in playas or on the ruggeder sierras), so that it is always within reach of the sagacious traveler; but it diminishes in abundance toward the borders of Seriland, and not more than a dozen examples were found in the portions of that province traversed by the 1895 expedition. Its rare occurrence,

[1] Cf. The Beginning of Agriculture: The American Anthropologist, vol. viii, Oct., 1895, pp. 350-373.

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extreme lightness in proportion to capacity, a quality due to the spongy character of the torote coil and to the thinness of the splints used in the woof. The inside dimensions, weight, and dry-measure capacity (filled to the level of the brim with rice) of two typical specimens approaching extremes in size are indicated in the accompanying table. As noted elsewhere, the ware is absolutely without decorative devices in weave, paint, or form; it is baldly utilitarian, a model of economy in material and in the balance between structure and function, approaching in this respect the thin-walled canteen-olla, the graceful balsa, and the light but effective harpoon. The structural correspondence of the ware to a widespread type and its limited use among the tribe suggest an aecultural origin for the Seri basketry; but the delicate adjustment of means to ends in the manufacture and the strictly local character of the material quite as strongly suggest an indigenous development.

Museum No.	Diameter	Depth	Weight	Capacity
174529....	38 cm. (15 in.)	9.5 cm. (3¾ in.)	482 g. (17 oz.)	6.25 l. (6.6 qt.)
174528a ..	25 cm. (9 in.)	5.0 cm. (2 in.)	142 g. (5 oz.)	1 l. (1.06 qt.)

It is impossible to portray justly the food habits of the Seri without some reference to a systematic scatophagy, which seems to possess fiducial as well as economic features. In its simplest aspect this custom is connected with the tuna harvests; the fruits are eaten in enormous quantity, and are imperfectly digested, the hard-coated seeds especially passing through the system unchanged; the feces containing these seeds are preserved with some care, and after the harvest is passed the hoard (desiccated, of course, in the dry climate) is ground between hupf and abst, and winnowed in baskets precisely as are the mesquite beans; and the product is then eaten either dry or in the form of atole like the mesquite meal. In superficial view this food factor is the precise homologue of the "second harvest" of the California Indians as described by Clavigero, Baegert,[1] and others; but it gains importance, among

[1] An Account of the Aboriginal Inhabitants of the Californian Peninsula, as given by Jacob Baegert, a German Jesuit missionary. . . . Translated and arranged for the Smithsonian Institution by Charles Rau; Ann. Rep. Smithsonian Inst. for 1863, pp. 352-369. Baegert's account of foods (pp. 363-367) is so apposite as to be worthy of quotation nearly entire:

"Notwithstanding the barrenness of the country, a Californian hardly ever dies of hunger, except, perhaps now and then an individual that falls sick in the wilderness and at a great distance from the mission, for those who are in good health trouble themselves very little about such patients, even if these should happen to be their husbands, wives, or other relatives; and a little child that has lost its mother or both parents is also occasionally in danger of starving to death, because in some instances no one will take charge of it, the father being sometimes inhuman enough to abandon his offspring to its fate.

"The food of the Californians, as will be seen, is certainly of a mean quality, yet it keeps them in a healthy condition, and they become strong and grow old in spite of their poor diet. The only period of the year during which the Californians can satisfy their appetite without restraint is the season of the pitahayas, which ripen in the middle of June and abound for more than eight weeks. The gathering of this fruit may be considered as the harvest of the native inhabitants. They can eat as much of it as they please, and with some this food agrees so well that they become corpulent during that period; and for this reason I was sometimes unable to recognize at first sight individuals, otherwise perfectly

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262 514 the Seri at least, as the sole method of storing or preserving food-supplies, and hence as the germ of industrial economy out of which a

000 familiar to me, who visited me after having fed for three or four weeks on these pitahayas. They do not, however, preserve them, and when the season is over they are put again on short rations. Among the roots eaten by the Californians may be mentioned the yuka, which constitutes an important article of food in many parts of America, as, for instance, in the island of Cuba, but is not very abundant in California. In some provinces it is made into a kind of bread or cake, while the Californians, who would find this process too tedious, simply roast the yukas in a fire like potatoes. Another root eaten by the natives is that of the aloe plant, of which there are many kinds in this country. These species of this vegetable, however, which afford nourishment—for not all of them are edible—do not grow as plentifully as the Californians might wish, and very seldom in the neighborhood of water; the preparations, moreover, which are necessary to render this plant eatable, require much time and labor. . . . I saw the natives also frequently eat the roots of the common reed, just as they were taken out of the water. Certain seeds, some of them not larger than those of the mustard, and different sorts in pods that grow on shrubs and little trees, and of which there are, according to Father Piccolo, more than sixteen kinds, are likewise diligently sought; yet they furnish only a small quantity of grain, and all that a person can collect with much toil during a whole year may scarcely amount to 12 bushels.

"It can be said that the Californians eat, without exception, all animals they can obtain. Besides the different kinds of larger indigenous quadrupeds and birds, they live nowadays on dogs and cats; horses, asses, and mules; fowl, as owls, mice, and rats; lizards and snakes; bats, grasshoppers, and crickets; a kind of green caterpillar without hair, about a finger long, and an abominable white worm of the length and thickness of the thumb, which they find occasionally in old rotten wood, and consider as a particular delicacy. The chase of game, such as deer and rabbits, furnishes only a small portion of a Californian's provisions. Supposing that for 100 families 100 deer are killed in the course of a year, which is a very favorable estimate, they would supply each family only with three meals in three hundred and sixty-five days, and thus relieve but in a very small degree the hunger and the poverty of these people. The hunting for snakes, lizards, mice, and field-rats, which they practise with great diligence, is by far more profitable and supplies them with a much greater quantity of articles for consumption. Snakes, especially, are a favorite sort of small game, and thousands of them find annually their way into the stomachs of the Californians.

"In catching fish, particularly in the Pacific, which is much richer in that respect than the Gulf of California, the natives use neither nets nor hooks, but a kind of lance—that is, a long, slender, pointed piece of hard wood—which they handle very dexterously in spearing and killing their prey. Sea-turtles are caught in the same manner.

"I have now mentioned the different articles forming the ordinary food of the Californians; but, besides these, they reject nothing that their teeth can chew or their stomachs are capable of digesting, however tasteless or unclean and disgusting it may be. These they will eat the leaves of the Indian fig-tree, the tender shoots of certain shrubs, tanned or untanned leather, old straps of rawhide, with which a house was tied together for years; fish, the lungs of poultry, sheep, goats, and calves; putrid meat or fish swarming with worms, damaged wheat or Indian corn, and many other things of that sort which may serve to appease the hunger they are almost constantly suffering. Anything that is thrown to the dogs will be also accepted by a Californian, and he takes it without feeling offended, or thinking for a moment that he is treated below his dignity. For this reason no one took the trouble to clean the wheat or maize, which was cooked for them in a large kettle, of the black worms and little bugs, even if the numbers of these vermin had been equal to that of the grains. By a daily distribution of about six bushels of bran (which they are in the habit of eating without any preparation) I could have induced all my parishioners to remain permanently in the mission, excepting during the time when the pitahayas are gathered.

"I saw one day a blind man, 70 years of age, who was busily engaged in pounding between two stones an old shoe made of raw deerskin, and whenever he had detached a piece he transferred it promptly to his mouth and swallowed it; and yet this man had a daughter and grown grandchildren. As soon as any of the cattle are killed and the hide is spread out on the ground to dry, half a dozen boys or more will instantly rush upon it and commence to work with knives, flints, and their teeth, tearing and scratching off pieces, which they eat immediately, till the hide is full of holes or scattered in all directions. In the mission of St. Ignatius and in others further toward the north there are persons who will attach a piece of meat to a string and swallow it and pull it out again a dozen times in succession, for the sake of prolonging the enjoyment of its taste.

171 262 514 252 "I must here ask permission of the kind reader to mention something of an exceedingly disgusting and almost inhuman nature, the like of which probably never has been recorded of any people in the world, but which demonstrates better than anything else the whole extent of the poverty, uncleanness, and variety of these wretched beings. In describing the pitahayas I have already stated that they contain a great many small seeds resembling grains of powder. For some reason unknown to me these seeds are not condemned in the stomach, but pass off in an undigested state, and in order to save them the natives collect during the season of the pitahayas that which is discharged from the

1: McGee E-5 (1894-1895)1896 NU31 Seri NU31

feeble thrift-sense may be regarded as emerging. And the rise of thrift in Seriland, like esthetic and industrial beginnings generally, is shaped

human body, separate the seeds from it, and roast, grind, and eat them, making merry over their loathsome meals, which the Spaniards therefore call the second harvest of the Californians. [This statement is corroborated in all particulars by Clavigero in his Storia della California, Venice, 1789, vol. i, p. 117.] When I first heard that such a filthy habit existed among them I was disinclined to believe the report, but to my utter regret I became afterwards repeatedly a witness to the proceeding, which they are unwilling to abandon, like many other bad practices [probably because of the fiducial character of the custom—W J M.]. Yet I must say in their favor that they have always abstained from human flesh, contrary to the horrible usage of so many other American nations who can obtain their daily food much easier than these poor Californians.

"They have no other drink but the water, and heaven be praised that they are unacquainted with such strong beverages as are distilled in many American provinces from Indian corn, the aloë, and other plants, and which the Americans in those parts merely drink for the purpose of intoxicating themselves. When a Californian encounters during his wanderings a pond or pool, and feels a desire to quench his thirst, he lies flat on the ground and applies his mouth directly to the water. Sometimes the horns of cattle are used as drinking vessels.

"Having thus far given an account of the different articles used as aliment by the aborigines of the peninsula, I will now proceed to describe in what manner they prepare their victuals. They do not cook, boil, or roast like people in civilized countries, because they are neither acquainted with these methods nor possessed of vessels and utensils to employ for such purposes; and, besides, their patience would be taxed beyond endurance if they had to wait till a piece of meat is well cooked or thoroughly roasted. Their whole process simply consists in burning, singeing, or roasting in an open fire all such victuals as are not eaten in a raw state. Without any formalities, the piece of meat, the fish, bird, snake, field mouse, lizard, or whatever it may be is thrown into the flames or on the glowing embers, and left there to smoke and to sweat for about a quarter of an hour; after which the article is withdrawn, in most cases only burned or charred on the outside, but still raw and bloody within. As soon as it has become sufficiently cool, they shake it a little in order to remove the adhering dust or sand, and eat it with great relish. Yet I must add here, that they do not previously take the trouble to skin the mice or disembowel the rats, nor deem it necessary to clean the half-emptied entrails and maws of larger animals, which they have to cut in pieces before they can roast them. Seeds, locusts, grasshoppers, green caterpillars, the white worms already mentioned, and similar things that would be lost, on account of their smallness, in the embers and flames of an open fire, are parched on hot coals, which they constantly throw up and shake in a turtle shell or a kind of frying pan woven out of a certain plant. What they have parched or roasted in this manner is ground to powder between two stones, and eaten in a dry state. Bones are treated in like manner.

"They eat everything unsalted, though they might obtain plenty of salt; but since they cannot dine every day on roast meat and constantly change their quarters, they would find it too cumbersome to carry always a supply of salt with them.

"The preparation of the aloë, also called *mezcals* or *magueys* by the Spaniards, requires more time and labor. The roots, after being properly separated from the plants, are roasted for some hours in a strong fire, and then buried, twelve or twenty together, in the ground, and well covered with hot stones, hot ashes, and earth. In this state they have to remain for twelve or fourteen hours, and when dug out again they are of a fine yellow color, and perfectly tender, making a very palatable dish, which has served me frequently as food when I had nothing else to eat, or as dessert after dinner in lieu of fruit. But they act at first as a purgative on persons who are not accustomed to them, and leave the throat somewhat rough for a few hours afterwards.

"To light a fire the Californians make no use of steel and flint, but obtain it by the friction of two pieces of wood. One of them is cylindrical, and pointed on one end, which fits into a round cavity in the other, and by turning the cylindrical piece with great rapidity between their hands, like a twirling stick, they succeed in igniting the lower piece if they continue the process for a sufficient length of time.

"The Californians have no fixed time for any sort of business, and eat, consequently, whenever they have anything, or feel inclined to do so, which is nearly always the case. I never asked one of them whether he was hungry who failed to answer in the affirmative, even if his appearance indicated the contrary. A meal in the middle of the day is the least in use among them, because they all set out early in the morning for their foraging expeditions, and return only in the evening to the place from which they started, if they do not choose some other locality for their night quarters. The day being thus spent in running about and searching for food, they have no time left for preparing a dinner at noon. They start always empty-handed; for if perchance something remains from their evening repasts they certainly eat it during the night in waking moments or on the following morning before leaving. The Californians can endure hunger easier and much longer than other people; whereas they will eat enormously if a chance is given. I often tried to buy a piece of venison from them when the skin had but lately been stripped off the deer, but regularly received the answer that nothing was left; and I knew well enough that the hunter who killed the animal needed no assistance

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

262 514 by faith and attendant ceremony; for the doubly consumed food is credited with intensified powers and virtues, and held to be specially potent in the relief of hunger and in giving endurance for the hard warpath or prolonged chase; it is—and makes—very strong ("mucho fuerte"), in the laconic and confident explanation of Mashóm. Incongruous as the custom is to higher culture, it finds natural suggestion in the everyday habits of the tribe, who are wonted not only to the eating of animal entrails in raw and uncleaned condition, but especially to the relief of the sharpest pangs of hunger by means of the soft structures and their seminassimilated contents—an association of much influence in primitive thought. Concordantly with the custom and the faith grown out of it, the excreta in general take a prominent place in the Seri mind; the use of urine in ablution, etc, is little understood and may be passed over; but all bony feces—and it may be noted that the "sign" of the Seri more resembles that of wolves or snake-eating swine than that of men—following gorges of large quarry are customarily located and kept in mind for recourse in time of ensuing shortage, when the mass is ground on the abst and reconsumed; and even the ordinary discharge is preserved during the seasons of less reliable food-supply.

514 764 There is an obscure connection between this curious and repulsive food custom of the Seri and the mortuary customs of the tribe, which

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000 to finish it. Twenty-four pounds of meat in twenty-four hours is not deemed an extraordinary ration for a single person, and to see anything eatable before him is a temptation for a Californian which he cannot resist; and not to make away with it before night would be a victory he is very seldom capable of gaining over himself."

Clavijero's account of the food-habits of the California Indians is similar, though generally less explicit. According to him the seeds forming the "second harvest of pitahayas" are extracted carefully while fresh, and are afterward roasted, ground, and preserved in the form of meal against the ensuing winter. Of the reswallowing habit, he says:

"The savages living in the northern part of the peninsula have found the secret, unknown to mortals in general, to eat and re-eat the same meal repeatedly. They tie a string around a mouthful of meat dried and hardened in the sun. After chewing it for a while they swallow it, leaving the string hanging from the mouth. After two or three minutes, by means of the string they draw the meat up again to be rechewed, and this they repeat as many times as may be necessary until the morsel is consumed or so softened that the string will not hold it any longer. In extracting it from the throat they make such a noise that to one who has not before heard it it appears that they are choking themselves.

"When many individuals are gathered together to eat in this manner it is practiced with more ceremony. They seat themselves on the ground, forming a circle of eight or ten persons. One of them takes the mouthful and swallows it, and afterwards draws it up again and passes it to the next one, and this one to another, proceeding thus around the circle with much enjoyment until the morsel is consumed. This has astonished the Spaniards who have seen it, and indeed it would not be credible if it had not been unanimously testified to by all who have been in that country. Several Jesuits who did not believe this, notwithstanding that sincere and prominent persons confirmed it, having afterwards gone to California saw it with their own eyes. Among those Indians who have embraced Christianity this loathsome and dangerous method of eating has been abandoned in consequence of the continual reproofs of the missionaries." (Historia de la Antigua ó Baja California, obra postuma del Padre Francisco Javier Clavijero; Mexico, 1852, p. 34.)

191 262 The records of Clavijero and Burgert indicate fair correspondence in the food habits of the California Indians and the Seri, though there are certain noteworthy differences, e. g., the taboo of the badger among the former and of the ground-squirrel among the latter; it would also appear that the Californians were the more largely vegetarian and the better advanced in culinary processes. The customs of the Seri throw light on the genesis of "re-eating", for the process would appear to be but an extension of the repeated mouthing and swallowing of tendinous strings still attached to the bones of larger animals.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

514 764 was not detected until the opportunity for personal inquiry had gone by. About the rancherias on Isla Tiburon, and especially about the extensive house-group at the base of Punta Tormenta, there are burial places marked by cairns of cobbles, or by heaps of thorny brambles where cobbles are not accessible; and most of these cairns and bramble-piles are supplemented by hoards of desiccated feces carefully stored in shells, usually of *Arca* (a typical specimen is illustrated in figure 25). The hoards range from 50 to 500 shells in quantity, and there were fully a score of them at Punta Tormenta alone. About the newer rancherias, as at Rada Ballena, where there are no cemeteries, the hoards are simply piled about small clumps of shrubbery. The meaning of the association of the dietetic residua and death in the Seri mind is not wholly clear; yet the connection between the "strong food" for the warpath and the

[262 415]

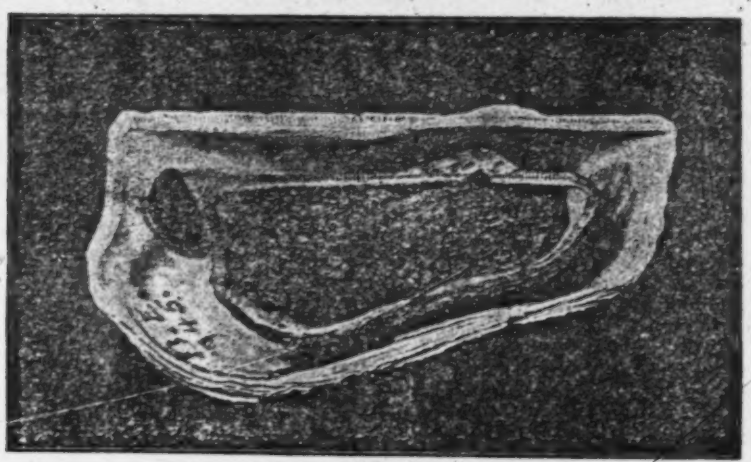

FIG. 25.—Scatophagic supplies.

mystical food for the manes in the long journey to the hereafter is close enough to give some inkling of the meaning.[1]

262 In recapitulating the food supplies of the Seri it is not without interest to estimate roughly the relative quantities of the several constituents consumed; and the proportions may be made the more readily comprehensible by expression in absolute terms. As a basis for the quantitative estimate, it may be assumed that the average Seri, living, as he does, a vigorous outdoor life, consuming, as he does, a diet of less average nutrition than the selected and cooked foods of higher culture, and attaining, as he does, an exceptional stature and strength, eats something more than the average ration; so that his ration of solid food may be lumped at 2.75 pounds (about 1,250 grams) daily, or 1,000

[1] Cf. Scatologic Rites of all Nations, by Captain John G. Bourke, 1891, especially chapter II, pp. 459-462. The Seri custom, resting as it does, on an ardent economic basis, tends to explain the scatophagy of the Hopi and other tribes described by Bourke.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

262 [162] pounds (about 455 kilograms) yearly. The aggregate diet of the tribe may be estimated also by assuming the population to comprise 300 full eaters, besides, say, 50 nurslings negligible in the computation; so that the annual consumption of the tribe may be reckoned at 300,000 pounds (136,000 kilograms), or 150 tons, of solid food. Accordingly the several constituents may be estimated, as shown in the accompanying table, in percentages of the total, in pounds aggregate and apiece for the eaters, and (so far as practicable) in units both aggregate and apiece; the weights of units being roughly averaged at 100 pounds (45 kilograms) for turtles, 12½ pounds (5.6 kilograms) for large land game, 450 pounds (about 200 kilograms) for stock, and 2 ounces (56.7 grams) for tunas.

Estimated annual dietary of the Seri tribe

Constituents	Per cent	Quantity		Units	
		Aggregate	Apiece	Aggregate	Apiece
		Pounds	*Pounds*		
Turtles	25	75,000	250	750	⅓
Pelicans	5	15,000	50	1,200	4
Other water-fowl and eggs	8	24,000	80	.....	.....
Fish	15	45,000	150	.....	.....
Shellfish (except turtles)	10	30,000	100	.....	.....
Large land game	7	21,000	70	280	¼
Other land game	8	24,000	80	.....	.....
Stock	6	18,000	60	40	1/7
Tunas	9	27,000	90	216,000	720
Other vegetals	5	15,000	50	.....	.....
Miscellaneous	2	6,000	20	.....	.....
Total	100	300,000	1,000	.....	.....

Of course the constituents vary with temporary conditions; during "The Time of the Big Fish", practically all other sources of food were neglected until the providential supply was exhausted; during the decades of main subsistence on stolen stock it is probable that the consumption of other constituents, perhaps excepting the tunas, was proportionately reduced; and it is not improbable that during the warfare between Seri and Tepoka, described by Hardy, the consumption of turtles was materially diminished. Judging from the direct and indirect data and from general analogies, the least variable constituent is the cactus fruit, which probably fails but rarely and is so easily harvested as practically to supplant all other supplies during its season of a month or more. At the best, too, the quantitative estimates are nothing more than necessarily arbitrary approximations, based on incomplete inquiries and observations;[1] yet they are better than no estimates at all, and

[1] About 200 turtle-shells were noticed about the rancherias at Punta Tormenta and Bahía Kunkaak alone in 1895, all being less than two years old, as judged from the degree of weathering.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

appear to form a fairly trustworthy basis for consideration of the Seri food-habits. 262

On reviewing the constituents it would appear that the Seri must be regarded as essentially a maritime people, in that about two-thirds of their food is derived from the sea; also that they must be deemed essentially carnivorous, since fully five-sixths of their diet (84 per cent plus a share of the miscellaneous—chiefly scatophagous—category) is animal. The tabulation does not show the relative proportions of the several constituents cooked and eaten raw, but the best available data indicate that fully three-fourths of the ordinary dietary, both animal and vegetal, is ingested in raw condition, and that the greater part of the remaining fourth is imperfectly cooked.

In recapitulating the devices for food-getting, it is found that nearly all of the more distinctive artifacts and crafts are either directly or indirectly connected with that primary activity of living things, food-conquest. Foremost among the distinctive artifacts of the Seri, in its relation to daily life and in its technical perfection, is the canteen-olla; probably second in importance, and also in technical perfection, is the balsa—whose functions, however, extend beyond simple food-getting; next comes the crude and simple, yet economically perfected, turtle-harpoon, with its variants in the form of arrow (with a function in warfare as well as in food-getting) and fire-drill; while the light basket-tray, although capable of carrying ten to twenty-five times its own weight, is perhaps the least perfect technically of the artifacts directly connected with sustentation. And it should be noted that the prevailing tools—hupf, ahst, multifunctional shell, and awl of mandible or bone or tooth—have either an immediate or a secondary connection with food-getting. 182

NAVIGATION

At first sight Seriland seems an abnormal habitat for a primitive people, since its land area is cleft in twain by a stormy strait—a strait whose terrors to the few Caucasian navigators who have reached its swirling currents are indicated by their appellations, "El Canal Peligroso de San Miguel"[1] and "El Infiernillo"; for such a stretch of troubled water is commonly a more serious bar to travel than any moderate land expanse. This intuitive notion of the effectiveness of a water barrier, and the correlative feeling of the incongruity of a land barrier insuperable for centuries, is well illustrated by prevailing opinion throughout northwestern Mexico; for it is commonly supposed in Sonora and neighboring states that Seriland is conterminous with Isla Tiburon, i. e., that the mainland portion of the province (including Sierra Seri with its flanking footslopes) lies beyond the diabolic channel. Yet longer scrutiny shows that the superficial impression merely mirrors Caucasian thought and fails to touch the essential conditions, 131

[1] Hardy, Travels, p. 291.

2: Kroeber E-5 (1930)1931 NU31 Seri NU31

The Seri "second harvest" of cactus seeds (p. 209), which Baegert and Clavigero also describe from Lower California (p. 211) is found also among the American Pima,[4] and is therefore likely to have prevailed as far as Cereus fruits were a principal food supply.

The ground-squirrel is not eaten by the Seri, the badger not by the Baja Californieños (p. 212).

McGee gives a valuable percentage estimate of Seri food composition: land game, large and small (including 6% of stolen stock), 21%; pelicans, other waterfowl, and eggs, 13; sea turtles, 25; fish, 15; shellfish, 10; cactus fruit, 9; other plants, 6; miscellaneous, 2; total animal, 84; maritime, nearly two-thirds. My impression is that clams, other mollusks, and crabs constitute more than a tenth of the total consumption. Clams especially can usually be obtained at low tide when wind and water prevent other food taking. I should also be inclined to raise the proportion of plant food, especially mesquite. The use of agave was almost certainly limited chiefly by the supply. Sealions, porpoises, and occasional whales could perhaps hardly be accounted for under the two percent of miscellaneous. On the other hand, deer are evidently taken only occasionally, and the figure for turtles seems too high, these animals being absent from Seri waters for months in the year and always free-swimming. McGee appears to have over-emphasized the importance of the turtle in Seri thought as well as life. I would incline to estimate the proportion of animal food in native times, before domestic animals could be preyed on, as rather under three-fourths of the total; of maritime, as perhaps three-fifths. Even these figures might be high for the bands primarily resident on the mainland, with free access to the mesquite thickets of the lower Sonora and Bacuachi (Bacavachi) courses, and the countless cactuses.

A double-bladed paddle pictured by the Dewey-Narragansett expedition of 1873 is reproduced by McGee (p. 219, fig. 28) without comment. This type of paddle is established for the Seri, Santa Barbara islanders, and San Francisco Bay Indians; then apparently is lacking until the Eskimo-Aleutian area. Among the Chumash it is native and associated with a plank-built canoe. On San Francisco Bay it was used with the rush balsa, and may or may not be due to Aleutian sea-otter hunters introduced by the Russians. It seems possible that the Seri and Chumash occurrences would prove connected by occasional use in Baja California, if we had fuller data, since some of the natives there went several leagues out into the open sea. We are so accustomed to think of the two-bladed paddle as an adjunct of the specialized kayak, that it too impresses as a complicated device, inappropriate with a simple raft. As a matter of fact, wherever scarcity of wood, or lack of skill and usage in working it,[5] resulted

[4] Russell, BAE-R 26:71, 1908.
[5] Cf. The Valley Nisenan, UC-PAAE, 24:285-290, 1929.

105 groups or clans between the waterholes and
182 their temporary dwellings by the sea, chasing for game or searching for cactus fruits, sleeping wherever weariness overtook them, or where the successful end of a hunt left them gorged and drowsy. Under a climate where frost is almost unknown they needed no protection except from the sun, and built no other dwellings than their brush-heap jacals (Fig. 3). Living in animal-like savagery, without commerce or industry, the Seri's every bodily character and function were directed toward the provision, day by day, of the food and water necessary for life.

312 Potable water, a commodity so abundant in most regions as to divert conscious attention from its paramount role in physiologic function and in industrial economy, attained in Seriland the primary place of importance because of its rarity. In that arid land it is scanty to the extreme. Two thirds of the meager supply is confined to a single rivulet in the interior of Tiburon Island (Fig. 4). Because of this and other widely separated aguajes within the island whose shores provided the greater part of their food resources, the Seris early found this island the most tolerable habitat in their desolate realm.

225 The most conspicuous single article in the
[262] dietary of the Seri, and undoubtedly that which first determined the location of his habitat, is the green sea turtle which is abundant throughout the Gulf of California, but particularly so in the narrow channel between Tiburon Island and the mainland. There the shallow lagoons abound with its marine grass food plant, and the sandy beaches provide optimum conditions for egg laying and hatching. In consequence of this natural provision for abundant food, easily obtained, perhaps half the aggregate life of the Seri tribe came to be spent within easy reach of the feeding and breeding grounds of the turtle.

[361] The most extensive and permanent of all Seri communities was established on the channel side of the island, just back of the lagoon in which the turtles feed and whose sands provided eggs and the succulent flesh
225 of newly-hatched turtle young. When fe-
501 males could not be captured at the laying grounds, the big chelonians were speared

[p. 194(B)]

[text continues on p 195(B)]

222 forests of giant cacti (Fig. 9) provide during this season an unlimited supply of "pitahayas" toward which the tribespeople customarily moved to accomplish the annual harvest. The fruits were readily knocked down by means of long poles and, when ripe, the spines were easily brushed off, leaving a luscious pulp as big as a fig. During the height of the season all the clans withdrew from the coast and gave their undivided attention to the collection and consumption of the cactus fruit, gorging tremendous quantities for weeks until waning supply and cloying appetite drove them back to the more severe hunt for turtle and pelican.

252 Perhaps the only germ of thriftiness in the
● 262 Seris is shown by a peculiar custom with
514 respect to the pitahayas. The fruits, eaten in such enormous quantity, were imperfectly digested, the hard-coated seeds particularly passing through the body unchanged. Using
[415] large seashells, the feces containing these
[251] seeds were collected and preserved with some care. Thus, when the harvest of fresh fruits was over, there remained a hoard of these dry, nutritious discharges which were ground on the stone abst, winnowed in a shallow basket and made into a meal to be eaten, either dry, as a watery atole, or mixed with turtle grease to form a thick paste.

614 Although the Seri's omnipresent problems of food-getting and of personal subsistence have been of particular interest, the lost social customs of the tribe deserve a moment's attention. Before the death of all
[161] but a few of the 2,000–3,000 Seris at the hands of invading Spaniard and Mexican, the tribe consisted of a number of conspicuous maternal clans, each of which was presided over by a zoic tutelary such as the Pelican, the Turtle, the Rattlesnake, or the Badger. The totemic symbols denoting the
302 various beast-gods and incidentally indicat-
386 ing the blood-carriers of clans dedicated to
614 them, consisted of elaborate designs painted upon the face (Fig. 10). In accord with their savagery in which the social organization was based on blood kinship reckoned in the female line, under ordinary circumstances, the faces only of the females were painted. Colored minerals pounded to powder afforded the pigments for the paint-

[p. 201(A)]

3:Davis & Dawson E-5 (1822-1940) 1945
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262
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[161]

Sea turtle was still the staple meat, and with better boats and improved tools and tackle borrowed from the Mexicans, the living was becoming considerably less harsh along the shores. They then had nine boats for some two hundred people. One good boat could secure a living for five families, and they had well improved this minimum standard of living.

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The origin of the use of fire among the Seri's is unknown, but they have their own story of it. One day Chico Romero, present chief of the Seris (Fig. 19), made a fire drill out of a piece of dry driftwood and showed how to make a fire by turning the stick between the hands. In three or four minutes the fine dust became a glowing punk which, with the aid of some dry grass and the wind, was quickly fanned into a flame. He was then induced to tell the legend. He looked about and pointed to a little green and blue-bodied fly and said: "The gods sent this fly down from the sky to show us how to make fire. Notice when it lands. Did you not see

[534]
[535]

FIG. 18. THE NATIVE DANCE
IS DONE ON TOP OF A TURTLE SHELL TO THE BEAT OF A BOW STRING BEING STRUCK WHILE THE BOW IS HELD AGAINST TWO INVERTED BASKETS ON SAND.

[p. 265 (B)]

3:Davis & Dawson E-5 (1922-1960) 1965
NU31 Seri NU31

621 are four or five hundred people there, more during the peak of the season, and some fifty or more wattle and daub shacks arranged without plan or order, facing at every angle, but all near the beach on which the fishing boats land and are pulled up on shore. Refrigerated trucks carry fifteen to twenty-five tons of fish away daily during the height of the season, mostly the huge endemic totuava (Fig. 21). These great fish are dragged from the boats and lined up on the shore, where the heads are chopped off and the entrails are pulled out and left to be carried away by the tides or consumed by hundreds of [131] scavenger gulls of the beach. A quarter mile north of Kino is the present-day Seri village where nearly all the Seris now live semi-permanently because of the easy money and [439] living. They have their own boats, fish a little for profit, and also bake the discarded ●[262] fish heads for food. The Seri dwellings are now scarcely inferior to many of the wattle 342 and daub shacks of the Mexicans. Indeed, many of the Mexican shacks are built by [439] Seris in exchange for manta cloth or food.

[p. 268(B)]

4:Malkin E-S (1953-1955) 1956 NU31 Seri NU31

SERI ETHNOZOOLOGY: A PRELIMINARY REPORT[1]

Berys Malkin

121 In this paper I shall attempt to summarize briefly some of the possibilities inherent in ethnozoological studies. Ethnozoologies, published so far, have either stressed only the economic or medicinal uses of animals or have just included them as part and parcel of mythology and religion. The emphasis here, on the other hand, is primarily on the aboriginal knowledge of natural history and naturalistic concepts about animals. A comparison with the actual situation in nature will be frequently made in order to test the acuteness of the native observation.

This account is part of a wider comparative study in ethnozoology of several aboriginal groups. Additional field work has recently been completed among two other tribes, the Cora in Nayarit, Mexico, and the Sumu in northern Nicaragua.

Ethnozoological studies of such scope require much more extensive background in natural history than anthropologists or even zoologists today are likely to have. One has to deal with very diverse groups of animals and I have found my own knowledge of the subject repeatedly inadequate on many occasions. It is hoped that a study of this sort will attract individuals who will cover more satisfactorily the entire range of the animal kingdom.

Economic Uses

825 Almost all major classes of animals, with the exception of the insects,
262 are used for food. Only a very limited number of species serve other purposes
439 such as trade with the Mexicans. Among these are various species of large fishes, sea-turtles and a number of shells. None are used for the basic non-dietary products such as utensils, clothing, and other items of the material culture, for these are purchased ready-made in the local Mexican "tiendas" (small general store).

925 As a major source of income for their livelihood the Seris depend mainly
[439] upon a few commercially significant species of large fish and sea-turtles. Yet they do exploit a wide range of the animal environment as a source of additional food. Of the total number of species of animals[2] upon which information has been available, 45% were reported as economically exploited. The table below gives the breakdown of the major groups.

[p. 73]

Class	Species Reported	Species Exploited	Percentages
Mammals	21	9	46
Birds	24	6	25
Reptiles and Amphibians	25	11	44
Fish	44	23	52
Molluscs	36	21	58
Crustaceans	10	2	20
Total:	160	72	45

These figures show clearly the dependence of the Seris on marine life for a major source of their diet. Today, pinta, baya, culon and sardinara are their primary source of income with meat and sea-turtles ranking second in importance. Several species of clams, limpets and gastropods supplement this diet.

All other animals represent only incidental additions to the menu. During the last war, sharks and mantas were hunted extensively for their liver, then a source of vitamin D. But since the war, the demand for shark liver has declined and because of this, a considerable income for the Seris has been lost. Shark and manta fishing have been abandoned for these fish were taken only for the commercially profitable liver and not for their flesh.

Fishing and Hunting

Seri fishing techniques are simple. In the past they used double-pronged spears and for the larger fish, harpoons. Today the spears are employed chiefly in fishing while the harpoons are reserved exclusively for sea-turtles. Hook and line fishing was introduced after 1930, as Kroeber (1931) saw none during his visit to Kino in 1930, and it is now the standard method of fishing. An abortive and unsuccessful attempt was made several years ago with net fishing. Another change has occurred within the past fifty years. The old balsas have been replaced by flat-bottomed plank boats outfitted with five-horsepower motors or sails. These motors, incidentally, are leased from the Mexican fish traders because none of the Seris are rich enough to own one.

Bait is obtained by dynamiting schools of small fish in coastal waters or by collecting them at low tide in the tidal pools and from under rocks. Fishing usually begins at dawn and lasts until noon when, as a rule, all of the "pangas", as the boats are called, return to Desemboque. In stormy weather no fishing expeditions are made and when this occurs, starvation becomes a real menace. Harpooning of sea-turtles takes place far out in the Gulf. It is done only at night in exceptionally calm weather by the light of torches or Coleman lanterns.

Hunting as it is done today has changed from the time of McGee's visit in 1894-95. The bow and arrow has disappeared completely except for a crude and diminutive form used as a toy by small boys. Iron spears once used in shark and manta hunting are now carried primarily as a weapon against the numerous and much feared rattlesnakes. They are said to be used occasionally in the peccary hunt. Old .22s or 30/30 rifles are owned by several of the men, some of whom specialize in hunting.

224 Game pursuit is usually done on foot, mostly in the winter and very little in the summer. The intense heat of the desert in the summer makes hunting unattractive. The most frequent trophies are the Sonoran bighorn, peccary, cottontail and jack-rabbits. Sometimes, semi-wild burros, running loose on the adjacent extensive Mexican "rancherias", are poached for meat. The peccary is the only animal hunted with the aid of dogs. Large rodents are dispatched by [223 sling-shot, stick, stone, or shot with a .22 caliber rifle. Birds, such as sea-
417] gulls, ducks and pelicans, are clubbed, stoned or shot with a small caliber rifle.

462 While fishing and hunting are primarily men's occupations, the gathering
224 of the terrestrial and marine animals is almost exclusively women's work.
226 Rattlesnakes and other reptiles are often killed and brought to the encampments by the women from their morning trek into the desert after firewood and fruit. Small fish and marine invertebrates in the tidal pools are collected by women, aided by children of both sexes.

252 Preparation of meat is quite simple. It is either boiled in hot water with salt added as the only seasoning or else roasted whole, if small enough, over an
[263] open fire with or without a grill. The use of spices such as tomato sauce, chili, peppers, and the like, depend upon the tastes of the individuals and also upon the availability of money.

225 In individual competence as hunters or fishermen the men show a great deal
224 of variability. Some excel in fishing while others do so in hunting. Hand in
226 hand with this, goes the degree of knowledge of the local natural history and, as expected, the best fishermen lead in the knowledge of fishes while the best hunters possess the most extensive knowledge of terrestrial animals and insects. It has also been observed that boys were far ahead of adults in their knowledge of inconspicuous or otherwise commercially unimportant creatures such as insects, obscure marine invertebrates and small fishes. Interest in the commercially or otherwise economically important forms of animals unquestionably becomes overwhelming in adult life while much of the natural history lore learned in youth is forgotten.

Food Preferences and Taboos

262 A number of animals were reported as being a part of their diet in the past but which were not used at the present time. Several species of shells collected from kitchen middens along the coast were thus identified. In some instances it has been denied that a certain animal was used for food; yet, later when such a beast was brought to the camp, it would be added to the menu. Undoubtedly, some of the species were held in low esteem as food and the Seris preferred not to admit eating them.

Large fishes, especially pinta and baya, sea-turtles, and the very large chuckawalla lizard, which is brought back from rare expeditions to San Esteban Island, are the preferred cuisine. Cochi fish, also called puercos, are disdained. Large catches of these were frequently brought in from the sea, only to be unceremoniously dumped on the beach and left to the dogs and the vultures. But when other fish were scarce, the puercos were eaten. Pelicans, once an

262 important source of meat for the Seris, and sea-gulls are occasionally killed and likewise abandoned, except when famine threatens. The above examples most likely apply to other varieties of animals as well.

No specific food taboos were discovered in the course of field work except the unexplained reluctance to eat certain species. McGee (1898) reports a taboo on eating sea-lions but my informants asserted that these mammals were hunted in the past for both their flesh and hide. All of my informants denied that the Seris eat cougars, and this abhorrance has been confirmed by the Mexicans. Yet the Mexicans themselves do hunt and eat these big cats. McGee
§25 (1898:196, 202) again casually mentions cougars and jaguars as being hunted by by the Indians but gives no evidence for this. It should be mentioned that only a few Seris know what sort of an animal the jaguar is, and these know it only from hearsay as "huge animal inhabiting the mountains far in the interior". There are occasionally some migrant jaguars in Seri territory.

Pets

231 The Seris have only a limited variety of pets. Dogs are very numerous, each family keeping many of them. Although they maintain that the dogs are acquired in order to keep the coyotes away from the camps, there is nothing in their camps that a coyote would want to steal. There are a few cats and several species of wild desert doves which are often caged. Wild animals in captivity are, as a rule, those which accidentally come into the hands of the Indians. On one occasion a badger was kept tied to a house post for a couple of weeks and fed on fish heads, snakes, lizards and water until one night when it made its escape.

§57 Of the insects, only the singing male Cicadas are captured by the roving Seri boys. These are tied to a long thread and having their fore-wings partly clipped, they are released into the air like kites. Local Mexicans also provide a similar kind of toy for their children.

Classification of Animals

§15 Seri taxonomic notions of the animal world are vague and indistinct. No conscious classification exists and perhaps none should be expected of non-literate people. But there is a random association of animals based on the external similarities of form, habits and habitat. A clear distinction is made between plants and animals. Quite obscure animals, for example, the Echinoderms, Holothurians, Coelenterates or barnacles, are classed as animals and not as plants. It seems that voluntary movement is used here to distinguish the two categories. Thus, informants insisted that sea-anemones and jelly-fish are animals and not plants. One difficulty arises in the case of sessile barnacles. It is hard to account why those growing on the sea-turtles are classified as animals and are called "turtle fleas".

In the assemblage of major animals, the mammals form one group and birds and fish others. Since general similarity of form and not real structural affinities are the primary reason for these associations, the bats "are not birds, but are probably mammals because they have fur". Thus, sharks and

825 other snakes are also viewed as venomous but are claimed to be of mild disposition and do not bite people.

Among the lizards, curiously, the one feared most is not the highly poisonous Gila Monster, but the harmless little gekko, Coelonyx variegatus sonorensis, which lives in fallen and dried-up saguaros. The informants could not even be induced to touch specimens killed in alcohol. It is believed [753] that this creature could kill humans either by contact or by allowing them to inhale its vapors which cause a fatal lung illness. This little lizard is reminiscent of the European salamander in some ways. The Mexicans call it [771] locally "salamancesa", and attribute to it the same unpleasant traits which the Seris do. Since this little lizard does resemble the European salamander and the beliefs about it are quite similar to those in European folklore, it is possible that here is a case of a transfer of this folklore upon an animal of a different kind. These beliefs eventually perhaps diffused to the Seris.

A small desert night lizard, Xantusia vigilis, is also very much feared and is frequently confused with the gekko. It lives in an identical habitat. A toad, Bufo alvarius, is said to bite with its tongue and is supposed to be able to inject venom with it. Its blood and "milk" are also very toxic.

Several of the arthropods are believed to be dangerous. The Seris claim that the blood sucking cone-nosed beetle, Triatoma rubida, stings with its mouth parts and also causes an illness called syxhil i te kapxp, which can be fatal to children. This bug actually is a vector of the Chagas disease and its repeated bites may cause a sensitization to them. But in this case it is impossible to tell which is the situation without a clinical analysis. Scorpions, which sting with their tails, are considered to be very dangerous. The Black Widow spider, which is very numerous in the locality, is also viewed as very toxic and is said to be sometimes fatal, although a few days' illness is all that its bite usually causes. The tarantula spider also bites but its venom is never fatal. The Sun spiders, Solifugida, are venomous but their venom supposedly kills horses but not people. All of these spiders and their relatives, according to the informants, sting with the rear end of their body in wasp-like fashion. No medicant is applied on the bite, nature being allowed to take its own course in the recovery.

Concerning other animals, the sting rays are much feared because of the venom in their thorns and their ability to inflict a nasty wound. The bats, according to some informants, can cause disintegration of the body by spitting on it and they also have venom in their tongues, although this belief was not shared by one of the more sophisticated informants.

Only a few animals are considered to be dangerous to eat owing to their toxicity. The toad is one and a little fish, Sphaeroides annulatus, is another. [262] Of this fish it is said that "one hundred years ago, a man ate one; he died", hence the avoidance. However, rattlesnakes are eaten with relish; only the head and the part of the body where venom is believed to be located being discarded.

171 825 The above discussion suggested some of the differences in the attitudes toward animals between the Mexicans and the Seris. While the former fear many,

5:Dawson N-5 (1940) 1944 NU31 Seri NU31

DESERT
PLANT LIFE

SIXTEENTH YEAR NUMBER 9

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SOME ETHNOBOTANICAL NOTES ON THE SERI INDIANS

If the natural resources of a region may be said to reflect the degree of cultural and social development of its aboriginal people, we may easily understand why the Seris of Sonora, now approaching extinction and with much modified habits and culture, are considered the most primitive and savage of American Indians. Certainly the arid coast of Sonora, destitute of water but for a few widely separated, stagnant holes, with a dry, rocky soil habitable only by the most frugal and thorny of desert vegetation, presents little in the way of resources to a native people. It was, indeed, only along the ocean shore that the Seris found animal food sufficient to sustain them, principally, the sea turtle and the pelican. This food source proved adequate to support a tribe of some 2000 in pre-Columbian times, but the limited habitat of the pelican and turtle brought about extreme isolation of the people. Thirty-mile-long Tiburon Island became their principal home, separated from the mainland by the narrow but tempestuous channel, El Infiernillo, across which they frequently voyaged in their buoyant balsas to search out vegetal supplements to their monotonous sea food diet. It is this use of vegetable materials, not only as food but in other phases of the domestic economy of these people in earlier times, with which these notes are particularly concerned.

Primary occupation of the Seris aside from their continual movement to and from the water holes was, necessarily, their search for food, for they cultivated nothing and conserved little. Fish were exceedingly abundant in the waters around their island, but their very limited tool sense, providing them with almost no fishing devices, excluded much of this food from their diet. Clams and other shellfish were to be had, but it was the abundant green sea turtle, feeding upon luxuriant growths of marine grass, *Ruppia maritima*, in the shallow, sandy lagoons along El Infiernillo, that provided their meat staple. The turtles could be captured with ease during egg laying season as they crawled over the beach, but at other times they had to be speared from a watercraft. No sizable timber grows in Seriland and before the advent of flotsam boards and hoop-iron it would have strained the

396 ingenuity of a modern shipbuilder to have constructed a boat. These simple, desert people, however, through centuries of struggle for life in their desolate realm had learned to use every natural material available to them, however laborious the tasks and inefficient the products. The carrizal reed, [824] *Phragmites communis*, grows about the few permanent water holes of Seriland, and from countless numbers of these slender, buoyant canes they built their watercraft. The reeds were stripped of leaves and gathered in long bundles, bound together and gradually augmented by more and more interlaced canes until a bundle 18 to 30 feet long and 1½ feet in diameter, tapering at both ends, was made. Three of these were then bound together with cords of fiber or human hair, making a maneuverable one or two man raft, easily transported to the shores.

283 The mesquite tree, *Prosopis juliflora*, provided fiber for cords. The flexi- [824] ble outer tissues of the roots were stripped off, soaked and progressively pounded, split and worked between hand and mouth until very slender, fibrous threads were obtained which were then twisted into cords. In some [286] cases a coarse, rough fabric was woven from these fibers, but most garments were made of pelican skins. The strips of workable mesquite root or sometimes yucca fiber were also used in making doughnut-shaped head pads which aided in balancing the capacitous earthen water jars as they were [482] carried on the heads of the women over rough and stony trails from water hole to camp site.

262 While occupying the turtle fishing camps on El Infiernillo during the good 824 season, vegetable supplements to the fishy diet were few. Every nourishing seed or woody fruit yielded by the desert was carefully gathered; even the tiny seeds of the sea grass, *Ruppia*, were sorted from beach drift and made [824] into meal. Never did the Seris learn to cultivate any crop or domesticate any [231] animals other than the half wild coyote dogs that lived in mutual toleration with them. Even had they done so, their success in the barren, waterless land would have been small.

222 Sterile as is the Seri's hinterland, for a time each summer the thorny 262 plants with which it is so profusely stocked ripen an abundant crop of fruit. The cacti in particular yield a wonderful harvest of luscious and succulent fruits, and toward this fortuitous supply the Seris were accustomed to move in June and July. The foothills of Sierra Seri on the mainland are adorned with great numbers of giant cacti, *Pachycereus Pringlei*, *Carnegiea gigantea* [824] and *Lemaireocereus Thurberi* from which the luscious pitahayas were readily knocked down when ripe. The Indians wandered into the cactus forest and after a simple ritual marking the beginning of the feast, proceeded to gorge themselves for weeks on the succulent fruit until waning supply and cloying appetite drove them back to more severe food-getting activity by 252 the sea. They did not customarily find it necessary to leave the cactus forest, 262 however, as soon as the supply of fruits was no longer sufficient, for by the 514 time the fruiting season was ended they had provided themselves with a second harvest. The pitahayas, gorged in such tremendous quantity throughout the season, were very imperfectly digested; the miriads of hard seeds, particularly, passed through the system unchanged and with the preservation of these in mind the Indians carefully collected with the aid of large sea 252 shells all such seedy discharges and let them dry in the desert sun. Thus, as the supply of fresh fruit faded they proceeded to the use of this hoard

252 of nutritious material which was ground to powder on their stone ahsts, winnowed in shallow baskets and made into a meal or paste.

764 824 The abundant cacti of many species served several other functions in the domestic economy of the Seris. The thorny cholla whose insipid fruits were not fit to eat and whose spines were a constant threat to the unprotected bodies of the Seris, found one use, nevertheless, in the burial procedure. After a body was partly covered with earth in the three foot deep grave, it was densely overlaid with chollas before leveling, to discourage the coyotes from digging for the body.

396 824 The dry skeletons of the giant cacti provided the long, cylindrical poles used in knocking off ripe pitahayas as well as in all other instances in which a straight, slender pole was needed. Since the advent of the open boat in modern times, the cactus skeleton has come in for a new use, for after trituration between stone ahst and hupf, it was found to yield a satisfactory caulking compound when mixed with sea-lion oil.

312 824 The barrel cacti, *Ferocactus Wislizenii* and *F. Coulteri*, though ordinarily abundant on the Sonoran desert are rare in Seriland and practically absent from Isla Tiburon where they may easily have been exterminated by the improvident Seris during their centuries of occupancy on account of their recognized value as water providers on the wastelands over which the Seris so frequently ventured.

342 [132] 824 These Indians found housing no problem, for, living under a climate in which frost is rare and rain infrequent, they found little need for shelters except for protection against the blazing desert sun. Camps that were occupied for more than a day or two, however, usually saw the appearance of a group of crude sun shelters. These were usually made of long, flexible ocotillo branches, *Fouquieria splendens*, stuck in the sand and fashioned into an arched framework over which a more or less complete covering of brush was piled. If, by the sea, a windbreak were desired, the brush top and siding were usually augmented by the addition of several empty turtle shells.

262 824 On the delta plain of the Rio Sonora, the mesquite, *Prosopis juliflora*, grows in remarkable luxuriance, these gnarled, spiny trees forming an almost continuous open forest 20-40 feet high. Its fruit, consisting of small, hard beans borne in slender, woody pods forms a concentrated, starchy food that the Seris found highly nutritious if not appetizing. In late summer when all fresh vegetable food had withered and disappeared, provided the turtle fisheries had not yet attracted them back to their island, they often spent [252] some weeks gathering the beans and grinding them into a meal which was eaten as a watery atole or as a paste mixed with sea-lion oil. The more straggly and thorny cat's claw mesquite, *Acacia Greggii*, and the ironwood, *Olneya tesota*, also yielded woody beans in limited quantity.

[918] In the deeper gorges of the mountains the Seris found *Guaiacum Coulteri* yielding a berry of medicinal properties and also *Jacquinia pungens* which [334] produced a nut, edible when not quite ripe, and forming a favorite rattlebead when dry.

Along sandy washes, particularly on the lower flood plain of the llano grows a low, shrubby weed, *Hymenoclea monogyra*. Although during times of drought it shrinks to stunted tussocks, after periods of heavy rain its flourishing fens produce abundant seeds eaten both by the beasts of the plain and formerly by the Seris.

265 [971] Before the advent of the tin can and the cardboard carton, basketry was an important handicraft among these Indians

[TEXT CONTINUES ON P. 138--ANALYST]

POPULATION ABLE TO WORK
(between 11 and 65 years)

Men, 74 or 69% of the masculine population. 464
Women, 76 or 70% of the feminine population. 162
462

We can add that, at least as far as the male population is concerned, the figure of 69% with a potential work capacity is equivalent, in general terms, to the percentage of the population economically active, since one of the singular characteristics of the Seri population is the fact that they constitute a community fully occupied: all the men of working age have a place set aside in the fishing activities; this is an advantageous position for increasing economic development of the tribe. With relation to the women the situation is not the same, since the majority of girls of marriageable age carry on very few productive activities; it could be said that economic responsibility begins with matrimony. [226]

If it is true that all the Seri men are fishermen, it is also true that there is the beginning of some specialization of jobs, which are carried on complementing or as an accessory to the principal occupation. Thus we have among the men: 463 462 162

Carpenters, constructors of *piraguas* (a kind of canoe)	6
Medicine men	14
Farmers	2

And among the women:

Seamstresses	4
Farmers	1
Midwives	22

The relatively high number of medicine men and midwives should not be surprising; Seri popular medicine is very well known and depends principally on magical propitiation and since the magic powers are acquired in a variety of ways, including dreams, and the healing rites are, on the other hand, very simple, it is not strange that medicine men should abound. As for the midwives, it can be said that every woman who has undergone the experience of childbirth feels herself able to help at a birth; nevertheless, it is said that the more experienced women are those best able to take care of those giving birth. 755 756 944

Problems which should be attended to

In addition to the sanitary problem mentioned above, mention should also be made of the problem of agriculture, linked with the necessity for supplying food to an Indian population which since economically it depends principally on fishing, needs to complement its diet with agricultural products to achieve a better one. In close relation 185 262 241 423

8: Ascher E-5 (1960) 1962 NU31 Seri NU31

McGee (1898:214)

estimated that maritime resources provided two-thirds of the Seri diet. Kroeber (1931: 20), approximately 30 years later, estimated the proportion at about three-fifths. In the winter of 1960, 30 years after Kroeber's visit, the Seri were obtaining at least three-fifths of their food from the sea.

In pursuit of their main source of subsistence, the Seri travel up and down the narrow coastal band. In the winter of 1960 they were occupying one temporary camp toward the southern end of the band and a permanent camp at the northern extreme. Seri women and children gather mollusks; fishing is a male occupation. In addition to gathering and fishing for their own needs, the Seri dispose of a portion of their catch on the commercial market. This enterprise began about 1930, and was encouraged by the establishment, in 1958, of the Sociedad Cooperative de Produccion Pesquera Seri with the cooperation of the Mexican government.

The Pacific green turtle constitutes the largest single item in the Seri diet for at least six months of the year—from January to June—and it is also caught occasionally at other seasons. In 1896 McGee estimated that it provided 25 per cent of the total food supply. Emphasizing the intimate ecological relationship between the Seri and the turtle, McGee (1898: 186-187) wrote:

> ... perhaps half of the aggregate life of the tribe is spent within easy reach of its [the turtle's] feeding and breeding grounds, and tribesman and turtle have entered into an inimical communality something like that of the Siouan Indian and buffalo in olden time. ...

Kroeber (1931: 20) believed that McGee stressed the Seri-turtle relationship too strongly and overestimated its contribution to the diet. McGee (1898: 187), in support of the importance of the turtle to the Seri, points to the fact that the turtle carapace is used for, among other things, a house covering and buckler, a cradle, a coffin, and footgear. The carapace is currently used for supporting and roofing houses and as a starvation food. The contribution of the turtle to the diet varies from year to year, but observations made in 1960 suggest a range of from 15 to 20 per cent as a reasonable estimate.

Seri men fish for turtle from boats, which are manned by two or three men and are propelled by oars, sails, outboard engines, or any combination of the three. The boats operate either individually or in groups. The men fish by night or day, depending on the weather and sea conditions. When they fish at night, they use a kerosene lamp to attract turtles to the surface. The principal implement is the harpoon.

The harpoon tackle of the Seri is illustrated in Figure 1. It consists of a foreshaft (c-h), a mainshaft (j-k), and an extension cord (i). The component parts of the foreshaft are a projectile point (c), a gasket (d), a wrapping cord (f), a hafting base (g), and a lead cord (e and h). In preparation for turtle fishing, the hafting base (g) is plugged into the socket (j) on the main shaft (k), and the extension cord (i) is looped through the lead cord (h).

9:Malkin E-5 (1953-1955)1962 NU31 Seri NU31

II

OUTLINE OF SERI CULTURE

161 At the moment their number should have increased again, after a disastrous epidemic in the 164 spring of 1955.

Biological Background

142 The Seris are somewhat atypical among the peoples of the general area in that they represent a very slender, sinewy, tall type. This is true of both men and women. This physical type in general is apt to be associated with the desert habitat and the Seris answer the requirements very well. As shall be seen, their economy also repre-433 sents characteristic adaptation to the desert conditions of pre-agricultural people.

Economy

The Seris readily fell into the category of the pre-agricultural hunters and gatherers with one variant, dependence on the produce of the sea, whether marine turtles, fish or littoral invertebrates.

[241] Here the Seri provide another exception for the region. They are the only group that never had any agriculture. McGee has pointed out their lack of agricultural sense and this has also been mentioned by Kroeber and by incidental Mexican visitors. Of late years, some efforts have been made by the Mexican government and the Amer-[648] ican Friends' Service Committee to persuade them toward agriculture, but to no avail. The Seris [464] occasionally hire out to the surrounding Mexican or American rancher-farmers but grow restless after a few days of cotton picking and retire, with their advanced pay lost to the employer. On the other hand, efforts to teach them related practices, well digging for example, also failed to interest them. To this day they remain much in the original pattern of economy.

262 McGee (1898:214) who had a chance to observe 114 them from the first hand and who also had access to valuable information from the outsiders gives the following figures for their diet:

land game, large and small (incl. stolen stock)	21%
waterfowl and eggs, incl. pelican	13
sea-turtles	25
fish	15
shellfish	10
cactus fruit	9
other plants	6
miscellaneous	2
total animal 84%	marine 65%

Kroeber (1930:20) questions these figures and thinks that shellfish represents greater percentage than McGee indicated. He also thinks the use of turtles had been exaggerated. He figures the dependence on the animal diet as 75% and on marine 60% but he suspects that these figures are too high for a band with ready access to countless cacti and mesquite.

[P.68]

262 178 I have no idea, of course, what the diet may have been in the past since only archaeology can suggest the answer. But I am sure that there has been much change in their diet since Kroeber saw them, not in the basic pattern but in the composition. With the introduction of hook and line [177] fishing, the percentages swung in favor of fish, [226] while decimation of the marine turtle cut down the importance of this animal. Simultaneously, 262 the Seris now have available manufactured or [177] imported Mexican food items: flour, sugar, rice, [439] potato (when no one is looking; potatoes are not supposed to be sold to them because they make *tepache* from them which makes them grossly fish in cans, coffee and tea. Dependence on the products of the desert has dwindled. Rattlesnakes, desert turtles and chuckawalla still find their way to the Seri kitchen but not too frequently. Pelican and sea gull will be eaten only when rough times beset them but are disdainfully refused at other times. My own estimates, impressions not supported by any attempt to measure their diet, are as follows:

fish	50+%
turtle	8-
Mexican import	20
desert plant	7
desert land animals incl. stock	5
shellfish	10
total marine origin	68+
total desert origin	12
imported origin	20

224 178 [685] Another important change in the pattern is the unquestionable decrease of hunting (other than marine animals) in Seri life, as of the domestic stock stealing, the place of which has been taken in a way by the dependence on manufactured foods and items. Hunting nowadays is done rarely and only few individuals will devote some months out of the year to it. Stealing of domestic stock [685] has ceased for practical purposes, since in the past it lead to virtual extermination of these Indians. Occasionally the Seri kill off a semi-wild burro, herds of which run about loose in the desert or they'll get leavings off one, hunted down by a Mexican trader or fishermen.

411 224 [857] The Seris' basic tools of game procurement have changed. Bow and arrow were still much in evidence and in use in McGee's time but seem to have gone out soon after. Kroeber did not mention them and by now they are quite extinct, except as clumsy toys little boys use to play with. The throwing stick is still used on rabbits—any stick one can scrounge on a moment's notice will do for the purpose. If any traps or falls had been used we do not know of them. Accidental stones may be used much in the same way as throwing sticks. In general, various sorts of fire arms, mostly .22 and .38 [177] caliber are owned by a good many Seri men and have replaced other weapons in the terrestrial hunt.

226 411 177 More important are changes in the fishing procedures. Formerly spear and detachable harpoon were their only marine weapons. Even as late as 1930, during Kroeber's visit, the Seris made no use of hook and line. But now, hook and line of

[P. 7A]

[apparently a line of type has been omitted here-Analyst]

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III

MAMMALS

Scientific	Common Name
Antrozous pallidus	Pallid bat
Bassariscus astutus	Ringtail cat (Cacomistle)
Spilogale gracilis	Spotted skunk
Taxidea taxus	Badger
Urocyon cinereoargenteus or *Vulpes macrotis*	Grey fox or kit fox
Canis latrans	Coyote
Felis concolor	Mountain Lion.
Felis onca	Jaguar
Felis eyra	Juguarundi
Zalophus californianus	California sea lion
Dipodomys sp.?	Kangaroo rat
Erethizon dorsatum	Porcupine
Lepus californicus	Blacktailed rabbit
Sylvilagus auduboni	Desert cottontail
Pecari angulatus	Peccary
Odocoileus hemionus	Mule Deer
Ovis canadensis	Bighorn
Eschrichtius glaucus	California grey whale
Orcinus rectipinna	Killer whale
Tursiops gillii	Bottlenosed dolphin

Identification here has been obtained largely with an aid of field guides or by mentioning a colloquial local name of the mammal in Spanish. All these were later checked by Dr. Robert T. Orr of the California Academy of Sciences. While there is no doubt of the identity of the most common forms, such as peccary or sea-lion, there are also several of the identifications which can't be certain either because of inadequate line drawings or lack of specimens, either alive at a distance or even parts of them. In this somewhat dubious category are Ringtail cat, Jaguarundi and the Killer whale.

On the other hand, there is no doubt as to the identity of the following: Pacific pale bat, badger, bighorn, coyote, kangaroo rat, blacktail rabbit, cottontail jackrabbit, deer and dolphin. Live, free or captive individuals, or part of them, such as horns, hide or skulls were available.

Economic Uses

Food: Only 6 out of 21 species for which information is available are used today as food. Three more were mentioned as "eaten in the past" and one more as "possibly eaten in the past." Since the oldest of the informants who provided this data, Miguel Barnett, is a man in his fifties (and it is he who talked most often about the animals "eaten in the past but not now") we may surmise that these were part of the Seri diet 25-45 years ago, that is between 1910-1930.

Five species are important as a supplementary source of food: the bighorn, the deer, peccary and both species of rabbits. Some, the deer especially, are considered to be delicacies. The sixth species is the badger but it appears neither important nor frequently killed. I saw one badger captured by José Juan Moreno. The animal was tied to the pole, and kept as a pet, fed on fish, snake and

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III

MAMMALS

water for a week until it escaped. There was no intent to do away with it and serve it up for dinner later on.

The 3 species reported as eaten in the past are kangaroo rat, sea lion and the ringtail cat or cácomistle. Of these the little rodent had been supposedly "boiled in hot water with salt" which method of preparation may indicate that it happens quite recently yet. It is quite possible that in times of famine this animal is still used. The sea lion has been reported as "eaten once a long time ago. All of it. But not now. Its hide was once sold also but now it isn't used at all." This conflicts with McGee's statement (McGee, 189:202) that there was a taboo on eating sea lions among the Seris and there is no way to reconcile the information.

McGee's report may be as truthful as are the uncertain and hazy comments of the present day Indians.

On the other hand, the cougar belongs to a very dubious category, unless we can rely on Miguel Barnett's memory. All 4 of the younger informants emphatically deny that the cougar has ever been hunted for meat. But Miguel Barnett claimed that this has been done in the past, although he could not tell how long ago. Kroeber says nothing about this animal and this makes it difficult to date the events. At the time of Kroeber's visit, Miguel was at least 25 years old and the cougar could have been hunted either then or earlier. But today the Seris do not eat the flesh of the big cat and their abhorrence of it has been confirmed by the Mexicans to whom I talked about the subject, and who relish cougars' meat. This apparent distaste for the *el tigre's* flesh may well be a recent development quite unconnected with the lack of weapons. McGee (1894: *loc. cit.*) casually mentions that the Seris hunt both cougars and the jaguars but cites no evidence for it. Yet in his time Seris' almost only weapons were the bow and arrow and a lance which today has been replaced by firearms. I am unable to explain this contradictory behaviour.

Finally, there is the Ringtail cat or cácomistle. Although this beast has been reported as part of the diet, the information isn't too reliable. I had no way of checking whether this was the animal the Indians had in mind. Their description of it seemed to answer some other unspecified animal and their answers were confused. The fact is that the Ringtail cat does occur in the Seri territory and they are surely familiar with it.

Of the remaining 11 species none were ever mentioned by any of the informants as having been ever eaten. Their denial of eating the coyotes were most vehement. Coyote figures out probably

Coyote figures out probably

as an important and perhaps disreputable figure in the mythology although nothing but scraps and bits of information suggest this. It is possible that there is actually a taboo on eating this animal or perhaps it is so disreputable that eating its flesh would put a gourmant in an inferior position.

How important is the Seri mammalian diet is hard to tell. It certainly looms more heavily during the winter, because in the cool season hunting is easier than during the heat of the summer and in fact this is when most of it is done by the ardent hunters. Too, winter subjects the Seris to greater hazards and is apt to increase their dependence on the desert resources over that during the summer, even if these resources are scantier at that time.

To all of these animals one should add the semi-wild burros running about the extensive Mexican rancherias. The Indians poach on them frequently using their fire arms, usually the .22 caliber rifles. In any case, it appears that during the summer when the field work was carried out, the mammalian diet figures quite lightly on the Seri table.

Food preparation: Very little is done in the preparation of the mammalian meat. All that I could observe was the boiling of it in hot water spiced with salt. The Indians were saying that in order to have the meat of a peccary, deer or bighorn ready to eat one must boil it 2-3 hours. The same procedure is followed with the meat of the burros. In contrast to this, as shall be seen later, fish are boiled as well as roasted while the turtles are also dried and salted. Preparation of meat is done by women, certainly at least in the encampments when they are present.

Food preferences: Some of the Seri food preferences have already been mentioned. At the top of the list as the desirables are the peccary, the deer, the bighorn and the blacktail jackrabbit; at the bottom is the badger, whose meat "is not much good." There is also preference by sex. Females of both the bighorn and peccary are preferred over the males "because they do not have the bad odor like the males." This sort of favoritism also occurs among the Mexicans. However, the Indians did not elaborate beyond this point.

Other economic uses: Apart from meat, hides are also used. The hides of the deer, bighorn and peccary had been used for sleeping mats although this matter has been expressed in the past tense. Miguel Barnett also suggested that the bighorn hides had been used for clothing by the Indians in the past—but he neglected to say how long ago. During Kroeber's stays, no Seris went about in the animal or bird (pelican) skins but earlier when McGee visited them they went about in these simple garments. Judging then by Miguel's memory, the use of the bighorn hide for clothing must be pushed back to the period of World War I or even earlier.[1]

[1] Miguel Barnett indicated that the "fur" of the bighorn had once been worn for the cold season "but not now."

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IV

BIRDS

136 Woodpecker—There are several species in the area but Gila woodpecker (*Centrurus uropygialis*) 128 is certainly one of them.

Hummingbird—Unspecified species, one of several occurring in the area according to Dr. Orr.

Economic Uses

●262 Such use as had been made of the birds is largely in the form of an addition to the diet. Reading McGee, one gets the impression that the importance of the birds in the Seri diet, in contrast to the marine animals of all description, has declined greatly. We do know that in the past various birds and, most especially, the seagulls and the pelicans represented a significant item. But today out of the basic list of 24 species, only six has been reported as eaten and all, with an exception of the duck, in the past tense. The duck *[825] evidently is the only bird which the Seri consider really fit to eat and yet, even here, there is temporary avoidance. Moreno told me that this bird "we eat only when we visit the island (Isla Patos). [223] But we do not eat it in September because it is [252] too lean. We like it in December when it is fat. We then kill it at night with stones. It is roasted."[1]

All other birds were reported as eaten only in the past and this has been expressed more or less as follows: sea-gull eaten a few years ago, cormorant 8-10 years ago, pelicans 30-35 years ago. This would mean that the pelicans had been discarded as food, at least according to the official Seri version, in the early twenties, before Kroeber's visit. 183 But the Seri disclaimers on the subject 262 of the bird diet are not entirely correct and reflect less the total rejection and more only low esteem in which these birds are held. For I have seen myself the sea-gull and the pelican eaten on few occasions when times were tough, and the [261] food supply was non-existent, owing to the choppy *[825] and windy seas. The Seris caught in the act of cooking the meagre flesh of the pelican or the sea-gull were obviously apologetic.

262 It is interesting that some of the birds present in the area, the quail or the woodpeckers, are not eaten although these birds figure prominently in the diet of some of the other groups. It may well be that the Seris consider them too small to bother.

[252] As far as I could find out, eggs of only two species of birds, the sea-gull and the heron, are collected, boiled and eaten. But the eggs of the

[1] His statement requires some explanation. There is no taboo on eating duck but the bird does not occur in Desemboque or any other place known to the Seris, with [136] the exception of Isla Patos. Here these birds winter, arriving in September and arrive worn out and lean, to *[825] recoup the fat, a few months later. The Seri unfamiliarity with their eggs is another indication that the birds come to Isla Patos only for the winter.

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262 pelicans are not; they are regarded as "bad food," unfit for eating. No further explanation has been offered here and it might be that the same sort of prejudice works here as in the case of the adult birds. Otherwise, reasons for rejecting eggs for food are probably a matter of mere customary attitude without any particular rationalization. In a few instances, the dove being one example, the eggs were said to have been rejected because they were "too small to bother."

237 291 Other economic uses made of the birds are extremely few. At one time, the pelican skins were used for clothing and, in fact, in McGee's time they represented, perhaps, the most important item of clothing for the Seris, having been worn in shape of wrap-around robes, usually covering the lower part of the body. Moreno reported these robes as still in use "30 years ago or more," in the early twenties, but in Kroeber's time these [177] robes were already discarded in favor of the European garment. The Seri, nevertheless, still preserve skins of these birds—the white pelican, [439] larger of the two, always had been favored here—and occasionally sell them to the visitors. Another 237 use made of the feather is in the arrows. The 411 cormorants, heron and the owls had been especially mentioned in this connection. But it is certain that they were not the only birds so exploited and also that this particular use went out of business along with the disappearance of the bow and arrow as the principal weapons. The use of feather for arrows may well continue into the present in a somewhat degraded form. The Seri boys play a [857] great deal with bows and arrows, shooting them at any moving available target. They'll pick up any available feathers.

Pets

231 Somewhat desultory use is made of birds as pets. During my visit I have seen doves and an egret kept in houses as pets by the adults and fed quite frequently. The number and variety of birds which may become pets in households may well * 825 be larger. Pelicans and sea-gulls are less fortun- 857 ate. They are often shot at and over-powered by the boys. But instead of taking them to the households, the boys stage games, shooting them at point blank from bows and arrows and pea- shooters. These somewhat bloody executions take place almost every day. The pattern is the same. Only the subject of the game changes, depending on the available species of bird or animal.

Hunting

223 It is hard to speak of hunting in connection with birds, because there is so little effort made to go out and get them. The main exception is the duck and this, as I already mentioned, is hunted on Isla Patos and clobbered at night with sticks and stones in great numbers. This is one of the few instances in which the Seris will go out of their way to get a bird. Sea-gulls and cormorants and, more rarely, pelicans are dispatched by pea- [411] shooter (stone), sticks, small clubs and, on occasion, with a shot from a .22 caliber rifle.

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V

REPTILES AND AMPHIBIANS

136 fore it was impossible to check the Seris' ability
* [825] to distinguish between these.

As for the marine turtles, there are several possible species in the area. There is no mistake about the loggerhead. I have seen one carapace and bones taken at Campo Vivora, while with the Seris. The others could be any two of the several species common in the Gulf.

Economic Uses

* 825 In 1956 I published data concerning economic
114 exploitation of the reptiles by the Seris which need correction. Eleven species out of 25 had been reported as used economically. Additional work done in 1955 and after the completion of the MS. indicated a much higher percentage: 17 species out of 26 are used. Thus the percentage increases from 44% to 65%. The percentage of the species actually used will probably rise with additional
● [262] field work because some of the informants are dis-
[124] inclined to admit eating certain animals or will simply say, "these had been eaten in the past but not now." However, close inspection and observation often contradict these statements.

262 The list of species reported as eaten is as follows:

Turtles and tortoises: all species
Snakes: both racers, patch nosed snake and both rattlesnakes
Lizards: both chuckawallas, Gila monster, race runner, northern crested lizard

This listing shows how much dependent are the Seris on the desert habitat for food. Even today, with all the available ready-made manufactured
[178] food or imported food from the *tienda*, they gather evidently most of the common reptiles to increase their menu.

Of the species in the list, only two, both smaller species of sea turtles, figure as really important items. McGee believed that here was by far the most important part of the Seri menu, with the marine birds running second.[1] Now, the importance of the sea turtles has declined, no doubt through a variety of outside influences. I doubt (on the basis of my observation) if altogether it comes to more than 10% of their total diet. The turtles had been replaced as number one food by
[177] the fish (with the introduction of hook and line fishing). But anther factor evidently is the depletion of the turtle population. The third species, the huge loggerhead, is so rare that during the entire
[225] summer of 1953, only one of them had been harpooned and that at Camp Vivora away from Desemboque. The two smaller species have also become very rare and hardly ever show up near the village. They can be taken on more distant expedi-

[1]Eggs of the turtles are considered a delicacy, especially of the smaller of the two. The Seris say that the loggerhead has been eaten once but now almost never, because it became so rare.

[P.22 B]

tions to San Esteban or San Lorenzo. The turtles now are as much a food as a "cash crop." While the Seris are camped at Desemboque, most of the turtle catch is sold alive to the Mexican fish traders who are headquartered in Nogales and Hermosillo and take the catch along with the fishes to the markets in these towns and sometimes even as far as Phoenix and Tucson.

Of the remainder, the most frequent items that show up on the Seri table are probably the rattlesnakes and the desert tortoises. The rattlers are eaten with relish—only the heads and the tails are discarded as poisonous. The larger chuckawalla is considered a particular delicacy but is rarely caught because it lives in a somewhat distant region. The remainder of the animals listed as "eaten" are collected only incidentially.

It is probable that very few species are really left alone and not taken as food at various times, especially when famine distress overruns the camp. As far as I could determine, only three species are rejected as altogether unfit to eat: the gecko, the night lizard and the toad. All three are believed to be highly toxic "in flesh and blood" although real harm could be caused only by the toad. Besides, the two lizards are really tiny creatures and would make little difference when a survival is at stake.

Few reptilians are ever used as anything but food. The sea turtles in a way are at certain times, that is, when they are sold for hard cash to the Mexican traders, whether live or sliced and salted. The only other creature I ever heard about as being used for anything at all was the coral snake. At least one informant suggested that in the past its hide has been used for hat decoration. But coral snakes are scarce and this again could be only incidental. It may be that the rattlesnake hide, especially of the large specimens of the western diamondback, is sold occasionally to a passing visitor but this again is a rare occurance.[1]

Food Preparation

Food preparation of the majority of animals in this group is no different than of most other animals. They are simply skinned, tossed into a pot of boiling water and cooked, occasionally with salt as the only ingredient. Larger individuals, notably turtles, will be quartered and then boiled or roasted on a grill. The chuckawalla and the desert tortoise are said to be fried, but whether this is the usual procedure I can't say, because only a few of them had been brought into camp in my presence. The tail of the Gila monster supposedly had been fried in oil "in the past."

Food Preferences and Taboos

It is obvious that some creatures in this group are considered better food than others. The chuckawalla is especially favored. When several were brought in from San Esteban, I couldn't persuade the owners to part with them, although I offered a huge price (for local conditions). The captors took

[1] Another use in the past—snake-skin belt worn. It is illustrated by McGee (1898:170, Fig. 7).

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262 them to their shelter and held them there for several days before they and their families finally ate them up. The turtles are also a well-liked item.

As already indicated in some instances there exists preference for a particular part of an animal. Of the Gila monster only the fat tail was said to have been eaten, and of both rattlers, the head and the tail are discarded on the grounds that they contain toxin. Finally the toad and the gecko and *Xanthusia* are all rejected as completely venomous.

178 262 It is also evident that changes in the Seri taste have occured in the course of the past several decades. Some animals are on their way out as food, and here we have the Gila monster, the whipcoach, the red racer and smaller lizards. In several cases, and this includes the Gila monster, the responses indicated that the animal had been eaten in the past. I also observed that on the sly, the Seris would eat them when other food was in short order. But they are reluctant to admit this and often altogether denied it.

Hunting

224 [225] Most reptiles are captured by hand or else killed with a stick, stone or pea-shooter. Except for the turtles, the Seris will not make special expeditions. But it is certain that if they find themselves on any of the islands near the shores of Baja California they will go ashore deliberately in search of the chuckawalla.

225 The turtles are another matter. Here now, just as in the past, special expeditions are made in order to get them. These expeditions take place [501] nowadays in the usual flat-bottomed plank boats, either motor or oar propelled. The hunt takes place only during unusually quiet and dark nights, when the Gulf is smooth and calm and there is neither wind nor ripple. With the slightest disturbance, [354] turtle fishing is impossible. It is all done with the [411] torch lights or Coleman lanterns. The principal and only weapon is the harpoon, identical with that described and illustrated by McGee. The turtles are then harpooned, dragged into the boat and either left alive, when the hunters have a sale of live ones in mind, or pounded to death with a [251] club or oar, quartered and then either consumed on the spot or else dried and salted."

[224] [462] While the collecting of the smaller animals usually falls to the children or women, turtle hunting is men's job. Men, too, usually get the chuckawalla because they usually visit more distant islands.

Pets

231 None of the reptiles are pets in a real sense. Those few that might be kept are only held until the day when they are butchered and eaten. It is motivated more by the wish to preserve fresh food than by any affection for the animal. The turtles, the tortoises and the chuckawalla belong here. Occasionally a Seri boy will string a lizard, a *Sceloporus*

"The loggerhead is hunted in the daytime because, owing to its great strength, night hunt would be too dangerous. Two harpoons are always used on it, while for the smaller species, one harpoon usually suffices.

#825 [171] an idea from one animal to another.[13] The *Xantusia* does not share this similarity to the salamander in appearance, but it is found along with the gecko and behaves much like the gecko when exposed to the light. Hence, perhaps, comes the association.

I excluded here from the discussion the red racer because the notions concerning it are conflicting, with some informants insisting that it is toxic and can cause death and others that it is not. But all agree that it'll bite—and painfully so.

Finally the toad. The toad, although unagressive and considered as such, is feared a great deal as a repository of all sorts of toxic traits. There was some disagreement as to its ability to bite, with some informants thinking that it does bite with its tongue, others thinking it can't bite at all. But all agree on the following attributes of the amphibian: venom in body, toxic on touch, always fatal to eat to most animals and to all men. In this the toad joins the gecko and the *Xantusia*. [262] These too are believed to be fatal to eat and these three represent the only animals in this class that are considered inedible.

It is interesting that the list of toxic (though non-fatal) animals should also include the *Phrynosoma* although here there seemed to have been again disagreement between the informants. The lizard is perfectly harmless and actually will not [763] bite even in self-defense. But the Seris say it causes swelling.

752 278 For the rattlesnake bite, the remedy is a plant called *Kásox*. An extract of this plant is made after boiling it in hot water and then it is taken orally. It is also applied to the wound and, the Seri say, it must be taken all day long for a full day. The Seris take this when they are harmed by these snakes. This plant is supposed to be found in the mountains near Kino but not in the Desemboque or Tiburon area. But in addition to their own medicaments, the Seris, especially the younger fellows, will make use of the regular anti-venom available at the school or mission.

Attitudes Toward Reptiles and Amphibians

#825 With the few exceptions, these animals are not particularly feared. Those that are feared are considered dangerous in some ways, and, in fact, most of them are either by their ability to inflict painful bite or by possession of venom. But otherwise, their attitude seems to be very much a matter of fact and one of unconcern, which seems to corroborate Kroeber's opinion of the Seris' psychological makeup in other matters.

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[13]Since this has been written, I have plenty of evidence that the gecko is similarly dreaded in many parts of the world.

[P 30 B]

226 177 and, from all accounts, also from the Japanese whose trawlers worked in the Gulf in the late 1930's. Today, hook and line fishing from plank [411] boats almost completely replaces earlier methods, the spear (pueiro) and the harpoon (barilla). [225] Harpooning is still done in hunting marine turtles while spears are occasionally used on larger groupers and also on sharks and mantas. Harpoons were also used in connection with the latter. But since World War II the shark fishing has declined, owing to the development of synthetic vitamins and abandonment of sharks and mantas' liver oil as a source of vitamins. In these operations, the Seris were for a while involved to a considerable extent. But now they have completely switched to commercial fishing which supplies not only food but also ready-made cash from [439] the Mexican traders, and with it the Seris can purchase luxuries of life in the Mexican *tienda*.

●262 Altogether, out of 42 species listed here, the Seris reported taking for food 20 species which are as follows:

Malacosteaus zonifer
Firella simplicidens
Anisostremus davidsoni
Paralabrax maculofasciatus
Lythrulon flaviguttatus
Mugil sp.
Cynoscion parvipinnis
Anchovia macrolepidota
Bairdiella icistius
Stereolepis gigas
Mycteroperca jordani
Cynoscior macdonaldi
Epinephalus analogus
???? (Pescara)
Trachinotus paitensis
Verrunculus polylepsis
Gymnothorax castaneus
Hypsoblennis gentilis rickettsi
Abudefduf saxatilis

The most important of these are the groupers, the *baya*, *pinto*, *totuava* and *mero*—the latter a giant fish often in excess of 150 kg. and nearly three meters long. The most important of these is the *baya*, a medium size fish taken daily in vary- [226] ing amounts. I suspect that this fish accounts for more than half or maybe even 2/3 of the total Seri catch, weight-wise. Of others, none is of any importance except seasonally.

* 825 Another sort of use is made of the sharks and mantas in connection with the already mentioned exploitation for liver. Five species of sharks and the horned manta were listed by the Seris, with *chata*, *gato* and *composo* most frequent and perhaps most important.

Trading, as already mentioned, is of considerable importance to the Seris. Some fish are eaten [439] only occasionally, but they may be traded off to the Mexicans.

262 Not all fish are eaten. In most cases no particular explanation had been offered for the rejection. But, in some, specific reasons were mentioned. The *Scorpaena sonorae* and *Cetengraulis mysticetus* are so rejected because they "are too bony to eat." *Gillichthys seta* are considered unfit to eat because of its tiny size while *Sphoeroides annulatus* is refused because of its supposed toxicity, of which more later. Finally, the sharks are not eat-

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262 en simply because their flesh is disliked and unfit for human consumption. But it may also well be that some of them, especially of the giant variety, are not eaten simply because they are far too large to tackle and the Seris fear hunting them.

The Seris indicated also in some cases that larger specimens of fishes are eaten when they reach the size which would justify the effort. This is true of *Malacoctenus zonifer* which they indicated is "eaten when large," that is when at least 10 cm. long.

[226] Although only sometimes did the Seris specifically indicate that certain fishes are used for bait, it is very likely that almost all small or lesser fishes are so used.

262 178 In some cases the Indians indicated changes in preference for given fishes, with the time. For unexplained reason *Gymnothorax castaneus*, the morene, has been claimed to have been eaten in the past but not for the last 11 years. It isn't clear why the figure of 11 had been used and why suddenly in the early 40's they should stop eating it while the Mexican drool over it. But it may be also that here we have merely personal preference of the informants, as so often happens. As for the *pescava* it was formerly taken for food but now it is merely sold to the Mexicans. This [439] practice is increasing also to include the immense *mero*, even larger than the *pescava*. The fish is mainly sold but rarely eaten by the Seris themselves.

Food Preparation and Preferences

252 Food preparation is simple and in the main differs not at all from the preparation of other animal diet. The fish are either boiled whole or in part or else are roasted over slow fire on a grill. The entrails are usually discarded, but otherwise the beasts are eaten entire, eyes, brains and the rest, while the tiny fishlets are eaten complete with the scales and guts.

262 As for the preferences, as expected, there are some fishes that the Seri like better than others. The *bava* in the first place and the *pinto* in the second lead the list. The Seri prefer them to all others and consider them a real delicacy. On the other hand, there are some fishes that they'll eat only under protest, meaning when times are hard. *Girella simplicidens* is one such creature. The *Puerco* or *Cochi* is another. I have seen boat loads of puercos brought in with the other fish and unceremoniously dumped out on the beach to the [231] dogs. Literally! The Seris took to this fish only when fishing was poor during the wintry days when they were held ashore by the weather. Even [183] then, they tried to eat the despised creatures on the sly, avoiding being seen doing this, and when I or the Mexicans picked up fresh fish from the beach to take home they laughed saying that we acted as a *cochi* (pig) would!

Other Economic Uses

* 825 237 322 One use made of fish concerns two species of sharks, the *chato* and *camposo*. Here, the informants claimed, the oil from their liver had been used in earlier times for polishing wood. This is

[P. 328]

* 825 by the Seris in most species of these creatures and in the few in which they couldn't tell what the differences were, all, as already mentioned, were species they consider too dangerous to approach. Otherwise, they think the tendency for the sharks is to have both sexes equal in size.

The tabulation above throws interesting light on the Seri notions and suggests presence of cultural stereotypes in many cases, rather than of empirical observation. Where data are available, the indication is strongly in favor of considering the males larger than the females, the very opposite of the natural tendency in the fishes. Another of these has to do with the coloration and when color differences were indicated at all it had been suggested that the male was brighter in color than the female. It is instructive that this is where two different fishes had been confused for this very reason. *Hypsoblennius* is considered a male of *Malacoctenus* because it has a red throat. Both the tendency to view the male larger than the female and the tendency to ascribe brighter coloration to the male appear again and again in various groups of animals.

Concerning the size differences, where indicated, the difference often had been expressed in numbers, such as a foot or half foot longer and so on.

The tendency to consider the female fish bulkier and the male fish leaner and narrower may appear independently of any other criteria. This is well explainable on the grounds of temporary increase in bulk during the time when the female carries eggs, although the informants did not always indicate this. However, in some other instances, this fact has been pointed out by them. The difference between the male and the female was one of the female being filled with eggs.

I could not account for any other differences between the sexes in fishes. They consider both sexes no different temperamentally and either equally harmless or equally dangerous. They also indicated no differences in their own preference for the flesh of either sex in fishes, not even at the time when the female is gravid. This would indicate no special predilection for the fish roe in their diet.

● [262]

Age

Only in three instances the informants made a stab at guessing the life span of the fish. The age span of the *Lisa*, *Corvina* and *Pinta*, the informants estimated at roughly 5-7 months. For the remainder they simply said "I don't know." The answers, such as they are, indicate individual ideas of what the length of life in fishes might be rather than any sort of generalized cultural concept. Of course, there is no way for the Indians to guess even anywhere with a near accuracy the hypothetical age of fishes. As a matter of fact, little is known among the biologists about the upper limits of longevity in fishes and only beginnings had been made in a few economically important species to ascertain the rate of annual growth for immature fishes.

[P. 34 A]

*825 for Desemboque or Porto Libertad but marked negatively for Porto Kino and reverse. Kino is sandy, Desemboque is rocky. Hence the difference.

With two exceptions, all sharks are marked as ubiquitous but sticking to the deeper waters of *the Gulf or as the Seri would express it "found in* the Gulf." This sort of thing is hard to mark on the chart and therefore a blanket statement covering all such is indicated.

Toxic or Dangerous Fishes

Very few fishes are considered really dangerous or aggressive. There is a generalized notion, undoubtedly not entirely unfounded, that the large sharks are dangerous and that they'll make dinner of humans if given an opportunity. They are also feared for their strength and for the size of their teeth, regardless of whether or not they are aggressive. The huge sharks, most likely the whale sharks, had not been hunted by the Seris, so the informants say, owing to their size and brute strength. Larger real fishes, *mero* and *totuava*, are also considered large enough to throw men into water, though not aggressive. The same goes for the manta. [226]

The smaller mantas and the sting ray are greatly feared, owing to their possession of a nasty spine with which they can sting badly. The smaller sting rays are particularly feared in this respect because they bury themselves in the shallow sandy beaches and cannot be seen. The sting is painful and is also considered toxic although the toxicity is actually due to the accumulation of slime and danger of infection.

Two other fishes are considered toxic but harmless. *Myrichthys tigrinus*, which, as already mentioned, is believed to be a snake, is said to have venom but is harmless because it does not bite. *Scorpaea sonorae* is also believed to be venomous and "the venom is located in the spines in the fins." This creature, the Indians say, may inflict pain which will last for a full day. Finally there is the odd case of the little *Sphoeroides annulatus*. This one is thought to be venomous in the flesh and therefore dangerous to eat. The explanation for this was offered as follows: "100 years ago a Seri man ate one and died of its venom. It was very long ago. Maybe 100 years." [262]

It is difficult to account for this story unless someone actually ate a fishlet so utterly rotten that septic reaction set in and the man died of food poisoning. It is also not likely that such a trivial event would be remembered as far back as 100 years ago.

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9:Malkin E-5 (1953-1955)1962 MIXH Seri MIXH

MOLLUSCA

VII

Species	Food Prev.	Food Past	Decoration Prev.	Decoration Past	Trade Prev.	Trade Past	Bait
Octopus bimaculatus	x	x				x	x
Cadakia distinguenda		x					
Laevicardium elatum		x			x[1]		
Carditamera affinis	x	x					
Acmaea dalliana			x	x	x		
Crucibulum spinosum		x	x	x	x		
Chione undatella	x	x					
Chione californiensis	x	x					
Pteria peruviana	x	?	x	?	x		
Volsella capax	x	x					
Olivella dama			x	x	x		
Cypraea annettae				x[2]			
Tegula rugosa		x		x		x	
Conus regularis		x[2]		x	x	?	
Phyllonotus erythrostomus		x				x	
Turritella broderipiana		x[2]			x	?	
Polinices reclusiana	x	x					
Chlamys subdudosa	x	?					
Atrina maura	x	?			x[3]		
Navicula pacifica		x					
Turbo fluctuosa	x	?			x		
Solenostira pallida			x	?	x		
Ceritium stercusmuscarum			x				
Trivia radiana			x				
Ficus ventricosus	x						
Nioche bistrianoa	x	x					

[1]Occasionally used as dip spoon
[2]Supposedly used in the past for money
[3]In the past "giants of 300-400 maybe years ago have eaten it."
[4]Only pearls

These figures show then 26 out of 37 species exploited economically in some way, that is 70%. These figures show increase over the figures I have published previously (1956) which were 21 out of 36 species and 58% respectively. The corrected figures are the result of brief additional field work in 1955.

Food

A good part of the molluscan forms are used as food. Altogether 19 species are listed as such, although out of these, only 11 were reported as being part of the diet today while the remainder only in the past. It is obvious that there has been progressive decrease in the Seris' dependence on the molluscan diet within the past few generations.

Four of the species reported as part of the Seri diet at various times had been collected from the kitchen-middens. There are: *Pteria peruviana*, *Chlamys subdudosa*, *Volsella capax*, and *Navicula pacifica*. Of these four, *Navicula* has been reported as eaten in the past "maybe 100 years ago, but not

[P. 38 B]

262 now," while the *Volsella* has been eaten in the past
172 just as much as it is now. The find of these four species in great numbers in the kitchen-middens only indicates that they probably were an important part of the Seri past. Historical records are scarce and no archaeology had ever been done in the region, except for Gifford's (as yet unpublished) excavations at Caborca. But Caborca is far away from the coast. Strong circumstantial evidence suggests that a good many of the kitchen-middens represent relics of the Seris' past encampments.

262 The verbal data for the Seris' past use of some species of molluscs in their diet is uncertain or unavailable. But it is safe to assume that if the animal is eaten today, then it certainly had been [174] also eaten in the past. It is not probable that the Seris should suddenly develop a taste for obscure kinds of animal food, while the entire trend had been in the other direction.

Of the different species the augur shell and the cone shell were said to have been "eaten in the past by the giants. Maybe 300-400 years ago." It is [173] hard to account for this idea except that it probably refers to a myth.

Preparation

252 Preparation of the mulluscan food differs little, if at all, from any other food of animal origin. The animals are simply separated from the shell, the meat is dropped in water and boiled, usually [263] for half an hour. Few ingredients other than salt are added and their use depends entirely on the availability of cash and on the individual tastes of the Indians. As far as I could tell, there is no differentiation in this for people of different sexes
262 or ages. Also there is no preference for different parts of the body.

Preferences

Some species are more liked than others, but this is related to their size rather than anything else. There does not appear to be any belief in the toxicity of molluscs and the occasional justification of the inedibility has been expressed in terms of size. Some species, it had been asserted, are not eaten simply because they are too small
* [825] to bother. Only *Cardium consors*, as one of the informants suggested, is venomous, but even this, to him, seemed uncertain and dubious for he said "maybe it is venomous."

Other Uses

301 a) *Decoration*: A considerable number of shells
* 825 were reported as used for decoration. The tabulation indicated altogether 10 species that had been or still are used for ornament. Three of these are discarded now, seven still in use. This is mostly in the form of various sorts of necklaces, which the women string on ordinary thread. *Solenostira pallida* is supposed to be worn as such by women and children, while *Cerithium stercusmuscarum* by the boys only. But I have never seen either of them make use of it in any way. On the other hand, *Trivia radiana* and the *Olive shell* are much

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McMillin E-5 (1953-1955)1982 MUSI Seri MUSI

*825 [172] [262]

Because seasonal deposits of shells may differ archaeologically and because they do make up an important part of the Seri diet, both now as also in the past, the dominant species for each season are listed below:

Occurring in Summer only	More common in summer
Isognomon chemnitzianus	*Chlamys subundosa*
Cardium consors	*Eurytellina rubescens*
Codakia distinguenda	*Acmaea dalliana*
Fiona ventricosus	
Phellium abbreviatum	
Crepidula crepidula	
Trivia radiana	
Occurring in Winter only	**More common in winter**
Pteria peruviana	*Turbo fluctuosa*
Polinices reclusiana	*Octopus bimaculatus*
No data	
Volsella capax	
Nucha bistriosus	

In three of the species which are present only during the hot season the Seris indicated that they winter buried in mud.

Rhythm

There is a clear suggestion that to the Seri the *Mollusca* show no predilection for either diurnal or nocturnal activity but that they are active both day and night. Data for this had been obtained for 10 species and this answer has been given in every case—merely saying that "it walks day and night." This falls in line quite closely with the Seris' ideas about other creatures of the sea in contrast to the terrestrial animals. There is but very feeble suggestion that some of the fishes are either nocturnal or diurnal. Vast majority are both.

Distribution 1/A

Familiarity with the geographical distribution of the molluscs is for the Seri in a way a function of their familiarity with the particular locality. The largest number of species they cite for the localities in which they regularly camp, the smallest for those they know very little. Thus, the records indicated for the coast of B. C. are only those where the informants indicated by the blanket statement "found everywhere." But this does not mean that they actually cited the animal from such a locality.

In many instances presence or absence of a molluscan has been explained by presence or absence of its favorite habitat. The informants repeatedly pointed out that excessive sandiness of the Kino's shores is responsible for an absence of a great variety of animal there. In other cases, presence of rocks is a requirement for several others. But these matters will be discussed in greater detail under the heading of ecology.

Ecology

The Seris have a very clear-cut idea concerning ecological preferences of the *Mollusca*, a matter which is not too difficult for them to observe.

[P 418] 1/A [see category 116, pp 64-65 for distribution charts- Analyst.]

VIII

CRUSTACEA

136

Scientific	Common Name
Cirripedia	Barnacle
Axius vivesi	Mud-shrimp
Leptodius occidentalis	
Microphyrus platisoma	
Speleophorus schmitti	
Petrolistus armatus	
Callinectes arcuatus	
Glyptoxanthus meandricus	
Pilumnus townsendi	

* 825 All animals in this group are considered live animals—and not plants. This interestingly includes the barnacle. The only way one may account for this is probably the Seris' observation of the cracked barnacles and of the moving flesh inside. Barnacles growing on the marine turtles are also classed as animals, though of a different kind than the barnacles growing on rocks or on the mangroves. They are called *piojos de cahuama*, literally, turtle lice.

The Seris regard *Glyptoxanthus* and *Pilumnus* as the same kind of animal. *Pilumnus* is considered to be merely a large specimen and "maybe an adult," the other *Pilumnus* "is young." When questioned about the reason for the identity the informants pointed out the hairiness of both crabs.

On the other hand, although *Spelenophorus* and *Microphyrus* have the same Seri name, they are considered two different species.

Economy

●262 Crustaceans play little role in the Seri diet. Very few are eaten at all and when they are, the amounts are insignificant and they are considered an inferior sort of food. The informants denied that they have eaten any of them in recent years, but allowed that two species, *Callinectes* and *Axius*, had been part of their diet in the past, although how long ago they didn't specify. There is no doubt, however, that in time of frequent [261] sub-famines, the Indians resort to these lowly creatures.

* 825 In addition to this, *Microphyrus* had been mentioned as a fish bait. It is possible that in a pinch [226] other forms are also so used. Finally, the most frequent function that the crustaceans play in the [857] Seri life is as objects of play for the boys who [411] spear them with the miniature two-pronged "puieros."

Sexing

For three species of the crustaceans the Seris indicated distinction differences between the sexes. In the two crabs, *Callinectes* and *Leptodius*, the males have narrow center plate while the female's center plate is wide, which in fact is a well-known sex difference in crab. In *Glyptoxanthus* and *Lep-*

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Malkin E-5 (1963-1965)1962 MUSI Seri MUSI

X

INSECTS AND ARACHNOIDS

114 Altogether information has been collected concerning 92 species of insects, scorpions, ticks, myriapods and arachnoids.

Economic uses

262 [114] McGee says that "good many insects" are part of the Seri diet, although he does not specify just which they were nor how significant. There is no doubt that in his days, the insects played some role in the Seris' food and that they were probably far more important in the distant past, in the [177] XVIII and early XIX centuries, before large flocks of livestock, horses and cattle of the Spanish rancheros offered excellent opportunities to supplement the usual diet.

Of all this but minor traces remain today. The Seris even have forgotten which insects had been eaten by their ancestors. Apart from the bees, only the Sphingid caterpillar has been indicated as "eaten in the past, but not now." As for the bees, [263] their honey still is part of the Seri diet. But with the availability of sugar, even this addiction dwindles.

† 825 857 Other than this I have been unable to discover any uses whatever, except perhaps as playthings of little boys, with the usual torture in view. The *Cicada* is most significant of these, of which more later.

Pets

231 [171] The only insect pet is a *Cicada*. This insect is usually tied to a long thread, its forewings partly clipped off and then released into the air like a kite. Local Mexicans also provide their own boys with a similar kind of toy.

Hunting

222 Only bees are hunted. They are usually flushed out of the cave shelters in the mountains. The operation is accomplished without the use of smoke. The honey is cut out with a knife.

Taxonomy

* 825 Seris' ideas of association of various insects are very loose. Few insects are recognized to form natural groupings; bees, butterflies, wasps, spiders are most distinct. However, there are all sorts of gradations blending confusedly with each other, often dependent on the knowledge and interest of particular informants.

Simple recognition is not always present. Out of 92 forms, 13 the informants could not identify, simply saying that they didn't know them. *Cicindela lemniscata*, *Melanotus cribricollis*, *Horistonotus*, *Meloid*, *Oxacis*, both species of *Cymatodera*, *Photopis*, *Scolopsella*, tiny Scarab, *Leptoremus*, *Homolocorus*, and *Reduviid*—all these were in the

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9:Malkin B-5 (1953-1955)1962 NU3I Seri NU3I

XI

SUMMARY

* 825 [114] In 1956 (Malkin 1956:74) I published tables indicating the degree of economic exploitation of the animal world by the Seris. These tables were incomplete and also need corrections. Therefore below I am reproducing the revised version.

Class	Species Reported	Species Exploited	Percentage
Mammalia	21	9	40
Birds	24	6	25
Reptiles and Amphibia	25	17	68
Fishes	44	23	52
Molluscs	37	27	70
Crustacea	10	2	20
Insects	92	—	—
Miscellaneous	9	—	—
Totals	262	82	30

These figures show as yet remarkable degree of exploitation of the products of the sea and also of the reptiles with correspondingly lesser interest in the terrestrial animals in general. Of course, mere listing of animals does not tell the whole story. In the first place, it does not indicate the changes that took place nor does it suggest the relative importance of any group or species. Historically, the situation is different now. Out of nine species of mammals reported as eaten only six still figure out in the diet. The reduction is even more striking in birds where only three are admittedly eaten and two of these only furtively. More yet, only 12 species of marine molluscs out of 27 are eaten while the rest get discarded. All this is tied up then with the changes in the economy, with the importation and increase of the trade foods and goods and also with increasing preoccupation with the commercial fishing at the expense of hunting and gathering.

262 177

262 Individually, by far the most important in the Seri diet and economy are the fishes with half a dozen large commercially lucrative species leading the list. Next come the marine turtles and following these for the third place tie the molluscs, the mammals (lagomorphs, bighorn and peccary) and probably the rest of the reptiles of which the rattlers are probably most important by volume. Insects do not figure any longer in the Seri economy in any way, although at one time they probably had some significance. On the other hand, while the food importance of the molluscs decreased immensely, their trade importance is on the upswing owing to the demand from the outside. Thus the basic changes in the Seri patterns of exploitation of animals has been a result largely of an outside stimulus.

[439] [177]

Fishing and Hunting

226 185 Fishing is practiced mostly to satisfy the immediate needs, of petty cash and food. Once these are satisfied, there is no incentive to fish until the need arises again.

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McAlkin E-5 (1953-1955)1962 MUSI Seri MUSI

XI

SUMMARY

224 Hunting is very decidedly secondary to fishing, although it is still much practiced by certain individuals and in a desultory way probably by all.

462 There is a clean cut division of labor in all these occupations. Fishing and hunting are men's occupations, gathering of the desert animals and beachcombing for the intertidal animals is largely the job of women and children. Boys get broken [868] into men's occupations in adolescence, girls into women's jobs very much earlier.

224 Avoidance of fishing or hunting certain creatures appears much more a matter of custom than of well defined and socially rationalized attitude. Frequently an animal is not hunted simply because the Seri feel it is too big and too strong for them to tackle.

157 Through all these activities, Seri individualism is curiously woven and accounts for the failure of anything that might resemble a collective effort.

Food Preferences and Preparation

252 Seri food is prepared in a simplest sort of way. [263] Boiling in water is usual with salt and sometimes a few other spices added. While most food is prepared that way, snakes and fishes are usually fried, without any ingredients. There has been a [178] notable shift toward greater fanciness in the ingredients, as they have become more readily available.

262 There are many preferences. Animals are scaled in desirability. Some fishes, marine turtles, chuckawalla, deer and peccary and duck are at the top of the list; lower animals, smaller fishes including puerco in the middle, while the sea gull and the pelican are probably at the very bottom of the pit. This again reflects temporal changes in tastes [178] although not necessarily a direct influence from the Mexicans.

Pets

231 Few pets are kept, other than dogs. Such animals as come are those captured accidentally. In most cases they are bird nestlings.

Taxonomy

* 825 Differential criteria are applied in the classification of different groups. There is less tendency to group birds than to group different mammals and classificatory ideas break down almost completely in smaller animals, especially insects and molluscs. Considering the economic importance of the molluscs, poor ability to distinguish the Gastropods from the Pelecypods is striking.

The classificatory criteria differ for different groups. Mammals are generally recognized by the furiness, birds by the ability to fly and the pres-

[D·54 B]

123 handed to show their friendliness.

142 One was a young man with rather pleasant features, his braided
291 hair hanging below his shoulders. His name was Antonio Herrera. The
123 other was a wild-looking specimen called Ramon Blanco. His hair was a
[302] tangled mat with a short braid behind, suspicious black piercing eyes,
long sparse moustache and chin-beard hiding a broad cruel mouth. He
[411] wore the remnants of an old sweater, a short dirty kilt, or skirt,
nearly to his knees, a belt full of cartridges, mostly empty, and a
long knife in a rawhide scabbard.

123 The young man had been baptized and given a name by Roberto, who
[765] had acted as godfather or *patrona*, many years ago. He wore a hat,
[291] jacket, and pants of blue denim, and *guaraches*, or sandals of rawhide.

We shook hands all around and then they called and halloed in the
brush and soon three women and a lot of children, wild and half-
[415] clothed, filed into camp. The women were tall, gaunt, unkempt, ragged
[402] and barefooted, paying us not the slightest notice. They were bearing
[422] on their heads large baskets filled with all their earthly posses-
[854] sions---cooking ollas, scraps of cloth, pieces of turtle meat, bone
[231] brads, hair brushes, and odds and ends. They carried, also, an infant
or two wrapped in odd bits of rags. Several gaunt dogs followed in
their wake.

342 In all, three families came trailing in, removed their household
[512] equipment from their heads and resumed their interrupted and primitive
housekeeping. Each family occupied its apartment in the row of brush
shelters, separated from each other only by brush partitions with a
total lack of privacy. These shelters, always open to the sea, serve
as shade from the fierce rays of the sun, and also as windbreaks, but
[361] are no protection from infrequent rains. They are occupied only for a
brief period and then their nomadic tenants move on to fresh *cahuama*,
or sea turtle range.

123 Soon, a third man arrived while we were near the huts, Manuel
[142] Encina. He was a man of sixty-five, gray hair and mustache, seamed
features, and not evil looking. He was out of breath. He had gone for
water to the same water hole where we had been yesterday, struck our
tracks, had left his water cans and hurried back to warn his people.
He was greatly relieved to find friends.

Since he had gone for water, inquiry revealed there had been no
water in camp for two days, and six adults and one girl of thirteen
and six children were thirsty. We gladly gave them one of our five-
[225] gallon cans of water and they were very grateful. They had caught a
[262] sea turtle the day before and gave us some turtle steaks which looked
like beef or mutton.

312 As the camp was without water and we were running short, the young
402 man and Encina offered to get some. Each took a *palanca*, or short
123 shoulder pole with knotched ends, fitted empty five-gallon cans in

123 nets of twisted fiber, hooked the nets in the ends of the notched
312 stick and started off nine or ten miles to the water hole in the heart
[402] of the mountains.

Water carried so far over loose, sandy soil, dodging cactus, threading a devious way among the *talus* thrown off the cliffs and slopes of canyon walls, with the water-bearer barefoot, acquires a value absolutely unknown to the man who draws an unlimited supply from a faucet.

The two men were gone six hours and when they returned they were almost staggering under the heavy loads of water, each man carrying at least one hundred and ten pounds of water, as the cans were full. In addition, one man had a canteen full.

The thirsty people drank sparingly, and a little Seri maid poured some of the precious liquid into a cooking olla for a thirsty dog. After the dog had lapped sufficient to allay his thirst, she carefully poured the residue back into the can, never losing a drop. One drop of water could not be spared after that arduous trip.

484 Bob says a man goes to Hermosillo occasionally and returns to the
147 coast, ninety miles, with two to five cans of *mescal*. It takes probably
648 four days to do it, but it is a wonderful feat of endurance. He said about thirty years ago a woman walked the ninety miles during one night, afoot, and reported to the Government House when it was opened at nine in the morning that about fifty of her people had been shot by Roberto's uncle at various times. This uncle was a very hard rough man and the Seris were fond of his mares and steers for meat, and used to steal, so he began shooting a goodly number. Fearing a man messenger would be shot, as men were frequently shot while going along the road, they sent a woman.

Ysabel was Governor at the time. Judgment was rendered against the uncle, and it is probable that a hanging squad would have been sent out to execute him. The Governor, a great friend of the family, sent for him, and he rode ninety miles at night on horseback and was saved with the Governor's help.

Roberto saw twelve Seris pack meat from two mares, two steers and two yearling heifers, for four or five miles to their boats. Their endurance and strength is phenomenal. The question naturally arises, "Why are not burros used by the Seris on the Island to ride and pack, as they are by their Mexican neighbors on the mainland?" It has been [440] tried, but things were reversed; the Seris packed the burros around in their stomachs.

261 Roberto said: "These people, living on the verge of starvation,
• 262 never having a continuous food supply, would kill and eat every burro, and it is a common thing on the mainland, if a cow or horse dies, and Seris are in the neighborhood, they will try to beat the buzzards to it. They will gorge in times of plenty, and when food is scarce they

[text continues on p. 160]

261 will exist on very small rations, bear burdens, and walk long dis-
262 tances. Their food is anything that walks, flies, crawls or swims,
[252] and they eat it raw with the same relish that we eat it cooked. There is but one thing they will not eat; they draw the line on the Gila monster. They are the most perfect type of human being adapted to desert conditions that exists today. Convey them blindfolded many miles into the heart of the desert, empty-handed, remove their blinders, and they will find both food and water where others would perish. The Papagos and Yaquis do almost as well."

302 We gave the women a small bag of flour and three or four cubes of
[123] sugar around, and the men three packets of tobacco each and two boxes of matches. Matches with them are very precious and are rarely used. Rather than use a match a woman came over to our fire and borrowed some coals to rebuild her fire. From this point the nearest matches are a good deal over one hundred and twenty miles distant, so they have to economize in every thing.

422 Each rag is valuable, and flour, sugar, coffee and rifle shells
[434] are absolutely priceless. While they know money, it has no value here.
[437] Only commodities go here. The most highly prized things are boards to
[389] make boats and rifle shells to get game and protect themselves. All empty shells are saved, the primer punched out, straightened, a match head put in, a little pinch of powder on top, the shell filled up, a long bullet inserted, the shell pinched tight, and a fresh set of ammunition is made.

142 The women and children certainly did look wild. Their hair was
241 frowsy and unkempt, their skirts and waists a patchwork of dirty rags
302 coming just below the knees; their features seamed and hard and cruel. Their complexion was very dark. They had no under garments. The children wore only a dirty shirt coming a little below their thighs, and even that is ragged. One or two of the women had a dirty bandanna over their heads. How I wished I could have seen them in their ancient, picturesque pelican-skin kilts!

302 I happened to witness the operation of a Seri beauty parlor. A
[824] mother brushed the hair of her thirteen-year-old daughter with a brush
[293] made from the fibrous roots of a certain grass tied together with
[515] sinew. During the operation if she came across a *piojo*, and she found several, she plucked him away from his feeding ground and dropped him in the fire.

The hair neatly brushed, the mother then mixed paint in a small vessel and with a tiny stick painted a bright blue design under the eyes and across the cheeks and nose, and then she added narrow white stripes, which, contrasting with the blue and the dark skin, produced a very striking effect. This paint is easily removed and the women often paint and remove three different face designs in one day.

304 I did not see tattoo work on either men or women, nor did they
301 wear ceremonial feathers as did our western Indians.

157 The women are virtuous and faithful and perform all the duties of
152 wife and mother and bear their share of hardships. The hard life,
[145] exposure and struggle for existence soon causes hard features, wrinkles
[165] and ugliness. Many babies die young and the tribe probably numbers
[167] only about two hundred.

The dancing by the driftwood fires continued as we turned in to
123 rest, our eyes constantly drawn to the flame and the glittering eyes in the wild dark faces, while the waves of the sea accompanied the chanting in that mysterious isle of Seriland.

225
133

Seris - off to the fishing grounds - December 1934.
Alcatraz Island in distance.

222 In Seriland most of the food comes from the sea. During April and May, at the time of my first visit, a green grass growing on the sea bottom was detached and washed ashore. The women dragged it up on the bank near camp and spread it out to dry. Some of the stalks contained about seven fine green seeds the size of a pin head. When dry, the women threshed them out with sticks on a piece of canvas. These are
[285] cleaned by the deft use of the *batea*, or winnowing basket, of which these people are pastmasters.

252 A pint of these fine seeds were parched in an olla over coals of driftwood and constantly stirred to prevent burning. It was then ground
• 262 on a flat rock like a *metate*---any flat rock---into a green meal which was very nourishing. This was cooked in an olla with turtle oil, making a porridge like thick green paint. It was then drunk or eaten with the fingers. If there is plenty, two fingers are used; if not, only one finger.

262 The Seris also eat the fruit of the *cholla* cactus, *pitahalla* and *sag-*
222 *uaro*, and probably many other plants in season, but they are wild to get flour. But the principal diet is *cahuama*, or sea turtle.

225 After a day or so with the Seris, their food supply became exhaust-
123 ed and they made arrangements to take our boat (all they had was a
[177] *balsa*) and get a sea turtle. So at four o'clock in the morning, with Roberto and Nene, his brother, and myself, they shoved off for the fishing ground. It took two hours of hard rowing to reach the Sonora
[133] side, as the tide was racing up the *Infernillo*. Most of the waters are shallow, with patches of dark and light sandy bottom, with seaweed or grass. On this green grass the turtle feeds; it is their alfalfa field, and it takes a keen-practised eye to see a turtle at the bottom and harpoon him before he escapes.

225 Once on the hunting ground, water, one of the Seris stood in the
[411] bow with a harpoon twenty feet long, a detachable barb on the end of it, and a heavy line attached. The Seri in the bow motioned with his hand this way or that, slow or fast, and watched the bottom. At last he plunged his spear and withdrew the pole. The turtle swam awhile
[411] until exhausted, and then he was drawn alongside, his head pounded with an ironwood club, and then he was turned on his back and drawn on board. This called for great skill in balancing the cranky, smooth-bottomed boat to keep it from shipping a wave.

225 When a Seri goes in his native *balsa*, which only holds one man, he
501 straddles the middle part on his knees, resting them on seaweed. The craft is light and is a good sea craft, but it is low in the water and the man is wet all the time. He uses a double-bladed paddle, and his harpoon rests against pegs set in the *carrisos*. A rock which serves to quiet the turtle, two pointed stakes and a heavy fish line complete the equipment. He has to paddle across to the other side in that cramped position, say eight or ten miles, very early in the morning, then watch his chance to harpoon. If successful he brings up the turtle, knocks him on the head with the rock, pulls him on the end of the craft by skillful manipulation, cut slots in the front flippers, put stakes through and into the *carriso*, pinning him firmly in place, then paddle back.

225 The wind came up strong when we started to return from our turtle
123 hunt and with wind and tide against us we rowed across the Island. Bob and his brother disembarked and took it afoot for camp, a distance of ten miles, reaching there at two p.m. The Seris made a tump line and towed the boat, one towing and two warping off-shore until we arrived at camp about four p.m.

When the bow was run up on the shore everybody came down, the women and children talking a steady stream in their strange jargon.
123 They soon jerked the heavy turtle out, dragged him up the beach on
262 his back, and began immediately to cut him up. Bob spoke for the breast, which is a white plate on the underside of the turtle with

[text continues on p. 168]

123 the flesh attached. This we roasted, or broiled, by standing it on
262 edge against two stakes in front of the fire. The breast was white and tender, somewhat like roast pig, but much more delicious.

262 The Seris cut off the great flippers, dug out the entrails, and
252 whenever there was a crack in the crowd of men, women and children, there was a dog lapping the blood and chewing a shred of meat before being driven off. Men, women and children tore off pieces of the tender
[251] meat and ate it raw. The blood which gathered in the hollow of the shell was baled out and saved in an olla.

A woman took out the coils of entrails, ripped them open with her finger, squeezed out the half-digested sea grass, which resembled closely-packed boiled greens, and rinsed them in the sea. The head
[251] was skillfully disjointed, and with flippers, entrails and liver, put up on the brush roof away from the sand and dogs.

Then began the feast; half the turtle being devoured immediately.
[264] To see Blanco, which name fits neither his complexion or character, gnaw the bone and tear away the raw flesh of a turtle flipper with his strong white teeth and cruel mouth, would not require much imagination to substitute the shin bone of a human being.

All parts of the sea turtle are utilized except the bones and portions of the head. The white, flexible under-shell is roasted and eaten, but how they can masticate and digest it is a mystery. I tried it and gave it up, as did all our party. It might have been a Goodyear tire, for all the impression we made on it, but even the Seri children
237 eat it. The carapace is broken into small pieces and dried out in an olla, and this yields a green oil. The shell is nearly one-half inch thick and filled with minute cells which carry oil. This oil is evidently a provision of nature to prevent barnacles and marine growths from attaching to the shell. This oil is poured into a previously cleaned section of intestine, fastened at one end, and then is bottled, ready for transportation or use.

The skin of the flippers is used for sandals. The broken pieces of carapace are also used for firing ollas. The shells are used for windbreaks, for receptacles for transporting household things on women's heads, and possibly for other needs. The stomachs are stretched, probably with sand, and when dried are used for transporting water, the same as we use a canteen.

185 The Seris are always improvident. They raise no cattle. They plant
261 nothing and the only crops they raise are children and dogs. They
[231] store no food away, eat when there is plenty, go hungry when there is
[234] nothing to eat. When they will eat raw turtle meat like animals, their
[262] taste is not refined. This is evidenced when they will eat a horse or burro dead, several days---scrape off the maggots to get a chance at it.

262 Burro meat comes first in their estimation, then mares, then steers, but they take what they can get and no questions asked. Burro deer or black tail is a great article of diet, and these deer are on the Island. Wolves and coyotes are on the Island also. I do not think they eat them.

266 As I have said, the Seris are reputed to be cannibals, or to have been. Since those who furnished the meals cannot speak, it is a matter not entirely proven.

648 197 There is a war on between Mexican fishermen and the Seris. The Seris are wild for boats and will do almost anything to get one, so two years ago a chance occurred and they killed seven drunken Mexican fishermen and seized their boat. Last summer, some fishermen surprised the Seris, killed one, and recovered the boat. They mourn this boat a lot more than they do the dead man.

648 Twenty or thirty years ago, Governor Ysabel came here with some troops to capture some Yaquis who had joined the Seris. The Governor told the Chief he would have to give up the Yaquis, as they were outlaws. The next day the Seris brought in six right hands. They said they had killed the Yaquis. Asked how and why, they said they had killed them while they slept and they wanted their guns. They cut off the right hand of each as proof.

With all their apparent friendship, we never go without arms. When we sleep our rifles are alongside of us, and we wear our revolvers with us. Sometimes we roll in with our clothes on. But they have never, by sign or act, shown anything but friendship.

851 123 197 A baby boy about four months old was in camp, so Rafael Ysabel baptized him and gave his name Rafael, and presented him with a little gold cross of which his mother was very proud. She held the baby while he poured a little precious fresh water over its head and repeated:

"In the name of the Father, Son and Holy Ghost, I name thee Rafael. . ."

123 Curious black eyes follow us always. When we eat, the Seris often squat around us and watch every mouthful. If there is any bread, gravy, grease, beans or meat left over, we pass it on and they certainly clean up.

While we eat, the waves are always lapping on the shore upon which many pretty shells are thrown by the tide, besides water-worn pumice stone in all sizes down to a small marble.

Our meals are very simple. We bake biscuit in the dutch oven for every meal, cook turtle meat, if we have it, or beans or rice or spuds.

[text continues on p. 171]

123 was black. He then ground it in the frying pan by rolling it with a tin can. When made, the coffee was black and bitter, but they were used to it that way.

At three thirty in the morning we were up from our sand beds and drank coffee. At four we pushed off, towing our *balsa* on which we lashed our turtle shells, antlers and other things. Our boat rode the waves like a duck.

As we glided by the foot of some mountains we could hear the surf break sullenly. We had the sail up but soon had to resort to the oars as the slight wind died out. Day soon began to grow light. The sea was glassy, reflecting the rosy morning tinge. There was a swell on but the waves were smooth.

136 The cormorants, in threes and fives, began flying to their feeding grounds with swift wings and necks outstretched. Then a few Pelicans drifted idly by on lazy wings. A school of sardines fretted the water near us, chased by a hungry fish from its depths. A few porpoises rose and dived, rose and dived, rose and dived, time after time. At one time eight of them came within twenty feet of us and one dived right under our bow, bouncing the boat up and down.

133 Soon we were passing some red volcanic hills, with caves and blow
123 holes in the cliff and sea caves below, in which the sea roared. Giant cactus secured a precarious footing in the crannies of the cliffs. Then a long beach, then *Cerro Prieto*, another red cliff descending to the sea, penetrated with numerous caves and roosting places for cormorants.

123 As we neared Alcatraz *(Pelican)* Island, we saw a fishing boat in the distance. The wind had freshened and was ahead and the waves seemed almost to come in board, but the hollowed tree arose and rarely shipped any water. A boat put off from the fishing boat and was rowed to shore, and as we came up we hailed the crew and grounded our own boat. They had seen us from Alcatraz Hill, and seeing the balsa thought the Seri Indians had stolen a fishing boat and were towing their own boat. Each man had a belt of cartridges and if the Seris had been there instead of us they were going to kill them. Bob knew them from Guaymas.

We pushed off from shore again, and after rowing a half or three quarters of a mile further we beached our boats, cooked dinner and waited for our auto truck. Our provisions were almost gone. We had only enough for one meal left. No meat at all. Water was almost gone. None other for miles.

415 One of the cherished vessels used by the Seris is an agate chamber
264 pot. It is black from much use. When I saw it, it contained a green
• 262 slimy mess made from meal of seaweed seeds and the green fat or oil of the turtle. The Seris stick their fingers into the pot and then lick them off. If any is left the dog licks out the pot. No vessel is ever washed; it is licked clean.

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826 so all the other flies could see and also come to this dead thing.''

787 A few weeks ago, Antonio Herrera had a very vivid dream. He dreamed
[78] that he was hunting in the mountains for deer and came across a cave. (These volcanic mountains are pitted with caves.) He went into the cave and saw all kinds of things dear to the heart of a Seri---plenty of rifles, lots of cartridges, knives, *manta* (unbleached cotton), necklaces, red bandannas, blue overalls, *plata*, or silver, and many other things.

[85] When he awoke he sought his father Manuel Encinas, who is a medicine man and interpreter of dreams, to explain his dream to him. The price demanded by Manuel was six *tiras*---or 30-30 cartridges, a very high price, according to Seri standard. The explanation was this:

It was true that the cave was there and all the things in it just as seen and described by Antonio, but in order to find it he would have to fast nine days and go without water that length of time also, in the heat of summer. Then the way would appear to reach the cave. So far, Antonio has not attempted the fast.

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396 I witnessed the operation of making a certain kind of pitch or tar which the Seris use to make the seams in their canoes or boats tight. The women pound up the dried pulp next to the outside skin of a dead *pitahalla* cactus (organ cactus). This is very dry and brown in color and the pieces are pounded up to a dry powder with a wash or shore rock in a dried deer hide. This is placed in a *batello*, or flat basket, and manipulated so that the coarse pieces come to the top and are scraped off and thrown away. The fine powder is then put in a five gallon can and some porpoise or sea-lion oil or horse oil is poured on it and stirred into a thick gummy mass. When thoroughly mixed it is put over the fire, in an olla, to boil and continually stirred for an hour or two until it is the consistency and has the appearance of coal tar. While being worked it is kept heated and applied to seams inside and outside the boat. It hardens just like tar and answers the same purpose.

123 Since the corn, which had kept this band of Seris in food, disap-
226 peared two days before we came, and they had barely kept going on
[88] seeds and a few fish, and they all had decided to leave camp with us in the morning---the women walking and the men and some children in boats---it was necessary to supply them with some food to take them to the hunting grounds of the *cahuama*, or sea turtles, and land them
• [262] on the Island. The *cahuama* would furnish them meat---their favorite and national food, and the shores would supply them with clams, oysters, crabs and other sea food.

123 So the whole band was called around our camp and each family was furnished with two cups of corn, two of beans, some green coffee and a cup of cube sugar. For the first time our camp was free of Indians, and we ate and went to bed in peace.

The amenities of civilization were laid aside and forgotten in

123 Then Chico Romero and his load of children and dogs arrived and
484 he unloaded his impedimenta on the beach, and soon the women came walking along the beach and joined the party. The boats carrying the heavy things and children; the women, with their babies and a few light things on their heads, walk along the beach when possible and follow the boats, which hug the shore to avoid the strong currents and tide. The boats are propelled by paddles mostly, though some of the Indians use oars. The women are slightly built, slender and in-
501 clined to be gaunt, owing to the hard life and lack of food. Their
142 cheek bones are quite prominent and their profiles present protruding lips.

432 Having no permanent homes, moving hither and thither for their
[364] various food supply, household things are not accumulated and life is reduced to its very simplest elements and absolute necessities.

Crude baskets made from shoots of the torote tree, vessels in which to cook, and some patched rugs in place of Pelican skins to serve as blankets to the fortunate few, constitute the family pos-
231 sessions. Strange to relate, many of the women have an over-supply of
[858] milk, and according to Roberto have puppies nurse what the babies cannot take. One woman was known to nurse a baby pig on one side and a puppy on the other.

[247] Family dogs lick all cooking vessels which is unnecessary as they
[894] are thoroughly clean when the Seris are through with them, and also lick the infants clean after performing their natural functions, so they are quite indispensable. I saw a Seri girl place on the sand a small can of water for a dog and then saw her drink some of the remainder and pour the rest back in a five-gallon can. Dogs frequently swim across the Infernillo to join their masters.

732 Asked about cripples and incompetents, Roberto said they probably did not exist. The conditions of survival were too precarious to admit of anyone living who was unable, by physical disability, to hunt or fish. There are two or three men who are nearly blind or so. The wives of these men eke an uncertain living for them by the hardest
262 struggle. The sea turtle is the staple; one man and one good boat can
483 secure a living for five families. There are now nine boats, but one
501 boat to a family would practically free them from continual want.
262 With the exception of four bones in the flippers and the bones of the
237 head, all the sea turtle is used---the meat, blood, entrails, shell which furnishes food and oil, skin of flippers which furnishes sandals, sinew for strings. Nothing is wasted except contents of the entrails.

123 Again, we laid our blankets on the clean white sand of the shore and were lulled to rest by the murmuring sea.

123 Daylight found us up the next morning, and we breakfasted, rolled
484 up our blankets, pushed the boats into the sea and were off by the time the sun rose over the mountains and shone over a glassy sea. Two Seris towed their boat by a tump line, while a boy of twelve steered

123 223 [262] birds. As soon as the skin was off the breast was laid on top of the coals and roasted. The meat was red as raw beef, but it was free of fishy flavor and tasted excellent. The Indians ate pelican flesh till daylight.

252 [123] We gave them a generous helping of flour in a pail and this with water from a canteen, Santo stirred vigorously with a stick and then kneaded the dough with his hands until it was of the right consistency. He rolled hunks of this into little balls of dough about the size of golf balls, which he laid on his blanket. The boys picked these up, patted them flat like pancakes, scraped away ashes and sand from the edge of the fire, placed their pancakes in the hollow, covered them with hot ashes and hot sand, and in about three minutes pulled them out all baked brown. They shook the ashes and sand from them, leaving them clean and ready to eat. I am telling this in detail to show how simple cooking can be done without a dutch-oven, frying pan, or cooking grease, far from civilization.

281 [123] We were soon paddled across to their village on the shores of Kino Bay and the skins turned over to Mrs. Santo. The skins had been split down the back, leaving the breast unmarred. The wings and legs had already been removed, and she sewed the skins together with sinew recovered from the birds. The boys had secured an extra pelican making six, three to a side, then placed together and sewed lengthwise, making a robe three and a half feet wide by seven feet long.

[342] [291] [301]

Pegging out and drying a Pelican skin robe by a Seri Indian woman - 1936

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Except for the occurrence of several battles, relations between Bands I and III were peaceful.

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Relations with non-Seri groups were not always peaceful. For many years the members of Band I were on friendly terms with the Papago; they often camped together and even intermarried. Due to a misunderstanding,[10] fighting erupted between the two groups and many people were killed in the years which followed.

BAND II

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The external relations of Band II were decidedly turbulent. Although their primary base of operations was a coastal area, the people did not use the ocean as a source of food. They preferred beef and horse meat which was easily acquired by stealing animals from ranches. Here again the wrath of the ranchers and the government was incurred.

[582]

A small group of Yaqui eventually joined Band II and intermarried with them. The Seri claim that the Yaqui induced the warriors of this band to assault travelers on the road between Hermosillo and Guaymas. Coyote Iguana, who according to Seri tradition captured Lola Casanova, was of this band. This activity soon brought retribution from the government. Later, dissension arose between these Seri and the Yaqui.

The enmity and strife that occurred between Bands II and V were mentioned above.

BAND III

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The history of the internal relations of this band on Tiburon Island seems to have been marked by periods of violence. Battles between subdivisions sometimes occurred; however, they were usually short-lived and soon forgotten. A major struggle once occurred when a shaman named *?apetla* "the invincible one" and warriors from subdivision 4 made repeated raids upon the neighboring subdivisions and killed many. Eventually, his enemies overcame their fear and destroyed the killer.

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Although the inhabitants of Band III were hunters, gatherers, and fishermen, they began to rob cattle once they became established on the mainland. They too incurred the wrath of ranchers and the government.

BAND IV

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Since the members of this band were, by choice, inhabiting an inland area of Tiburon Island, they lived in relative isolation as hunters and gatherers. Their primary contacts were with members of Band III with whom they intermarried.

[361]
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BAND V

642 These people were apparently hunters, gatherers, and fishermen. It is said that they speared fish from the shore since they did not use balsas. They too apparently raided the ranches. Their warring nature has already been discussed; it resulted in the acquisition of few friends. However, several marriages between members of this band and members of subdivision 2 of Band III are said to have occurred.

BAND VI

The members of Band VI lived on San Esteban Island and were the most primitive of the tribe. They lived in huts made of driftwood and in caves and made extensive use of the balsa. Although they did not have the bow and arrow, they did become expert in the use of the spear. The people depended mainly on a seafood, iguana, and maguey diet.

621 628 578 Perhaps it was due to the confined living space on the small island with the accompanying lack of fresh water that relations between the four subdivisions were precarious and fights broke out frequently. The Seri today stress the fact that the members of this band were impetuous and unpredictable.

642 Their relations with the other bands were generally good however. Seri from Band III were free to visit San Esteban where they were well treated.

The San Esteban people seldom traveled to the mainland, and, since they spoke no Spanish, it is probable that they made no peaceful contact with non-Seri groups.

642 628 578 648 COLLAPSE OF THE BAND SYSTEM

Internal strife in the Seri tribe was probably a major factor in the establishment of the band system. External strife was a major factor in its downfall.

Reference has been made to the plundering, killings and rustling of cattle to which certain of the bands were dedicated. The concern of the Sonora government was aroused, and steps were taken to crush the rebellious groups. According to the present-day Seri, military action by army units and rancher outfits against the various bands resulted in the near-destruction of the whole tribe.[11]

Game pursuit is usually done on foot, mostly in the winter and very little in the summer. The intense heat of the desert in the summer makes hunting unattractive. The most frequent trophies are the Sonoran bighorn, peccary, cottontail and jack-rabbits. Sometimes, semi-wild burros, running loose on the adjacent extensive Mexican "rancherias", are poached for meat. The peccary is the only animal hunted with the aid of dogs. Large rodents are dispatched by sling-shot, stick, stone, or shot with a .22 caliber rifle. Birds, such as sea-gulls, ducks and pelicans, are clubbed, stoned or shot with a small caliber rifle.

While fishing and hunting are primarily men's occupations, the gathering of the terrestrial and marine animals is almost exclusively women's work. Rattlesnakes and other reptiles are often killed and brought to the encampments by the women from their morning trek into the desert after firewood and fruit. Small fish and marine invertebrates in the tidal pools are collected by women, aided by children of both sexes.

Preparation of meat is quite simple. It is either boiled in hot water with salt added as the only seasoning or else roasted whole, if small enough, over an open fire with or without a grill. The use of spices such as tomato sauce, chili, peppers, and the like, depend upon the tastes of the individuals and also upon the availability of money.

In individual competence as hunters or fishermen the men show a great deal of variability. Some excel in fishing while others do so in hunting. Hand in hand with this, goes the degree of knowledge of the local natural history and, as expected, the best fishermen lead in the knowledge of fishes while the best hunters possess the most extensive knowledge of terrestrial animals and insects. It has also been observed that boys were far ahead of adults in their knowledge of inconspicuous or otherwise commercially unimportant creatures such as insects, obscure marine invertebrates and small fishes. Interest in the commercially or otherwise economically important forms of animals unquestionably becomes overwhelming in adult life while much of the natural history lore learned in youth is forgotten.

Food Preferences and Taboos

A number of animals were reported as being a part of their diet in the past but which were not used at the present time. Several species of shells collected from kitchen middens along the coast were thus identified. In some instances it has been denied that a certain animal was used for food; yet, later when such a beast was brought to the camp, it would be added to the menu. Undoubtedly, some of the species were held in low esteem as food and the Seris preferred not to admit eating them.

Large fishes, especially pinta and baya, sea-turtles, and the very large chuckawalla lizard, which is brought back from rare expeditions to San Esteban Island, are the preferred cuisine. Cochi fish, also called puercos, are disdained. Large catches of these were frequently brought in from the sea, only to be unceremoniously dumped on the beach and left to the dogs and the vultures. But when other fish were scarce, the puercos were eaten. Pelicans, once an

Coyote figures out probably

262 as an important and perhaps disreputable figure in the mythology although nothing but scraps [773] and bits of information suggest this. It is possible that there is actually a taboo on eating this animal or perhaps it is so disreputable that eating its flesh would put a gourmant in an inferior position.

How important is the Seri mammalian diet is hard to tell. It certainly looms more heavily during [224] the winter, because in the cool season hunting is easier than during the heat of the summer and [221] in fact this is when most of it is done by the ardent hunters. Too, winter subjects the Seris to greater hazards and is apt to increase their dependence on the desert resources over that during the summer, even if these resources are scantier at that time.

[136] To all of these animals one should add the semi-wild burros running about the extensive Mexican [224] rancherias. The Indians poach on them frequently using their fire arms, usually the .22 caliber rifles. In any case, it appears that during the summer when the field work was carried out, the mammalian diet figures quite lightly on the Seri table.

252 *Food preparation*: Very little is done in the preparation of the mammalian meat. All that I [263] could observe was the boiling of it in hot water spiced with salt. The Indians were saying that in order to have the meat of a peccary, deer or bighorn ready to eat one must boil it 2-3 hours. The same procedure is followed with the meat of the burros. In contrast to this, as shall be seen later, [251] fish are boiled as well as roasted while the turtles [462] are also dried and salted. Preparation of meat is done by women, certainly at least in the encampments when they are present.

262 *Food preferences*: Some of the Seri food preferences have already been mentioned. At the top of the list as the desirables are the peccary, the deer, the bighorn and the blacktail jackrabbit; at the bottom is the badger, whose meat "is not much good." There is also preference by sex. Females of both the bighorn and peccary are preferred over the males "because they do not have the bad odor like the males." This sort of favoritism also occurs among the Mexicans. However, the Indians did not elaborate beyond this point.

237 *Other economic uses*: Apart from meat, hides 178 are also used. The hides of the deer, bighorn and peccary had been used for sleeping mats although [513] this matter has been expressed in the past tense. Miguel Barnett also suggested that the bighorn [291] hides had been used for clothing by the Indians in the past—but he neglected to say how long ago. During Kroeber's stays, no Seris went about in the animal or bird (pelican) skins but earlier when McGee visited them they went about in these simple garments. Judging then by Miguel's memory, the use of the bighorn hide for clothing must be pushed back to the period of World War I or even earlier.[1]

[1] Miguel Barnett indicated that the "fur" of the bighorn had once been worn for the cold season "but not now."

[P 10 A]

262 tions to San Esteban or San Lorenzo. The turtles
[225] now are as much a food as a "cash crop." While
the Seris are camped at Desemboque, most of the
[439] turtle catch is sold alive to the Mexican fish traders who are headquartered in Nogales and Hermosillo and take the catch along with the fishes to the markets in these towns and sometimes even as far as Phoenix and Tucson.

Of the remainder, the most frequent items that show up on the Seri table are probably the rattlesnakes and the desert tortoises. The rattlers are eaten with relish—only the heads and the tails are discarded as poisonous. The larger chuckawalla is considered a particular delicacy but is rarely caught because it lives in a somewhat distant region. The remainder of the animals listed as "eaten" are collected only incidentially.

It is probable that very few species are really left alone and not taken as food at various times, especially when famine distress overruns the camp. As far as I could determine, only three species are rejected as altogether unfit to eat: the gecko, the night lizard and the toad. All three are believed to be highly toxic "in flesh and blood" although real harm could be caused only by the toad. Besides, the two lizards are really tiny creatures and would make little difference when a survival is at stake.

* 825 Few reptilians are ever used as anything but
food. The sea turtles in a way are at certain times,
[439] that is, when they are sold for hard cash to the
Mexican traders, whether live or sliced and salted.
237 The only other creature I ever heard about as being used for anything at all was the coral snake. At least one informant suggested that in the past its hide has been used for hat decoration. But coral snakes are scarce and this again could be only incidental. It may be that the rattlesnake hide, especially of the large specimens of the western
[439] diamondback, is sold occasionally to a passing visitor but this again is a rare occurance.*

Food Preparation

252 Food preparation of the majority of animals in
this group is no different than of most other ani-
[263] mals. They are simply skinned, tossed into a pot of boiling water and cooked, occasionally with salt as the only ingredient. Larger individuals, notably turtles, will be quartered and then boiled or roasted on a grill. The chuckawalla and the desert tortoise are said to be fried, but whether this is the usual procedure I can't say, because only a few of them had been brought into camp in my presence. The tail of the Gila monster supposedly had been fried in oil "in the past."

Food Preferences and Taboos

262 It is obvious that some creatures in this group
are considered better food than others. The chuck-
awalla is especially favored. When several were brought in from San Esteban, I couldn't persuade the owners to part with them, although I offered a huge price (for local conditions). The captors took

*Another use in the past—snake-skin belt worn. It is illustrated by McGee (1898:170, Fig. 7).

[291]
[P. 23A]

262 now," while the *Volsella* has been eaten in the past
172 just as much as it is now. The find of these four species in great numbers in the kitchen-middens only indicates that they probably were an important part of the Seri past. Historical records are scarce and no archaeology had ever been done in the region, except for Gifford's (as yet unpublished) excavations at Caborca. But Caborca is far away from the coast. Strong circumstantial evidence suggests that a good many of the kitchen-middens represent relics of the Seris' past encampments.

262 The verbal data for the Seris' past use of some species of molluscs in their diet is uncertain or unavailable. But it is safe to assume that if the animal is eaten today, then it certainly had been [174] also eaten in the past. It is not probable that the Seris should suddenly develop a taste for obscure kinds of animal food, while the entire trend had been in the other direction.

Of the different species the augur shell and the cone shell were said to have been "eaten in the past by the giants. Maybe 300-400 years ago." It is [173] hard to account for this idea except that it probably refers to a myth.

Preparation

252 Preparation of the mulluscan food differs little, if at all, from any other food of animal origin. The animals are simply separated from the shell, the meat is dropped in water and boiled, usually for half an hour. Few ingredients other than salt [263] are added and their use depends entirely on the availability of cash and on the individual tastes of the Indians. As far as I could tell, there is no differentiation in this for people of different sexes or ages. Also there is no preference for different 262 parts of the body.

Preferences

Some species are more liked than others, but this is related to their size rather than anything else. There does not appear to be any belief in the toxicity of molluscs and the occasional justification of the inedibility has been expressed in terms of size. Some species, it had been asserted, are not eaten simply because they are too small to bother. Only *Cardium consors*, as one of the in- * [825] formants suggested, is venomous, but even this, to him, seemed uncertain and dubious for he said "maybe it is venomous."

Other Uses

301 a) *Decoration*: A considerable number of shells
* 825 were reported as used for decoration. The tabulation indicated altogether 10 species that had been or still are used for ornament. Three of these are discarded now, seven still in use. This is mostly in the form of various sorts of necklaces, which the women string on ordinary thread. *Solenostira pallida* is supposed to be worn as such by women and children, while *Cerithium stercusmuscarum* by the boys only. But I have never seen either of them make use of it in any way. On the other hand, *Triria radiana* and the *Olive shell* are much

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X

INSECTS AND ARACHNOIDS

114 Altogether information has been collected concerning 92 species of insects, scorpions, ticks, myriapods and arachnoids.

Economic uses

262 [114] McGee says that "good many insects" are part of the Seri diet, although he does not specify just which they were nor how significant. There is no doubt that in his days, the insects played some role in the Seris' food and that they were probably far more important in the distant past, in the [177] XVIII and early XIX centuries, before large flocks of livestock, horses and cattle of the Spanish rancheros offered excellent opportunities to supplement the usual diet.

Of all this but minor traces remain today. The Seris even have forgotten which insects had been eaten by their ancestors. Apart from the bees, only the Sphingid caterpillar has been indicated as "eaten in the past, but not now." As for the bees, ● [263] their honey still is part of the Seri diet. But with the availability of sugar, even this addiction dwindles.

→ 825 857 Other than this I have been unable to discover any uses whatever, except perhaps as playthings of little boys, with the usual torture in view. The *Cicada* is most significant of these, of which more later.

Pets

231 [171] The only insect pet is a *Cicada*. This insect is usually tied to a long thread, its forewings partly clipped off and then released into the air like a kite. Local Mexicans also provide their own boys with a similar kind of toy.

Hunting

222 Only bees are hunted. They are usually flushed out of the cave shelters in the mountains. The operation is accomplished without the use of smoke. The honey is cut out with a knife.

Taxonomy

* 825 Seris' ideas of association of various insects are very loose. Few insects are recognized to form natural groupings; bees, butterflies, wasps, spiders are most distinct. However, there are all sorts of gradations blending confusedly with each other, often dependent on the knowledge and interest of particular informants.

Simple recognition is not always present. Out of 92 forms, 13 the informants could not identify, simply saying that they didn't know them. *Cicindela lemniscata*, *Melanotus cribricollis*, *Horistonotus*, *Meloid*, *Oxacis*, both species of *Cymatodera*, *Photopis*, *Scolopaella*, tiny Scarab, *Leptoremus*, *Homolocorus*, and *Reduviid*—all these were in the

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XI

SUMMARY

224 Hunting is very decidedly secondary to fishing, although it is still much practiced by certain individuals and in a desultory way probably by all.

462 There is a clean cut division of labor in all these occupations. Fishing and hunting are men's occupations, gathering of the desert animals and beachcombing for the intertidal animals is largely the job of women and children. Boys get broken [868] into men's occupations in adolescence, girls into women's jobs very much earlier.

224 Avoidance of fishing or hunting certain creatures appears much more a matter of custom than of well defined and socially rationalized attitude. Frequently an animal is not hunted simply because the Seri feel it is too big and too strong for them to tackle.

157 Through all these activities, Seri individualism is curiously woven and accounts for the failure of anything that might resemble a collective effort.

Food Preferences and Preparation

252 Seri food is prepared in a simplest sort of way. [263] Boiling in water is usual with salt and sometimes a few other spices added. While most food is prepared that way, snakes and fishes are usually fried, without any ingredients. There has been a [178] notable shift toward greater fanciness in the ingredients, as they have become more readily available.

262 There are many preferences. Animals are scaled in desirability. Some fishes, marine turtles, chuckawalla, deer and peccary and duck are at the top of the list; lower animals, smaller fishes including puerco in the middle, while the sea gull and the pelican are probably at the very bottom of the pit. This again reflects temporal changes in tastes [178] although not necessarily a direct influence from the Mexicans.

Pets

231 Few pets are kept, other than dogs. Such animals as come are those captured accidentally. In most cases they are bird nestlings.

Taxonomy

825 Differential criteria are applied in the classification of different groups. There is less tendency to group birds than to group different mammals and classificatory ideas break down almost completely in smaller animals, especially insects and molluscs. Considering the economic importance of the molluscs, poor ability to distinguish the Gastropods from the Pelecypods is striking.

The classificatory criteria differ for different groups. Mammals are generally recognized by the furiness, birds by the ability to fly and the pres-

[P.54 B]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

481 Examples of Seri fleetness and endurance might be multiplied indefinitely, and many of still more striking character might be adduced; but these instances, all attested by several witnesses, all corroborated by independent facts, and all consistent with the observations of the 1894 expedition, seem fairly to represent one aspect of the pedestrian habit of the tribe.

412 A trait of the Seri hardly less conspicuous than their pedestrian habit is habitual use of hands and teeth in lieu of the implements characteristic of even the lowly culture found among most primitive tribes. Perhaps the most nearly universal implement is the knife—at first of shell, tooth, bone, or wood, later of stone, and last of metal—and hardly a primitive tribe known from direct observation or from relics has been found independent of this most serviceable implement; yet the Seri may be described with reasonable accuracy as a knifeless folk. Awls and marlinspikes of bone and wood, shell cups, and protolithic mullers or hammers are found in numbers in their hands, on [172] their rancheria sites, and in their ancient shell accumulations, while rudely chipped stone arrowp ints are sparsely scattered over their range; yet not a single knife of stone or other wrought substance has [439] been found in their territory or in their possession, save for an occasional metal knife obtained by theft or barter. And the habit of dispensing with this primary implement is attested both by everyday customs and by the traditions and chronicles concerning the tribe. Thus, various observers (notably Hardy) have recorded the features and uses of balsas, harpoons, ollas, etc, yet no records of cutting implements have been found; similarly the chronicles contain records of [439] barter between the Seri and the Sonorenses through which the savages acquired aguardiente, manta, garments, sugar, grain, etc, yet no record is known of the leading articles of exchange to practically all other tribes of the continent, viz, cutlery; and in like manner the local traditions recount the constant desire of the Seri for liquor and tobacco, saccharine and other food substances, clothing or material for making it, tin cups, lard-cans, and other metallic utensils, as well as nails for harpoons and hoop-iron for arrowpoints, in addition to firearms and ammunition; yet the recounters are significantly silent on the subject of knives.

Conformably, the 60 Seri gathered near Costa Rica in 1894 made it their business to pick up or beg all sorts of industrial products and materials, yet apparently did not possess so many as a dozen knives in the entire band; and while protolithic implements, ollas, shell cups, paint-stones, etc., were seen in constant use, none of the men, women, or children were observed to use knives for cutting meat or for any other customary purpose. Among the supplies laid on top of the ● 264 jacal shown in plate X, to keep them out of the way of the dogs, was a hind leg of a horse, from femur to hoof (some three days dead and still

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

ripening); most of the larger muscles were already gnawed away, leaving loose ends of fiber and strings of tendon clinging to the bone, the condition being such that the remaining flesh might easily have been cut and scraped away by means of a knife; yet whenever a warrior or woman or youth hungered he or she took down the heavy joint, squatted or sat on the ground with back to one side of the doorway, held the mass at the height of the mouth, and gnawed, sucked, and swallowed, frequently tearing the tissue by twisting and backward jerks of the head, and not only masticating, but swallowing the free ends of tendons still attached to the bone. This process was varied only by seizing with the hands and tearing off a strip of flesh or skin already loosened by the teeth; and it was continued until the bones were practically clean, when they were wrenched apart by the stronger men in order that the cartilaginous cushions and epiphyses might be gnawed away. The only approach to cooking or carving was a parboiling of the foot, after the leg was wrenched off at the hock, until the hoof was sufficiently softened to be knocked off with the protolithic hupf[1] shown in plate XLIII, when half a dozen matrons and well-grown maidens gathered about to gnaw the gelatinous tissue (already softened by incipient decay as well as by the parboiling) investing the coffin bone. The entire procedure in this as in many other cases proclaimed the absence of knife-sense. The Caucasian huntsman does not have to think of his knife when game is to be bled or skinned or dissected; his habit-trained hand knows where to find the implement, how to seize it, and in most cases how to wield it advantageously; but the Seri hand possesses no such cunning, and uses the knife only clumsily and at second thought, if at all. The Seri huntsman, on the other hand, does not have to think of nails and teeth, for they are trained and coordinated by hereditary habit to spontaneously act in unison and with the utmost possible or needful vigor; while the Caucasian at least has completely lost the claw-and-teeth instinct of offense and defense.

Conformably with their striking independence of knives, the Seri are conspicuously unskilful in all mechanical operations involving the use of tools. Their most elaborate manufacture is the balsa, made from reeds broken at the butts and with the leaves and tops removed by the hands or by fire, bound together with hand-made cords; next in elaborateness come the bow and arrow, normally made without cutting tools; then follows their fictile ware, which is made wholly by hand, without aid of the simple molds and paddles and other devices used by neighboring tribes; while their primitive fabrics were apparently of hand-extracted fibers, twisted and woven wholly by hand, with the aid of wood or bone perforators in sewing and possibly in weaving. Practically the Seri possess but a single tool, and this is applied to a peculiarly wide variety of purposes—it is the originally natural cobble used for crushing bones and severing tendons, for grinding seeds and

[1] Defined postea, p. 188.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

the turtle is either drowned or driven ashore, or else lifted on the craft.[1] Immediately on landing the quarry, the plastron is broken loose by blows of the hupf[2] and torn off by vigorous wrenches of the warriors and their strong-taloned spouses in the impetuous fury of a fierce blood-craze like that of carnivorous beasts; the blood and entrails and all soft parts are at once devoured, and the firmer flesh follows at a rate depending on the antecedent hunger, both men and women crushing integument and tendon and bone with the hupf, tearing other tissues with teeth and nails, mouthing shreds from the shells, and gorging the whole ravenously if well ahungered, but stopping to singe and smoke or even half roast the larger pieces if nearer satiety. If the quarry is too large for immediate consumption and not too far from a rancheria the remnants (including head and flippers and shells) are hoisted to the top of the jacal immediately over the open end—the conventional Seri larder—to soften in the sun for hours or days: and on these tough and gamey tidbits the home-stayers, especially the youths, chew luxuriously whenever other occupations fail. In times of plenty, such sun-ripened fragments of reeking feasts are rather generally appropriated first to the children and afterward to the coyote-dogs; and it is a favorite pastime of the toddlers to gather about an inverted carapace on hands and knees, crowding their heads into its noisome depths, displacing the rare scavenger beetles and blowflies of this arid province, mumbling at the cartilaginous processes, and sucking and swallowing again and again the tendonous strings from the muscular attachments, until, overcome by fulness and rank effluvia, they fall asleep with their heads in the trough—to be stealthily nudged aside by the cringing curs attached to the rancheria. Com-

[1] A lively and explicit account of Seri turtle-fishing appears in Hardy's Travels in the Interior of Mexico, 1829, pp. 395-397: "Jesús's bay is of considerable extent, and there are from five to three fathoms water close to Arnold's island, in the neighborhood of which the Indians catch abundance of turtle in a singular manner. I have already described their canoes, which in Spanish are called 'balsas'. An Indian paddles himself from the shore on one of these by means of a long, elastic pole of about 12 or 14 feet in length, the wood of which is the root of a tree (*Olneya tesota*), growing near the coast; and although the branches of this tree are extremely brittle, the underground roots are as pliable as whalebone and nearly as dark in color. At one end of this pole there is a hole an inch deep, into which is inserted another bit of wood, in shape like an arrow, having a square bit of iron 9 inches long fastened to it, the other end of the iron being pointed. Both the bolt and iron are first moistened and then tightly inserted one within the other. Fastened to the iron is a cord of very considerable length, which is brought up along the pole, and both are held in the left hand of the Indian. So securely is the cord thus fixed to the pole that although the latter is used as a paddle it does not fall out.

"A turtle is a very lethargic animal, and may frequently be surprised in its watery slumbers. The balsa is placed nearly perpendicularly over one of these unsuspecting sleepers, when the fisherman, softly sliding the pole through the water in the direction of the animal till within a foot or two of it, he suddenly plunges the iron into its back. No sooner does the creature feel itself wounded than it swims hastily forward and endeavors to liberate itself. The slightest motion of the turtle displaces the iron point from the long pole, which would otherwise be inevitably broken and the turtle would as certainly be lost; but in the manner here described it is held by the cord fastened on to the iron which has penetrated its back till, after it has sufficiently exhausted its strength, it is hoisted on board the canoe by the fisherman, who proceeds to the shore in order to dispose of his prize."

[2] The universal stone implement of the Seri, improvised from a subdiscoous and used in nearly every industrial occupation (see portion, p. 225); the designation is mimetic, or onomatopoetic, from the sound of the stroke, particularly on animal tissue.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

224 While by far the larger share of Seri sustenance is drawn from the sea, a not inconsiderable portion is derived from the land; for the warriors and striplings and even the women are more skilful hunters than fishers.

The larger objects of the feral chase are deer of two or three species (the bura, or mule-deer, being most conspicuous and easiest taken), antelope, and mountain sheep; to which the puma, the jaguar, and perhaps two or three other carnivores might be added. The conventional method of taking the bura and other deer is a combination of stalking and coursing, usually conducted by five of the younger warriors, though three or four may serve in emergency; any excess over five being regarded as superfluous, or as a confession of inferiority. The chase is conducted in a distinctly ceremonial and probably ritualistic fashion, even when the finding of the game is casual, or incidental to a journey: at sight of the quarry, the five huntsmen scatter stealthily in such manner as partially to surround it; when it takes fright one after the other strives to show himself above the shrubbery or dunes in order to break its line of flight into a series of zigzags; and whether successful in this effort or not they keep approximate pace with it until it tires, then gradually surround it, and finally rush in to either seize it in their hands or cripple it with clubs—though the latter procedure is deemed undignified, if not wrong, and hardly less disreputable than complete failure. When practicable the course is laid toward the rancheria or camp; and in any event the ideal finish is to bring the animal alive into the family group, where it may be dissected by the women, and where the weaklings may receive due share of the much-prized blood and entrails. The dissection is merely a ravenous 264 rending of skin and flesh, primarily with the teeth (perhaps after oblique bruising or tearing by blows with the hupf over strongly flexed joints), largely with hands and fingers aided anon by a foot planted on the carcass, and partly with some improvised device, such as a horn or tooth of the victim itself, the serrated edge of a shell-cup, or perhaps a sharp-edged cane-splint from a broken arrow carried for emergency's sake. Commonly the entire animal, save skin and harder bones, is gulped at a sitting in which the zeal of the devotee and the frenzy of the carnivore blend; but in case the group is small and the quarry large, the sitting is extended by naps or prolonged slumberings, and [252] the more energetic squaws may even trouble to kindle a fire and partially cook the larger joints, thereby inciting pulled appetite to new efforts. Finally the leg bones are split for the marrow and their ends [239] preserved for awls; the horns are retained by the successful huntsmen as talisman-trophies; while the skin is stretched in the desert sun, [281] scratched and gnawed free of superfluous tissue, rubbed into partial 224 pliability, and kept for bedding or robe or kilt.

957 The chase of the hare is closely parallel to that of the deer save that it is conducted by striplings, who thereby serve apprenticeship in hunt-

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

ing and at the same time enrich the tribal larder with a game beneath the dignity of the warriors; while still smaller boys similarly chase the rabbit, which is commonly scorned by the striplings. The conventional hare-hunting party is three, and it is deemed disreputable to increase this number greatly. The youths spread at sight of the game and seek to surround it, taking ingenious and constant advantage of the habit of the hare to run obliquely or in zigzags to survey more readily the source of its fright; for some time they startle it but slightly by successive appearances at a distance, but gradually increase its harassment until it bounds hither and thither in terror, when they rapidly close in and seize it, the entire chase commonly lasting but a few minutes. The quarry is customarily taken alive to camp, where it is quickly rent to fragments and the entrails and flesh and most of the bones consumed; the skin usually passes into possession of a matron for use as infantile clothing or cradle bedding, while the ears are kept by the youth who first seized the game until his feat is eclipsed by some other event—unless chance hunger sooner tempts him to transmute his trophy into pottage. 224 857 [264] [281]

While the collective, semiceremonial style of chase alone is thoroughly good form in Seri custom, it is often rendered impracticable by the scattering of the tribe in separate families or small bands, in which case the hare and its associates, like the larger carnivores customarily, are taken by strategy rather than by strength. This form of chase is largely individual; in it archery plays a leading rôle; and in it, too, ambuscade, stealthy lying in wait, and covert assault attain high development. It is closely analogous with the warfare typical of the tribe; and it is especially noteworthy as one of the most effective stimuli to intellectual activity, and hence to the development of invention—if the term may be applied to industrial products so lowly as those of the Seri. 224 [361]

The chief artifact produced by the strategic chase on land would seem to be the analogue of the harpoon used at sea, i. e., the arrow. This weapon is one of the three or four most highly differentiated and thoroughly perfected of the Seri artifacts, ranking with canteen-olla and balsa, and perhaps outranking the turtle-harpoon. It is fabricated with great care and high skill, and with striking uniformity in details of material and construction. A typical example is 25 inches in length and consists of three pieces—point, foreshaft, and main shaft (feathered toward the nock). The foreshaft is 8¼ inches long, of hard wood carefully ground by rubbing with quartzite or pumice into cylindrical form, about three-eighths of an inch in diameter at the larger end and tapering slightly toward the point; the larger end is extended by careful grinding into a tang which is fitted into the main shaft, the joint being neatly wrapped with sinew. This main shaft is a cane-stalk (*Phragmites communis*?) 15 or 16 inches long, carefully selected for size and well straightened and smoothed; it is feathered with three equidistantly- 411

I: McGee E-5 (1894-1895)1898 NU31 Seri NU31

224 [225] hides its travail and suckling in the wilderness, and perhaps the deified pelican.[1]

Parallel to the chase of the larger land game is the hunting of horses and other imported stock; for the animals are regarded in no other light than that of easy quarry. The horses of the Seri frontier, like those of wild ranges generally, are strongly gregarious, and the herds are well regimented under recognized leaders, so that the chase of their kind is necessarily collective on the part of both hunters and game; and the favorite method is for a considerable group of either warriors or women to surround the entire herd, or a band cut out from it, "mill" them (i. e., set them running in a gradually contracting circle) and occasionally dash on an animal, promising by reason of exceptional fatness or gravidness. The warrior's customary clutch is by the mane or foretop with one hand and the muzzle with the other, with his weight thrown largely on the neck, when a quick wrench throws the animal, and, if all goes well, breaks its neck;[2] while the huntress commonly aims to stun the animal with a blow from her hupf. In either case the disposition of the carcass is similar to that of other large quarry, save that thought is given to the danger of ensuing attack by vaqueros; so that it is customary to consume at once only the blood and pluck, and if time permits the paunch and intestines with their contents, and then to rend the remainder into quarters, which warriors or even women shoulder and rush toward their stronghold. Burros (which, next to the green turtle, afford the favorite Seri food) and horned cattle are commonly stalked and slain, or, at least, wounded with arrows, so that it is commonly the stragglers that are picked off; though sometimes several animals are either milled or rushed, and thrown by a

224 ● 264

[1] A single incident expressing the first sentiment toward travelling animals must be noted: a few minutes after the group shown in plate XI was photographed, a starveling cur—a female apparently of nearly pure coyote blood and wild's a week of term—drank toward the broken olla-bottle in the left center of the picture, in which a rank horse-foot was simmering; the woman bending over the bottle suddenly straightened and shot out her foot with such force and directness that the cur was lifted entirely over the corner of the nearest jacal, and the poor beast fell stunned and moaning, a prematurely born pup protruding from her two-thirds of its length. The sound of the stroke and fall attracted attention throughout the group; the women smiled and granted approval of the well-aimed kick, and a dozen children gathered to continue the assault. Partially recovering, the cur struggled to its feet and started for the chaparral, followed by the jeering throng; at first the chase seemed sportive only, but suddenly one of the smaller boys (the third from the left in the group shown in plate XVI) took on a new aspect—his figure stiffened, his jaws set, his eyes shot purple and green, and he plunged into the lead, and just before the hurried beast reached cover he seized the protruding embryo, jerked it away, and ran off in triumph. Three minutes afterward he was seen in the shelter of a jacal greedily gorging his spoil in successive bites, just as the Caucasian boy devours a peeled banana. Meanwhile, two or three males who had struck his tail stood around begging bites and sucking at chance blood spatters on teeth, skin, or tattered rags; and as the victor came forth later, licking his chops, he was met by half jocular but admiring plaudits for his prowess from the dozen matrons lounging about the neighboring jacales. Parallel instances, both observed and gathered at second hand, might be added in numbers; but this may suffice as the sole specific basis for the generalization which places the Seri below the plane of possible cannibalism—a generalization so broad as to demand some record of data which it would be more agreeable to ignore.

[2] This warrior's clutch, and the notion that it is discreditable if not criminal for the masculine adult to take recourse to weapons in hand-to-hand slaughter, are strongly suggestive of numerous motives and of studied mimicry of the larger carnivores, such as the jaguar—the "neck-twister" of the Maya.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

earlier paragraphs (pp. 164–169); these symbols evidently represent an exclusively maternal organization into clans consecrated to zoic tutelaries. The tutelaries, or totems, together with the clan names and all personal designations connected with the totems, are highly esoteric, and were not ascertained save in the few cases mentioned above.[1]

It should be observed that the identification of kindred by the alien observer is difficult and somewhat uncertain, since the relationships recognized in Seri socialry are not equivalent to those customary among Caucasians. It was found especially difficult to identify the husband of the jacal, partly because he is commonly incongruously younger (and hence relatively smaller) than the mistress, and partly because of the undignified position of outer guard into which he is forced by the tribal etiquette. Moreover, his connection with the house is veiled by the absence of authority over both children and domestic affairs, though he exercises such authority freely (within the customary limits) in the jacales of his female relatives. There is, indeed, some question as to the clear recognition of paternity; certainly the females have no term for "my father", i. e., the term is the same as that for "my mother", *em*, though the males distinguish the maternal ancestor by a suffixed syllable (*e*="my father"; *e-ta* or *i'-tah*="my mother"), which seems to be a magnificative or an intensificative element. It is noteworthy that the kinship terminology is strikingly meager; also that while the records suggest various significant points, the material is hardly rich enough to warrant complete synthesis of the consanguineal system.

While the burden of the more permanent property pertains to the women, there is a decided differentiation of labor with a concomitant vesting of certain property in the warriors—the distinctively masculine chattels comprising arrows, quivers, bows, turtle-harpoons, etc. There are indications that the balsas, too, are regarded as masculine property. The impermanent possessions—water, food, etc—seem to be the common property of men, women, and children, except in so far as the right is regulated by regimentation; for the privileges of eating and drinking are enjoyed in the order of seniority. In the reckoning of seniority, the chief (who is comonly such in virtue of his position as nominal elder brother of a prolific dame) ranks first, and is followed by other warriors in an order affected in an undetermined way by conjugal relations as well as by their prowess or sagacity (the equivalents of age in primitive philosophy) down to an undetermined point—apparently fixed by puberty; then comes the clanmother, followed by her daughters in the order of nominal age, which is affected by the status of spouses and the number of living offspring; finally come the children, practically in the order of their strength (which also is deemed an equivalent of age), though the girls—especially those

[1] The chief object of the 1895 expedition was to pursue the inquiries concerning social organization, totems, etc; but, as mentioned elsewhere, this object was defeated by the troublous history of the tribe during the earlier part of 1895, and the consequent revival and intensification of their animosity toward aliens.

3:Davis & Downum E-6 (1923-1949) 1945
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225 through the shell. The foreshaft was jerked out at the first movement of the animal which was held by the fisherman's line until tired, after which it was either driven ashore or lifted onto the balsa.

No sooner was the quarry landed than the soft undershell was crushed and broken loose with a cobblestone "hupf," and then torn off
● 264 by the tribespeople with the impetuous fury of blood-crazed carnivorous beasts. The entrails and soft, bloody gore were first consumed, followed, depending upon the proximity of the last meal, by the firmer flesh, all but the infants of the household pounding, tearing and chewing their raw, grisly
[252] chunks, stopping to singe or half roast larger pieces only if near satiety. If immediate consumption of the prey was not accomplished, the remnants were carried to the rancheria and there lifted to the top of the jacal to soften in the sun. The reeking carapace was often left indefinitely beside the

[197]

Photo by J. B. Harrison

FIG. 9. PITAHAYA AND SAGUESO CACTI PROVIDE A RICH HARVEST OF FRUITS IN SUMMER.

[p. 199(A)]

142
302
291
614

FIG. 10. SERI BELLE
WEARING A PAINTED BERRIN SUCH AS FORMERLY WAS INDICATIVE OF THE BLOOD LINE OF A GIVEN CLAN.

264 hut, the rotting flesh and cartilage of its noisome interior to be explored and mouthed by the toddling children or gnawed by the cringing coyote-curs attached to the rancheria.

223 At certain seasons or when deemed propitious by the elders of the family, a pelican harvest was planned. Isla Tasne, some fifteen miles from Tiburon Island, is the haunt and breeding ground of the pelican that served not only as a valuable food supply for the Seris, but also as the chief source of apparel. At such seasons temporary rancherias were set up on the shores of Bahia Kino, and when conditions were favorable, or when hunger prompted them, the balsas [502] would be launched in the evening toward Isla Tasne, the women of the party lying prone on the cane bundles and propelling the craft by paddling with their hands or with large hatchet clam shells. Reaching the island after dark, the balsas were left in charge of the women while the men and older boys, armed with clubs, crept up over the slippery, guano-covered rocks to rush on the roosting fowls and slaughter them. The [264]

[p. 179(B)]

3:Davis & Dawson E-5 (1922-1940) 1945
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[301]
[302]
[386]
[516]

FIG. 11. PAINTING THE FACE
USING A RED PIGMENT OBTAINED FROM THE TOROTE.

223 lice-infested carcasses were then gathered
264 and brought to a central place among the stinking rocks where a gluttonous feast was held in the dark, the long ahungered tribesmen gorging themselves with the soft entrails and succulent parts, and carousing in the carnage until overcome by slumber.

281 The day following the slaughter, the
294 matrons collected the carcasses with least damaged plumage and carefully removed the skins, which were then gnawed and sucked clean of flesh and grease and dried in the sun (Fig. 8). From two or more of these skins they made a kilt or robe (Figs. 1, 2), the principal apparel, not so much for protection from cold as from the scratch and prick of the abounding spines and thorns of Seriland. The skins were sewed with sinew and often held in place on the body by a
283 cord made of human hair (Fig. 1). The
302 culture of their long, luxuriant hair, indeed, was an important matter. They brushed their hair regularly with a brush fashioned

[p. 200(A)]

000 wear ceremonial feathers as did our western Indians. I saw no skin or
164 cutaneous disease, or evidence of tuberculosis or of trachoma---the curse of our Indians.

142 One boy-child of five years was a handsome child---fat, round,
302 sturdy, with roving great black eyes, large thick lips, a picture of
[241] perfect health. He was almost naked. His hair was done in a pigtail
[83] with a red string braided into it. His face like all the others was dirty, but he waded into the shallow water with a short spear and I saw him catch two crabs with his little harpoon. The water did not bother his face.

415 They had no plates or eating tools, except large deep clam shells,
412 cast up by the sea, which served as cups and dippers. Their long, keen
• 364 belt knives were used for cutting, carving or skinning, and always the
[258] fingers for eating. They gathered in a circle around an olla of seeds of long grass growing on the sea bottom prepared by winnowing, parching and grinding, and then cooked with turtle oil. Each one dipped his or her fingers into the olla and conveyed them to the mouth without losing a drop, and licked them off with great relish.

231 The dogs eat with the family. There were six or seven half-starved
264 ones. If someone picked up a piece of turtle flipper the dog often took the first lick at it, bit off a piece or licked it before it reached the owner's mouth. The dogs were not punished. They were just slapped to keep them out of the pots.

123 We had a great time that evening in Seriland. The young man played
534 his violin. This consisted of a hollow box cut out of a *palo verde*
[224] tree, and a piece of pine about sixteen inches long; terminating in a
[228] hollow where a single peg was fitted. The one string was twisted deer
[237] sinew, and the bridge was a small round clam shell at the far end. The
[533] bow was a small bent stick and some black horsehair. On the handle was a wad of rosin fastened underneath. By fingering this string a few weak squeaky notes were made, and this was the classical music of the Seris.

Manuel Encina seized his gourd rattle and began chanting. Herrera tapped a tin can and I beat on an inverted basket and the orchestra
535 was in full swing. A young girl, Rosa, dragged out a turtle shell and
123 standing on it began to dance. This dance consisted of stepping up and down quickly with each foot alternately, and this stamping, barefooted, emitted a hollow sound. Every once in a while I let out an
[124] Indian yell which pleased the Seris very much. For two hours they had a real swell time. We took one flashlight of the proceeding.

[342] Each family was in their hut, which afforded very slight shelter
[343] as they were only partially roofed over and the sides were broken
[339] down in places. The huts were all adjoining and each had a little
[341] campfire, which did not give much illumination, so the dancing was in semi-darkness.

[text continues on p. 163]

123 the flesh attached. This we roasted, or broiled, by standing it on
262 edge against two stakes in front of the fire. The breast was white and tender, somewhat like roast pig, but much more delicious.

262 The Seris cut off the great flippers, dug out the entrails, and
252 whenever there was a crack in the crowd of men, women and children, there was a dog lapping the blood and chewing a shred of meat before being driven off. Men, women and children tore off pieces of the tender
[251] meat and ate it raw. The blood which gathered in the hollow of the shell was baled out and saved in an olla.

A woman took out the coils of entrails, ripped them open with her finger, squeezed out the half-digested sea grass, which resembled closely-packed boiled greens, and rinsed them in the sea. The head
[251] was skillfully disjointed, and with flippers, entrails and liver, put up on the brush roof away from the sand and dogs.

Then began the feast; half the turtle being devoured immediately.
[264] To see Blanco, which name fits neither his complexion or character, gnaw the bone and tear away the raw flesh of a turtle flipper with his strong white teeth and cruel mouth, would not require much imagination to substitute the shin bone of a human being.

All parts of the sea turtle are utilized except the bones and portions of the head. The white, flexible under-shell is roasted and eaten, but how they can masticate and digest it is a mystery. I tried it and gave it up, as did all our party. It might have been a Goodyear tire, for all the impression we made on it, but even the Seri children
237 eat it. The carapace is broken into small pieces and dried out in an olla, and this yields a green oil. The shell is nearly one-half inch thick and filled with minute cells which carry oil. This oil is evidently a provision of nature to prevent barnacles and marine growths from attaching to the shell. This oil is poured into a previously cleaned section of intestine, fastened at one end, and then is bottled, ready for transportation or use.

The skin of the flippers is used for sandals. The broken pieces of carapace are also used for firing ollas. The shells are used for windbreaks, for receptacles for transporting household things on women's heads, and possibly for other needs. The stomachs are stretched, probably with sand, and when dried are used for transporting water, the same as we use a canteen.

185 The Seris are always improvident. They raise no cattle. They plant
261 nothing and the only crops they raise are children and dogs. They store no food away, eat when there is plenty, go hungry when there is
[241] nothing to eat. When they will eat raw turtle meat like animals, their
[231] taste is not refined. This is evidenced when they will eat a horse or
[262] burro dead, several days---scrape off the maggots to get a chance at it.

123 was black. He then ground it in the frying pan by rolling it with a tin can. When made, the coffee was black and bitter, but they were used to it that way.

At three thirty in the morning we were up from our sand beds and drank coffee. At four we pushed off, towing our *balsa* on which we lashed our turtle shells, antlers and other things. Our boat rode the waves like a duck.

As we glided by the foot of some mountains we could hear the surf break sullenly. We had the sail up but soon had to resort to the oars as the slight wind died out. Day soon began to grow light. The sea was glassy, reflecting the rosy morning tinge. There was a swell on but the waves were smooth.

136 The cormorants, in threes and fives, began flying to their feeding grounds with swift wings and necks outstretched. Then a few Pelicans drifted idly by on lazy wings. A school of sardines fretted the water near us, chased by a hungry fish from its depths. A few porpoises rose and dived, rose and dived, rose and dived, time after time. At one time eight of them came within twenty feet of us and one dived right under our bow, bouncing the boat up and down.

133 Soon we were passing some red volcanic hills, with caves and blow
123 holes in the cliff and sea caves below, in which the sea roared. Giant cactus secured a precarious footing in the crannies of the cliffs. Then a long beach, then *Cerro Prieto*, another red cliff descending to the sea, penetrated with numerous caves and roosting places for cormorants.

123 As we neared Alcatraz *(Pelican)* Island, we saw a fishing boat in the distance. The wind had freshened and was ahead and the waves seemed almost to come in board, but the hollowed tree arose and rarely shipped any water. A boat put off from the fishing boat and was rowed to shore, and as we came up we hailed the crew and grounded our own boat. They had seen us from Alcatraz Hill, and seeing the balsa thought the Seri Indians had stolen a fishing boat and were towing their own boat. Each man had a belt of cartridges and if the Seris had been there instead of us they were going to kill them. Bob knew them from Guaymas.

We pushed off from shore again, and after rowing a half or three quarters of a mile further we beached our boats, cooked dinner and waited for our auto truck. Our provisions were almost gone. We had only enough for one meal left. No meat at all. Water was almost gone. None other for miles.

415 One of the cherished vessels used by the Seris is an agate chamber
• 264 pot. It is black from much use. When I saw it, it contained a green
262 slimy mess made from meal of seaweed seeds and the green fat or oil of the turtle. The Seris stick their fingers into the pot and then lick them off. If any is left the dog licks out the pot. No vessel is ever washed; it is licked clean.

123 Then Chico Romero and his load of children and dogs arrived and
484 he unloaded his impediments on the beach, and soon the women came walking along the beach and joined the party. The boats carrying the heavy things and children; the women, with their babies and a few light things on their heads, walk along the beach when possible and follow the boats, which hug the shore to avoid the strong currents and tide. The boats are propelled by paddles mostly, though some of the Indians use oars. The women are slightly built, slender and in-
501 clined to be gaunt, owing to the hard life and lack of food. Their
142 cheek bones are quite prominent and their profiles present protruding lips.

422 Having no permanent homes, moving hither and thither for their
[364] various food supply, household things are not accumulated and life is reduced to its very simplest elements and absolute necessities.

Crude baskets made from shoots of the torote tree, vessels in which to cook, and some patched rags in place of Pelican skins to serve as blankets to the fortunate few, constitute the family pos-
231 sessions. Strange to relate, many of the women have an over-supply of
[853] milk, and according to Roberto have puppies nurse what the babies cannot take. One woman was known to nurse a baby pig on one side and a puppy on the other.

[264] Family dogs lick all cooking vessels which is unnecessary as they
[894] are thoroughly clean when the Seris are through with them, and also lick the infants clean after performing their natural functions, so they are quite indispensable. I saw a Seri girl place on the sand a small can of water for a dog and then saw her drink some of the remainder and pour the rest back in a five-gallon can. Dogs frequently swim across the Infernillo to join their masters.

732 Asked about cripples and incompetents, Roberto said they probably did not exist. The conditions of survival were too precarious to admit of anyone living who was unable, by physical disability, to hunt or fish. There are two or three men who are nearly blind or so. The wives of these men eke an uncertain living for them by the hardest
262 struggle. The sea turtle is the staple; one man and one good boat can
433 secure a living for five families. There are now nine boats, but one
501 boat to a family would practically free them from continual want.
262 With the exception of four bones in the flippers and the bones of the
237 head, all the sea turtle is used---the meat, blood, entrails, shell which furnishes food and oil, skin of flippers which furnishes sandals, sinew for strings. Nothing is wasted except contents of the entrails.

123 Again, we laid our blankets on the clean white sand of the shore and were lulled to rest by the murmuring sea.

123 Daylight found us up the next morning, and we breakfasted, rolled
484 up our blankets, pushed the boats into the sea and were off by the time the sun rose over the mountains and shone over a glassy sea. Two Seris towed their boat by a tump line, while a boy of twelve steered

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then killed him with stones. This modified statement, also, Señor Encinas duly communicated to me. 124

Still later, in collecting linguistic material through the first interpreter with the assistance of Señor Alvarez-Leon, I received in the subject incidentally (or at least ostensibly so) on two or three occasions, partly with the view of verifying or disproving the current report that the men were eaten by the Indians; and since the first distrust on the part of the interpreter and the companions (by whom he was commonly surrounded) had worn off, the questions were answered freely and with apparent truth. In brief, the information gained in this way was a repetition in general terms of the statement of the killing of both men; but the responses indicated (1) that the Indians are not cannibals, (2) that they do not eat any portion or portions of the body of an enemy slain in war, (3) that they do not eat human flesh in a sacrificial way, and (4), specifically, that they did not eat the flesh of the two white men killed last spring. I am disposed to give credence to all of these statements. 648 [266]

Señor Encinas informed me that for a long time after the reputed killing of the two Americans on the island the Seri were exceptionally shy and were seldom seen on the mainland; that the first representatives of the tribe to appear were one or two old women who came to his rancho with much trepidation; that these representatives being not ill-treated, a man appeared, who was also well treated, and that still later other members of the tribe appeared, though it was only a few days before our visit that any considerable body of the Seri Indians showed themselves at their favorite mainland haunt on his rancho. It was his first communication with the Indians since the killing, and, both he and they agreed, the first confession of the crime outside of their own tribe. 648

While in Sonora various conflicting accounts of the affair were given me. One, to which I was disposed to attach credence by reason of the character of my informant and his explanation of the circumstances under which the information was gained, was given me (just before the visit referred to above) by ex-Consul Forbes, of Guaymas. This account corresponds in all essential details with that scavenged by my party by the Indians, except that, according to Mr Forbes' account, the survivors were altogether unarmed after the borrowing of the rifle by the Indians, and that when the men in the boat arose suddenly and shouted he pointed at the Indians not a gun but a stick, in the hope of deceiving them thereby, as he was fortunate enough to do. 115 124 648

It may be added that the Seri Indians are at the same time the most primitive and the most bloodthirsty and treacherous of the Indians of North America, so far as my knowledge extends; also that their character is well known throughout Sonora, and indeed generally throughout Mexico, Arizona, and the southern part of California. I was assured by the acting governor of Sonora and by the prefect of Hermosillo that it would be little short of suicide for even a Mexican official to visit these Indians or land on their island without an armed guard. Through conference with the Indians, also, I learned that any white man, Mexican, or Indian of another tribe coming in contact with them is killed without the slightest compunction, unless they are restrained by fear. Accordingly I am satisfied that the character of the Seri Indians is quite as bad as the unsavory reputation they have acquired throughout the Southwest. 181 648

It should be observed that while the Indians were unable to give the names of the men killed, their description of race and vessel agreed exactly with those of the newspaper correspondent Robinson and his companion, and with the sloop *Evanista*; and Mr Forbes' information was obtained direct from the survivors of the expedition of which Mr Robinson had charge. There can then be no doubt that it was Mr Robinson and his companion who were killed by these Indians, and whose killing was confessed by them, as set forth above. 124 648

With great respect, your obedient servant,

W J McGee,
Ethnologist in charge.

Honorable S. P. Langley,
Secretary of the Smithsonian Institution.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

186 pitiful case of Fray Cristobal Gil, and oftentimes rising explosively
648 beyond the feeble control of the untrained mind; for the impulse of enmity toward aliens is an ever-present possession—or obsession—of the tribe, and a reflection of that race-sense which is their most distinctive attribute.

726 Of open warfare and face-to-face fighting there is hardly a germ among the Seri. When themselves ambushed or surrounded, some of their stouter warriors have in a few instances faced the foe for a few minutes at a time, as is shown by the annals of Cerro Prieto; yet this accidental attitude but betokens the play of chance rather than the plan of choice. Concordantly, the folk avoid the method of warfare (so common among other Amerind tribes as to be properly considered characteristic) involving open duel between chiefs and other warriors; they seem to be devoid of that sense of fairness in fighting which finds expression in the duel; and despite the individual advantages growing out of gigantic stature, immense strength, and superior swiftness, they habitually seek to combine in numbers against panicked or baffled enemies, just as their hunters throw themselves mercilessly on surrounded quarry. Of open boldness or confident prowess no trace appears; and the body of facts seems to justify the prevailing Sonoran opinion that the warfare of the Seri is treacherous and cowardly in design, craven and cruel in execution.

Once begun, the conduct of the fray by the Seri fighters is fairly uniform; the warriors either discharge clouds of arrows from their coigns of vantage, or rush to brain their victims with stones, or to break their necks and limbs and crush in their chests, as in the slaughtering of quarry; and according to the tale of the occasional survivors—Señor Pascual Encinas and his son Manuel, Don Ygnacio
[115] Lozanía, Don Andrés Noriega, Don Jesus Omada of Bacuachito, and Don Ramon Noriega of Pozo Noriega, are among the survivors and informants; also the sturdy Papago fighters, Mariano, Anton, Miguel, and Anton Castillo (whose sister died of dread while he was on the 1895 expedition)—the rushing warriors are transfigured with frenzy; their eyes blaze purple and green, their teeth glisten through snarling lips, their hair half rises in bristling mane, while their huge chests swell and their lithe limbs quiver in a fury sudden and blind and overpowering as that of springing puma or charging peccary. Of the successful assaults the ghastly end is rarely recorded, though whispered large in the lore of Sonora; in the unsuccessful assaults recounted by survivors the blood-frenzy burned but briefly and died swiftly as the disappointed warriors skulked silently behind rocks and shrubs, or fled across the sands with inconceivable fleetness. These details of battle precisely parallel the details of butchery of beastly quarry, as recounted by local observers and corroborated by Mashém's recitals.

266 So far as can be ascertained the parallelism between frenzied battling
727 and furious butchery in the chase affords the chief basis for the firm

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

Sonoran belief that the similarity extends one step further, and that the human victims are rent and consumed, like the beasts. There is a lamentable lack of data concerning the alleged anthropophagy of the Seri; on the one hand there is the deep-seated local opinion, generally growing stronger as the tribal territory is approached, and agreeing so well with the hunting customs, the thaumaturgic arrow-poisoning, the zoomimic handicraft, and zootheistic faith, and especially with the pervading fetish-piracy of the folk, that its validity would seem inherently probable; on the other hand, there is not only a dearth of specific positive testimony, but hacendero Encinas (best informed among Caucasians concerning Seri customs) and several of his vaqueros reject the prevailing belief, while Mashem consistently repudiated the custom, both in general and in particular, and in ceremonial as well as in economic aspects, whenever and in whatever way the subject was approached during his intercourse with the 1894 expedition. On the whole, the much-mooted question of Seri cannibalism must be left open pending further inquiry, with some preponderance of evidence against the existence of the custom.

The war-frenzy of the Seri fighters is significant in its parallelism with the blood-craze of the chase, and even more so in its analogy with the warpath customs and ceremonies of most Amerind tribes and many other primitive peoples. In typical tribes the warpath custom is a most distinctive one, standing for an abnormal state of mind and an unaccustomed habit of body, perhaps to the extent of an extreme exaltation or obsession akin to intoxication, in which the ordinary ideas of justice and humanity are inhibited; among most tribes the condition is sought voluntarily and deliberately when occasion is thought to demand, and is superinduced by fasts and vigils, exciting songs and ceremonies, and related means; while among certain tribes the aid of symbolic "medicines", which may be actual intoxicants, is invoked. Thus the savage on the warpath is a different being from the same man in times of peace; viewed from his own standpoint, he is possessed of an alien and violent demon, usually that of a fantastic and furious beast-god whose rage he must symbolize and enact; viewed from the standpoint of higher culture, he is a raving and ruthless maniac whose craze is none the less complete by reason of its voluntary origin. The warpath frenzy is one of the fundamental, even if little understood, facts of primitive life, and the character of the savage tribe can not properly be weighed without appreciation of it. Now, the Seri blood-craze seems measurably distinct in two ways: in the first place, it expresses a more profound and bitter enmity toward aliens than is found among most savage tribes—i. e., it is instinctive and persistent in exceptional degree; in the second place, it is more spontaneous and explosive in its culmination when conditions favor than among tribesmen who induce the condition by elaborate preparation—i. e., it is dependent on the swift-changing hazard of warfare in exceptional

2: Kroeber E-5 (1930) 1931 NU31 Seri NU31

is what their "shirt" (McGee, pl. 29) probably was. The fabrics of McGee's Mexican informant may refer to gunny-sacks made over into improvised imitations of civilized garments; or to single-element carrying bags. It is entirely possible that contact with the cloth-weaving tribes of Sonora long ago induced the Seri to shrink from habitual complete nudity; but it is difficult to imagine them producing even a coarse wearable cloth. McGee's interpretation of the historic sequence of Seri garments is of course wholly speculative.

The cradle shown by McGee (p. 226, fig. 30) consists of a kite-shaped hoop with eight sticks tied across it and a lashing thong passed back and forth across it half-a-dozen times. Even allowing for some slip of the parts in transport to Washington, this specimen is quite typical in Seri disregard of evenness, neatness, order, or finish. The Yaqui cradle illustrated by Hrdlička[1] consists of eight or nine lengthwise sticks or canes twined close together. The Lower Californians used a basket or a turtleshell. The Gila Pima and river Yuman cradle is of "ladder" type, and therefore similar in structure to the Seri except that it lacks the point at the bottom and has the sides parallel; it also carries a hood of wickered or twilled splints. As regards basic structure, one form of Maidu cradle is most similar to the Seri; just as the plan of the Yaqui one reappears among Miwok, Yokuts, and Mono a little further south in California.[2] It appears from this irregular distribution that so simple an apparatus as the open or flat baby-carrier, which can be just as serviceable without a definite technique or style entering into it, is likely to vary locally without much significance, and that its forms will indicate historic connection only when they are parallel in a number of details. In these respects it resembles house types. In both these objects, new "inventions," certainly of detail elements and perhaps of basic structure, seem to be readily made and adopted.

McGee's finding (p. 247) that the Seri are "not habitual stone arrow-makers" has a parallel among the river Yumans, and, at least partially, among the remaining Sonoran tribes. His conclusion (p. 259) that the *yerba de la flecha* (magot, Sebastiano bilocularis?) was an Opata but probably not a Seri arrow poison, seems sound. The plant was shown me on the island, and the Seri knew it as venomous, but volunteered nothing as to using it on arrows.

That the question of Seri cannibalism must be left open, with a preponderance of evidence against the practice (p. 263), also seems a conservative judgment.

As to shields, McGee learned of loose pelican pelts and turtle-shells (p. 264), I of armor and a large upright shield of hide. Both accounts may be right, one referring to emergency pick-ups, the other ——— to prepared defence or attack.

[1] AA 6, pl. 9, 1904.
[2] BAE-B 78:838, fig. 48, pls. 36, 46.

S:Davis & Dawson F-8 (1922-1940) 1945
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lation, but as the Ishmaelites of America they brought misery and death upon themselves by an unwavering belligerence toward all outsiders. The history of their centuries of bitter contest against the forces of law in Sonora is a bloody one, but whatever has been the extent of their wanton looting and murder, there is one crime of which they have long been unjustly accused. Sonora is full of legend and tale of "los canibales," [266] but no convincing evidence has ever come to light proving that the Seris ever practiced cannibalism. Of course, it could be argued that the only ones who might have proved it were killed and eaten.

[p. 202(B)]

[pp. 203-260 have no material relating to the Seri.]

000 possible for producing domestic crops of any kind. There is no water
312 for irrigation, and drinking water is very scarce, rising in only a few parts of the Island in places known only to the Indians.

648 For centuries these nomads of the wastes have borne an evil repu-
[49] tation as killers and cannibals, and many an expedition to the Island for trade or exploration has never left its beautiful shores. Lured away from their boats by friendly gestures of the Indians, every last man has been killed by arrow or rifle and the expedition never heard from. No survivor has ever returned to relate his experience and, up to the time of my visit, a man risked his life to go among the Seris on their Island.

Time after time, for four hundred years, the Spaniards, and later the Mexicans, have tried to exterminate them. They have been ambushed, hunted, killed on sight for years; diseases have decimated them: they have been the Ishmaelites among the native tribes of Mexico, with every man's hand against them. Now only a small remnant survives.

[13] They have also taken heavy toll of those who have invaded their territory, which at one time extended from Altar on the north to Guaymas on the south, and from Hermosillo to the coast. When hard pressed, they retired to their Island sanctuary where, deep in the rugged ranges, they have defied pursuit. They are strong, brave, neither asking nor giving quarter in battle---men of marvelous endurance, tireless walkers, swift runners, wonderful trackers.

Within the last few years the Government has definitely set aside Tiburon as their exclusive home and sanctuary, with a strip along the mainland as their hunting and fishing ground, and where they can harvest the fruits of the giant cacti without fear of being killed. No person is allowed on this Island without special permission from the Governor of Sonora, or their Superintendent and devoted friend, Roberto Thomson. The Government has declared a permanent closed season on Seris.

175 As to the reputation of these nomads of the wastes of being can-
648 nibals, I quote the following extract from the *Life of Bill Fain:*

266 After I had been in Yuma some time, a Yuma school teacher asked what I knew about Tiburon Island and the Seris. He said he had heard there was gold on the Island and he in company with a sailor intended to go down there. I said "Partner, I have been at the head of the Gulf several times, and interviewed many Mexican sailors and fishermen. These Seris are murderers and cannibals and my advice is, don't go, for as sure as God made little apples, you and your friend will make a fine feast for the *Tiburones.*"

He said the sailor would manage the boat and they would prospect on the Island and pack the gold out. And besides, they were going unarmed and trust themselves to the tender mercies of the most treacherous Indians in North America. I told him, "My advice is to stay just as far away from that Island as you can, if you want to teach school any longer." My advice was thrown away.

Some weeks later several mining men in skirting the coast opposite Tiburon, came across a place where the Seris had evidently been feasting on human flesh,

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648
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near the narrow channel called *Infernillo*. They knew about the missing school teacher and sailor and without doubt this was the place where they had been eaten. There were the bones of two human beings, and there seemed to be a sort of cross, with hands severed at the wrists, nailed to the ends of the cross with big spikes, with a piece of leather, about as big as a dollar, to keep the nails from pulling through. The hands were from a white man, and many scattered papers from a valise near by, with the man's name stamped on it, was ample proof that the remains were those of the Yuma teacher and this sailor friend. The holes cut out of the valise fitted the leather washers. Even the bones were broken to extract the marrow. The teacher never showed up and everything happened just as I predicted. This was about 1893.

About a year after this, five other men left Yuma in a boat, called the *Examiner*, for Tiburon. Clark was an old frontiersman, O'Brien was a good man too, but not so old at the game; Charley Cowles was a mining man and the two *Examiner* reporters wanted to write up the Seris and the Island and hunt deer. All were fully armed. I gave Clark and O'Brien the same advice as I gave the school master and said on no account to all desert the boat; for O'Brien to make some excuse and stay in the large boat with a shot gun loaded with buckshot and land the reporters with the small skiff. I told Clark not to land but to stay in the skiff. I said they were all flying in the face of sure death once they landed. Charley disembarked at the mouth of a river and left for the interior.

When the boat got close to the Island, it was anchored according to my instructions and Clark and the reporters got in the skiff and were rowed close to shore, when the reporters jumped out and waded. Twelve or fifteen wild natives had emerged from the brush and were making signs of friendship and they shook hands all around with the reporters. One of the men could talk Spanish and he asked about deer and one of the Indians pointed to the mountains of the interior and said, "*Si Senor, bastante venado.*" So they all started inland and were soon concealed by the brush.

Of course, even two men fully armed and good gun men, would stand no chance with that number of wild natives.

Soon after they had disappeared around the point of a hill, the men in the boats heard the crack of a gun, followed by the scream of a man in mortal anguish. The men never showed up and Clark started for the big boat in his skiff. About this time, a great buck Indian started out in a dugout canoe to cut him off. O'Brien had kept himself concealed until the Indian came within range, when he raised up and threatened to shoot, and waved him back.

He went back all right, and as soon as Clark came aboard, they raised the anchor and sailed south to Guaymas, sold the boat and returned by train. They gave me the details as here recorded. Friends of the newspapermen took the matter up with the authorities at Washington and they had some diplomatic exchanges with the Mexican Government. Mexico answered: "If you don't want your Americans killed, keep them away from Tiburon."

[*Life of Bill Fain*, unpublished manuscript from the Davis collection.]

About 1893 George Porter and John Johnson fitted out the small sloop *World* in San Diego, to go down in the Gulf for shells and curios, and trade with the Seris. They came to grief in the same way. The men were lured ashore by the friendly attitude of the natives, led up the beach, then retreat cut off and they were shot down and "eaten by the Seris."

Dr. [W J] McGee of the Smithsonian Institute of Washington, in 1895, visited the Island with a party of scientists to study the

[text continues on p. 146]

175 698 266 Indians. Dr. McGee, confirming Bill Fain's story of the disappearance of Robinson and Logan, the San Francisco newspapermen, secured the facts from a Seri who spoke Spanish, as follows:

> On reaching the Island, Robinson and Logan asked the natives if there were any deer to be shot and receiving an affirmative reply, they started for the interior toward the mountain with several Seris as escort, leaving the two other men with the boats. On the face of it, this was a most foolhardy performance and Robinson actually loaned his rifle to one of the Seris, who accompanied him. The Seri shot Logan in the back and wounded Robinson who called for help. In trying to escape he stumbled and fell and the Indians beat his brains out with rocks.

On the Gulf Coast, this list of killed and of course eaten, could be greatly enlarged and leads to the fact that, up to recent years, no stranger---American, Mexican or Indian---could land on Tiburon and live. Ever since Sonora was settled, two or three hundred years ago, the Island has borne a sinister reputation and up to recent years, it has lived up to its reputation. Even now, no one is allowed to land on the Island without permission of the Governor or the Superintendent.

[193] The Island of Tiburon is isolated, its approaches guarded by deserts and sea, and its people the wildest and most primitive race in North America---every man's hand against them, and they against every body.

175 648 266 114 Dr. McGee's investigations in 1895 failed to convict the Seris of cannibalism or of eating any part of either whites or Indians, killed on the Island or killed in battle. This reputation of cannibalism is prevalent in Mexico as well as in the United States, but the charge has never been proven.

It is true, they eat the flesh of animals raw as well as partially cooked, and that may have given rise to this gruesome reputation, but my own investigations covering several visits on the Island and on the Sonoran coast, failed to convince me that they had eaten human flesh. They told me themselves they had not, and if all reports of cannibalism by the Seris were traced back to their source, they would end in surmise or guesswork. No one, so far as I have been able to find, has actually seen a Seri eat human flesh. Until such a witness can be produced, the Seri remains unconvicted.

Let us examine the so-called evidence of the mining men, as quoted by Bill Fain: the finding of a white man's hands spiked to a cross, and the schoolmaster's papers scattered on the Gulf Coast of Sonora. This evidence is too circumstantial. The discs of leather even fitted the holes in the bag.

In the first place, nails are scarce in Sonora, and no Seri at that time would risk his life to procure nails or spikes at any ranch. Nearly all woods in that region are hard and would almost certainly turn a nail. The Seris had no axes to chop trees to make crosses, and

if they were as hungry then as they are today, they would not stop to spike a man up preparatory to serving him. Their only tools then were rocks to use as hammers and hoop iron for knives, and these are in universal use today.

There is no doubt that the men were killed, but I think these mining men purposely exaggerated their findings, if any.

There is no doubt that the Seris were brave fighters, treacherous murderers, sparing neither men, women or children on their raids, killing ruthlessly. But there is one charge which cannot be brought against them, which cannot be said of many tribes north of the border. So far as I could find out, they never tortured nor scalped.

The Seris never took prisoners and they never inter-married with other tribes, so their strain is pure.

There was one exception. Sixty or seventy years ago, the Seri Chief Coyote Iguana and his band of warriors held up the stage between Hermosillo and Guaymas, and killed all except a handsome Spanish girl of the better class. This girl, Coyote Iguana made his wife and by her raised a family. One granddaughter still survived in 1924, and while more attractive than the general run of Seri, her complexion was fully as dark.

The Seris, Ishmaelites among the native tribes of Mexico---the most fascinating Indians in North America!

Reception Committee, Tiburon Island - 1938

On the twenty-fifth of April, nineteen twenty-two, I engaged the services of Roberto Thompson, who with his father and grandfather

[text continues on p. 149]

242 Burro meat comes first in their estimation, then mares, then steers, but they take what they can get and no questions asked. Burro deer or black tail is a great article of diet, and these deer are on the Island. Wolves and coyotes are on the Island also. I do not think they eat them.

• 266 As I have said, the Seris are reputed to be cannibals, or to have been. Since those who furnished the meals cannot speak, it is a matter not entirely proven.

648 199 There is a war on between Mexican fishermen and the Seris. The Seris are wild for boats and will do almost anything to get one, so two years ago a chance occurred and they killed seven drunken Mexican fishermen and seized their boat. Last summer, some fishermen surprised the Seris, killed one, and recovered the boat. They mourn this boat a lot more than they do the dead man.

648 Twenty or thirty years ago, Governor Ysabel came here with some troops to capture some Yaquis who had joined the Seris. The Governor told the Chief he would have to give up the Yaquis, as they were outlaws. The next day the Seris brought in six right hands. They said they had killed the Yaquis. Asked how and why, they said they had killed them while they slept and they wanted their guns. They cut off the right hand of each as proof.

With all their apparent friendship, we never go without arms. When we sleep our rifles are alongside of us, and we wear our revolvers with us. Sometimes we roll in with our clothes on. But they have never, by sign or act, shown anything but friendship.

851 123 197 A baby boy about four months old was in camp, so Rafael Ysabel baptized him and gave his name Rafael, and presented him with a little gold cross of which his mother was very proud. She held the baby while he poured a little precious fresh water over its head and repeated:

"In the name of the Father, Son and Holy Ghost, I name thee Rafael. . ."

123 Curious black eyes follow us always. When we eat, the Seris often squat around us and watch every mouthful. If there is any bread, gravy, grease, beans or meat left over, we pass it on and they certainly clean up.

While we eat, the waves are always lapping on the shore upon which many pretty shells are thrown by the tide, besides water-worn pumice stone in all sizes down to a small marble.

Our meals are very simple. We bake biscuit in the dutch oven for every meal, cook turtle meat, if we have it, or beans or rice or spuds.

[text continues on p. 171]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

extensive rancherias near Punta Narraganseti measure 10 miles by trail from the same aguaje; the half dozen jacales about Campo Navidad are separated by some 15 miles of stony and hilly pathway from the alternative watering places of Tinaja Anita and Arroyo Carrizal;[1] and the huts crowning the great shell-heap of Punta Antigualla—one of the most striking records of immemorial occupancy in America—are nearly or quite 10 miles by trail from Pozo Escalante, and still further from Aguaje Parilla, the nearest sources of potable water. These are but typical instances; and while there are ruined huts (evidently regarded as temporales) near the dead waters of Barranca Salina and Pozo Escalante, they tell the tribal policy of locating habitations in places surprisingly remote from running water. Like other desert folk, the Seri have learned to economize in water-carrying by swigging incredible quantities on their occasional visits to the aguajes; it is probable, too, that their systems are inured, somewhat as are those of the desert animals that survive deprivation of water for days or months, to prolonged abstinence from liquid food; yet it seems safe to assume that at least half of the water required in their vital economy (say 2 or 3 pounds apiece daily, on an average) is consumed after transportation over distances ordinarily ranging from 4 to 12 miles. Under these conditions the Seri have naturally produced a highly developed water industry; they are essentially and primarily water-carriers, and all their other industries are subordinated to this function.

Concordantly with their customs, the Seri have a highly differentiated aquarian device in the form of a distinctive type of olla, which is remarkable for the thinness and fragility of the ware, i. e., for largeness of capacity in proportion to weight. Representative specimens are illustrated in plates XXXII and XXXIII (the former painted, as already described). The dimensions of the two vessels are as follows: painted olla, height 34 cm. (13⅜ inches), mean diameter 32.5 cm. (12¾ inches); plain olla, height 32 cm. (12⅝ inches), mean diameter 31 cm. In both specimens the walls are slightly thickened at the brim, those of the painted vessel measuring about 4 mm. and those of the plain vessel about 4.5 to 5 mm. in thickness. Below the brim the walls are thinned to about 3 mm., as is shown in the fractured neck of the painted specimen. The capacity of these Seri vessels in proportion to their weight, compared with that of typical examples of ware produced by other desert peoples, is shown in the accompanying table.

Comparison of the mean ratios indicates that the Seri ware is almost exactly twice as economical as that of the Pueblos—i. e., that its capacity is twice as great in proportion to the weight of the vessel; and that

[1] The preciousness of water in this hard province was impressed in the 1895 expedition, during which the cost of the commodity, reckoned on the basis of the time and labor involved in obtaining it, was estimated at $10 or $12 per gallon, or about the wholesale price of the finest champagnes.

312 of four miles by a rough and stony trail. In
482 other parts of the island, habitations were occupied as distant as 15 miles from the nearest watering places. Under these conditions the Seris became essentially and primarily water carriers, and all their other industries were subordinated to this function. They learned to economize on water carrying by gulping incredible quantities on their occasional visits to the aguajes, yet, more than half of the water required in their vital economy was consumed after transportation over distances of four to twelve miles. The
312 women were ordinarily the water bearers and
482 for this important business manufactured a
323 distinctive vessel for the purpose. From fine adobe clay they hollowed, expanded and shaped by manipulation with the fingers and without the aid of implements of any sort, a large olla of remarkably light weight in proportion to its capacity. Its mouth was made no larger than the hand that shaped it, thus to prevent spilling on the trail. From
482 yucca fiber a cylindrical cushion was also

[271]

[p. 196(B)]

[text continues on p. 197(B)]

7: Marroquin E-5 (1955) 1957 NU31 Seri NU31

In general, the Seris have a healthy appearance; the most frequent complaints are gastro-intestinal and visual defects due to avitaminosis. It is very possible that given the difficult living conditions resulting from the desert environment, a rigorous selective process among the newborn takes place so that only those who possess exceptional physical qualities survive. This explains why the majority of them retain the physical characteristics described by Hardy more than a century ago: "the Indians of Isla Tiburón are tall, healthy and well built". 164 147 142

In spite of attempts at education, the Seris do not practice the elemental rules of hygiene; their way of life, neglecting this aspect, contributes to increase the unhealthy foci which exist in the places where they have established themselves. 515 751

Dwellings.—The Seris retain many vestiges of their nomadic life, among them the hut which serves as their living quarters; many of them are simple provisional arrangements for sheltering themselves from wind and sun, and they bear no relationship to the stability and durability of our dwellings. The Seri hut was made to meet the necessities of a nomadic people who had no reason to spend much time nor work on making a dwelling which would only be used for a season (one, two or at the most three months). Nevertheless, some innovations have been introduced in the last 20 years, so that we must distinguish between two types of houses. The primitive model consists of a series of scrub pine arches interwoven with branches from the same shrub almost totally covered by foliage, tortoise shells, *zacate*, etc., with only a small hole in one of its ends as an entrance (this type of hut is the same that McGee saw in 1894 when the Seris still led a nomadic life). 342 [221] [177]

In the new model more resistent woods are used, like *sahueso*, *torote*, etc., and poles, between which is laid a layer mud. The house is rectangular, without windows; with only one entrance, but always larger than the entrance to the brush hut. Other models would have to be added to these two, due to the incorporation and utilization of tents made in the United States which some U. S. tourists or the Society of Friends have given them. The tent is used as permanent living quarters; or sometimes combined with branches to cover the primitive type huts. 342 178 [177]

Domestic Animals.—The Seris are very fond of domestic animals like the dog, cat, and finally, the chicken. For all practical purposes these animals live together with the family; they rest on the piles of rags and sand which serve the Indians as beds; lick the plates and cooking utensils; dirty the house; increase the household fauna with their fleas and other vermin thus contributing to create and unhealthy atmosphere in the home. 231 [136]

Problems of Intoxication.—Their dealings with the fish buyers, in whose stores are sold beer, mezcal and tequila, has turned them to the consumption of these drinks. The Seri drinks liquor in an uncontrolled 273 [275]

7: Marroquin E-5 (1955) 1957 NU31 Seri NU31

way. Since the preparation of the drinks served to them is not very hygienic, they often produce severe gastro-intestinal upsets and even affect their vision. 273 [164]

Demographic Data

The following chart shows the population distribution by age groups: 162

SERI POPULATION BY AGE GROUPS AND SEXES
(as of December 31, 1955)

	Men	*Women*
Less than 1 year	4	3
From 1 to 5 years	10	11
From 6 to 10 years	15	12
From 11 to 15 years	15	16
From 16 to 20 years	13	14
From 21 to 25 years	4	1
From 26 to 30 years	7	15
From 31 to 35 years	16	13
From 36 to 40 years	5	2
From 41 to 45 years	2	2
From 46 to 50 years	3	6
From 51 to 55 years	5	5
From 56 to 60 years	—	—
From 61 to 65 years	4	2
From 66 to 70 years	1	2
From 71 to 75 years	—	3
From 76 to 80 years	—	1
From 81 to 85 years	2	—
From 86 to 90 years	—	—
From 91 to 95 years	1	—
Total	107	108

The pyramid of ages formed by the data of the above chart does not present the usual characteristics of a young community in full growth, as is common in the Indian villages; rather it is closer to the old communities, with predomination of the working age groups over the infant and old age groups.

Work

The population able to work can be calculated as that between 11 and 65 years of age; because even though they begin to work very early, the cycle of economic productivity is very long. Calculation of that population gives us the following figures: 464

231 which was kept around as a pet and it was interesting that the Indians who held it captive took considerable pains to look after it. This I noticed also with such few pet birds as they had. On the contrary, the large number of dogs which these Indians keep are left much to their own devices and are rarely fed. They are treated with lordly indifference and are treated as one Indian said to me "as you treat the dogs" which meant with a kick, stone and fist and forced to feed on the offal left on beaches. Yet, no Seri would ever think of deliberately killing a dog, unless drunk. Although there is obviously little use for the dogs, each family keeps many of them. Sometimes as many as a dozen of these miserable curs live in the compound of one Serian family.

● [273]

Taxonomy and Recognition

825 From the responses given, the Seri tend to split the mammals into two groups, the mammals proper and the group of animals which to them seem neither mammals nor fish. Evidently the possession of fur is of paramount importance here because it had been mentioned as a mammalian feature for several of the species. The Seri then put the *Cetacea* in a group of their own perhaps on these grounds. To be sure, the designation is somewhat hazy. The whale, the informants said, "is not fish nor mammal." The killer whale has also been referred to by them as a "whale-like animal." Finally, the dolphin one of the informants said was "like a shark. It lays eggs like a shark." But another informant thought it was "a mammal-like whale" although his response was obviously uncertain. That the presence of fur must be the main distinguishing feature is obvious in that they have no doubt about the mammalian position of the sea lion and that, while uncertain about the position of the bat, they are inclined to classify it with the mammals. As one informant put it "it can be of smilar kind to the coyote. It is not a bird because it has fur. Fur is not what the birds have."

Otherwise they are fairly good at the recognition of those individual species that are well known to them or that are frequently encountered in the area. The jaguar, called also *el tigre*, is known from hearsay only, owing to its extreme rarity in the immediate area of Desemboque. Porcupine is well recognized due to its peculiar features. But it must be rare and José Juan Moreno who saw it only once thought it was a "mammal." But he had no difficulty in recognizing a picture of it or associating the Spanish name *porcospino* with it. A somewhat moot point is the cácomistle. This animal evidently is not well known and, from the report, had been surely confused with some other creature. Finally, while the jaguarundi is surely found in the area it is also little known. Having to work with pictures I cannot in any way verify the Seri responses, especially since the picture used was not of the best kind for the identification purposes. A Mexican trader had a multilated skin of one, but he sold it to a visitor before I had time to query the informants about it.

[124]

[P 11 A]

285 [824] I watched a woman make a basket. She used young branches from the terote tree, I think *terote blanco*. The bark was peeled and shredded into two parts, the heart taken out and kept separate. The coils of the round part were put in a pot of hot water to soften, and the edge of the basket was soaked a little in hot water. The center of the coils or woof consisted of six or eight strips of heart while the outer sap wood was woven around in regular coil-weave fashion.

[287] [412] A brad of deer shin-bone sharpened on pumice to a needle point was used as a brad. With this brad she split the fiber, held one piece in her mouth, and stripped the back down. Then she punched a hole in the bone brad, inserted the sharp end of the fiber and pulled it almost through. She then repeated the operation, adding a strip of heart once in a while. These baskets are coarse and unattractive, but they are hard and tough and stand heavy use.

323 Cooking vessels consist of two or three cooking ollas that nest together to facilitate transportation. These are made of coarse clay, solely for utility without regard for beauty of shape, color or design. In burning these ollas they use the shell of the sea turtle. [237] [372] The cells of the shell are filled with a fine oil and this burns the ollas. On most of the other places on the mainland, the Indians use cow chips, or dried droppings to fire the clay.

283 484 123 We proposed to shift camp to Tinajanita, our first landing place, where Herrera was to meet us in two days with the Chief and some of his men. Since it was blowing, he said the men couldn't fish and they would be on land probably hunting, so he would be able to see them. [271] At this time they gathered *mescal* on an island off the west coast to make the liquor they used at fiestas, weddings and other celebrations.

Herrera left at five o'clock in the morning, with a swinging gait, for the opposite side of the Island. The distance around by boat would be fifty miles, and across, only about twenty or twenty-five---a full day's trip and hard, as mountains would have to be crossed and the rocks were sharp and the way difficult.

123 We had breakfast on rice and bread. Our rations are running low and we expect to move this morning. We made arrangements about the native boat and saw Blanco trot off with two five-gallon cans for water, a distance of ten miles. We went to the camp to get a few things---an old basket, a Pelican hide and other things, and then we asked the help of everybody to get the boat down to water---the tide was very low. The one man, the women and five of us were required to drag and push the boat to water.

We waved goodbye, loaded her up and then rowed against the tide and wind for miles, and finally landed in a lovely sheltered lagoon, built our fire and had lunch. A few crabs were speared, and late in the afternoon the wind shifted. We loaded the boat again and pushed off for Tinajanita, our first landing place. After rowing, we raised

[Text continues on p.174]

7: Marroquin E-5 (1955) 1957 NU31 Seri NU31

In general, the Seris have a healthy appearance; the most frequent complaints are gastro-intestinal and visual defects due to avitaminosis. It is very possible that given the difficult living conditions resulting from the desert environment, a rigorous selective process among the newborn takes place so that only those who possess exceptional physical qualities survive. This explains why the majority of them retain the physical characteristics described by Hardy more than a century ago: "the Indians of Isla Tiburón are tall, healthy and well built".

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Problems of Intoxication.—Their dealings with the fish buyers, in whose stores are sold beer, mezcal and tequila, has turned them to the consumption of these drinks. The Seri drinks liquor in an uncontrolled

2: Kroeber E-5 (1930)1931 NU31 Seri NU31

789 Some shamans display their ability to hold live coals in their mouth.

Taboos

[88] 784 At first menstruation, the girl eats nothing (!) for 8 days, only drinking water. For 4 nights a *fiesta* is held for her, men and women dancing in a circle, anti-sunwise. She is outside the ring. Her head is not covered. San-pit roasting was unknown to the informant.

[841] At menstruation a woman drinks hot water. She may cook for others. She may not eat deer meat.

[844] After childbirth, both husband and wife eat only *atole* (gruel) and water, he for 4, she for 8 days. She may not work at all, he only a little, such as getting wood, "hunting" as necessary, etc.

[861] [224] There is no puberty ceremony for boys. Nothing is said to be known of any rule forbidding a boy to eat of the first game killed by him.

[833] Continence before hunting deer was not observed. Nor was there any special treatment or respect due the deer carcass. It is said that deer meat could not be left behind unless there was too much, but this is probably a statement of practise rather than a taboo.

Dances

535 [727] Besides the girl's puberty dance, the Seri also had a scalp dance. Only the frontal piece of the scalp was used. This was hung on a pole. Men (armed) and women danced together around it. If the scalp fell down, all would die.

Dances seen were solo on a plank laid over a shallow pit. Several singers sat by, beating or rattling anything convenient. Each song and dance lasted scarcely three minutes. The tempo is fast. The step is a quick double shuffle with alternate feet. In one type, the dancer held to a stick with one hand, his body and hanging arm remaining as motionless as possible. Another type was without the stick, the dancer holding a gourd rattle and keeping his body bent forward somewhat.

534 171 Rattles are of gourds, e'Xèc, on a stick, or of cocoons, Xekakë'ntta. Deer-hoof rattles were denied. The cocoons are on a band worn below the knee. The Yaqui-Mayo wear such knee-bands of cocoons; and sometimes of deer-hoofs. The Gila Pima also know the cocoon band.

Various Religious Items

● 276 Datura (tolouche, jimsonweed) does not appear to have been used. Even the plant seems unknown, although it is said to occur in the Seri range.

778 789 Rain making seems to be by amulet rather than by direct shamanistic power. For instance, Antonio Herrera wears a small object

[92 cont.]

156 They are principally the result of influences that act during the first years of life: constant contact of the skin with that 854 of adults; immobilization of the extremities by cloth wrappings; 155 provision of a permanent support in the form of a cradle to which the child is fastened; constant attention to his alimentary needs, and continuous supervision of his actions.

155 "Give me bread," "give me coffee," "you have food, I 156 am hungry," "why do you keep food?" "that's the way things are," etc., are very common expressions that manifest the Seri personality.

000 On the other hand, from the practical point of view (3),

226 439 3. For the present fishing promoters, the Seri personality is a serious obstacle: because of the wealth of marine fauna, the competent Seri obtain a good catch in a few hours, and their earnings permit them to live several days, which would be multiplied if the yori would not resort to the sale of marijuana at excessive prices to obligate them to work.

●[276]

it has to be greatly altered, above all in so far as it influences the personality, in order to raise the Seri standard of living, changing their habits, ideas, and values.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

subsequent episods in their history or century in time. The description of the effect of the poison is especially suggestive of the Seri; as pointed out on a later page, the Seri arrow-venom is magical in motive, but actually consists of decomposing and ptomaine-filled organic matter, so that it is sometimes septic in fact, while the arrow-poison of the neighboring Opata, Jova, and other Piman tribes was (so far as can be ascertained) vegetal; and these accounts seem to attest septic poisoning rather than the effects of any known vegetal toxic.[1]

Such (assuming the validity of the several identifications) are the earliest records concerning the truculent tribesmen and the desolate district known centuries later as the Seri and Seriland.

About 1545 began the Dark Ages in the history of northwestern Mexico; the excursion of Guzman, and the journeys of Cabeza de Vaca and Friar Marcos and of Coronado himself, died out of the memory of the solitary adventurers and scattering settlers who slowly infused Spanish culture and a strain of Caucasian blood into the Sonoran province; even the route taken by Coronado's imposing cavalcade was lost for centuries, to be retraced only during the present generation, largely through the determinations of Simpson, Bandelier, Winship, and Hodge.[2] It is true that Don Francisco de Ibarra penetrated the territory in 1563, and remained until rumors of gold in other districts drew him elsewhere; it is also true that Captain Diego Martinez de Hurdaide pushed into the province in 1584, and entered on a career of subjugation, waging persistent war with the Yaqui, which resulted in the acquisition of the territory of Sonora by treaty April 15, 1610;[3] yet few records of exploration or settlement were written before the advent of the Jesuit missionaries, toward the end of the seventeenth century.

Still more astounding was the eclipse of knowledge of the gulf. Despite Ulloa's survey of the entire coast, recorded in an itinerary so detailed that every day's sailing may readily be retraced, and despite Alarcon's repetition of the surveys and extension of the discoveries far up Rio Colorado (where his work was verified by that of Melchior Diaz), a mythic cartography arose to shadow knowledge and delude exploration for a century and a half; for "upon the authority of a Spanish chart, found accidently by the Dutch, and of the authenticity of which there never were, or indeed could be, any proofs obtained, an opinion prevailed that California was an island, and the contrary assertion was treated even by the ablest geographers as a vulgar error";[4] and a mythic strait formed by cartographic extension of the Gulf of California indefinitely northward haunted the maps of the seventeenth century. This error was adopted by various geographers, including Fredericus

[1] It should be noted that Mr. F. W. Hodge, whose large acquaintance with the Southwest and its literature gives his opinion great weight, is inclined to class the Indians in question as Opata.

[2] Op. cit., pp. 29-72.

[3] Sonora Historica y Descriptiva, por F. T. Davila, 1851, p. 8.

[4] A Natural and Civil History of California; translated from the original Spanish of Miguel Venegas. London, 1759. vol. i, preface.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

411 and seldom stirred until the stranger approached within 50 or 60 yards; whence it may be assumed that these distances fairly indicate the ordinary range of Seri arrows. The few accounts of conflicts in which arrows are mentioned prove, however, that these missiles are discharged with great rapidity and in considerable numbers during the brief interval to which the fighting is customarily limited.

278 411 The most notorious feature of the Seri warfare, and that of deepest interest to students, is the reputed use of poisoned arrows. The scattered literature of the tribe, from the days of Coronado onward, abounds in references to this custom; the Jesuit authorities give somewhat varied yet fairly consistent descriptions of the preparation and the effects of these arrows; Hardy added his testimony as to the character of the poison; General Stone gave directly corroborative evidence; hacendero Encinas gives witness to the effects of the envenomed missiles on his own stock; while Mashém recounted to the 1894 expedition the various uses of the "poisoned" arrows and highly extolled their potency, though he was noncommittal—save in casual allusions—as to the details of the poisoning. A part of the arrows acquired by this expedition and now preserved in the National Museum were professedly poisoned; they are easily distinguished by a thin varnish of gummy and greasy substance over the iron tips and wooden foreshafts, and especially about the attachments of mesquite gum and sinew. According to Mashém's asseverations, such arrows are habitually used in war save when the supply is exhausted by continued demand; they are also used occasionally in hunting, especially for deer and lions (i. e., the swiftest and fiercest game of the region); and the use of the poisoned missile does not destroy the meat of the animal, though the portion immediately about the wound is "thrown away". Two of [126] the treated arrows brought back from Costa Rica were submitted to Dr S. Weir Mitchell some months afterward for examination, and for identification of any poisonous matter found on them; but no poison was detected. On the whole, the data concerning the reputed arrow poisoning are less definite than might be desired; yet they are sufficient to suggest the nature of the custom with considerable clearness.

279 [811] In any consideration of Seri customs it is to be realized that the folk are notably primitive in thought, and hence deeply steeped in that overweening mysticism which dominates all lowly folk—that they still cling to zoomimic motives in their simple handicraft, and are still wholly within zootheism in their lowly faith. In the light of this realization the numerous consistent records of the preparation of the poison are easily interpreted, and are found to be fully in accord with the prevailing motives of the tribe; and the interpretation serves to explain the somewhat discrepant accounts of the effects of the poison, effects ranging from nil to horrible sepsis. According to the more circumstantial recipes, the first constituent of the poison is a portion of lung, preferably human—a selection readily explained by pristine philosophy,

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

in which the breath is life, and the lungs at once the seat and the symbol of vitality. Naturally the fleshly symbol is from a dead body; and just as the lung denotes vitality in life, so (in primitive thought) it denotes an emphasized, as it were an incarnated, antithesis of vitality in death. Next, as the recipes continue, this death-symbol is exposed to the most potent agencies of death—to the bites of maddened rattlesnakes, to the stings of irritated scorpions, to the venomed trailings of harried centipedes. Then the deadly creatures are themselves killed, and the fanged heads of the serpents, the stinging tails of the scorpions, and the fiery feet of the centipedes, together with portions of redolent ordure from the grave-cairns, and other symbols of death and decay are crushed and macerated with the mass in a wizard's brew, gruesome beyond the emasculated and degraded witch's broth of medieval times. Finally, the grisly mess is allowed to simmer in a stinkpot[1] shell under the fierce desert sun until its ripeness and putrid potency are attested by the rank fetor of death; when it is ready for its ruthless use. Thus the entire recipe is thanmaturgic in concept, necromantic in detail; it represents merely the malevolent machinations of the medicine-man seeking success by spells and enchantments; it stands for no rational system of thought or practice, but pertains wholly to the plane of shamanism and sorcery. So interpreted the recipe is readily understood; the several witnesses who have independently obtained it are justified, and Mashém's details and unwilling intimations are made clear—especially if the sacrificed flesh about the wound in deer or lion be deemed an oblation, such as primitive folk are given to making. 278

While thus the motive of the medicine-man in compounding his loathsome mess is wholly necromantic, serious consequences of its use must occasionally supervene; and though these may be incidental so far as the philosophy is concerned, they may tend reflexly toward the perpetuation of the custom. In the course of the preparation of the charm-poison, and especially in the final ripening process, morbific germs and ptomaines must be developed; these may retain their virulence up to the time of use, particularly when a batch of poison is prepared for a special occasion and the arrows are used while the application is still fresh; and in such cases the wound might initiate septicemia of the sort described in Castañeda's early narrative and still more clearly displayed by Señor Encinas' saddle-horse (ante, p. 112). Naturally the incidentally zymotic varnish frequently fails of effect, and can hardly be expected to remain morbific long enough to be detected in laboratory experiments; yet it is probable, as attested by Mashém's guarded expressions, that the occasionally terrible results of such poisoning are within the ken of the Seri shamans.

It is noteworthy that the various early accounts of the Seri arrow-poisoning are strikingly consistent, though sufficiently diverse to 279 114

[1] Cleodonema cumingii (I).

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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[114]

attest independence in origin; it is also noteworthy that several of the accounts are given hesitatingly and half qualifiedly, with alternative references (obviously hypothetical) to vegetal sources of poison. Thus the author of "Rudo Ensayo" qualified a characteristic (though brief) account of the preparation of the poison by adding: "But this is mere guesswork, and no doubt the main ingredient is some root."[1] So, too, Hardy described the compounding of the brew in much detail, adding the significant statement that "when the whole mass is in a high state of corruption the old women take the arrows and pass their points through it"; yet he could not resist the alternative hypothesis, and added: "Others again say that the poison is obtained from the juice of the yerba de la flécha (arrow-wort)."[2] Bartlett "was told that the Ceris tip their arrows with poison; but how it was effected I [he] could not learn," and so he contented himself with quoting Hardy's account.[3] Stone gave the recipe in fairly similar terms, adding that the morbific mass is hung up "to putrefy in a bag, and in the drippings of this bag they soak their arrowheads"; and he gave a characteristic account of the effect of a wound from a poisoned arrow on a human subject (ante, p. 109). Pajeken independently attested the virulence of the poison, and described the consequences of a slight wound suffered by his horse (ante, p. 101), while Pimentel gave independent corroboration, and Orozco y Berra added the further information that the proverbially deadly poison is fortified "by superstitious practices" (ante, p. 103). Bancroft gave currency to the customary recipe, and also to the complementary hypothesis that the "magot" may be the source of the poison; while Dewey merely mentioned the reputed use of poisoned arrows. Like their predecessors, the vaqueros of today are familiar with the tradition of a necromantic brew; but many of them—like Don Jesus Omada, of Batuachito, and Don Ramon Noriega, of Pozo Noriega—display a much more lively interest in the local yerba mala, or yerba de flécha, of which they stand in such mortal dread that they can hardly be induced to approach a clump of it, and which they conceive must add the final crux to the brew. This plant was described in "Rudo Ensayo": "Mago, in the Opata language, is a small tree, very green, luxuriant, and beautiful to the eye; but it contains a deadly juice which flows upon making a slight incision in the bark. The natives rub their arrows with it, and for this reason they call it arrow-grass; but at present they use very little."[4] Elsewhere the anonymous author mentions the use of (presumably) this poison by the Jova, and describes it as "so deadly that it kills not only the wounded person, but also him who undertakes the cure by sucking the wound, as is customary with all the Indians"; the description implying that the infection is irremediable.[5] Yet he apparently discriminated this poison from that of the Seri, for which another plant known as caramatraca

[1] Op. cit., p. 109; cf. ante, p. 72.
[2] Personal Narrative, p. 468.
[3] Op. cit., pp. 127, 128.
[4] Travels, p. 289; cf. ante, p. 87.
[5] Op. cit., p. 181.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

is an infallible remedy. On the whole it seems probable that the yerba mala (*Sebastiana bilocularis?*), or yerba de flécha, or mago, or magot, yielded or furnished the standard arrow-poison of the Opata and perhaps of other Indians, and that the ill-repute of the shrub survived and spread throughout Mexicanized Sonora in such frequent repetition and common belief as to affect the ideas of residents and travelers alike; but it seems equally probable that the magic-inspired brew of the Seri is entirely distinct.[1]

As suggested by widespread primitive customs, and as illustrated specifically by the arrow-charming, the warfare of the Seri is largely sortilegic, this feature being but an extension and magnification of a corresponding feature of their hunting customs. The economic object of the chase is, of course, the flesh of the quarry; but the hunt normally begins with invocatory or other fiducial ceremonies, culminates in a feast opened with oblations, and ends in the use of horns or hoofs, teeth or bones, mane or tail, as talisman-trophies—primarily pledges of fealty to the favorable potencies, only secondarily symbols of success. The observances illumine the ever-present esoteric object of the chase, which is to gain the favor or overcome the power of the beast-god represented by the animal hunted; in general, this is sought to be effected through mimetic movements, or symbolic objects, associated with that animal-kind, and the retained charm-trophy is valued as a symbol of the placation or outwitting of a particular deity. Similarly, the Seri warrior strives for the supposed deific symbols of the enemy—the scalp or headdress or arrow of the alien tribesman, the fire-breathing and echo-waking (as well as death-dealing) wand of the Caucasian; and the Papago arrows, Yaqui scalps, and white man's firearms are sought avidly, treasured as fetishes, and often carried conspicuously as badges of borrowed prowess.[2] So the Seri are never without alien insignia in the form of weapons. The day before the 1895 expedition entered their stronghold, a band of warriors and women were frightened from a freshly slaughtered cow by a party of vaqueros so suddenly that their arms were left behind—and these

[1] It should be noted that the actuality of the poisonous property ascribed to the yerba mala is in some degree questionable; the plant is the only one of southern Papagueria yielding suitable material for arrow-shafts, and it is possible (if not probable) that it was consecrated to this purpose by the aboriginal Opata and protected by taboo in such wise as to become a sacred and fearsome thing. It is accordingly by no means improbable that the reputed poisonous property is but the product of generations of association, and that the plant is really harmless—an inference supported by experiments on the part of the leader of the 1895 expedition, who swallowed the juice of stem and leaves in two or three minute but increasing doses without perceptible effect. On the other hand, it should be observed that the region is one abounding in toxic juices, and that this shrub is so luxuriant and so free from thorny armament and other protective devices of a mechanical sort as to raise the presumption that it must be protected against herbivorous animals, at least, by chemical constituents of some kind (cf. ante, p. 38).

[2] Three motives on the part of the Seri were reciprocated by their tribal enemies: a Papago fetish in the form of an Apache arrowpoint, long worn by an aged warrior as a protection from Apache arrows, was among the spoil of the 1894 expedition; and a "poisoned" Seri arrowhead and foreshaft, worn by a supernaturalized Papago "doctor" as a badge of invulnerability to similar missiles, was confidently shown to the 1895 expedition, but was held above price by its wearer—and this despite the fact that he had been christianized for decades, and retained no other pagan symbols.

2: Kroeber E-5 (1930) 1931 NU31 Seri NU31

is what their "shirt" (McGee, pl. 29) probably was. The fabrics of McGee's Mexican informant may refer to gunny-sacks made over into improvised imitations of civilized garments; or to single-element carrying bags. It is entirely possible that contact with the cloth-weaving tribes of Sonora long ago induced the Seri to shrink from habitual complete nudity; but it is difficult to imagine them producing even a coarse wearable cloth. McGee's interpretation of the historic sequence of Seri garments is of course wholly speculative.

The cradle shown by McGee (p. 226, fig. 30) consists of a kite-shaped hoop with eight sticks tied across it and a lashing thong passed back and forth across it half-a-dozen times. Even allowing for some slip of the parts in transport to Washington, this specimen is quite typical in Seri disregard of evenness, neatness, order, or finish. The Yaqui cradle illustrated by Hrdlička[7] consists of eight or nine lengthwise sticks or canes twined close together. The Lower Californians used a basket or a turtleshell. The Gila Pima and river Yuman cradle is of "ladder" type, and therefore similar in structure to the Seri except that it lacks the point at the bottom and has the sides parallel; it also carries a hood of wickered or twilled splints. As regards basic structure, one form of Maidu cradle is most similar to the Seri; just as the plan of the Yaqui one reappears among Miwok, Yokuts, and Mono a little further south in California.[8] It appears from this irregular distribution that so simple an apparatus as the open or flat baby-carrier, which can be just as serviceable without a definite technique or style entering into it, is likely to vary locally without much significance, and that its forms will indicate historic connection only when they are parallel in a number of details. In these respects it resembles house types. In both these objects, new "inventions," certainly of detail elements and perhaps of basic structure, seem to be readily made and adopted.

McGee's finding (p. 247) that the Seri are "not habitual stone arrow-makers" has a parallel among the river Yumans, and, at least partially, among the remaining Sonoran tribes. His conclusion (p. 259) that the *yerba de la flecha* (magot, Sebastiano bilocularis?) was an Opata but probably not a Seri arrow poison, seems sound. The plant was shown me on the island, and the Seri knew it as venomous, but volunteered nothing as to using it on arrows.

That the question of Seri cannibalism must be left open, with a preponderance of evidence against the practice (p. 263), also seems a conservative judgment.

As to shields, McGee learned of loose pelican pelts and turtle-shells (p. 264), I of armor and a large upright shield of hide. Both accounts may be right, one referring to emergency pick-ups, the other ——— to prepared defence or attack.

[7] AA 6, pl. 9, 1904.
[8] BAE-B 78:388, fig. 48, pls. 38, 46.

Food Habits

The food habits of all but a very few of the insects are totally unknown to the Indians but they do have accurate and detailed knowledge of the food habits of fish. This is probably due to the great economic importance of fish to the Seris. They also have very full data for the mammals, including bats, which are said to be insectivorous. The responses varied concerning lizards and often did not parallel the situation in nature. In some instances, the acuteness of the observation was remarkable. Thus, the Northern Crested lizard, Dipsosaurus dorsalis sonorensis, which occurs on the sands of Rancho San Francisco, inland from Desemboque, has been mentioned as climbing trees after fruit. Even more unusual, the leopard lizard, Crotaphytus wislizeni, was said to feed on other species of lizards. And indeed, it is one of the very few species of lizard in the region which habitually devours others of its own kind.

Mating Seasons, Eggs and Nesting

In most of these aspects of natural history the native information is quite deficient. In the case of birds, it is assumed that mating occurs in early spring, that the eggs are laid a month later, that in another month the young hatch out and about the third month they fly from the nest. This sequence seems to represent a conventionalized idea rather than a reflection of direct observation. Another difficult question for them to answer, with respect to the reptiles, was whether the young are born alive or whether they hatch from an egg. Only a few of the species are correctly described, among them the rattlesnakes. Sharks and mantas are said to give birth to live young.

Guesses as to the number of eggs varied from fairly accurate estimates for some of the birds to rough approximations ("many") for some of the reptiles and most of the fishes. The knowledge of bird nesting habits was fair. The informants had no difficulty in pointing out the particular localities where one or another species of bird nests nor in the identification of the nest by its shape and construction. This was especially true of the cormorants, egrets, sea-gulls and pelicans. All these are either marine or shore birds as will be noted.

Animals: Venomous and Otherwise Feared

In contrast to the Mexicans, the Seris fear relatively few animals and they are almost always those which can inflict a vicious or toxic bite or sting. The Mexicans, on the other hand, are afraid of a great many animals. European folklore plays a part in this as does unfamiliarity with the desert and the consequent fear of it.

The Seris fear most the rattlesnake, both the Western Diamondback and the Sidewinder. These snakes, they say, bite with their fangs but the venom is located in the rear of the body, about two inches in front of the anus. A plant called "humco" (?) is used as a remedy both in the form of a drink and as a dressing for the wound. The Mexicans claim this remedy is effective. The coral snake is also considered to be venomous although the Seris believe that its bite is fatal only to Mexicans and not to themselves (!). Most of the

5:Dawson N-5 (1940) 1944 NU31 Seri NU31

252 of nutritious material which was ground to powder on their stone ahsts, winnowed in shallow baskets and made into a meal or paste.

769 824 The abundant cacti of many species served several other functions in the domestic economy of the Seris. The thorny cholla whose insipid fruits were not fit to eat and whose spines were a constant threat to the unprotected bodies of the Seris, found one use, nevertheless, in the burial procedure. After a body was partly covered with earth in the three foot deep grave, it was densely overlaid with chollas before leveling, to discourage the coyotes from digging for the body.

396 824 The dry skeletons of the giant cacti provided the long, cylindrical poles used in knocking off ripe pitahayas as well as in all other instances in which a straight, slender pole was needed. Since the advent of the open boat in modern times, the cactus skeleton has come in for a new use, for after trituration between stone ahst and hupf, it was found to yield a satisfactory caulking compound when mixed with sea-lion oil.

312 824 The barrel cacti, *Ferocactus Wislizenii* and *F. Coulteri*, though ordinarily abundant on the Sonoran desert are rare in Seriland and practically absent from Isla Tiburon where they may easily have been exterminated by the improvident Seris during their centuries of occupancy on account of their recognized value as water providers on the wastelands over which the Seris so frequently ventured.

342 [132] 824 These Indians found housing no problem, for, living under a climate in which frost is rare and rain infrequent, they found little need for shelters except for protection against the blazing desert sun. Camps that were occupied for more than a day or two, however, usually saw the appearance of a group of crude sun shelters. These were usually made of long, flexible ocotillo branches, *Fouquieria splendens*, stuck in the sand and fashioned into an arched framework over which a more or less complete covering of brush was piled. If, by the sea, a windbreak were desired, the brush top and siding were usually augmented by the addition of several empty turtle shells.

262 824 On the delta plain of the Rio Sonora, the mesquite, *Prosopis juliflora*, grows in remarkable luxuriance, these gnarled, spiny trees forming an almost continuous open forest 20-40 feet high. Its fruit, consisting of small, hard beans borne in slender, woody pods forms a concentrated, starchy food that the Seris found highly nutritious if not appetizing. In late summer when all fresh vegetable food had withered and disappeared, provided the turtle fisheries had not yet attracted them back to their island, they often spent [252] some weeks gathering the beans and grinding them into a meal which was eaten as a watery atole or as a paste mixed with sea-lion oil. The more straggly and thorny cat's claw mesquite, *Acacia Greggii*, and the ironwood, *Olneya tesota*, also yielded woody beans in limited quantity.

[518] 534 In the deeper gorges of the mountains the Seris found *Guaiacum Coulteri* yielding a berry of medicinal properties and also *Jacquinia pungens* which produced a nut, edible when not quite ripe, and forming a favorite rattlehead when dry.

Along sandy washes, particularly on the lower flood plain of the Ilano grows a low, shrubby weed, *Hymenoclea monogyra*. Although during times of drought it shrinks to stunted tussocks, after periods of heavy rain its flourishing fens produce abundant seeds eaten both by the beasts of the plain and formerly by the Seris.

385 [191] Before the advent of the tin can and the cardboard carton, basketry was an important handicraft among these Indians

[Text continues on p. 138--Analyst]

5:Dawson N-5 (1940) 1944 NU31 Seri NU31

an important handicraft among these Indians. They made a shallow, coil type basket such as is characteristic of many southwestern tribes. The Seri basket, however, was remarkable for its extreme lightness in proportion to capacity, a quality due to the spongy character of the coil made of a whisp of splints of the torote. Several torotes are found in the region, the commonest species being *Jatropha cardiophylla*. Also used were the torote amarillo, *Jatropha spatulata*, torote blanco, *Bursera microphylla*, and torote prieto, *Bursera laxiflora*. The woof consisted of splints of palo blanco, *Acacia Willardiana*, or of baraprieta, *Caesalpinia gracilis*, deftly interlaced by means of a bone awl to form a smooth, practically waterproof utensil.

In pre-Columbian times the Seris commonly sought wild game, mostly deer, without the aid of weapons, using only their tremendous physical endurance against their prey, chasing the animal until it was exhausted and could be thrown to the ground. With the introduction of iron, however, the development of the bow and arrow achieved prominence, for the shaping and fastening of points had long retarded the exploitation of these implements. Few straight stemmed or straight grained plants grow in Seriland suitable for making arrow shafts, but on the flanks of the deeper gorges of Sierra Seri and Sierra Kunkaak on Tiburon Island, the Indians found one leafy shrub that filled the need, *Sapium biloculare*. The juice of this plant is also said to have been used for arrow poison. The bow was preferably of palo blanco, wrapped and strung with mesquite fiber cord.

The modern Seri tribe consists of barely more than 100 souls, with early extinction threatening from imported diseases. Their natural habits are now vastly modified and they live a comparatively sedentary life near the village of Kino, scavengering for fish heads and other refuse discarded by the fishermen, now and then fishing for themselves when in need. Every year, however, they trek off to the cactus forest for the annual feast, and in late summer many may be seen camping among the mesquite groves near the Kino well where an abundance of both mesquite beans and water makes for easy living.

Malkin E-5 (1953-1955)1962 NU31 Seri NU31

+825 [171] an idea from one animal to another.[13] The *Xanthusia* does not share this similarity to the salamander in appearance, but it is found along with the gecko and behaves much like the gecko when exposed to the light. Hence, perhaps, comes the association.

I excluded here from the discussion the red racer because the notions concerning it are conflicting, with some informants insisting that it is toxic and can cause death and others that it is not. But all agree that it'll bite—and painfully so.

Finally the toad. The toad, although unagressive and considered as such, is feared a great deal as a repository of all sorts of toxic traits. There was some disagreement as to its ability to bite, with some informants thinking that it does bite with its tongue, others thinking it can't bite at all. But all agree on the following attributes of the amphibian: venom in body, toxic on touch, always fatal to eat to most animals and to all men. In this the toad joins the gecko and the *Xanthusia*. [262] These too are believed to be fatal to eat and these three represent the only animals in this class that are considered inedible.

It is interesting that the list of toxic (though non-fatal) animals should also include the *Phrynosoma* although here there seemed to have been again disagreement between the informants. The lizard is perfectly harmless and actually will not [753] bite even in self-defense. But the Seris say it causes swelling.

752 For the rattlesnake bite, the remedy is a plant called *Kásox*. An extract of this plant is made ●278 after boiling it in hot water and then it is taken orally. It is also applied to the wound and, the Seri say, it must be taken all day long for a full day. The Seris take this when they are harmed by these snakes. This plant is supposed to be found in the mountains near Kino but not in the Desemboque or Tiburon area. But in addition to their own medicaments, the Seris, especially the younger fellows, will make use of the regular anti-venom available at the school or mission.

Attitudes Toward Reptiles and Amphibians

+825 With the few exceptions, these animals are not particularly feared. Those that are feared are considered dangerous in some ways, and, in fact, most of them are either by their ability to inflict painful bite or by possession of venom. But otherwise, their attitude seems to be very much a matter of fact and one of unconcern, which seems to corroborate Kroeber's opinion of the Seris' psychological makeup in other matters.

[13]Since this has been written, I have plenty of evidence that the gecko is similarly dreaded in many parts of the world.

[p. 30B]

9:Malkin E-5 (1953-1955)1962 NU31 Seri NU31

825 known remedy. This bug is actually a vector of the Chagas disease. Its repeated bites may cause allergic sensitization. For lack of clinical observation it is impossible to determine the exact nature of its effects, as the Seris describe them.

The remaining two creatures are both beetles. *Calosoma* is thought a nuisance rather than a danger. Its disagreeable habit is spitting out poison through the rear end of the body which may cause headache for a brief while. To this I may readily attest having on more than one occasion be subjected to *Calosoma's* bombardment. However, at worst it is a mere irritant. Finally *Hippomelas*, sometimes confused with the *Steriphanus* and *Dermestes* are supposedly evil smelling but not harmful.

Finally the male *Arenivaga*, considered separate from the female, the Seris claim also bites with the mouth but it is not dangerous.

What is little surprising is that the Seris did not include in their list a few other insects that could have readily found their way into the "dangerous" gallery. The huge water bug *Leptocerus* of course bites, although the Seris claim it does not. An aquatic insect par excellence, it simply never had a chance to prove to them what it can do. The Pentatomid bug *Rhytidolomia* at least may be included among the stinging variety, although it is perfectly harmless. Finally there are various Reduviid bugs, notorious carnivores, which when disturbed and offered an opportunity will sting painfully. But here again, the Seris may not have played enough with them to find out.

On the whole, the Seris are well informed concerning possible dangers from various insects. As a matter of practical application, they do in this regard far better than the Mexicans."[16]

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278 [16]"The Seris may have used a concoction of insects in arrow poisoning. McGee quotes Hardy who had visited them in 1825 as follows:

> "It is believed that the Ceres Indians have discovered a method of poisoning their arrows and that they do in that way: They kill a cow and take from it its liver. They then collect a number of rattlesnakes, scorpions, centipedes and tarantulas, which they confine in a hole with the liver. The next process is then to beat them with the sticks in order to enrage them, and being thus infuriated, they fasten their fangs and exhaust their venom upon each other and upon the liver. When the hole mass is in high state of corruption, the old women take the arrows and pass the point through it. They are then allowed to dry in the shade and it is said that the wound inflicted by them will prove fatal. Others again say that the poison is obtained from the juice of the yerba de flecha (arrow wort)."

[P. 53 B]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

174 177 411 during prometal times; but an intimation from Mashém that the old men thought it much better to take the turtle with the teeth of an "animal that goes in the water", and the similarity in terms for "harpoon" (or arrow) and "teeth" both suggest that the aboriginal point may have been a sea-lion tooth, and that the foreshaft itself may have been a larger tooth of seal or cetacean. While the modern harpoon is shaped with the aid of metal (hoop-iron, etc.), the forms are quite evidently vestigial of knifeless manufacture, in which a naturally rounded or abraded or fire-shaped foreshaft was fitted into the natural socket afforded by a cane-stalk broken at its weakest point—i.e., just below the joint; and both function and socket arrangement (as well as the linguistic evidence) strongly suggest the cylindrical tooth as the germ of the apparatus.

223 It is probable that water-fowl, considered collectively, stand second in importance as Seri prey; and the foremost fowl is undoubtedly the pelican, which serves not only as a fruitful food-supply but as the chief source of apparel.

The principal haunt and only known breeding ground of the pelican in the Gulf of California is Isla Tassne, an integral part of Seriland; and while the great birds are doubtless taken occasionally in Bahia Kunkaak, El Infiernillo, Bahia Tepoka, and other Seri waters, this island is the principal pelican hunting ground. According to Mashém's account, the chase of the pelican here is a well organized collective process: at certain seasons, or at least at times deemed propitious by the shamans, pelican harvests are planned; and after some days of preparation a large party assemble at a certain convenient point (presumably Punta Antigualla) and await a still evening in the dark of the moon. When all conditions are favorable they set out for the island at late twilight, in order that it may be reached after dark; on approaching the shore the balsas are left in charge of the women, while the warriors and the larger boys, armed only with clubs, rush on the roosting fowls and slaughter them in great numbers—the favorite coup de grâce being a blow on the neck. The butchery is followed by a gluttonous feast, in which the half-famished families gorge the tenderer parts in the darkness, and noisily carouse in the carnage until overcome by slumber. Next day the matrons select the carcasses of least injured plumage and carefully remove the skins, the requisite incisions being made either with the edge of a shell-cup or with a sharp sliver of cane-stalk taken from an injured arrow or a broken balsa-cane. The feast holds for several days, or until the last bones are picked and the whole party sated, when the clans scatter at will, laden with skins and lethargic from the fortnight's food with which each maw is crammed.

[237] [281]

Mashém's recital gave no indication as to whether the Pelican clan participate in the hunting orgies, though it clearly implies that the chase and feast are at least measurably ceremonial in character; and this implication was strengthened by the interest and comparative

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

224 While by far the larger share of Seri sustenance is drawn from the sea, a not inconsiderable portion is derived from the land; for the warriors and striplings and even the women are more skilful hunters than fishers.

The larger objects of the feral chase are deer of two or three species (the bura, or male-deer, being most conspicuous and easiest taken), antelope, and mountain sheep; to which the puma, the jaguar, and perhaps two or three other carnivores might be added. The conventional method of taking the bura and other deer is a combination of stalking and coursing, usually conducted by five of the younger warriors, though three or four may serve in emergency; any excess over five being regarded as superfluous, or as a confession of inferiority. The chase is conducted in a distinctly ceremonial and probably ritualistic fashion, even when the finding of the game is casual, or incidental to a journey: at sight of the quarry, the five huntsmen scatter stealthily in such manner as partially to surround it; when it takes fright one after the other strives to show himself above the shrubbery or dunes in order to break its line of flight into a series of zigzags; and whether successful in this effort or not they keep approximate pace with it until it tires, then gradually surround it, and finally rush in to either seize it in their hands or cripple it with clubs—though the latter procedure is deemed undignified, if not wrong, and hardly less disreputable than complete failure. When practicable the course is laid toward the rancheria or camp; and in any event the ideal finish is to bring the animal alive into the family group, where it may be dissected by the women, and where the weaklings may receive due share of the much-prized blood and entrails. The dissection is merely a ravenous
264 rending of skin and flesh, primarily with the teeth (perhaps after oblique bruising or tearing by blows with the hupf over strongly flexed joints), largely with hands and fingers aided anon by a foot planted on the carcass, and partly with some improvised device, such as a horn or tooth of the victim itself, the serrated edge of a shell-cup, or perhaps a sharp-edged cane-splint from a broken arrow carried for emergency's sake. Commonly the entire animal, save skin and harder bones, is gulped at a sitting in which the zeal of the devotee and the frenzy of the carnivore blend; but in case the group is small and the quarry large, the sitting is extended by naps or prolonged slumberings, and
[252] the more energetic squaws may even trouble to kindle a fire and partially cook the larger joints, thereby inciting pallid appetite to new efforts. Finally the leg bones are split for the marrow and their ends
[23] preserved for awls; the horns are retained by the successful huntsmen as talisman-trophies; while the skin is stretched in the desert sun,
[281] scratched and gnawed free of superfluous tissue, rubbed into partial
224 pliability, and kept for bedding or robe or kilt.
957 The chase of the hare is closely parallel to that of the deer save that it is conducted by striplings, who thereby serve apprenticeship in hunt-

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

ing and at the same time enrich the tribal larder with a game beneath the dignity of the warriors; while still smaller boys similarly chase the rabbit, which is commonly scorned by the striplings. The conventional hare-hunting party is three, and it is deemed disreputable to increase this number greatly. The youths spread at sight of the game and seek to surround it, taking ingenious and constant advantage of the habit of the hare to run obliquely or in zigzags to survey more readily the source of its fright; for some time they startle it but slightly by successive appearances at a distance, but gradually increase its harassement until it bounds hither and thither in terror, when they rapidly close in and seize it, the entire chase commonly lasting but a few minutes. The quarry is customarily taken alive to camp, where it is quickly rent to fragments and the entrails and flesh and most of the bones consumed; the skin usually passes into possession of a matron for use as infantile clothing or cradle bedding, while the ears are kept by the youth who first seized the game until his feat is eclipsed by some other event—unless chance hunger sooner tempts him to transmute his trophy into pottage.

While the collective, semiceremonial style of chase alone is thoroughly good form in Seri custom, it is often rendered impracticable by the scattering of the tribe in separate families or small bands, in which case the bura and its associates, like the larger carnivores customarily, are taken by strategy rather than by strength. This form of chase is largely individual; in it archery plays a leading rôle; and in it, too, ambuscade, stealthy lying in wait, and covert assault attain high development. It is closely analogous with the warfare typical of the tribe; and it is especially noteworthy as one of the most effective stimuli to intellectual activity, and hence to the development of invention—if the term may be applied to industrial products so lowly as those of the Seri.

The chief artifact produced by the strategic chase on land would seem to be the analogue of the harpoon used at sea, i. e., the arrow. This weapon is one of the three or four most highly differentiated and thoroughly perfected of the Seri artifacts, ranking with canteen-olla and balsa, and perhaps outranking the turtle-harpoon. It is fabricated with great care and high skill, and with striking uniformity in details of material and construction. A typical example is 25 inches in length and consists of three pieces—point, foreshaft, and main shaft (feathered toward the nock). The foreshaft is 8¼ inches long, of hard wood carefully ground by rubbing with quartzite or pumice into cylindrical form, about three-eighths of an inch in diameter at the larger end and tapering slightly toward the point; the larger end is extended by careful grinding into a tang which is fitted into the main shaft, the joint being neatly wrapped with sinew. This main shaft is a cane-stalk (*Phragmites communis*?) 15 or 16 inches long, carefully selected for size and well straightened and smoothed; it is feathered with three equidistantly-

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

291 [177] Of all the party at Costa Rica in 1894 subchief Mashém was the only one who wore Caucasian apparel with any air of comfort and fitness; yet even he, with hat and shirt, boots and breeches, and loose bandana about his neck in cowboy style (plate XVII), did not feel fully dressed without the slender hair-cord necklace of his kin in its wonted place. On the frontier improvised fig-leaves were sometimes put on the children of less than a dozen years (as illustrated by the standing infant shown in plate XIV, who was thus dressed hastily for her picture); and a common garb of the smaller children at Costa Rica, as they played about the rancheria or wandered in directions away from the white

[412] [854]

FIG. 25—Seri hairbrush.

FIG. 30—Seri cradle.

man's rancho, was limited to a cincture of hair cord or snake skin, or perhaps of agave fiber, under which an improvised kilt might be tucked on the Caucasian's approach.

281 513 In addition to the individual apparel, each clan, or at least the elder-woman or her fraternal executive, accumulates some surplus material as opportunity offers, and this serves as family bedding until occasion arises for converting it to other uses. Of late the prevailing materials are pelican skins, lightly dressed and joined into robes by sinew stitching; deerskins, dried or partially dressed; cormorant skins, treated like those of the pelican; seal skins, usually fragmentary; peccary skins,

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

281 apparently dried without dressing, together with
513 skins of rabbits, mountain sheep, antelope, etc, usually tattered or torn into fragments. Commonly the hides and pelts are nearly or quite in natural condition, retaining the hair, fur, or feathers. The dressing is apparently limited to scratching and gnawing away superfluous flesh, followed by some rubbing and greasing; tanning is apparently unknown. By far the most abundant of the collective possessions are the pelican-skin robes, which form
[439] the sole article of recognized barter with aliens. The aggregate stock accumulated at any time is but meager, never too much to be borne on the heads and backs of the clan in case of unexpected decamping.

412 Aside from the painting paraphernalia, there is
302 but a single conspicuous toilet article; this is a hair-brush made of yucca fiber bound into cylindrical form, as illustrated in figure 29. This article is in frequent use; both women and men give much attention to brushing their own long and luxurious locks and cultivating the hair and scalps of their children, the process being regarded as not only directly useful but in some measure sacramental. Ordinarily the hair is parted in the middle and brushed straight, the tresses being permitted to wander at will and never braided or bound or restrained by fillets save in imitation of Caucasian customs on the frontier; though in certain ceremonies the pelage is gathered in a lofty knot on the top-head.[1]

854 The Seri cradle is merely a bow of paloblanco or other switch with rude cross-sticks lashed on, as shown in figure 30. On this is laid a small pelican-skin robe, with a quantity of pelican down for a diaper, and perhaps a few pelican feathers attached as plumes to wave over the occupant's face; though on the frontier these primitive devices are largely replaced by rags.

283 Among the important appurtenances of Seri life are the cords used for belts and necklaces, as well as for the attachment of ceremonial headdresses, for converting the kilts into bags, and for numberless minor purposes. The finest of these are made from human hair; and for this purpose the combings are carefully kept, twisted into strands, and wound on thorns or sticks in slender bobbins, such as that illustrated

FIG. 31.—Hair spindle.

[1] Cf. Hardy, Travels, p. 250.

2: Kroeber E-5 (1930)1931 NU31 Seri NU31

114 342 middle. Two imperfect wind-breaks of brush, less than a quarter of a circumference in curvature, stood near the camp..

On the subject of textiles and textile clothing (pp. 171, 225-232), 114 McGee is necessarily vague on account of lack of specimens. He 281 says that native kilts, from waist to knee, were either of birdskin or "a rectangle of coarse textile fabric," "woven probably on some prim- 286 itive device"; that it is practically certain that a long-sleeved, short- 291 bodied shirt or wammus is "of local aboriginal design" and was "made primitively of haircloth or native textiles"; that the probable genetic series of Seri garments was: 1, the pelican-skin robe used as a kilt, 2, the textile shirt, 3, the textile kilt; and that Seri fabrics, according to a Mexican informant, "resemble coarse bagging, and are woven or netted quite plainly."[1]

Human hair cord could be netted, or twined in double weft into 114 basket-like bags or mats; it could hardly be woven into cloth without 171 a loom. The same holds of *ixtle*, agave fiber. Bast of willow, cotton- 286 wood, beanstalk, such as was spun and twined, and perhaps woven on a limited scale, by the Colorado river Yuman tribes, was not available to the Seri, though they may have had nearly equally soft substitutes, even in their desert. Cotton they did not have. *Ixtle* is a strong, harsh fiber, excellent for cordage, nets, open-mesh bags, and the like, and still largely used in Mexico for such purposes. It would also serve well for fringe-aprons, for which the Lower Californians used it. A fabric from it would be rough and stiff, giving little warmth, not very satisfactory for a kilt, and quite unserviceable for a fitted garment like a sleeved shirt. Cotton was the prevailing garment material found along the coast by the first Spaniards, north up to the Cahita (Ka'ita, namely Tehueco, Mayo, Yaqui); here *ixtle* became more prevalent though cotton persisted; but the type of garment is not clear.

As to looms, *ixtle* is today woven into carrying bags on a heddled belt-loom by the Nahua-speaking Indians of Sinaloa. The Mayo weave woolen girdles on a similar loom. They also weave woolen blankets on a demountable horizontal loom, the warp passing continuously around the two heavy yarn beams. It is not clear whether this is a hybrid Spanish or a purely native apparatus. The Opata and Pima Bajo loom is not known. The American Pima weave cotton both on a belt-loom and on a staked horizontal loom, but with warps in a single plane.[2] It is difficult to imagine these looms existing among the Seri, except the first mentioned; and this would not yield them much in the way of garments. There is no reason why they 114 should have worn more than the Lower Californian women's fringe- 291 aprons, supplemented perhaps by birdskin blankets and loin covers. 434 They no doubt secured occasional garments from neighboring tribes, as they gladly but irregularly wear those of whites today; and this

[1] Russell, BAE-R, 23:118-153, 1908.

482

FIG. 7. CARRYING WATER FROM A DESERT AGUAJE

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FIG. 8. STRETCHING AND DRYING THE PELICAN SKIN BOBE

[p. 198(A)]

3:Davis & Dawson E-5 (1923-1940) 1945
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[301]
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[386]
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FIG. 11. PAINTING THE FACE
USING A RED PIGMENT OBTAINED FROM THE PERCH.

223 lice-infested carcasses were then gathered
264 and brought to a central place among the stinking rocks where a gluttonous feast was held in the dark, the long ahungered tribesmen gorging themselves with the soft entrails and succulent parts, and carousing in the carnage until overcome by slumber.

281 The day following the slaughter, the
294 matrons collected the carcasses with least damaged plumage and carefully removed the skins, which were then gnawed and sucked clean of flesh and grease and dried in the sun (Fig. 5). From two or more of these skins they made a kilt or robe (Figs. 1, 2), the principal apparel, not so much for protection from cold as from the scratch and prick of the abounding spines and thorns of Seriland. The skins were sewed with sinew and often held in place on the body by a
283 cord made of human hair (Fig. 1). The
302 culture of their long, luxuriant hair, indeed, was an important matter. They brushed their hair regularly with a brush fashioned

[p. 200(A)]

123 223 [262] birds. As soon as the skin was off the breast was laid on top of the coals and roasted. The meat was red as raw beef, but it was free of fishy flavor and tasted excellent. The Indians ate pelican flesh till daylight.

252 [123] We gave them a generous helping of flour in a pail and this with water from a canteen, Santo stirred vigorously with a stick and then kneaded the dough with his hands until it was of the right consistency. He rolled hunks of this into little balls of dough about the size of golf balls, which he laid on his blanket. The boys picked these up, patted them flat like pancakes, scraped away ashes and sand from the edge of the fire, placed their pancakes in the hollow, covered them with hot ashes and hot sand, and in about three minutes pulled them out all baked brown. They shook the ashes and sand from them, leaving them clean and ready to eat. I am telling this in detail to show how simple cooking can be done without a dutch-oven, frying pan, or cooking grease, far from civilization.

281 [123] We were soon paddled across to their village on the shores of Kino Bay and the skins turned over to Mrs. Santo. The skins had been split down the back, leaving the breast unmarred. The wings and legs had already been removed, and she sewed the skins together with sinew recovered from the birds. The boys had secured an extra pelican making six, three to a side, then placed together and sewed lengthwise, making a robe three and a half feet wide by seven feet long.

[342] [291] [301]

Pegging out and drying a Pelican skin robe by a Seri Indian woman - 1936

281 The Indians made a mound of sand full length of the robe and amply wide rounding off the top. On this the robe was spread, flesh side up, and pinned to the mound by slender slivers of *carrizo* and left exposed to the sun. The skins were singularly free from oil or fat and in a few hours, the robe was cured. The pins removed, the sand shaken from the plumage, and it was ready to use as a blanket covering at night or in old times, as clothing wrapped around the body.

The robes of silvery gray are from male Pelicans and are larger and more attractive than robes from the female birds, which have white breasts, edged with gray.

281 177 Before the garments and costumes of civilization encroached on the Seris, Pelican robes and deer skins were the only clothing worn by the natives, but now they have adopted civilized ways to a great extent, Pelican robes as clothing became obsolete.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

281 apparently dried without dressing, together with
513 skins of rabbits, mountain sheep, antelope, etc, usually tattered or torn into fragments. Commonly the hides and pelts are nearly or quite in natural condition, retaining the hair, fur, or feathers. The dressing is apparently limited to scratching and gnawing away superfluous flesh, followed by some rubbing and greasing; tanning is apparently unknown. By far the most abundant of the collective possessions are the pelican-skin robes, which form
[439] the sole article of recognized barter with aliens. The aggregate stock accumulated at any time is but meager, never too much to be borne on the heads and backs of the clan in case of unexpected decamping.

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302 but a single conspicuous toilet article; this is a hair-brush made of yucca fiber bound into cylindrical form, as illustrated in figure 29. This article is in frequent use; both women and men give much attention to brushing their own long and luxurious locks and cultivating the hair and scalps of their children, the process being regarded as not only directly useful but in some measure sacramental. Ordinarily the hair is parted in the middle and brushed straight, the tresses being permitted to wander at will and never braided or bound or restrained by fillets save in imitation of Caucasian customs on the frontier; though in certain ceremonies the pelage is gathered in a lofty knot on the top-head.[1]

854 The Seri cradle is merely a bow of paloblanco or other switch with rude cross-sticks lashed on, as shown in figure 30. On this is laid a small pelican-skin robe, with a quantity of pelican down for a diaper, and perhaps a few pelican feathers attached as plumes to wave over the occupant's face; though on the frontier these primitive devices are largely replaced by rags.

283 Among the important appurtenances of Seri life are the cords used for belts and necklaces, as well as for the attachment of ceremonial headdresses, for converting the kilts into bags, and for numberless minor purposes. The finest of these are made from human hair; and for this purpose the combings are carefully kept, twisted into strands, and wound on thorns or sticks in slender bobbins, such as that illustrated

FIG. 3.—Hair spindle.

[1] Cf. Hardy, Travels, p. 280.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

283 in figure 31. When the accumulation suffices the strands are doubled or quadrupled, as shown in figures 32 and 33, and the cords are either

FIG. 32.—Human-hair cord.

applied to immediate use or added to the matron's meager store against emergency demands. The cordage used for other purposes than apparel-

FIG. 33.—Horsehair cord.

ing is commonly made from fiber extracted either from the roots of the mesquite or the stipes of the agave; usually it is well twisted and notably

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

283 [237]

uniform in size and texture; an inferior example appears in figure 34. The manes and tails of horses and other stock are also converted into cordage, of which the chief known application is in toy riatas. It is of no small significance that the most highly prized cordage material is human hair, and that its chief uses are connected with the person; that the next in order of diminishing preciousness is that derived from the fibrous plants, which is used in balsa-making, bowstrings, harpoon cords, etc, as well as in the native fabrics; and that the least prized material is that derived from imported animals, which is largely limited in its utilization to youthful imitation of Caucasian industries; for the association of material with function reflects a distinctive feature of

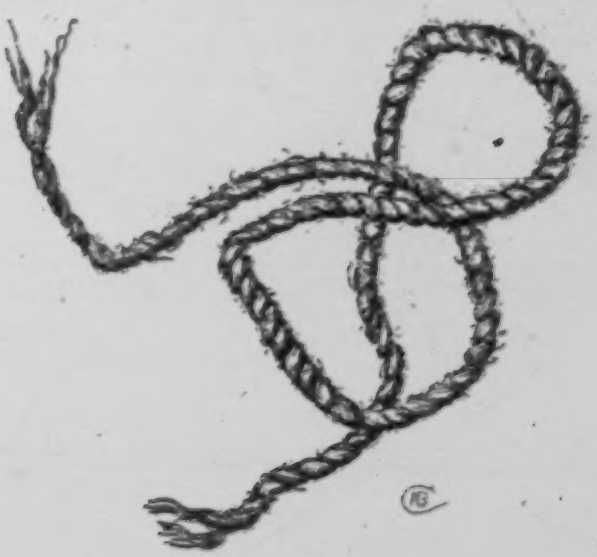

FIG. 34.—Mesquite-fiber rope.

primitive thought, akin to that displayed in somewhat higher culture as synecdochic magic, the doctrine of signatures, etc.

Partly because of that decadence of aboriginal devices correlated with acculturation, partly by reason of imperfect observation, practically nothing is known of Seri spinning and weaving, and little of Seri sewing. The religiously-guarded hair-combings are twisted in the fingers and wound on stick-bobbins without aid of mechanical appliances; and, so far as has been observed, the final making of hair cords is merely a continuation of the strictly manual process. The agave stipes and mesquite roots are alleged by vaqueros to be retted in convenient lagoons and barrancas (a statement corroborated by the finding of half a dozen sections of mesquite root soaking in a lagoon near Punta Anti-

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

283 gualla by the 1895 expedition), and then hatcheled with the hupf or the edge of a shell; when the fibers are gathered in slender wisps or loosely wound coils, both of which were among the possessions of the Seri matrons at Costa Rica in 1894. So far as could be ascertained, the final processes parallel those of hair-cord making, i. e., the fibers are patiently sorted into strands, sized in the fingers and twisted by rolling on the thigh, the strands being subsequently combined in similar fashion.[1] Neither the weaving nor the woven fabrics of the Seri have ever been seen by technologic students so far as known, though the fabrics are shown in Von Bayer's photographs and have been described by various observers. According to Señor Encinas, they resemble coarse bagging, and are woven or netted quite plainly. The ordinary sewing material is sinew, used in connection with a bone awl (a good example of which is illustrated in figure 35), a fish

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[239]

FIG. 35—Bone awl.

FIG. 36—Wooden awls.

spine or bone, a cactus thorn, or either the mandible of a water-bird or a hard-wood skewer shaped after this natural needle (figure 36 *a* and *b*). Sometimes hair or vegetal fiber is substituted for the sinew; and for certain purposes an agave thorn, with the fibers naturally attached, serves for needle and thread.

[524] [1] A rope-twisting device of the sort commonly employed by southwestern Indians was found in use among Seri boys at Costa Rica in 1894, and was included in the Seri collection; but the indications were that the device was a mere toy used, like the horse-hair rosin mark by its side, only in youthful sports.

2:Davis & Dawson S-6 (1923-1949) 1945
MUSI Seri MUSI

THE SAVAGE SERIS OF SONORA—I

By EDWARD H. DAVIS AND R. YALE DAWSON

000 us first acquaint ourselves with the life and habits of the Seri before the Spaniard trod upon his thorny land.

131 His homeland speaks first of isolation. Tiburon Island, in the Gulf of California, and the adjacent coast of Sonora are pro-

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[291]
[283]

FIG. 1. CHICO ROMERO, SERI CHIEF
WEARING A KILT OF PELICAN SKINS WHICH USED TO BE THEIR ONLY MATERIAL FOR GARMENTS. NOTE THE CORD MADE OF HUMAN HAIR CARRIED IN THE HANDS.

tected on one side by stormy seas and on the other by even more forbidding deserts. The natural isolation of this habitat set its people apart from all other human beings, and the two or three thousand Seris, wandering between their desert island and the mountain-

[p.193(B)]

3:Davis & Dawson E-5 (1922-1940) 1948
NU31 Seri NU31

396 the extremities. Throughout the process the
cord used for lashing was laboriously made
[283] by hand and mouth by the women who ob-
tained the fibrous raw material from mes-
[462] quite tree roots, from the yucca or the
maguay. Three of the finished bundles were
lashed together to form a watercraft some
thirty feet in length and of four-foot beam.
These large balsas were buoyant enough to
carry several members of a family across El
Infiernillo channel. One-man balsas were
also made (Fig. 5) principally for use in
turtle fishing.

225 Except during the egg-laying season
411 turtles had to be sought from the balsa. The
Seris lacked tool sense in the extreme, but
their clumsy brains had devised a harpoon
for use against the turtle. The hard, pene-
trating point was commonly made of native
ironwood, but may also have been the sharp-
ened tooth of a sea lion or the shin bone of
a deer. It was fitted and firmly cemented
with mesquite gum to a short, hardwood
foreshaft whose rounded end fitted into the

[p. 197(C)]
[Text continues on p. 198(B)]

3:Davis & Dawson I-5 (1922-1940) 1946
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FIG. 11. PAINTING THE FACE
USING A RED PIGMENT OBTAINED FROM THE TUBERS.

223 lice-infested carcasses were then gathered
264 and brought to a central place among the stinking rocks where a gluttonous feast was held in the dark, the long ahungered tribesmen gorging themselves with the soft entrails and succulent parts, and carousing in the carnage until overcome by slumber.

281 The day following the slaughter, the
294 matrons collected the carcasses with least damaged plumage and carefully removed the skins, which were then gnawed and sucked clean of flesh and grease and dried in the sun (Fig. 8). From two or more of these skins they made a kilt or robe (Figs. 1, 2), the principal apparel, not so much for protection from cold as from the scratch and prick of the abounding spines and thorns of Seriland. The skins were sewed with sinew and often held in place on the body by a
283 cord made of human hair (Fig. 1). The
302 culture of their long, luxuriant hair, indeed, was an important matter. They brushed their hair regularly with a brush fashioned

[p. 200(A)]

283 from coarse, wiry grass stems, and saved all
302 the brushings to be used in the making of strong threads and cords.

The fleetness of foot and remarkable physi-
147 cal endurance of these people attest to the
481 rigorous and difficult life in Seriland where the ability of an individual to survive a season of want depended upon the reserve energy of his own body by which he could carry himself long distances in search of food and yet have strength to return to a waterhole, left miles behind. The slender, sinewy limbs and capacious chests of the Seris, in whom no trace of obesity has ever been observed, show clearly the result of untold centuries of selection of the strong by the severity of the environment, where water,
[312] too heavy for transport, too difficult of storage, is yet always within reach of an organism strong enough to journey ten, twenty, or even fifty miles in search of it.

Perhaps the most severe physical exercise
224 practiced by the Seris was the chase of animal game, particularly since it was often resorted to only after a period of weakening hunger which prompted the all-out effort to obtain adequate food supply. Days of wandering over the deserts in search of vegetable food were sometimes unrewarded, and although rabbits were to be had for the chase, they were too small to be of much consequence in the feeding of a family. The deer were fairly plentiful and provided excellently for a lasting feast.

The deer hunt was conducted by several tribesmen without weapons. When an animal was sighted it was followed by one and circled by others of the party, chased until frantic and exhausted, whereupon one of the men rushed upon it, threw it to the ground and caved in its skull with a stone.

The most avidly sought prey in the Seri chase were the helpless young and heavily pregnant does which were pursued and rent to fragments with a horrible fury, particularly with intent upon the succulent tidbits afforded by the fetal flesh.

222 A time of ease and plenty came each summer, for usually in late May or June the cactus plants with which Seriland abounds begin to mature their fruits. In the foothills of Sierra Seri on the mainland, great

5:Dawson N-5 (1940) 1944 NU31 Seri NU31

ingenuity of a modern shipbuilder to have constructed a boat. These simple, desert people, however, through centuries of struggle for life in their desolate realm had learned to use every natural material available to them, however laborious the tasks and inefficient the products. The carrizal reed, *Phragmites communis*, grows about the few permanent water holes of Seriland, and from countless numbers of these slender, buoyant canes they built their watercraft. The reeds were stripped of leaves and gathered in long bundles, bound together and gradually augmented by more and more interlaced canes until a bundle 18 to 30 feet long and 1½ feet in diameter, tapering at both ends, was made. Three of these were then bound together with cords of fiber or human hair, making a maneuverable one or two man raft, easily transported to the shores.

The mesquite tree, *Prosopis juliflora*, provided fiber for cords. The flexible outer tissues of the roots were stripped off, soaked and progressively pounded, split and worked between hand and mouth until very slender, fibrous threads were obtained which were then twisted into cords. In some cases a coarse, rough fabric was woven from these fibers, but most garments were made of pelican skins. The strips of workable mesquite root or sometimes yucca fiber were also used in making doughnut-shaped head pads which aided in balancing the capacitous earthen water jars as they were carried on the heads of the women over rough and stony trails from water hole to camp site.

While occupying the turtle fishing camps on El Infiernillo during the good season, vegetable supplements to the fishy diet were few. Every nourishing seed or woody fruit yielded by the desert was carefully gathered; even the tiny seeds of the sea grass, *Ruppia*, were sorted from beach drift and made into meal. Never did the Seris learn to cultivate any crop or domesticate any animals other than the half wild coyote dogs that lived in mutual toleration with them. Even had they done so, their success in the barren, waterless land would have been small.

Sterile as is the Seri's hinterland, for a time each summer the thorny plants with which it is so profusely stocked ripen an abundant crop of fruit. The cacti in particular yield a wonderful harvest of luscious and succulent fruits, and toward this fortuitous supply the Seris were accustomed to move in June and July. The foothills of Sierra Seri on the mainland are adorned with great numbers of giant cacti, *Pachycereus Pringlei*, *Carnegiea gigantea* and *Lemaireocereus Thurberi* from which the luscious pitahayas were readily knocked down when ripe. The Indians wandered into the cactus forest and after a simple ritual marking the beginning of the feast, proceeded to gorge themselves for weeks on the succulent fruit until waning supply and cloying appetite drove them back to more severe food-getting activity by the sea. They did not customarily find it necessary to leave the cactus forest, however, as soon as the supply of fruits was no longer sufficient, for by the time the fruiting season was ended they had provided themselves with a second harvest. The pitahayas, gorged in such tremendous quantity throughout the season, were very imperfectly digested; the miriads of hard seeds, particularly, passed through the system unchanged and with the preservation of these in mind the Indians carefully collected with the aid of large sea shells all such seedy discharges and let them dry in the desert sun. Thus, as the supply of fresh fruit faded they proceeded to the use of this hoard

261 will exist on very small rations, bear burdens, and walk long dis-
262 tances. Their food is anything that walks, flies, crawls or swims,
[252] and they eat it raw with the same relish that we eat it cooked. There is but one thing they will not eat; they draw the line on the Gila monster. They are the most perfect type of human being adapted to desert conditions that exists today. Convey them blindfolded many miles into the heart of the desert, empty-handed, remove their blinders, and they will find both food and water where others would perish. The Papagos and Yaquis do almost as well."

302 We gave the women a small bag of flour and three or four cubes of
[123] sugar around, and the men three packets of tobacco each and two boxes of matches. Matches with them are very precious and are rarely used. Rather than use a match a woman came over to our fire and borrowed some coals to rebuild her fire. From this point the nearest matches are a good deal over one hundred and twenty miles distant, so they have to economize in every thing.

422 Each rag is valuable, and flour, sugar, coffee and rifle shells
[434] are absolutely priceless. While they know money, it has no value here.
[437] Only commodities go here. The most highly prized things are boards to
[389] make boats and rifle shells to get game and protect themselves. All empty shells are saved, the primer punched out, straightened, a match head put in, a little pinch of powder on top, the shell filled up, a long bullet inserted, the shell pinched tight, and a fresh set of ammunition is made.

142 The women and children certainly did look wild. Their hair was
291 frowsy and unkempt, their skirts and waists a patchwork of dirty rags
302 coming just below the knees; their features seamed and hard and cruel. Their complexion was very dark. They had no under garments. The children wore only a dirty shirt coming a little below their thighs, and even that is ragged. One or two of the women had a dirty bandanna over their heads. How I wished I could have seen them in their ancient, picturesque pelican-skin kilts!

302 I happened to witness the operation of a Seri beauty parlor. A
[824] mother brushed the hair of her thirteen-year-old daughter with a brush
[283] made from the fibrous roots of a certain grass tied together with
[515] sinew. During the operation if she came across a *piojo*, and she found several, she plucked him away from his feeding ground and dropped him in the fire.

The hair neatly brushed, the mother then mixed paint in a small vessel and with a tiny stick painted a bright blue design under the eyes and across the cheeks and nose, and then she added narrow white stripes, which, contrasting with the blue and the dark skin, produced a very striking effect. This paint is easily removed and the women often paint and remove three different face designs in one day.

304 I did not see tattoo work on either men or women, nor did they
301 wear ceremonial feathers as did our western Indians.

wear ceremonial feathers as did our western Indians. I saw no skin or cutaneous disease, or evidence of tuberculosis or of trachoma---the curse of our Indians.

One boy-child of five years was a handsome child---fat, round, sturdy, with roving great black eyes, large thick lips, a picture of perfect health. He was almost naked. His hair was done in a pigtail with a red string braided into it. His face like all the others was dirty, but he waded into the shallow water with a short spear and I saw him catch two crabs with his little harpoon. The water did not bother his face.

They had no plates or eating tools, except large deep clam shells, cast up by the sea, which served as cups and dippers. Their long, keen belt knives were used for cutting, carving or skinning, and always the fingers for eating. They gathered in a circle around an olla of seeds of long grass growing on the sea bottom prepared by winnowing, parching and grinding, and then cooked with turtle oil. Each one dipped his or her fingers into the olla and conveyed them to the mouth without losing a drop, and licked them off with great relish.

The dogs eat with the family. There were six or seven half-starved ones. If someone picked up a piece of turtle flipper the dog often took the first lick at it, bit off a piece or licked it before it reached the owner's mouth. The dogs were not punished. They were just slapped to keep them out of the pots.

We had a great time that evening in Seriland. The young man played his violin. This consisted of a hollow box cut out of a *palo verde* tree, and a piece of pine about sixteen inches long; terminating in a hollow where a single peg was fitted. The one string was twisted deer sinew, and the bridge was a small round clam shell at the far end. The bow was a small bent stick and some black horsehair. On the handle was a wad of rosin fastened underneath. By fingering this string a few weak squeaky notes were made, and this was the classical music of the Seris.

Manuel Encina seized his gourd rattle and began chanting. Herrera tapped a tin can and I beat on an inverted basket and the orchestra was in full swing. A young girl, Rosa, dragged out a turtle shell and standing on it began to dance. This dance consisted of stepping up and down quickly with each foot alternately, and this stamping, barefooted, emitted a hollow sound. Every once in a while I let out an Indian yell which pleased the Seris very much. For two hours they had a real swell time. We took one flashlight of the proceeding.

Each family was in their hut, which afforded very slight shelter as they were only partially roofed over and the sides were broken down in places. The huts were all adjoining and each had a little campfire, which did not give much illumination, so the dancing was in semi-darkness.

[text continues on p. 163]

123 We have given the Seris so much we are now short ourselves. Variety is very restricted. We haven't enough tin dishes or tools to go around, but that does not trouble us at all. All the cleaning is done in salt water and sand. Fresh water is only used to drink. Nothing else. We can't even take a shave. Not a drop of water. We are very lax in our personal toilets and appearance. We are barefooted always in the boat, as we have to wade to get the boat in deep water, and often the waves slosh on board.

This boat is made of a hollowed log twenty feet long and three feet, three inches wide, and she is very cranky. She almost upset with us several times. When everybody is placed in it, it is difficult to even change a posture without endangering everybody. She has no keel and leaks some, so we have to bail out often. But she is a good sea boat and rides the waves well if they are not too rough.

123 439 [203] [484] One evening we decided to get a message through to Juan Tomas, the Chief, some twenty or thirty miles distant. Herrera promised to go if we gave him twenty thirty-thirty cartridges. He would go one day and return the next, a round trip of about fifty miles. We gave him the message to tell those people we had a lot of things to trade for the things they use in every day life. Pelican skin kilts, bows and arrows, oilas, baby cradles, hair brushes and other interesting things. I had already made a trade with Blanco for his *balsa*, promising him sufficient lumber, nails and tools, to make a boat large enough to carry five men. This promise I fulfilled to the letter, and later on another expedition to Seriland I had the pleasure of sailing in this boat, which was well built and seaworthy. The unusual part of this bargain was that Blanco permitted me to deprive him of his only means (apparently) of making a living in hunting *cahuama* for himself and his family, freely and without hesitation, simply on my promise of lumber in the future. I was deeply touched by the trust reposed in me by this old sea rover.

322 [504] These people are splendid mechanics with the crudest of tools---rocks, fire, bones, knives. For instance, the pole of the harpoon was composed of five pieces of driftwood and a seagoing boat which I saw in Guaymas, captured by Mexican fishermen after killing the Seri crew, was composed of fully one hundred pieces of driftwood fastened with nails made of wire, and tied with fiber, and all the seams were filled with a black composition of native origin resembling pitch. Previous [325] to the use of old iron, harpoon points were made of ironwood, but now iron is universally used.

283 [124] I asked old Blanco for some of his native rope. He gave me some of it. He said they get the slender roots of the mesquite and peel the bark, and then the girls and women chew the fibrous wood. This is shredded and twisted into small two-stranded ropes. It is this rope, tied around and around, that holds the *carriso balsa* together.

411
291
576

Fastening feathers on arrows with a sinew held tight in his teeth.
1929

[283]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

those so fully described by Hough,[1] and serves to explain the otherwise obscure genesis of the fire-sense, which must have accompanied and shaped that most significant of all steps in human progress, the conquest of fire.

The modern coordinate of the Seri arrow is the bow, made preferably from a straight and slender branch of the palo blanco. A typical specimen is illustrated in plate XXX; it is 4 feet 9½ inches long, with the outer face convex and the inner face flat; greatest width 1¼ inches, narrowed to 1¼ inches at the hand-hold; thickness at the hand-hold 1 inch, thinning to five-eighths inch at 8 inches from this point; tapering gradually in both dimensions toward the extremities, which are rudely notched to receive the cord (of mesquite-root fiber). The specimen illustrated has been cracked and repaired in two places; in one place the repair was effected by a rough wrapping of sinew, and in the other by slipping over the wood a natural sheath of rawhide from the leg of a deer. The specimen is of added interest in that it combines bow and nether fire-stick ("Strong-Kind-Mother"), one of the friction holes being worn out to the notched margin, and the other remaining in usable condition, as shown in the enlarged marginal drawing.[2]

Compared with the delicately finished and graceful arrow, the typical bow is a rude and clumsy device; it displays little skill in the selection and shaping of material, and evidently involves little labor in manufacture—indeed, the indications are that more actual labor is spent in the construction of a single arrow than in the making of a bow, while the arrow-making is expert work, betokening craft of a high order, and the bow-making little more than simple handiwork of the lowest order. The comparison affords some indication of the genesis of Seri archery, and at the same time corroborates the independent suggestion that the arrow is of so much greater antiquity than the bow as to represent a distinct stage in cultural development—though the precise cultural significance of the bow is not easily ascertained.

Efforts were made to have different Seri warriors at Costa Rica in 1894 assume the normal archery attitude, with but moderate success, the best pose obtained (illustrated in plate XXVIII) being manifestly unnatural and a mere reflection of the attitude in the mind of the Caucasian poser; while the results of inquiries served only to indicate that the normal archery attitude was purposely avoided for reasons not ascertained. Fortunately another observer was more successful: in the course of the United States hydrographic surveys in 1873, Commander (now Admiral) Dewey received several visits from Seri warriors on board the *Narragansett*; and on the occasion of one of those visits, Mr Hector von Hayer, of the hydrographic party, caught a photograph of an archer in the act of drawing his bow. The negative was accident-

[1] Fire-making apparatus in the U. S. National Museum; Sixth Annual Report for 1888, pp. 11, 1889, pp. 531-545, and elsewhere.

[2] Ordinarily the nether fire-stick is of soft and porous wood, Sonora palo-verde and water-logged pine being preferred.

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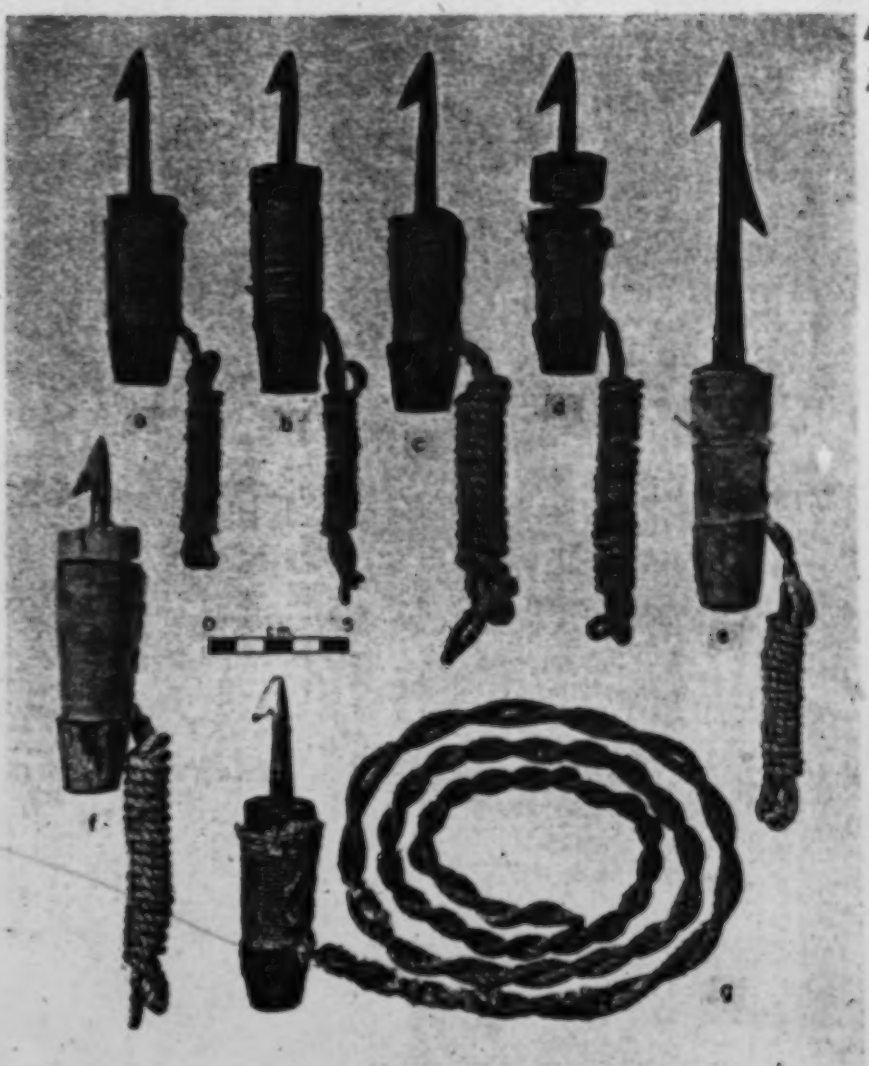

PLATE I: FORESHAFTS MANUFACTURED BY SEVEN SERI FISHERMEN
(see Table 1 for specifications) A

[facing page 364]

A [Table 1 is on page 367, category 116: Analyst]

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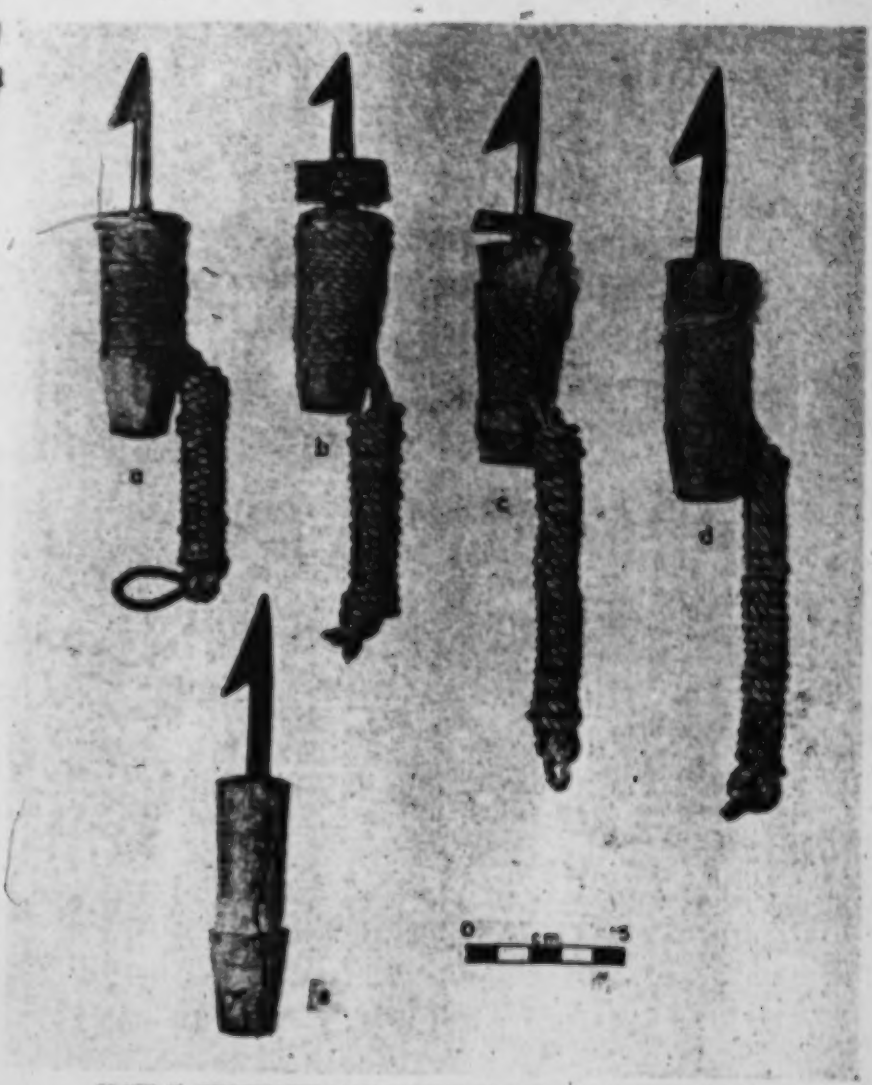

PLATE II: FORESHAFTS MANUFACTURED BY ONE SERI FISHERMAN, FRANCISCO BARNETT

(see Table 1 for specifications)

[Table 1 is on page 367, category 116.- Analyst]

[Facing page 365]

1: McGee E-2 (1894-1895)1898 NU31 Seri NU71

and the shell-strata are so like and so different from any other fictile wares as to be distinguished at a glance. Hence it would seem manifest that the Seri olla must constitute a normal nucleus for the Seri esthetic; yet even here the field is practically barren, as is shown by the study of a score of usable and mortuary specimens and of thousands of sherds. The most ornate specimen seen is that depicted in plate XXXIII. Its form, like that of the balsa, is a mechanical equation of forces and materials; its body-color is that of the clay, blotched and blackened irregularly by the smoke of the firing; and its decoration is limited to 17 faint lines or bands radiating downward from the ill-shaped neck. The radial bands were evidently drawn by a finger dipped in clayey water after the vessel was otherwise finished for the firing; they are irregular in placement, width, length, and direction; they generally run in pairs, two straight lines alternating with two zigzag lines, though the circuit is completed by two zigzags drawn wide apart and separated by a single straight line. The meaning of the device (if meaning there be) was not directly ascertained; but it is suggestive that its maker and owner was the mother of the youthful warrior from whom the rattlesnake necklace was obtained (her face-symbol is that shown in the lower left figure of plate XXVI), and that the vessel was surrendered more reluctantly than any other article obtained from the tribe.

Another utensil of some importance to the tribe is a basket of the type illustrated in figure 24. It is manufactured with much skill and is used for various domestic purposes, being practically water-tight and unbreakable, and materially lighter than even the unparalleledly light fictile ware of the Seri. In form and size and weave the half dozen examples seen correspond with widespread southwestern types; yet it is noteworthy that while otherwise similar baskets are habitually decorated by other basket-making tribes, the Seri specimens were absolutely devoid of decorative devices.

Practically the only remaining artifacts available for decoration are those connected with archery; and it suffices to say that while the bows are skilfully made and the arrows constructed with exceeding pains, not a single specimen seen showed the slightest trace of symbolism or of nonutilitarian motive.

Summarily, the Seri are characterized by extreme esthetic poverty. This has been noted by the early missionaries and by the few other travelers who have approached their haunts, as well as by the vaqueros on the Encinas and Serna and other ranchos bordering their range, who know them as "los pobrecitos". All observers have been struck with their destitution and squalor; yet when the impressions are particularized they are seen to denote absence of the poor luxuries, rather than the bare necessities, of primitive life. The people are pathetically poor in the industrial sense; their equipment in artifacts—implements, weapons, utensils, habitations, apparel—is meager almost, if not quite, beyond parallel in America; yet their esthetic equipment, practically

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

137 chiefly in the form of wounded and dwarfed specimens, seems to indicate that its original range comprised all Seriland; while its dearth suggests destruction nearly to the verge of extinction by improvident generations better armed with their hupfs and harpoons and shell-cups than the subhuman beasts against whom the plant is so well protected.

285 415 Aside from the universally used hupf and ahst (which may be regarded as differentiated implements or tools), the only special device used in connection with vegetal food is the basket, or, rather, basketry tray (illustrated in figure 24). This ware is of the widespread coil type so characteristic of southwestern tribes. The coil is a wisp of stems and splints of a fibrous yet spongy shrub, apparently torote; and the woof consists of paloblanco (?) splints deftly intertwined by aid of an awl. The construction is fairly neat and remarkably uniform; the

FIG. 24—Seri basket.

coiled wisps vary somewhat in size, both intentionally and inadvertently, ranging from an average of three-eighths of an inch toward the bottoms of the larger specimens to half that diameter in the smaller specimens and toward the margins of the larger. The initial coil starts in an indefinite knot, rather than a button, at the center; and the spiral is continuous throughout, the final coil being quite deftly worked out to a single splint smoothly stitched to the next lower spiral with the woof splints. The ware is practically water-tight, remarkably strong and resilient, and quite durable in the dry climate of Seriland. Ordinarily the basket is abandoned when the bottom decays or breaks, but an ancient specimen obtained on Isla Tiburon was roughly rebottomed with a patch of sealskin attached by means of sinew. The baskets are notably uniform in shape, though the size varies from 8 or 9 inches to fully 17 inches in diameter.

The most striking feature of the Seri basketry, as of the pottery, is

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

extreme lightness in proportion to capacity, a quality due to the spongy character of the torote coil and to the thinness of the splints used in the woof. The inside dimensions, weight, and dry-measure capacity (filled to the level of the brim with rice) of two typical specimens approaching extremes in size are indicated in the accompanying table. As noted elsewhere, the ware is absolutely without decorative devices in weave, paint, or form; it is baldly utilitarian, a model of economy in material and in the balance between structure and function, approaching in this respect the thin-walled canteen ollas, the graceful balsa, and the light but effective harpoon. The structural correspondence of the ware to a widespread type and its limited use among the tribe suggest an aecultural origin for the Seri basketry; but the delicate adjustment of means to ends in the manufacture and the strictly local character of the material quite as strongly suggest an indigenous development.

Museum No.	Diameter	Depth	Weight	Capacity
174539	38 cm. (15 in.)	9.5 cm. (3¾ in.)	482 g. (17 oz.)	6.25 l. (6.6 qt.)
174538a ..	23 cm. (9 in.)	5.0 cm. (2 in.)	142 g. (5 oz.)	1 l. (1.06 qt.)

It is impossible to portray justly the food habits of the Seri without some reference to a systematic scatophagy, which seems to possess ritual as well as economic features. In its simplest aspect this custom is connected with the tuna harvests; the fruits are eaten in enormous quantity, and are imperfectly digested, the hard-coated seeds especially passing through the system unchanged; the feces containing these seeds are preserved with some care, and after the harvest is passed the board (desiccated, of course, in the dry climate) is ground between hupf and abst, and winnowed in baskets precisely as are the mesquite beans; and the product is then eaten either dry or in the form of atole like the mesquite meal. In superficial view this food factor is the precise homologue of the "second harvest" of the California Indians as described by Clavigero, Baegert,[1] and others; but it gains importance, among

[1] "An Account of the Aboriginal Inhabitants of the Californian Peninsula, as given by Jacob Baegert, a German Jesuit missionary. . . . Translated and arranged for the Smithsonian Institution by Charles Rau; Ann. Rep. Smithsonian Inst. for 1863, pp. 352-369. Baegert's account of foods (pp. 360-367) is so apposite as to be worthy of quotation nearly entire:

"Notwithstanding the barrenness of the country, a Californian hardly ever dies of hunger, except, perhaps now and then an individual that falls sick in the wilderness and at a great distance from the mission, for those who are in good health trouble themselves very little about such patients, even if these should happen to be their husbands, wives, or other relatives; and a little child that has lost its mother or both parents is also occasionally in danger of starving to death, because in some instances no one will take charge of it, the father being sometimes inhuman enough to abandon his offspring to its fate.

"The food of the Californians, as will be seen, is certainly of a mean quality, yet it keeps them in a healthy condition, and they become strong and grow old in spite of their poor diet. The only period of the year during which the Californians can satisfy their appetite without restraint is the season of the pitahayas, which ripen in the middle of June and abound for more than eight weeks. The gathering of this fruit may be considered as the harvest of the native inhabitants. They can eat as much of it as they please, and still some this food agrees so well that they become corpulent during that period; and for this reason I was sometimes unable to recognize at first sight individuals, otherwise perfectly

2: Kroeber E-5 (1930) 1931 NU31 Seri NU31

sounds like an expectable enough mythic idea, but seems involved with McGee's dubious conceptions as to totemism, discussed below. 114 193

The two-pointed fish-spear, with serrated points 6 inches long and spreading 5°, seen by Hardy (McGee, p. 193), is interesting because seemingly unreported in or near the area. 114 227

"Fishing" with staked pelicans who are then fed by free birds, is authenticated by the statement of Venegas for lower California, (McGee, p. 193). [226 231]

No fish nets, hooks, or lines were seen by McGee among the abandoned effects on Tiburon (p. 194). This is in accord with my observation. The abundance of sharks may interfere with net or deep water fishing.

The bow (p. 200) is of *palo blanco;* the release (pls. 28, 29), Mediterranean; the archer's position (pl. 29), with elbow above head, suggests a quick downward shot at a target or game lying on the ground not far away. 114 411

Mesquite, according to McGee (p. 207), is ground on the metate. Sr. Thomson told me of its being pounded in a hole in the ground. The Seri gave me the name a'kaʟa for what I understood to be this earth mortar. According to Sr. Thomson's description, the flour from the first beans cakes and lines the cavity firmly, so that the bulk of the material is secured quite cleanly. In general, mesquite is mortar-pounded rather than metate-ground by the tribes from whom we have records, as is expectable from the woody nature of the beans. 114 252

McGee (p. 207) noted the viznaga cactus, Echinocistus, as rare in the Seri habitat, presumably owing to its use for water by the natives. I made the same observation on the mainland, but Sr. Thomson stated that along the roads the plant is being gathered for candying. 114 137

The one basket described by McGee (p. 208, fig. 24) is bundle-coiled and plain. The only one I saw in use among the Seri was ornamented with a plain reddish band. Sr. Thomson presented me with two which bear patterns (fig. 13), and showed me a photograph of a collection made by Mr. Davis for the Museum of the American Indian, Heye Foundation, nearly all of which were decorated, some fairly elaborately. Several of these are shown by courtesy of that institution in figure 12. As McGee observes, there is obvious resemblance to Southwestern baskets; especially of the Papago, Pima and Apache. Southern California basketry is less similar. That of Baja California is unknown from specimens, though the mention of water-tight vessels used for winnowing and parching suggests a coiled tray of Seri type. The surviving tribes of Sonora other than the Seri use few baskets distinguishable from those of the non-Indian population. 114 285 [171]

2: Kroeber E-5 (1930) 1931 NU31 Seri NU31

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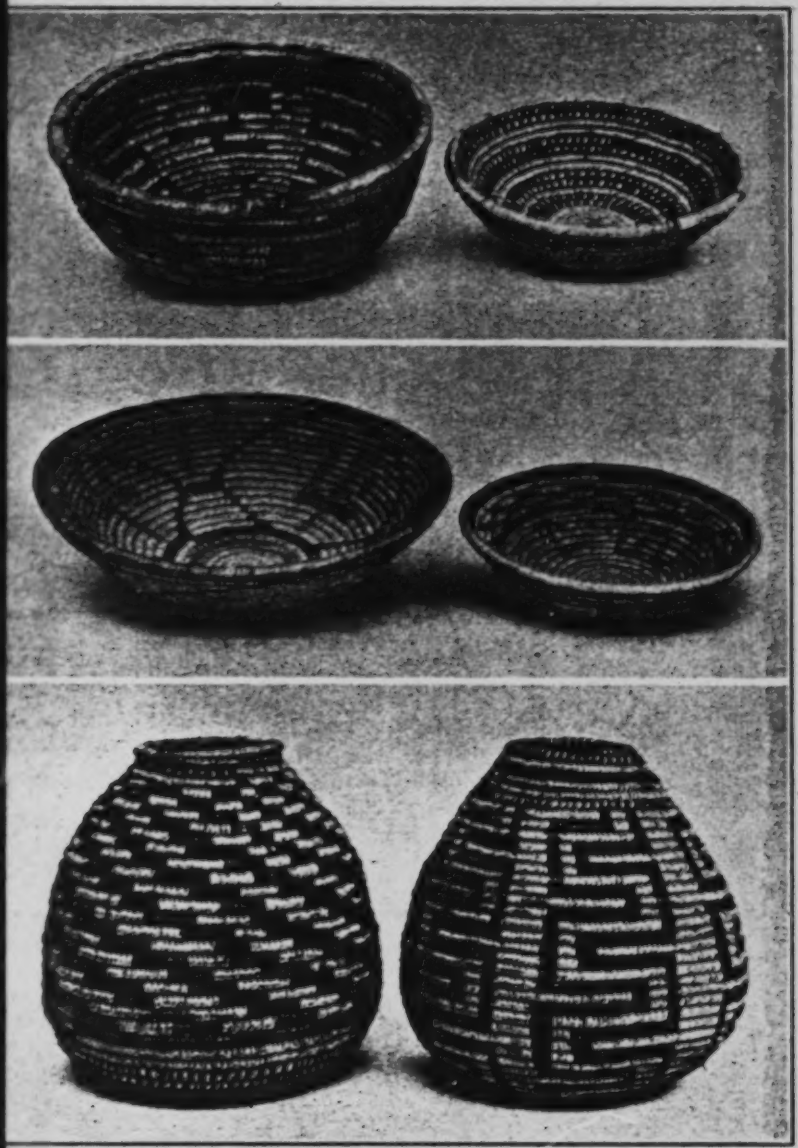

FIG. 12. *Seri Baskets in Museum of the American Indian, Heye Foundation.*
Nos. 15—4279, 4285, 4292, 4236, 4247, 4249.

2: Kroeber E-5 (1930)1931 NU31 Seri NU31

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531

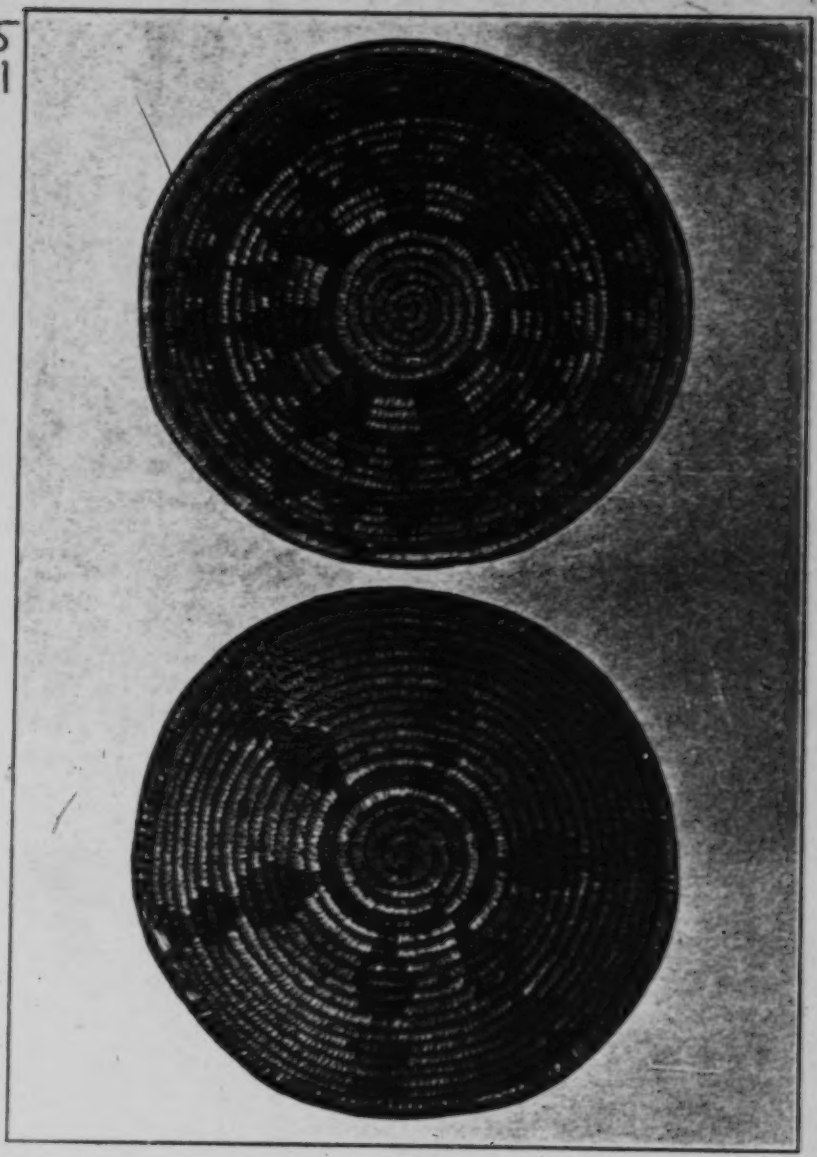

FIG. 13. *Seri Baskets in University of California Museum of Anthropology.*

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342
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FIG. 6. DOMESTIC SCENE IN A SERI VILLAGE

[p. 197(A)]

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342
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FIG. 13. PREPARING BASKETRY MATERIAL
THE SPLINTS ARE MADE BY HAND AND MOUTH STRIPPING OF THE BRANCHES OF TORNTE AND PALO BLANCO.

[p. 261(c)]

5:Dawson N-5 (1940) 1944 NU31 Seri NU31

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285
516

1. A basket of cactus meal.

2. A Seri village on Tiburon Island. Note the large shells of the sea turtle that serves as food.

3. Making the Seri basket. House is constructed of ocotillo branches and brush.

[p. 135]

5:Dawson N-5 (1940) 1944 NU31 Seri NU31

252 of nutritious material which was ground to powder on their stone ahsts, winnowed in shallow baskets and made into a meal or paste.

764 824 The abundant cacti of many species served several other functions in the domestic economy of the Seris. The thorny cholla whose insipid fruits were not fit to eat and whose spines were a constant threat to the unprotected bodies of the Seris, found one use, nevertheless, in the burial procedure. After a body was partly covered with earth in the three foot deep grave, it was densely overlaid with chollas before leveling, to discourage the coyotes from digging for the body.

396 824 The dry skeletons of the giant cacti provided the long, cylindrical poles used in knocking off ripe pitahayas as well as in all other instances in which a straight, slender pole was needed. Since the advent of the open boat in modern times, the cactus skeleton has come in for a new use, for after trituration between stone ahst and hupf, it was found to yield a satisfactory caulking compound when mixed with sea-lion oil.

312 824 The barrel cacti, *Ferocactus Wislizenii* and *F. Coulteri*, though ordinarily abundant on the Sonoran desert are rare in Seriland and practically absent from Isla Tiburon where they may easily have been exterminated by the improvident Seris during their centuries of occupancy on account of their recognized value as water providers on the wastelands over which the Seris so frequently ventured.

342 [132] 824 These Indians found housing no problem, for, living under a climate in which frost is rare and rain infrequent, they found little need for shelters except for protection against the blazing desert sun. Camps that were occupied for more than a day or two, however, usually saw the appearance of a group of crude sun shelters. These were usually made of long, flexible ocotillo branches, *Fouquieria splendens*, stuck in the sand and fashioned into an arched framework over which a more or less complete covering of brush was piled. If, by the sea, a windbreak were desired, the brush top and siding were usually augmented by the addition of several empty turtle shells.

262 824 On the delta plain of the Rio Sonora, the mesquite, *Prosopis juliflora*, grows in remarkable luxuriance, these gnarled, spiny trees forming an almost continuous open forest 20-40 feet high. Its fruit, consisting of small, hard beans borne in slender, woody pods forms a concentrated, starchy food that the Seris found highly nutritious if not appetizing. In late summer when all fresh vegetable food had withered and disappeared, provided the turtle fisheries had not yet attracted them back to their island, they often spent [252] some weeks gathering the beans and grinding them into a meal which was eaten as a watery atole or as a paste mixed with sea-lion oil. The more straggly and thorny cat's claw mesquite, *Acacia Greggii*, and the ironwood, *Olneya tesota*, also yielded woody beans in limited quantity.

In the deeper gorges of the mountains the Seris found *Guaiacum Coulteri* [019] yielding a berry of medicinal properties and also *Jacquinia pungens* which [334] produced a nut, edible when not quite ripe, and forming a favorite rattlehead when dry.

Along sandy washes, particularly on the lower flood plain of the llano grows a low, shrubby weed, *Hymenoclea monogyra*. Although during times of drought it shrinks to stunted tussocks, after periods of heavy rain its flourishing fens produce abundant seeds eaten both by the beasts of the plain and formerly by the Seris.

Before the advent of the tin can and the cardboard carton, basketry was [191] an important hand craft among these Indians

[Text continues on p. 138--Analyst]

5:Dawson N-5 (1940) 1944 NU31 Seri NU31

an important handicraft among these Indians. They made a shallow, coil type basket such as is characteristic of many southwestern tribes. The Seri basket, however, was remarkable for its extreme lightness in proportion to capacity, a quality due to the spongy character of the coil made of a whisp of splints of the torote. Several torotes are found in the region, the commonest species being *Jatropha cardiophylla*. Also used were the torote amarillo, *Jatropha spatulata*, torote blanco, *Bursera microphylla*, and torote prieto, *Bursera laxiflora*. The woof consisted of splints of palo blanco, *Acacia Willardiana*, or of baraprieta, *Caesalpinia gracilis*, deftly interlaced by means of a bone awl to form a smooth, practically waterproof utensil.

In pre-Columbian times the Seris commonly sought wild game, mostly deer, without the aid of weapons, using only their tremendous physical endurance against their prey, chasing the animal until it was exhausted and could be thrown to the ground. With the introduction of iron, however, the development of the bow and arrow achieved prominence, for the shaping and fastening of points had long retarded the exploitation of these implements. Few straight stemmed or straight grained plants grow in Seriland suitable for making arrow shafts, but on the flanks of the deeper gorges of Sierra Seri and Sierra Kunkaak on Tiburon Island, the Indians found one leafy shrub that filled the need, *Sapium biloculare*. The juice of this plant is also said to have been used for arrow poison. The bow was preferably of palo blanco, wrapped and strung with mesquite fiber cord.

The modern Seri tribe consists of barely more than 100 souls, with early extinction threatening from imported diseases. Their natural habits are now vastly modified and they live a comparatively sedentary life near the village of Kino, scavengering for fish heads and other refuse discarded by the fishermen, now and then fishing for themselves when in need. Every year, however, they trek off to the cactus forest for the annual feast, and in late summer many may be seen camping among the mesquite groves near the Kino well where an abundance of both mesquite beans and water makes for easy living.

462 desert plants or littoral fishlets from tide-pools
or of the shellfish. Both men and women will
[224] bring in an occasional rattler, although women
are more likely to do this because they spend more
[857] time in the desert. Children of both sexes are
engaged in the female occupations here, but ado-
[883] lescent boys already join in their fathers' hunts
on land or sea.

342 Housing has undergone some changes. In the
184 desert or on Tiburon the Indians construct the
kind of shelter they did in the recorded past,
an ocotillo frame, bent over in the middle and
covered up with dried plant debris and twigs
from the desert, or with the sail cloth. But in
Desemboque they have more substantial houses—
of wattle and adobe, with flat roofs, rectangular
or square, often with corrugated tin or drift
planks and other debris piled up on top, or along
the walls.

178 In the remainder of their material culture, not
much has been left from years past although one
must remember that from the very beginning of
[391] recorded Serian history it has been of a most
[412] meager sort. Pelican robes, which some Seris ap-
parently still wore in 1939 are gone for good.
[323] So are the stone tools. So is the pottery which had
probably disappeared in Kroeber's time. The hu-
[301] man hair necklace with rattlesnake rattles is also
a thing of the past. The rattlesnake skin belts
[291] McGee (1898:170) described and figured are
probably all gone. I havn't seen or heard of any.

412 But what remains much as they had been in
● 285 1894 are the bone-awls. These are made of burros'
carpals and the blossoming of basketry, owing to

[P. 8A]

9:Malkin E-5 (1953-1958)1962 MU31 Seri MU31

412 the stimulus of the tourist trade, has kept this
●285 tool alive. Another survival from McGee's times
301 are *Olivella* shell necklaces.

Seri Antecedants and Relationship

174 For complete lack of archaeological information, little can be deduced about Seri antecedents. Speculations can be made only on the basis of similarities of their post-historic cultures with the cultures of the surrounding tribes.

171 Individual traits between the Seri and their
174 neighbors show discordant connections. Comparative data assembled by Kroeber, Beals and Driver & Massey suggest almost equal possibilities of derivation from the Cochimí, the Gila, Pimá and the Yuman tribes but favor much less connections to the south. Much is made of the basketry. Archae-
[172] ological basketry has been unearthed since the work of Kroeber and Beals was published (Massey, MS.), but it is different from the Serian. Seri basketry shows closest relationship to Pima-Papago complex (Malkin, MS.). But part of this may be not only post-historic but certainly very recent and is hardly an argument in favor of the Pima-Papago connections.

Kroeber (1930:5) thought that on the face of it, the Seri showed greatest affinity to the Cochimí on the grounds of their general development of economy—the hunting and gathering subsistence. But he also pointed out that relationship with the Cochimí may rest ultimately on the linguistic analysis if the Cochimí language can still be recorded—which is most dubious.

[P. 8 B]

10: Davis E-5 (1922-ca. 1939) 1965 NU31 Seri NU31

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Carrying firewood

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Seri basket maker - 1934

157 The women are virtuous and faithful and perform all the duties of
152 wife and mother and bear their share of hardships. The hard life,
[145] exposure and struggle for existence soon causes hard features, wrinkles
[165] and ugliness. Many babies die young and the tribe probably numbers
[167] only about two hundred.

The dancing by the driftwood fires continued as we turned in to
123 rest, our eyes constantly drawn to the flame and the glittering eyes in the wild dark faces, while the waves of the sea accompanied the chanting in that mysterious isle of Seriland.

225
133

Seris - off to the fishing grounds - December 1934. Alcatraz Island in distance.

222 In Seriland most of the food comes from the sea. During April and May, at the time of my first visit, a green grass growing on the sea bottom was detached and washed ashore. The women dragged it up on the bank near camp and spread it out to dry. Some of the stalks contained about seven fine green seeds the size of a pin head. When dry, the
[285] women threshed them out with sticks on a piece of canvas. These are cleaned by the deft use of the *batea*, or winnowing basket, of which these people are pastmasters.

252 A pint of these fine seeds were parched in an olla over coals of driftwood and constantly stirred to prevent burning. It was then ground
262 on a flat rock like a *metate*---any flat rock---into a green meal which was very nourishing. This was cooked in an olla with turtle oil, making a porridge like thick green paint. It was then drunk or eaten with the fingers. If there is plenty, two fingers are used; if not, only one finger.

285 [224] I watched a woman make a basket. She used young branches from the terote tree, I think *terote blanco*. The bark was peeled and shredded into two parts, the heart taken out and kept separate. The coils of the round part were put in a pot of hot water to soften, and the edge of the basket was soaked a little in hot water. The center of the coils or woof consisted of six or eight strips of heart while the outer sap wood was woven around in regular coil-weave fashion.

[287] [414] A brad of deer shin-bone sharpened on pumice to a needle point was used as a brad. With this brad she split the fiber, held one piece in her mouth, and stripped the back down. Then she punched a hole in the bone brad, inserted the sharp end of the fiber and pulled it almost through. She then repeated the operation, adding a strip of heart once in a while. These baskets are coarse and unattractive, but they are hard and tough and stand heavy use.

323 Cooking vessels consist of two or three cooking ollas that nest together to facilitate transportation. These are made of coarse clay, solely for utility without regard for beauty of shape, color or design. In burning these ollas they use the shell of the sea turtle. [237] [372] The cells of the shell are filled with a fine oil and this burns the ollas. On most of the other places on the mainland, the Indians use cow chips, or dried droppings to fire the clay.

283 484 123 We proposed to shift camp to Tinajanita, our first landing place, where Herrera was to meet us in two days with the Chief and some of his men. Since it was blowing, he said the men couldn't fish and they would be on land probably hunting, so he would be able to see them. [271] At this time they gathered *sescal* on an island off the west coast to make the liquor they used at fiestas, weddings and other celebrations.

Herrera left at five o'clock in the morning, with a swinging gait, for the opposite side of the Island. The distance around by boat would be fifty miles, and across, only about twenty or twenty-five---a full day's trip and hard, as mountains would have to be crossed and the rocks were sharp and the way difficult.

123 We had breakfast on rice and bread. Our rations are running low and we expect to move this morning. We made arrangements about the native boat and saw Blanco trot off with two five-gallon cans for water, a distance of ten miles. We went to the camp to get a few things---an old basket, a Pelican hide and other things, and then we asked the help of everybody to get the boat down to water---the tide was very low. The one man, the women and five of us were required to drag and push the boat to water.

We waved goodbye, loaded her up and then rowed against the tide and wind for miles, and finally landed in a lovely sheltered lagoon, built our fire and had lunch. A few crabs were speared, and late in the afternoon the wind shifted. We loaded the boat again and pushed off for Tinajanita, our first landing place. After rowing, we raised

[text continues on p.174]

1: McGee E-5 (1894-1895):898 NU31 Seri NU31

ripening); most of the larger muscles were already gnawed away, leaving loose ends of fiber and strings of tendon clinging to the bone, the condition being such that the remaining flesh might easily have been cut and scraped away by means of a knife; yet whenever a warrior or woman or youth hungered he or she took down the heavy joint, squatted or sat on the ground with back to one side of the doorway, held the mass at the height of the mouth, and gnawed, sucked, and swallowed, frequently tearing the tissue by twisting and backward jerks of the head, and not only masticating, but swallowing the free ends of tendons still attached to the bone. This process was varied only by seizing with the hands and tearing off a strip of flesh or skin already loosened by the teeth; and it was continued until the bones were practically clean, when they were wrenched apart by the stronger men in order that the cartilaginous cushions and epiphyses might be gnawed away. The only approach to cooking or carving was a parboiling of the foot, after the leg was wrenched off at the hock, until the hoof was sufficiently softened to be knocked off with the protolithic hupf[1] shown in plate XLIII, when half a dozen matrons and well-grown maidens gathered about to gnaw the gelatinous tissue (already softened by incipient decay as well as by the parboiling) investing the coffin bone. The entire procedure in this as in many other cases proclaimed the absence of knife-sense. The Caucasian huntsman does not have to think of his knife when game is to be bled or skinned or dissected; his habit-trained hand knows where to find the implement, how to seize it, and in most cases how to wield it advantageously; but the Seri hand possesses no such cunning, and uses the knife only clumsily and at second thought, if at all. The Seri huntsman, on the other hand, does not have to think of nails and teeth, for they are trained and coordinated by hereditary habit to spontaneously act in unison and with the utmost possible or needful vigor; while the Caucasian at least has completely lost the claw-and-teeth instinct of offense and defense.

Conformably with their striking independence of knives, the Seri are conspicuously unskilful in all mechanical operations involving the use of tools. Their most elaborate manufacture is the balsa, made from reeds broken at the butts and with the leaves and tops removed by the hands or by fire, bound together with hand-made cords; next in elaborateness come the bow and arrow, normally made without cutting tools; then follows their fictile ware, which is made wholly by hand, without aid of the simple molds and paddles and other devices used by neighboring tribes; while their primitive fabrics were apparently of hand-extracted fibers, twisted and woven wholly by hand, with the aid of wood or bone perforators in sewing and possibly in weaving. Practically the Seri possess but a single tool, and this is applied to a peculiarly wide variety of purposes—it is the originally natural cobble used for crushing bones and severing tendons, for grinding seeds and

[1] De Smet pounce, p. 188.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

291 erty even transcending the poor apparel, flimsy habitations, and generally ill-developed artifacts of the lowly tribe.

[237] The most prominent personal possession is the pelican-skin robe; it is usually made of six skins, slightly dressed and in full plumage, sewed together with sinew in a conventional pattern of such sort as to give the greatest possible expanse consistent with the irregular outlines of the individual skins, and at the same time to display a conventional color pattern on the feathered side, the colors ranging from the dorsal slate to the ventral white of the fowl (as indicated in plate XXIII); sometimes there are only four skins and rarely there are eight, but the conventional arrangement is maintained. Before the beginning of a

[301] [824]

FIG. 5—Dried flower necklace.

[177] fairly regular barter at Rancho de Costa Rica, and hence before the introduction of manta and other stuffs, the pelican-skin robes were supplemented by kilts made of mesquite root or other fibers, spun and twisted

● [286] in the fingers and woven probably on some primitive device no longer in use; but so far as is known these native fabrics were devoid of decorative patterns in color or weave. Less habitually a short wammus or shirt, with long sleeves, made of a material similar to that of the kilt, was worn: but it, too, was without ornamentation, so far as can be ascertained. The remaining article of utilitarian apparel is the belt, usually consisting of a strip of skin (of deer, rabbit, peccary, etc), slightly dressed with the hair on; frequently this is replaced by a cord or braided band of human hair, while the favorite belt of some of the

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

283 gualla by the 1895 expedition), and then hatcheled with the hupf or the edge of a shell; when the fibers are gathered in slender wisps or loosely wound coils, both of which were among the possessions of the Seri matrons at Costa Rica in 1894. So far as could be ascertained, the final processes parallel those of hair-cord making, i. e., the fibers are patiently sorted into strands, sized in the fingers and twisted by rolling on the thigh, the strands being subsequently combined in similar fashion.[1] Neither the weaving nor the woven fabrics of the Seri have ever been seen by technologic students so far as known, though the fabrics are shown in Von Bayer's photographs and have been described by various observers. According to Señor Encinas, they resemble coarse bagging, and are woven or netted quite plainly. The ordinary sewing material is sinew, used in connection with a bone awl (a good example of which is illustrated in figure 35), a fish

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FIG. 35.—Bone awl.

FIG. 36.—Wooden awls.

spine or bone, a cactus thorn, or either the mandible of a water-bird or a hard-wood skewer shaped after this natural needle (figure 36 *a* and *b*). Sometimes hair or vegetal fiber is substituted for the sinew; and for certain purposes an agave thorn, with the fibers naturally attached, serves for needle and thread.

[524] [1] A rope-twisting device of the sort commonly employed by southwestern Indians was found in use by Seri boys at Costa Rica in 1894, and was included in the Seri collection; but the indications were that the device was a mere toy used, like the horse-hair rattle made by its side, only in youthful sports.

2: Kroeber E-5 (1930)1931 NU31 Seri NU31

middle. Two imperfect wind-breaks of brush, less than a quarter of a circumference in curvature, stood near the camp..

On the subject of textiles and textile clothing (pp. 171, 225-232), McGee is necessarily vague on account of lack of specimens. He says that native kilts, from waist to knee, were either of birdskin or "a rectangle of coarse textile fabric," "woven probably on some primitive device"; that it is practically certain that a long-sleeved, short-bodied shirt or wammus is "of local aboriginal design" and was "made primitively of haircloth or native textiles"; that the probable genetic series of Seri garments was: 1, the pelican-skin robe used as a kilt, 2, the textile shirt, 3, the textile kilt; and that Seri fabrics, according to a Mexican informant, "resemble coarse bagging, and are woven or netted quite plainly."

Human hair cord could be netted, or twined in double weft into basket-like bags or mats; it could hardly be woven into cloth without a loom. The same holds of *ixtle*, agave fiber. Bast of willow, cottonwood, beanstalk, such as was spun and twined, and perhaps woven on a limited scale, by the Colorado river Yuman tribes, was not available to the Seri, though they may have had nearly equally soft substitutes, even in their desert. Cotton they did not have. *Ixtle* is a strong, harsh fiber, excellent for cordage, nets, open-mesh bags, and the like, and still largely used in Mexico for such purposes. It would also serve well for fringe-aprons, for which the Lower Californians used it. A fabric from it would be rough and stiff, giving little warmth, not very satisfactory for a kilt, and quite unserviceable for a fitted garment like a sleeved shirt. Cotton was the prevailing garment material found along the coast by the first Spaniards, north up to the Cahita (Ka'ita, namely Tehueco, Mayo, Yaqui); here *ixtle* became more prevalent though cotton persisted; but the type of garment is not clear.

As to looms, *ixtle* is today woven into carrying bags on a heddled belt-loom by the Nahua-speaking Indians of Sinaloa. The Mayo weave woolen girdles on a similar loom. They also weave woolen blankets on a demountable horizontal loom, the warp passing continuously around the two heavy yarn beams. It is not clear whether this is a hybrid Spanish or a purely native apparatus. The Opata and Pima Bajo loom is not known. The American Pima weave cotton both on a belt-loom and on a staked horizontal loom, but with warps in a single plane.[9] It is difficult to imagine these looms existing among the Seri, except the first mentioned; and this would not yield them much in the way of garments. There is no reason why they should have worn more than the Lower Californian women's fringe-aprons, supplemented perhaps by birdskin blankets and loin covers. They no doubt secured occasional garments from neighboring tribes, as they gladly but irregularly wear those of whites today; and this

[9] Russell, BAE-R, 26:148-153, 1908.

ingenuity of a modern shipbuilder to have constructed a boat. These simple, desert people, however, through centuries of struggle for life in their desolate realm had learned to use every natural material available to them, however laborious the tasks and inefficient the products. The carrizal reed, *Phragmites communis*, grows about the few permanent water holes of Seriland, and from countless numbers of these slender, buoyant canes they built their watercraft. The reeds were stripped of leaves and gathered in long bundles, bound together and gradually augmented by more and more interlaced canes until a bundle 18 to 30 feet long and 1½ feet in diameter, tapering at both ends, was made. Three of these were then bound together with cords of fiber or human hair, making a maneuverable one or two man raft, easily transported to the shores.

The mesquite tree, *Prosopis juliflora*, provided fiber for cords. The flexible outer tissues of the roots were stripped off, soaked and progressively pounded, split and worked between hand and mouth until very slender, fibrous threads were obtained which were then twisted into cords. In some cases a coarse, rough fabric was woven from these fibers, but most garments were made of pelican skins. The strips of workable mesquite root or sometimes yucca fiber were also used in making doughnut-shaped head pads which aided in balancing the capacitous earthen water jars as they were carried on the heads of the women over rough and stony trails from water hole to camp site.

While occupying the turtle fishing camps on El Infiernillo during the good season, vegetable supplements to the fishy diet were few. Every nourishing seed or woody fruit yielded by the desert was carefully gathered; even the tiny seeds of the sea grass, *Ruppia*, were sorted from beach drift and made into meal. Never did the Seris learn to cultivate any crop or domesticate any animals other than the half wild coyote dogs that lived in mutual toleration with them. Even had they done so, their success in the barren, waterless land would have been small.

Sterile as is the Seri's hinterland, for a time each summer the thorny plants with which it is so profusely stocked ripen an abundant crop of fruit. The cacti in particular yield a wonderful harvest of luscious and succulent fruits, and toward this fortuitous supply the Seris were accustomed to move in June and July. The foothills of Sierra Seri on the mainland are adorned with great numbers of giant cacti, *Pachycereus Pringlei*, *Carnegiea gigantea* and *Lemaireocereus Thurberi* from which the luscious pitahayas were readily knocked down when ripe. The Indians wandered into the cactus forest and after a simple ritual marking the beginning of the feast, proceeded to gorge themselves for weeks on the succulent fruit until waning supply and cloying appetite drove them back to more severe food-getting activity by the sea. They did not customarily find it necessary to leave the cactus forest, however, as soon as the supply of fruits was no longer sufficient, for by the time the fruiting season was ended they had provided themselves with a second harvest. The pitahayas, gorged in such tremendous quantity throughout the season, were very imperfectly digested; the miriads of hard seeds, particularly, passed through the system unchanged and with the preservation of these in mind the Indians carefully collected with the aid of large sea shells all such seedy discharges and let them dry in the desert sun. Thus, as the supply of fresh fruit faded they proceeded to the use of this hoard

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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TYPICAL SERI HOUSE ON THE FRONTIER

SEVENTEENTH ANNUAL REPORT—PL. II

BUREAU OF AMERICAN ETHNOLOGY

[FACING P. 117]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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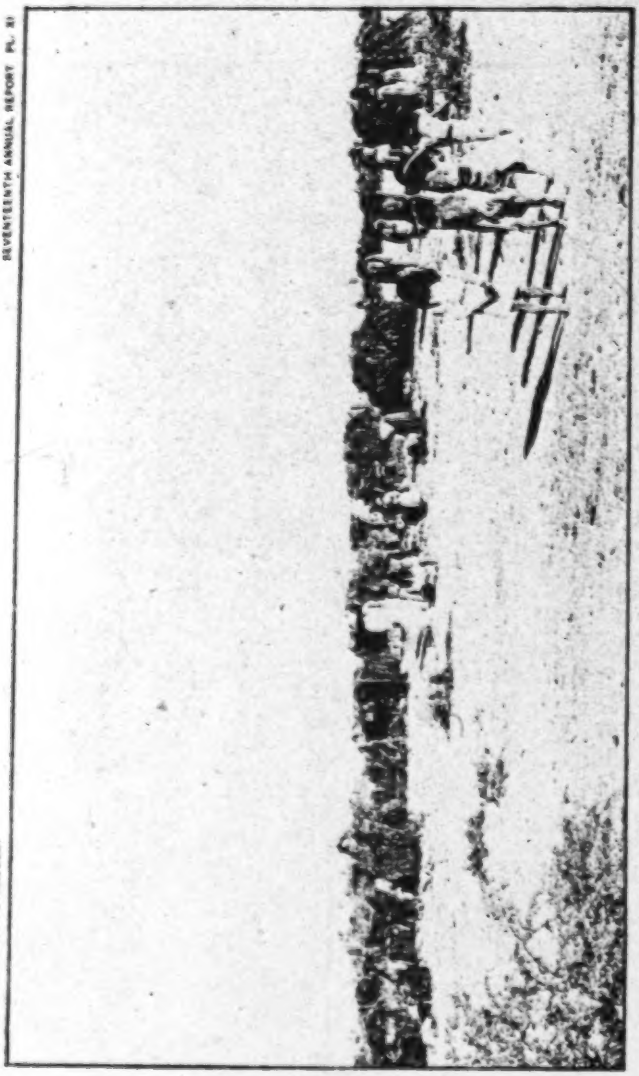

OCCUPIED RANCHERIA ON THE FRONTIER

[FACING p. 119]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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BUREAU OF AMERICAN ETHNOLOGY SEVENTEENTH ANNUAL REPORT PL. XII

GROUP OF SERI INDIANS ON TRADING EXCURSION

[FACING p. 121]

1894-1895/1898 NU31 Seri NU31

GROUP OF SERI INDIANS ON THE FRONTIER

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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SERI FAMILY GROUP

SEVENTEENTH ANNUAL REPORT PL. XIV

BUREAU OF AMERICAN ETHNOLOGY

[FACING P. 139]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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SERI MOTHER AND CHILD

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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GROUP OF SERI BOYS

[p. 144 A]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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MASHEM, SERI INTERPRETER

[p. 146 A]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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TYPICAL SERI WARRIOR

(p. 154 A)

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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TYPICAL SERI MATRON

[p. 156 A]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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SERI RUNNER

(p. 158 A)

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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291

YOUTHFUL SERI WARRIOR

[p. 162 A]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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SERI MAIDEN

(p. 166 A)

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

The second mutilation was the only corporeal modification noted by early missionaries and explorers—it was the perforation of the nasal septum for the insertion of a skewer, perhaps of polished stone (though doubtless more commonly of bone), to which swinging objects were attached. One of the most useful records is that of the Jesuit, Padre Joseph Och, who described the nasal attachment as a small, colored stone suspended by cords from the perforated septum, and guarded with such jealous veneration that "one must give them at least a horse or a cow for one" (ante, p. 78); while according to Hardy's record, the nasal fetish is "a small, round, white bone, 5 inches in length, tapering off at both ends, and rigged something like a cross-jack yard."[1]

FIG. 7.—Snake-skin belt.

The custom is apparently obsolete, and nothing is known directly of details or motives.

Excepting these mutilations the corporeal decoration of the Seri is apparently limited to the face-painting: among the 60 individuals at Costa Rica in 1894 there was no trace of tattooing or scarification of face, limbs, or body; there were no labrets or earrings, and neither lips nor ears were pierced, nor were nasal septa observed to be perforated in accordance with the reputed ancient custom; the teeth were neither filed nor drilled; no indications of amputation or other maiming (save the removal of the incisors) were observed—indeed, the instinct for physical markings of symbolic or decorative character, which seems to be normal to primitive men, was apparently satisfied by the prevalent and persistent face-painting among the females.

The extra-corporeal decorative devices are of a meagerness and pov-

[1] Travels, p. 266.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

291 erty even transcending the poor apparel, flimsy habitations, and generally ill-developed artifacts of the lowly tribe.

[237] The most prominent personal possession is the pelican-skin robe; it is usually made of six skins, slightly dressed and in full plumage, sewed together with sinew in a conventional pattern of such sort as to give the greatest possible expanse consistent with the irregular outlines of the individual skins, and at the same time to display a conventional color pattern on the feathered side, the colors ranging from the dorsal slate to the ventral white of the fowl (as indicated in plate XXIII); sometimes there are only four skins and rarely there are eight, but the conventional arrangement is maintained. Before the beginning of a

[301] [824]

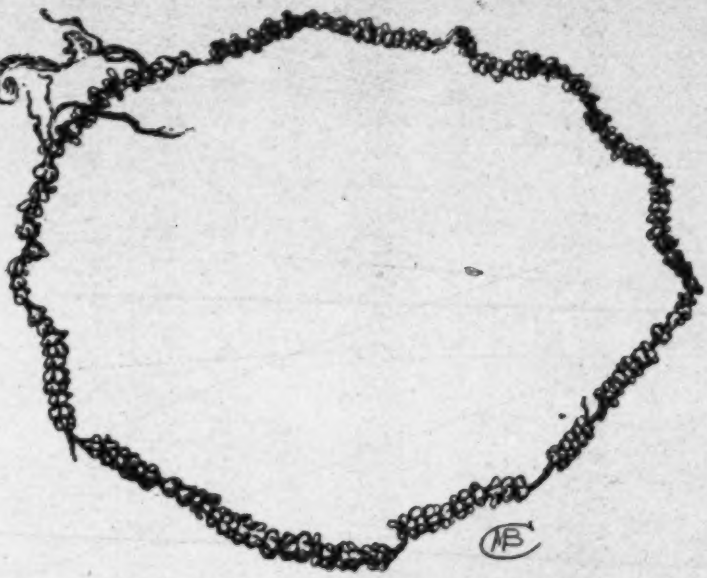

FIG. 8.—Dried flower necklace.

[177] fairly regular barter at Rancho de Costa Rica, and hence before the introduction of manta and other stuffs, the pelican-skin robes were supplemented by kilts made of mesquite root or other fibers, spun and twisted [286] in the fingers and woven probably on some primitive device no longer in use; but so far as is known these native fabrics were devoid of decorative patterns in color or weave. Less habitually a short wammus or shirt, with long sleeves, made of a material similar to that of the kilt, was worn; but it, too, was without ornamentation, so far as can be ascertained. The remaining article of utilitarian apparel is the belt, usually consisting of a strip of skin (of deer, rabbit, peccary, etc), slightly dressed with the hair on; frequently this is replaced by a cord or braided band of human hair, while the favorite belt of some of the

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

young warriors is a snake skin (such as that illustrated in figure 7); but so far as was seen the belts are not extended into tassels, decorative appendages, or even flowing ends.

The presumptively decorative costumery observed is limited to necklaces, usually of strung seeds, shells, and beads of wood or bone (figures 8, 9, 10, 11, 12, and 13), though animal appendages, such as hoofs, teeth, etc, are sometimes worn. The most highly prized necklace found at Costa Rica was a human-hair cord with nine crotalus rattles attached (figure 14), worn by a young warrior of the Rattlesnake (?) clan. Not the slightest indication of headdresses was seen (though deer and lion masks are said by Hardy to have been worn on occasions); there were no bracelets, leg-bands, or rings of any description, and the cheap jewelry given to many of the women and youths at Costa Rica was either strung about the neck or concealed; while it is significant that even the showiest jewelry was less appreciated than bits of manta or lumps of sugar. When it is remembered that the Seri have been in occasional contact with Caucasians for over three and a half centuries, the fact that not a single glass bead was found among them becomes significant; and the significance of the simple fact is increased by the virtual absence of that persistent desire and protean use for beads—or beadsense—so prominent among most primitive tribes.

Fig. 9—Seed necklace.

Fig. 10—Nut pendants.

Fig. 11—Shell beads.

Fig. 12—Wooden beads.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

Naturally the conditions at Costa Rica were unfavorable to the study of native ideas concerning apparel. The women and some of the children were arrayed chiefly in cast-off habiliments of the rancheras or in nondescript rags, while the men either aped Mexican fashions, like Mashém, or shamefacedly sweltered under the unaccustomed burden of tatterdemalion gear; yet there was a meaningful absence of that desire for finery so prominent among primitive peoples—a fact quite as eloquent in itself as the absence of bracelets and bangles, tassels and trappings. It is probable that the shamans and mystery-hedged crones in the depths of Seriland enhance their influence by the aid of symbolic paraphernalia (indeed, some inkling of such customs is found in the meager records of earlier visitors);[1] yet the conspicuous feature of Seri costumery is the dearth of decorative devices.

FIG. 13.—Necklace of wooden beads.

The habitations of the tribe are the simplest of jacales—mere bowers, affording partial protection from sun and wind, but not designed to shed rain or bar cold. Half a dozen of these were examined at Costa Rica in 1894 and probably a hundred more, in various stages of habitability, in Seriland proper in 1895, yet not the slightest trace of decoration was observed—the structures are plainly and barrenly utilitarian in every feature. The same may be said of the balsas in which the Seri navigate their stormy waters; for the peculiarly graceful curves of the craft evidently stand for nothing more than the mechanical solution of a complex problem in balanced forces, wrought out through the experience of generations, while the simple reed bundles are absolutely devoid of paint, of superfluous cord, of fetishistic appendages or markings, of tritons, nereids, or other votive symbols at bow or stern, and of industrially superfluous features or attachments in general—indeed, the only appendages discovered were one or two simple wooden marlinspikes (shown in figure 26), thrust among the reeds to be at hand in case of need for repairs.

Among the utensils employed in the primitive householdry of the Seri the most conspicuous and at the same time the most essential is the olla, or water-jar. Its technical features are described elsewhere; but it may here be noted that the olla is the central artifact about which the very

[1] Hardy noted the use of "a small leathern bag, painted and otherwise ornamented", as a medicine rattle (Travels, p. 262), and also described a wind-symbol and an effigy used for thaumaturgic purposes (Ibid., pp. 284, 285).

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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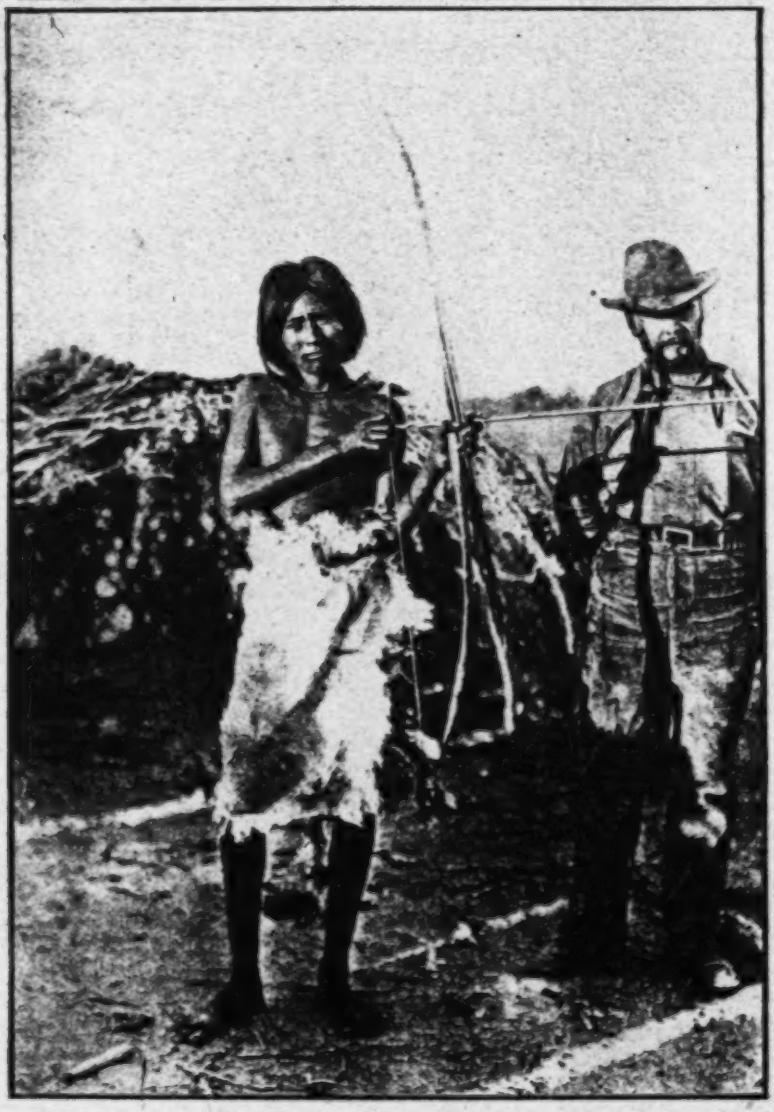

SERI ARCHER AT REST

[p. 200 A]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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SERI ARCHER AT ATTENTION

[p. 202 A]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

strong wrench on the horns or stunned with a blow of war-club or hupf, as conditions may demand. Straggling swine and wandering dogs are occasionally ambushed or stalked and transfixed with arrows, torn hurriedly into fragments, or shouldered and carried off struggling, as exigency may require; while sheep and goats are practically barred from the entire Seri frontier because of their utter helplessness in the face of so hardy huntsmen.

The quantity of stock consumed by the Seri varies greatly with the policy of rancheros and vaqueros. At different times during the last two and a half centuries it has been estimated that the chief portion of the subsistence of the tribe was derived from stolen stock, and it is probable that during the early period of the Encinas régime this

FIG. 23—Desiccated pork.

estimate was fair; but under the Draconian rule of a Seri head for each head of slaughtered stock, the consumption is reduced to a few dozen head annually, including superannuated, crippled, and diseased animals unable to keep up with the herds, those bogged in Playa Noriega and other basins during freshets, the stallions and bulls slain in strife for leadership of their bands, and the festering or semimummied carcasses gladly turned over by idle rancheros on the chance visits of Seri bands to the frontier (such as the specimen in the protograph reproduced in figure 23).

No special devices have been developed in connection with the chase for stock, nor has material progress been made in acquiring Caucasian devices. There are, indeed, indications of a disposition to nse

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

ary sense-effects (as when the sense of smell is intensified by exercise of the organs of taste), or, in another direction, by the habit of the youthful penman who shapes his letters by aid of lingual and facial contortion; yet it is a characteristic of primitive life—one doubtless due to the interrelations of psycho-physical functions—to not only employ but to greatly exalt vocal formulas associated with manual activities, so that words, and eventually *the* Word, acquires a mystical or talismanic or sacred significance pervading all lower culture—indeed the savage shaman is unable to work his marvels without mumbled incantations ending in some formulated and well-understood utterance, and his practice persists in the meaningless mummery and culminating "presto" of modern jugglery. So, viewed in the light of psycho-physical causes and prevalent customs connected with vocal formulas, it would seem probable that the conventional features of the Seri jacales are crystallized in the tribal lore quite as effectually through the associated work-chants as through direct memory of the forms and structures themselves. And the simple runes chanted in unison by Seri matrons engaged in bending and lashing their okatilla house-bows apparently define a nascent stage in the development of the elaborate fiducial house-building ceremonies characteristic of various higher tribes; for the spontaneous vocal accompaniment tends naturally to run into ritual under that law of the development of myth or fable which explains so many of the customs and notions of primitive peoples.[1]

APPARELING

Slightly as they have been affected by three centuries of sporadic contact with higher culture, the Seri reveal many marks of acculturation; and the most conspicuous of these are connected with clothing, especially on the frontier, where women and even warriors habitually wear a livery of subserviency in the form of cast-off Caucasian rags (as illustrated in most of the photographs taken at Costa Rica). Even in the depths of Seriland the native fabrics are largely replaced by white men's stuffs, obtained by barter, beggary, and robbery; yet it is easy to distinguish the harlequin veneer of borrowed trappings from the few fixed types of covering that seem characteristic.

The most distinctive piece of apparel is a kilt, extending from waist to knees, worn alike by men and women and the larger children. Aboriginally it was either a birdskin robe or a rectangle of coarse textile fabric, secured at the waist by a hair-cord belt; acculturally it is usually a rectangle of manta (course sheeting) or other stuff, preferably cotton or linen but sometimes woolen, fastened either by tucking in the corners or by a belt of cord. Good specimens of the acultural cloth kilt worn by men and larger boys are illustrated in plates XVI

[1] The law of fable in its relation to primitive surgery is formulated in the Sixteenth Ann. Rep. Bur. Am. Eth., 1897, p. 22.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

and XIX; the birdskin kilt (put on for the purpose) is illustrated in plate XVIII, while the aboriginal fabric is fairly represented in plate XXIX. Although ordinarily worn as a kilt, the same article (temporarily replaced by an improvised substitute) serves other purposes at the convenience of the wearer; in the chase for tunas and for moving game it becomes a bag or pack-sheet; in case of cold rain it is shifted to the shoulders or the exposed side; during the siesta it is elevated on an shrub and a stick to serve as a canopy; at sleeping time generally it forms (especially when of birdskin) a bed, i. e., a combined mattress and coverlet; and in attack or defense the pelican skin is at once standard, buckler, and waving cape to confuse quarry or enemy after the manner of the toreador's cloak. 291 [177] [182] [513]

An almost equally distinctive garment is a short shirt or wammus, with long sleeves, worn by men and women but not by children; ordinarily it covers the thorax, missing connection with the kilt by a few inches, and so affording ventilation and space for suckling the teeming offspring. Unlike the kilt, it is an actual garment, fitted with sleeves and fastened in front with hair-cord strings. Although the Seri wammus corresponds fairly with a Yaqui garment, it seems practically certain that it is of local aboriginal design, and that it was made primitively of haircloth or native textiles (as illustrated in plate XXIX) and worn rather ceremoniously; but latterly it is made of manta and is worn habitually (at least by the women and on the frontier), though cast aside in preparation for any special task or effort—i. e., it is not connected with pudency-sense, save to a slight degree in the younger women. The form, function, and prevalence of the wammus are illustrated by the group shown in plate XIII, in which nearly all of the thirty-odd adults wear the garment. [171] [177]

These two articles constitute the ordinary wearing apparel of the Seri, though they are commonly supplemented (especially when both are of manta) by a pelican-skin robe, which is habitually carried to serve as bed or mackintosh, according to the chance of journey and weather, or as a shield in sudden warfare. No head-covering is used, save in the ceremonial masquerade, when the heads of animals are worn as masks,[1] or in aping Caucasian customs, especially on expeditions for barter (as illustrated in plate XII). Loose trousers of Mexican pattern are sometimes put on at frontier points, but are discarded in Seriland proper, save by Mashém, who maintains prestige partly by this borrowed badge of Caucasian superiority. Leggings and moccasins are eschewed, naturally enough, since they would afford little protection from the sharp spalls and savage thorns of the district, and would give lodgment for the barbed spines inevitably gathered in rapid chase or flight over cactus-dotted stretches; and the only foot-covering seen (save Mashém's boots) was a single sandal made from the rough skin of a turtle-flipper, apparently for ceremonial rather than practical use. [177]

[1] Hardy (Travels, p. 396) describes the ceremonial wearing of the heads of deer with horns attached.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

291 [177] Of all the party at Costa Rica in 1894 subchief Mashém was the only one who wore Caucasian apparel with any air of comfort and fitness; yet even he, with hat and shirt, boots and breeches, and loose bandana about his neck in cowboy style (plate XVII), did not feel fully dressed without the slender hair-cord necklace of his kin in its wonted place. On the frontier improvised fig-leaves were sometimes put on the children of less than a dozen years (as illustrated by the standing infant shown in plate XIV, who was thus dressed hastily for her picture); and a common garb of the smaller children at Costa Rica, as they played about the rancheria or wandered in directions away from the white

[412] [854]

FIG. 29—Seri hairbrush.

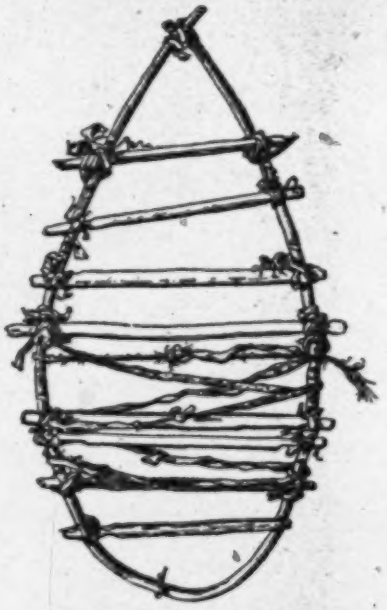

FIG. 30—Seri cradle.

man's rancho, was limited to a cincture of hair cord or snake skin, or perhaps of agave fiber, under which an improvised kilt might be tucked on the Caucasian's approach.

281 513 In addition to the individual apparel, each clan, or at least the elder woman or her fraternal executive, accumulates some surplus material as opportunity offers, and this serves as family bedding until occasion arises for converting it to other uses. Of late the prevailing materials are pelican skins, lightly dressed and joined into robes by sinew stitching; deerskins, dried or partially dressed; cormorant skins, treated like those of the pelican; seal skins, usually fragmentary; peccary skins,

1: McGee E-5 (1894-1895)1898 NU31 Ser

Summarily, the customary apparel of Seri men and women may be regarded as limited to three articles—(1) a kilt, normally of coarse textile fabric, which is made a prime necessity by a well-developed pudency; (2) a short wammus, also normally of coarse textile fabric, which is apparently regarded as a convenience and luxury rather than a necessity; and (3) a robe, normally of pelican skin, sometimes substituted for either or both of the other articles, but ordinarily used as bedding or as a buckler. The most valued of these articles is the robe, which in the absence of the others replaces the kilt; yet pudency demands the habitual use of some form of kilt, while both wammus and robe are held so far superfluous that they may be laid aside or bartered or otherwise dispensed with whenever occasion arises. 291

On considering the special functions and probable genesis of the Seri appareling, the student is impressed by the absence of the breech-clout, except perhaps in temporary improvisations—though the absence of this widespread article of primitive costumery need awaken little surprise in view of the environment, and especially of the abounding barbs of Seriland, which render all appareling of doubtful value save for the protection of tissues softened by habitual covering. The prevailing thornliness of the habitat renders the free-flowing and easily removable apron the most serviceable protection for the exposed vitals of the pubic region; and this device, a common one in thorny habitats generally, grades naturally into the short skirt or kilt; while it would well accord with the maritime habit and habitual thought of the Seri to apply the tough and densely feathered skin of the pelican to the purpose. This suggestion as to the nascent covering of the tribe consists with the tribal faith, in which the Ancient of Pelicans ranks as the creative deity, while its modern representative is esteemed a protective tutelary possessing talismanic powers against cold, wet, bestial claw and fang, alien arrows, and all other evils; so that the use of this feathered pelt as a shield against spiny shrubbery, sharp-leaved sedges, and barb-thorned cacti is quite in harmony with Seri philosophy. Accordingly it seems clear that the pelican-skin kilt was autochthonous among the Seri, and that it was the original form of tribal appareling; and it is of no small significance that the type persists in actual use as well as in suggestive vestigial forms, such as pelican-down swaddling for infants, pelican-feather plumes on cradle nets, etc. 182 291 [776] [1741]

The passage from the pelican-skin kilt to the garment of textile fabric under the slow processes of primitive thought may not be traced confidently, though a strong suggestion arises in the Seri hair-cult (a Samoanan faith not without parallel in far higher culture) under which mystical powers and talismanic virtues are imputed to the human pelage. It is in connection with this cult that the Seri locks are so attentively cultivated and so assiduously preserved and consecrated to more intimate personal uses in belts, necklaces, and the like; and although the connecting links have not been found, it is thoroughly 174 291 826

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

174 In accord with Seri thought to assume that in earlier times the hair necklaces were expanded into rudimentary apparel in connection with
291 pelican-skin shields, and after the conquest of vegetal fibers into more
826 finished garments probably woven partly of hair and worn in such wise as to supplement the natural pelage in the protection of back, shoulders, chest, and arms. If the indication of the tribal cult be valid, it would appear that the wammus was the second piece of apparel in order of genesis, though the first to be made of artificial fabric; and it is noteworthy that the suggestion is supported by the form of the short and free-flowing garment underlying the flowing tresses of warriors and matrons, as well as the vestigial use of human-hair cords for neckbands and fastening strings; while its antiquity in comparison with the textile kilt is indicated by the fact that it is a finished artifact, evidently fitted to its functions by generations of adjustment.

The step from the making of the wammus to the substitution of artificial fabrics for the pelican-skin kilt was an easy and natural one; and it need only be noted that the transition is still incomplete, since the feathered pelt is unquestioningly substituted for the fabric whenever occasion demands, yet that the kilt in some form must be much more archaic than the wammus, since it is correlated with the pudency sense,[1] while the complete garment is not so correlated save in slight and incipient degree.

Accordingly the three articles of apparel may be seriated genetically as (1) the pelican-skin robe, used long as a kilt, and only lately relegated to emergency use and bedding; (2) the well-differentiated wammus of textile fabric with hair-cord fastenings; and (3) the textile kilt, with or without a hair-cord belt. And the three artifacts are local and presumptively—indeed manifestly—autochthonous, and exemplify the interdependence of artifacts and environment no less strikingly than the Seri balsa or basket or jacal.

TOOLS AND THEIR USES

000 In advanced culture tools are finished products, made and used in accordance with preconceived designs or established arts for the production of commodities; in primal life (as well exemplified by Seri handicraft) tools are mere by-products incidental to the largely instinctive activities directed toward the maintenance of life. Accordingly, the tools of advanced culture form the nucleus of industries, while the designless tools of the prime cluster about the outskirts of industrial

[1] In this writing the conclusion reached in an unpublished discussion of the beginning of clothing is assumed—i. e., that the primal apparel was purely protective, and that the habitual concealment of portions of the body incidental to its wearing gradually planted the pudency sense. The germ of clothing, without attendant pudency, is well illustrated in Karl von den Steinen's observations and discussions of the Brazilian natives (Unter den Naturvölkern Zentral-Brasiliens, Berlin, 1894, pp. 150-159). It is noteworthy that the Seri, more primitive as they are in so many respects than any other American aborigines known, are much farther advanced than the Brazilian natives in apparelling and its effects on character. The contrariation and the differences are alike interesting; yet in both cases the costumes reflect environmental conditions and needs with remarkable fidelity.

2: Kroeber E-5 (1930)1931 NU31 Seri NU31

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342 middle. Two imperfect wind-breaks of brush, less than a quarter of a circumference in curvature, stood near the camp..

On the subject of textiles and textile clothing (pp. 171, 225-232), 114 McGee is necessarily vague on account of lack of specimens. He 281 says that native kilts, from waist to knee, were either of birdskin or "a rectangle of coarse textile fabric," "woven probably on some prim- 286 itive device"; that it is practically certain that a long-sleeved, short- 291 bodied shirt or wammus is "of local aboriginal design" and was "made primitively of haircloth or native textiles"; that the probable genetic series of Seri garments was: 1, the pelican-skin robe used as a kilt, 2, the textile shirt, 3, the textile kilt; and that Seri fabrics, according to a Mexican informant, "resemble coarse bagging, and are woven or netted quite plainly."

Human hair cord could be netted, or twined in double weft into 114 basket-like bags or mats; it could hardly be woven into cloth without 171 a loom. The same holds of *ixtle*, agave fiber. Bast of willow, cotton- 286 wood, beanstalk, such as was spun and twined, and perhaps woven on a limited scale, by the Colorado river Yuman tribes, was not available to the Seri, though they may have had nearly equally soft substitutes, even in their desert. Cotton they did not have. *Ixtle* is a strong, harsh fiber, excellent for cordage, nets, open-mesh bags, and the like, and still largely used in Mexico for such purposes. It would also serve well for fringe-aprons, for which the Lower Californians used it. A fabric from it would be rough and stiff, giving little warmth, not very satisfactory for a kilt, and quite unserviceable for a fitted garment like a sleeved shirt. Cotton was the prevailing garment material found along the coast by the first Spaniards, north up to the Cahita (Ka'ita, namely Tehueco, Mayo, Yaqui); here *ixtle* became more prevalent though cotton persisted; but the type of garment is not clear.

As to looms, *ixtle* is today woven into carrying bags on a heddled belt-loom by the Nahua-speaking Indians of Sinaloa. The Mayo weave woolen girdles on a similar loom. They also weave woolen blankets on a demountable horizontal loom, the warp passing continuously around the two heavy yarn beams. It is not clear whether this is a hybrid Spanish or a purely native apparatus. The Opata and Pima Bajo loom is not known. The American Pima weave cotton both on a belt-loom and on a staked horizontal loom, but with warps in a single plane.[4] It is difficult to imagine these looms existing among the Seri, except the first mentioned; and this would not yield them much in the way of garments. There is no reason why they 114 should have worn more than the Lower Californian women's fringe- 291 aprons, supplemented perhaps by birdskin blankets and loin covers. 439 They no doubt secured occasional garments from neighboring tribes, as they gladly but irregularly wear those of whites today; and this

[4] Russell, BAE-R, 26:142-153, 1908.

2: Kroeber E-5 (1930) 1931 NU31 Seri NU31

is what their "shirt" (McGee, pl. 29) probably was. The fabrics of McGee's Mexican informant may refer to gunny-sacks made over into improvised imitations of civilized garments; or to single-element carrying bags. It is entirely possible that contact with the cloth-weaving tribes of Sonora long ago induced the Seri to shrink from habitual complete nudity; but it is difficult to imagine them producing even a coarse wearable cloth. McGee's interpretation of the historic sequence of Seri garments is of course wholly speculative.

The cradle shown by McGee (p. 226, fig. 30) consists of a kite-shaped hoop with eight sticks tied across it and a lashing thong passed back and forth across it half-a-dozen times. Even allowing for some slip of the parts in transport to Washington, this specimen is quite typical in Seri disregard of evenness, neatness, order, or finish. The Yaqui cradle illustrated by Hrdlička[7] consists of eight or nine lengthwise sticks or canes twined close together. The Lower Californians used a basket or a turtleshell. The Gila Pima and river Yuman cradle is of "ladder" type, and therefore similar in structure to the Seri except that it lacks the point at the bottom and has the sides parallel; it also carries a hood of wickered or twilled splints. As regards basic structure, one form of Maidu cradle is most similar to the Seri; just as the plan of the Yaqui one reappears among Miwok, Yokuts, and Mono a little further south in California.[8] It appears from this irregular distribution that so simple an apparatus as the open or flat baby-carrier, which can be just as serviceable without a definite technique or style entering into it, is likely to vary locally without much significance, and that its forms will indicate historic connection only when they are parallel in a number of details. In these respects it resembles house types. In both these objects, new "inventions," certainly of detail elements and perhaps of basic structure, seem to be readily made and adopted.

McGee's finding (p. 247) that the Seri are "not habitual stone arrow-makers" has a parallel among the river Yumans, and, at least partially, among the remaining Sonoran tribes. His conclusion (p. 259) that the *yerba de la flecha* (magot, Sebastiano bilocularis?) was an Opata but probably not a Seri arrow poison, seems sound. The plant was shown me on the island, and the Seri knew it as venomous, but volunteered nothing as to using it on arrows.

That the question of Seri cannibalism must be left open, with a preponderance of evidence against the practice (p. 263), also seems a conservative judgment.

As to shields, McGee learned of loose pelican pelts and turtle-shells (p. 264), I of armor and a large upright shield of hide. Both accounts may be right, one referring to emergency pick-ups, the other ——— to prepared defence or attack.

[7] AA 8, pl. 9, 1906.
[8] BAE-B 78:838, fig. 48, pls. 38, 48.

2: Kroeber E-5 (1930)1931 NU31 Seri NU31

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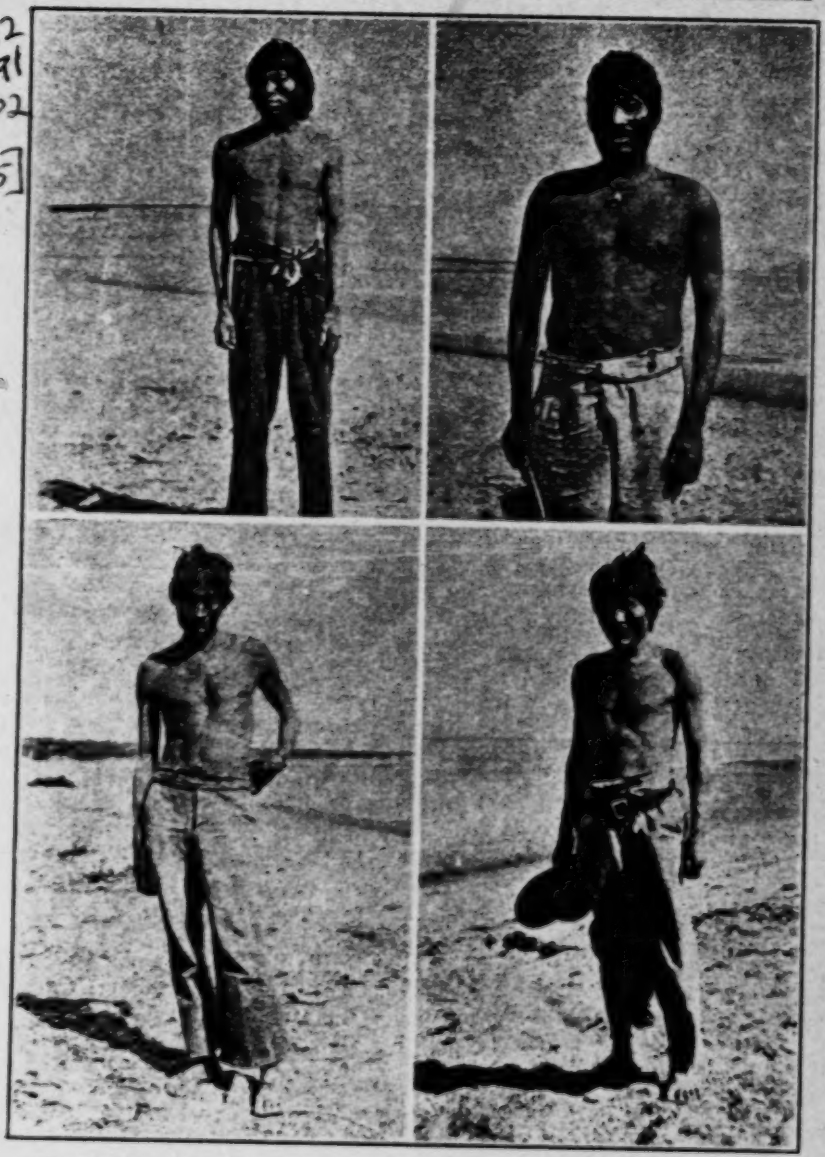

FIG. 1 (upper left). *Young man with long hair.*

FIG. 2 (upper right). *Chico Romero, official Seri chief and principal informant. The largest individual seen.*

FIG. 3 (lower left). *Elderly man of the spare Seri type.*

FIG. 4 (lower right). *Native policeman for the Mexican government.*

2: Kroeber E-5 (1930) 1931 NU31 Seri NU31

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FIG. 5 (upper left). *Maria, wife of Chico, with their baby.*

FIG. 7 (lower left). *Man, youth, and boy.*

FIG. 6 (upper right). *Heavier Seri type on beach of Tiburon Island, a bay of El Infernillo in background.*

FIG. 8 (lower right). *On Punta San Miguel, mainland, mangroves in background.*

2: Kroeber E-5 (1930)1931 NU31 Seri NU31

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FIG. 9 (upper). *Seri children showing variety of expressions at camera experience.*
FIG. 10 (lower left). *Young woman with sickly baby.*
FIG. 11 (lower right). *Two girls, the shorter unmarried.*

3:Davis & Dawson E-5 (1922-1940) 1945
NU31 Seri NU31

THE SAVAGE SERIS OF SONORA—I

By EDWARD H. DAVIS AND E. YALE DAWSON

000 us first acquaint ourselves with the life and habits of the Seri before the Spaniard trod upon his thorny land.

131 His homeland speaks first of isolation. Tiburon Island, in the Gulf of California, and the adjacent coast of Sonora are pro-

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[291]
[283]

FIG. 1. CHICO ROMERO, SERI CHIEF WEARING A KILT OF PELICAN SKINS WHICH USED TO BE THEIR ONLY MATERIAL FOR GARMENTS. NOTE THE CORD MADE OF HUMAN HAIR CARRIED IN THE HAND.

tected on one side by stormy seas and on the other by even more forbidding deserts. The natural isolation of this habitat set its people apart from all other human beings, and the two or three thousand Seris, wandering between their desert island and the mountain-

[p.193(B)]

3:Davis & Dawson E-5 (1922-1946) 1945
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FIG. 2. THE PELICAN SKIN ROBE
A TYPICAL WOMAN'S GARMENT BEFORE THE ADVENT OF THE COTTON CLOTH AND BAGS THAT REPLACED IT.

131 bounded coastal plain, lived a life so independent and so oblivious of the outside world that they might well have been on another planet.

182 105 The hard, inhospitable natural environment afforded by Seriland long ago moulded the characteristics of its people and their whole mode of life. The distance between reliable food sources in the sea and supplies of fresh water created a pedestrian habit whereby they acquired a remarkable fleetness of foot and tremendous physical endurance against thirst and weariness on the trail. The monotonous sea-food diet induced a wandering, roving life in search of game and vegetal produce to supplement their meager rations. They became a homeless, burden-bearing people, wandering in family

[p. 194(A)]

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FIG. 6. DOMESTIC SCENE IN A SERI VILLAGE

[p. 197(A)]

3:Davis & Dawson E-5 (1922-1940) 1945
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FIG. 10. SERI BELLE
WEARING A PAINTED DESIGN SUCH AS FORMERLY WAS INDICATIVE OF THE BLOOD LINE OF A GIVEN CLAN.

264 hut, the rotting flesh and cartilage of its noisome interior to be explored and mouthed by the toddling children or gnawed by the cringing coyote-curs attached to the rancheria.

223 At certain seasons or when deemed propitious by the elders of the family, a pelican harvest was planned. Isla Tasne, some fifteen miles from Tiburon Island, is the haunt and breeding ground of the pelican that served not only as a valuable food supply for the Seris, but also as the chief source of apparel. At such seasons temporary rancherias were set up on the shores of Bahia Kino, and when conditions were favorable, or when hunger prompted them, the balsas [502] would be launched in the evening toward Isla Tasne, the women of the party lying prone on the cane bundles and propelling the craft by paddling with their hands or with large hatchet clam shells. Reaching the island after dark, the balsas were left in charge of the women while the men and older boys, armed with clubs, crept up over the slippery, guano-covered rocks to rush on the roosting fowls and slaughter them. The [264]

[p. 179(B)]

[142]
[291]
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[853]

FIG. 12. SERI MOTHER AND BABE
SERI MOTHERS COMMONLY HAVE TOO MUCH MILK AND FREQUENTLY RELIEVE THEMSELVES BY SUCKLING AN ORPHANED PUPPY OR SOMETIMES EVEN A BABY PIG.

302 ing, and were carried in cane tubes. The
386 paints were carefully prepared, applied, and
614 preserved, and, as indispensable feminine accompaniments even on the longest journeys, were among the most highly prized of the people's possessions. The importance of
302 the face-painting custom, established in the
614 old tribal life, remained strong even as the slaughter of the warring tribe progressed

[p. 201(B)]

2:Davis & Dawson E-5 (1923-1940) 1945
NU31 Seri NU31

[291]

FIG. 14. JUAN TOMAS AND NEPHEW
OLD SERI CHIEF BEFORE CHICO ROMERO AND VETERAN OF MANY WARS, IN 1926 AT THE AGE OF 94 YEARS.

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The further extension of settlements necessitated the establishment of military posts from which troops were sent out, first by one, then another governor of Sonora, to destroy all Seris they might find and to discourage their wanton looting and killing. If a strong force was sent out, it was frequently ambushed and many soldiers were left on the field, transfixed by arrows. Many small forces left never to be heard from again. In 1780 an army of national troops met the Seris in several bloody battles in their Cerro Prieto, and claimed to have exterminated the tribe. Yet the Indians retained sufficient vitality to continue their sanguinary raids

[p. 262 (A)]

114 648 [123] their minds and to live among them without undue fear of losing his life. Through the kindness of Señor Thomson the senior author succeeded in making himself a friend of the Seri and, enlarging upon this friendship through long periods of living and traveling among them, has acquired an intimate knowledge of these strange people.

105 178 In 1922 the fishing industry of the Gulf of California was not yet well developed, and it was to be ten years before the village of Kino should appear on the maps of the Sonora coast. The Seris were still isolated in their desert domain and their numbers, then about [161] 250, were maintaining themselves out of reach of the infectious diseases of the white man. The clan life had disappeared, and the people lived as a single tribe with their old chief, Juan Tomas, 90 years old at that time

[291] [481] [482] [415]

FIG. 15. MOVING DAY AMONG THE SERIS
THESE BURDENS, BORNE FOR MANY MILES OVER ROCKS, THROUGH CACTUS AND DEEP SAND, CONTAIN UTENSILS FOR HOUSEKEEPING WHEREVER THE SERIS MAY STOP.

[p. 263(B)]

3: Davis & Dawson E-5 (1922-1940)1945 NU31 Seri NU31

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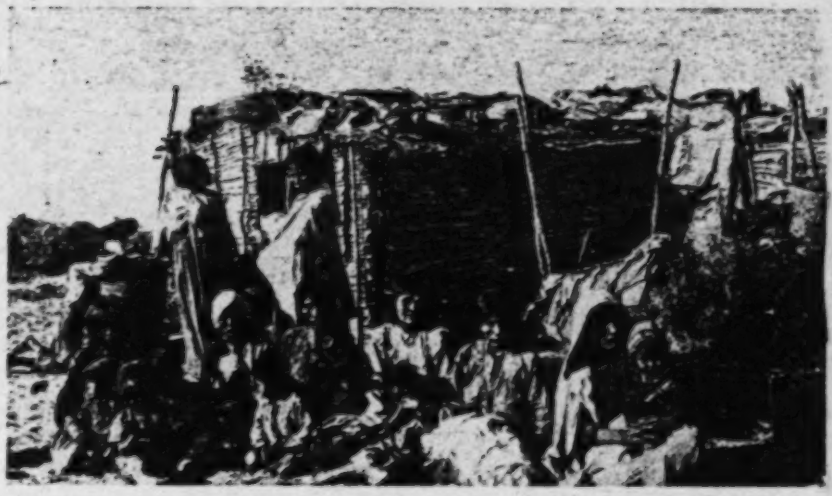

FIG. 22. SOME SERI WOMEN OF THE VILLAGE NEAR KINO

[p. 268(A)]

5:Dawson N-5 (1940) 1944 NU31 Seri NU31

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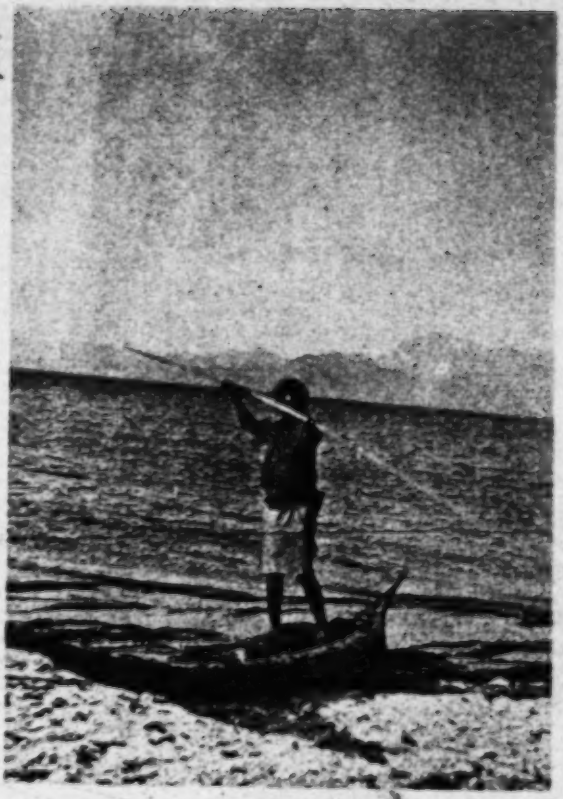

A rare photograph of the last native carrizal reed balsa made by the Seris in 1922. Tiburon Island.

5:Dawson N-5 (1940) 1944 NU31 Seri NU31

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1. A basket of cactus meal.

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2. A Seri village on Tiburon Island. Note the large shells of the sea turtle that serves as food.

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3. Making the Seri basket. House is constructed of ocotillo branches and brush.

5:Dawson N-5 (1940) 1944 NU31 Seri NU31

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516

Preparing a mesquite bean meal cake on the stone metate.

Seri women carrying firewood back to camp. Note the baskets and the head pads made of mesquite or torote.

7: Marroquin E-5 (1955) 1957 NU31 Seri NU31

Distribución geográfica

000 Los indios seris viven en dos pequeñas poblaciones de la costa del Estado de Sonora, frente al Golfo de California, en Desemboque y en Punta Chueca. De allí pasan con alguna frecuencia a la Isla de Tiburón en el mencionado Golfo de California.

En Desemboque viven aproximadamente 35 familias seris y en Punta Chueca 16. Tan solo en el primero de estos dos lugares se hallan establecidas 5 familias "yoris" (mestizas).

Problemas sanitarios

Los seris carecen de defensa ante ciertas enfermedades que, como el sarampión y la gripe, adquieren en sus relaciones con los "yoris"; estas enfermedades causan muchas defunciones entre los indígenas.

[302]
[291]
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Familia indígena seri de Desemboque, Sonora. *Foto Enriqueta Yurchenco.*

Según el anciano seri Chico Romero, último gobernador seri, hubo una fuerte epidemia de viruela allá por 1897, que causó la muerte de una tercera parte de la tribu que se encontraba residiendo en Costa Rica, ranchería de la costa de Sonora.

En 1955 se propagó el sarampión entre los seris, ocasionando gran número de víctimas, niños y adultos; la actividad del maestro rural Leo Sandoval, del lingüista Eduardo Mosser y de las autoridades sanitarias de Hermosillo, lograron contener la mortalidad; no obstante, el número de defunciones llegó al 5 % del total de la población nativa.

7: Marroquin E-5 (1955) 1957 NU31 Seri NU31

Geographical Distribution

The Seri Indians live in two small Indian villages on the coast of the Gulf of California, State of Sonora, Desemboque and Punta Chueca. From there they frequently go to Isla Tiburón in the Gulf of California.

Approximately 35 Seri families live in Desemboque and 16 in Punta Chueca. Only in the first of these two places are there five "yori" (mestizo) families.

Sanitary Problems

The Seris have no defense against certain diseases which, like measles and flu, they acquire in their relations with the "yoris"; these diseases cause many deaths among the Indians. According to the ancient Seri Chico Romero, last Seri Governor, there was a great smallpox epidemic there about 1897 which caused the death of a third of the tribe which was living in Costa Rica, a small ranch on the coast of Sonora.

Seri Indian woman of Desemboque, Sonora. *Photo Henriette Yurchenco.*

In 1955 measles appeared among the Seris, with a great number of victims, children and adults; the actions of the rural teacher Leo Sandoval, the Linguistic Eduardo Mosser and of the sanitation authorities of Hermosillo, succeeded in keeping the mortality rate down; nevertheless, the number of deaths reached 5% of the total native population.

9:34alkin E-5 (1953-1955)1962 NU31 Seri NU31

462 desert plants or littoral fishlets from tide-pools
or of the shellfish. Both men and women will
[224] bring in an occasional rattler, although women
are more likely to do this because they spend more
[857] time in the desert. Children of both sexes are
engaged in the female occupations here, but ado-
[883] lescent boys already join in their fathers' hunts
on land or sea.

342 Housing has undergone some changes. In the
184 desert or on Tiburon the Indians construct the
kind of shelter they did in the recorded past,
an ocotillo frame, bent over in the middle and
covered up with dried plant debris and twigs
from the desert, or with the sail cloth. But in
Desemboque they have more substantial houses—
of wattle and adobe, with flat roofs, rectangular
or square, often with corrugated tin or drift
planks and other debris piled up on top, or along
the walls.

178 In the remainder of their material culture, not
much has been left from years past although one
must remember that from the very beginning of
recorded Serian history it has been of a most
[291] meager sort. Pelican robes, which some Seris ap-
[412] parently still wore in 1930 are gone for good.
So are the stone tools. So is the pottery which had
[323] probably disappeared in Kroeber's time. The hu-
[301] man hair necklace with rattlesnake rattles is also
[291] a thing of the past. The rattlesnake skin belts
McGee (1898:170) described and figured are
probably all gone. I havn't seen or heard of any.

412 But what remains much as they had been in
285 1894 are the bone-awls. These are made of burros'
carpals and the blossoming of basketry, owing to

[p. 8A]

Coyote figures out probably

262 as an important and perhaps disreputable figure in the mythology although nothing but scraps [773] and bits of information suggest this. It is possible that there is actually a taboo on eating this animal or perhaps it is so disreputable that eating its flesh would put a gourmant in an inferior position.

How important is the Seri mammalian diet is hard to tell. It certainly looms more heavily during [224] the winter, because in the cool season hunting is easier than during the heat of the summer and [221] in fact this is when most of it is done by the ardent hunters. Too, winter subjects the Seris to greater hazards and is apt to increase their dependence on the desert resources over that during the summer, even if these resources are scantier at that time.

[136] To all of these animals one should add the semi-[224] wild burros running about the extensive Mexican rancherias. The Indians poach on them frequently using their fire arms, usually the .22 caliber rifles. In any case, it appears that during the summer when the field work was carried out, the mammalian diet figures quite lightly on the Seri table.

252 *Food preparation*: Very little is done in the preparation of the mammalian meat. All that I [263] could observe was the boiling of it in hot water spiced with salt. The Indians were saying that in order to have the meat of a peccary, deer or bighorn ready to eat one must boil it 2-3 hours. The same procedure is followed with the meat of the burros. In contrast to this, as shall be seen later, [251] fish are boiled as well as roasted while the turtles are also dried and salted. Preparation of meat is [462] done by women, certainly at least in the encampments when they are present.

262 *Food preferences*: Some of the Seri food preferences have already been mentioned. At the top of the list as the desirables are the peccary, the deer, the bighorn and the blacktail jackrabbit; at the bottom is the badger, whose meat "is not much good." There is also preference by sex. Females of both the bighorn and peccary are preferred over the males "because they do not have the bad odor like the males." This sort of favoritism also occurs among the Mexicans. However, the Indians did not elaborate beyond this point.

237 *Other economic uses*: Apart from meat, hides are also used. The hides of the deer, bighorn and 178 peccary had been used for sleeping mats although this matter has been expressed in the past tense. [513] Miguel Barnett also suggested that the bighorn hides had been used for clothing by the Indians [291] in the past—but he neglected to say how long ago. During Kroeber's stays, no Seris went about in the animal or bird (pelican) skins but earlier when McGee visited them they went about in these simple garments. Judging then by Miguel's memory, the use of the bighorn hide for clothing must be pushed back to the period of World War I or even earlier.[1]

[1] Miguel Barnett indicated that the "fur" of the bighorn had once been worn for the cold season "but not now."

[P 10 A]

StMalkin E-5 (1953-1955)1962 NU31 Seri NU31

262 pelicans are not; they are regarded as "bad food," unfit for eating. No further explanation has been offered here and it might be that the same sort of prejudice works here as in the case of the adult birds. Otherwise, reasons for rejecting eggs for food are probably a matter of mere customary attitude without any particular rationalization. In a few instances, the dove being one example, the eggs were said to have been rejected because they were "too small to bother."

237 Other economic uses made of the birds are ex-
291 tremely few. At one time, the pelican skins were used for clothing and, in fact, in McGee's time they represented, perhaps, the most important item of clothing for the Seris, having been worn in shape of wrap-around robes, usually covering the lower part of the body. Moreno reported these robes as still is use "30 years ago or more," in the early twenties, but in Kroeber's time these [177] robes were already discarded in favor of the European garment. The Seri, nevertheless, still preserve skins of these birds—the white pelican, [439] larger of the two, always had been favored here—and occasionally sell them to the visitors. Another 237 use made of the feather is in the arrows. The 411 cormorants, heron and the owls had been especially mentioned in this connection. But it is certain that they were not the only birds so exploited and also that this particular use went out of business along with the disappearance of the bow and arrow as the principal weapons. The use of feather for arrows may well continue into the present in a somewhat degraded form. The Seri boys play a [857] great deal with bows and arrows, shooting them at any moving available target. They'll pick up any available feathers.

Pets

231 Somewhat desultory use is made of birds as pets. During my visit I have seen doves and an egret kept in houses as pets by the adults and fed quite frequently. The number and variety of birds which may become pets in households may well * 825 be larger. Pelicans and sea-gulls are less fortun-
857 ate. They are often shot at and over-powered by the boys. But instead of taking them to the households, the boys stage games, shooting them at point blank from bows and arrows and pea- shooters. These somewhat bloody executions take place almost every day. The pattern is the same. Only the subject of the game changes, depending on the available species of bird or animal.

Hunting

223 It is hard to speak of hunting in connection with birds, because there is so little effort made to go out and get them. The main exception is the duck and this, as I already mentioned, is hunted on Isla Patos and clobbered at night with sticks and stones in great numbers. This is one of the few instances in which the Seris will go out of their way to get a bird. Sea-gulls and cormorants and, more rarely, pelicans are dispatched by pea-
[411] shooter (stone), sticks, small clubs and, on occasion, with a shot from a .22 caliber rifle.

[P. 18A]

9:Malkin E-5 (1953-1955)1962 NU31 Seri NU31

262 [225] [439] tions to San Esteban or San Lorenzo. The turtles now are as much a food as a "cash crop." While the Seris are camped at Desemboque, most of the turtle catch is sold alive to the Mexican fish traders who are headquartered in Nogales and Hermosillo and take the catch along with the fishes to the markets in these towns and sometimes even as far as Phoenix and Tucson.

Of the remainder, the most frequent items that show up on the Seri table are probably the rattlesnakes and the desert tortoises. The rattlers are eaten with relish—only the heads and the tails are discarded as poisonous. The larger chuckawalla is considered a particular delicacy but is rarely caught because it lives in a somewhat distant region. The remainder of the animals listed as "eaten" are collected only incidentially.

It is probable that very few species are really left alone and not taken as food at various times, especially when famine distress overruns the camp. As far as I could determine, only three species are rejected as altogether unfit to eat: the gecko, the night lizard and the toad. All three are believed to be highly toxic "in flesh and blood" although real harm could be caused only by the toad. Besides, the two lizards are really tiny creatures and would make little difference when a survival is at stake.

*825 [439] 237 [439] Few reptilians are ever used as anything but food. The sea turtles in a way are at certain times, that is, when they are sold for hard cash to the Mexican traders, whether live or sliced and salted. The only other creature I ever heard about as being used for anything at all was the coral snake. At least one informant suggested that in the past its hide has been used for hat decoration. But coral snakes are scarce and this again could be only incidental. It may be that the rattlesnake hide, especially of the large specimens of the western diamondback, is sold occasionally to a passing visitor but this again is a rare occurance.[9]

Food Preparation

252 [263] Food preparation of the majority of animals in this group is no different than of most other animals. They are simply skinned, tossed into a pot of boiling water and cooked, occasionally with salt as the only ingredient. Larger individuals, notably turtles, will be quartered and then boiled or roasted on a grill. The chuckawalla and the desert tortoise are said to be fried, but whether this is the usual procedure I can't say, because only a few of them had been brought into camp in my presence. The tail of the Gila monster supposedly had been fried in oil "in the past."

Food Preferences and Taboos

262 It is obvious that some creatures in this group are considered better food than others. The chuckawalla is especially favored. When several were brought in from San Esteban, I couldn't persuade the owners to part with them, although I offered a huge price (for local conditions). The captors took

[9]Another use in the past—snake-skin belt worn. It is illustrated by McGee (1898:170, Fig. 7).

[291] [P. 23A]

10: Davis E-5 (1922-ca. 1939) 1968 NU31 Seri NU31

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Seri Indians

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175 if they were as hungry then as they are today, they would not stop to
641 spike a man up preparatory to serving him. Their only tools then were
246 rocks to use as hammers and hoop iron for knives, and these are in
114 universal use today.

[412] There is no doubt that the men were killed, but I think these mining men purposely exaggerated their findings, if any.

648 There is no doubt that the Seris were brave fighters, treacherous
721 murderers, sparing neither men, women or children on their raids,
727 killing ruthlessly. But there is one charge which cannot be brought against them, which cannot be said of many tribes north of the border. So far as I could find out, they never tortured nor scalped.

648 The Seris never took prisoners and they never inter-married with
721 other tribes, so their strain is pure.

727 There was one exception. Sixty or seventy years ago, the Seri
583 Chief Coyote Iguana and his band of warriors held up the stage between Hermosillo and Guaymas, and killed all except a handsome Spanish girl of the better class. This girl, Coyote Iguana made his wife and by her raised a family. One granddaughter still survived in 1924, and while more attractive than the general run of Seri, her complexion was fully as dark.

604 The Seris, Ishmaelites among the native tribes of Mexico---the most fascinating Indians in North America!

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123 *Reception Committee, Tiburon Island - 1935*

115 On the twenty-fifth of April, nineteen twenty-two, I engaged the services of Roberto Thompson, who with his father and grandfather

[text continues on p. 149]

10: Davis E-5 (1922-ca. 1939) 1965 NU31 Seri NU31

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Alberto Mendoza and Lupe Astorga getting water from cactus - used for cooking

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Child leading Petra - blind woman, Kino Bay - 1938

10: Davis E-S (1922-ca. 1939) 1968 NU31 Seri NU31

Blind Seri Indian, 1939
Best paddler we had

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Candelario completes his decoration
one of our paddlers - 1936

123 handed to show their friendliness.

142 One was a young man with rather pleasant features, his braided
291 hair hanging below his shoulders. His name was Antonio Herrera. The
123 other was a wild-looking specimen called Ramon Blanco. His hair was a
[302] tangled mat with a short braid behind, suspicious black piercing eyes,
long sparse moustache and chin-beard hiding a broad cruel mouth. He
[411] wore the remnants of an old sweater, a short dirty kilt, or skirt,
nearly to his knees, a belt full of cartridges, mostly empty, and a
long knife in a rawhide scabbard.

123 The young man had been baptized and given a name by Roberto, who
[705] had acted as godfather or *patróna*, many years ago. He wore a hat,
[291] jacket, and pants of blue denim, and *guaraches*, or sandals of rawhide.

We shook hands all around and then they called and halloed in the brush and soon three women and a lot of children, wild and half-
[415] clothed, filed into camp. The women were tall, gaunt, unkempt, ragged
[482] and barefooted, paying us not the slightest notice. They were bearing
[422] on their heads large baskets filled with all their earthly posses-
[854] sions---cooking ollas, scraps of cloth, pieces of turtle meat, bone
[231] brads, hair brushes, and odds and ends. They carried, also, an infant or two wrapped in odd bits of rags. Several gaunt dogs followed in their wake.

342 In all, three families came trailing in, removed their household
[512] equipment from their heads and resumed their interrupted and primitive housekeeping. Each family occupied its apartment in the row of brush shelters, separated from each other only by brush partitions with a total lack of privacy. These shelters, always open to the sea, serve as shade from the fierce rays of the sun, and also as windbreaks, but
[361] are no protection from infrequent rains. They are occupied only for a brief period and then their nomadic tenants move on to fresh *cahuasa*, or sea turtle range.

123 Soon, a third man arrived while we were near the huts, Manuel
[42] Encina. He was a man of sixty-five, gray hair and mustache, seamed features, and not evil looking. He was out of breath. He had gone for water to the same water hole where we had been yesterday, struck our tracks, had left his water cans and hurried back to warn his people. He was greatly relieved to find friends.

Since he had gone for water, inquiry revealed there had been no water in camp for two days, and six adults and one girl of thirteen and six children were thirsty. We gladly gave them one of our five-
[225] gallon cans of water and they were very grateful. They had caught a
[262] sea turtle the day before and gave us some turtle steaks which looked like beef or mutton.

312 As the camp was without water and we were running short, the young
402 man and Encina offered to get some. Each took a *palanca*, or short
123 shoulder pole with knotched ends, fitted empty five-gallon cans in

Seri - wild boy - 1925

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Seri child

261 will exist on very small rations, bear burdens, and walk long dis-
262 tances. Their food is anything that walks, flies, crawls or swims,
[252] and they eat it raw with the same relish that we eat it cooked. There is but one thing they will not eat; they draw the line on the Gila monster. They are the most perfect type of human being adapted to desert conditions that exists today. Convey them blindfolded many miles into the heart of the desert, empty-handed, remove their blinders, and they will find both food and water where others would perish. The Papagos and Yaquis do almost as well."

302 We gave the women a small bag of flour and three or four cubes of
[123] sugar around, and the men three packets of tobacco each and two boxes of matches. Matches with them are very precious and are rarely used. Rather than use a match a woman came over to our fire and borrowed some coals to rebuild her fire. From this point the nearest matches are a good deal over one hundred and twenty miles distant, so they have to economize in every thing.

422 Each rag is valuable, and flour, sugar, coffee and rifle shells
[434] are absolutely priceless. While they know money, it has no value here.
[437] Only commodities go here. The most highly prized things are boards to
[389] make boats and rifle shells to get game and protect themselves. All empty shells are saved, the primer punched out, straightened, a match head put in, a little pinch of powder on top, the shell filled up, a long bullet inserted, the shell pinched tight, and a fresh set of ammunition is made.

142 The women and children certainly did look wild. Their hair was
• 291 frowsy and unkempt, their skirts and waists a patchwork of dirty rags
302 coming just below the knees; their features seamed and hard and cruel. Their complexion was very dark. They had no under garments. The children wore only a dirty shirt coming a little below their thighs, and even that is ragged. One or two of the women had a dirty bandanna over their heads. How I wished I could have seen them in their ancient, picturesque pelican-skin kilts!

302 I happened to witness the operation of a Seri beauty parlor. A
[824] mother brushed the hair of her thirteen-year-old daughter with a brush
[283] made from the fibrous roots of a certain grass tied together with
[515] sinew. During the operation if she came across a *piojo*, and she found several, she plucked him away from his feeding ground and dropped him in the fire.

The hair neatly brushed, the mother then mixed paint in a small vessel and with a tiny stick painted a bright blue design under the eyes and across the cheeks and nose, and then she added narrow white stripes, which, contrasting with the blue and the dark skin, produced a very striking effect. This paint is easily removed and the women often paint and remove three different face designs in one day.

304 I did not see tattoo work on either men or women, nor did they
301 wear ceremonial feathers as did our western Indians.

000 wear ceremonial feathers as did our western Indians. I saw no skin or
164 cutaneous disease, or evidence of tuberculosis or of trachoma---the curse of our Indians.

142 One boy-child of five years was a handsome child---fat, round,
202 sturdy, with roving great black eyes, large thick lips, a picture of
• [241] perfect health. He was almost naked. His hair was done in a pigtail
[857] with a red string braided into it. His face like all the others was dirty, but he waded into the shallow water with a short spear and I saw him catch two crabs with his little harpoon. The water did not bother his face.

415 They had no plates or eating tools, except large deep clam shells,
912 cast up by the sea, which served as cups and dippers. Their long, keen
264 belt knives were used for cutting, carving or skinning, and always the
[259] fingers for eating. They gathered in a circle around an olla of seeds of long grass growing on the sea bottom prepared by winnowing, parching and grinding, and then cooked with turtle oil. Each one dipped his or her fingers into the olla and conveyed them to the mouth without losing a drop, and licked them off with great relish.

231 The dogs eat with the family. There were six or seven half-starved
264 ones. If someone picked up a piece of turtle flipper the dog often took the first lick at it, bit off a piece or licked it before it reached the owner's mouth. The dogs were not punished. They were just slapped to keep them out of the pots.

123 We had a great time that evening in Seriland. The young man played
534 his violin. This consisted of a hollow box cut out of a *palo verde*
[824] tree, and a piece of pine about sixteen inches long; terminating in a
[283] hollow where a single peg was fitted. The one string was twisted deer
[237] sinew, and the bridge was a small round clam shell at the far end. The
[533] bow was a small bent stick and some black horsehair. On the handle was a wad of rosin fastened underneath. By fingering this string a few weak squeaky notes were made, and this was the classical music of the Seris.

Manuel Encina seized his gourd rattle and began chanting. Herrera tapped a tin can and I beat on an inverted basket and the orchestra
535 was in full swing. A young girl, Rosa, dragged out a turtle shell and
123 standing on it began to dance. This dance consisted of stepping up and down quickly with each foot alternately, and this stamping, barefooted, emitted a hollow sound. Every once in a while I let out an
[24] Indian yell which pleased the Seris very much. For two hours they had a real swell time. We took one flashlight of the proceeding.

[392] Each family was in their hut, which afforded very slight shelter
[362] as they were only partially roofed over and the sides were broken
[354] down in places. The huts were all adjoining and each had a little
[361] campfire, which did not give much illumination, so the dancing was in semi-darkness.

(text continues on p. 163)

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Carrying firewood

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Seri basket maker - 1934

10: Davis E-5 (1922-ca.1939) 1965 NU31 Seri NU31

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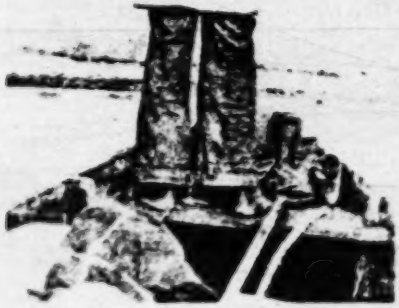
Poised for harpooning sea turtles off Tiburon Island - 1936



[302]
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The catch

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10: Davis E-5 (1922-ca. 1939) 1965 NU31 Seri NU31

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Vene Thomson, Pancho Olivieria and Roberto Thomson at Tecoaate, on north coast, upending whale ribs cast up on the beach. Although thoroughly dried and bleached for years by a semitropic sun, it took their united efforts to elevate these ribs.---E.H.D.

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Roberto Thomson, Santo Blanco and Edward H. Davis

five-gallon cans full. They were fastened one each end of a *palanca*, or shoulder pole, and thus brought to camp. If anyone thinks this is easy they should try it over rocky, uneven, sandy, stony ground, dodging thorny vegetation at every step. 123

The colors of the mountains were mostly red of volcanic character, with great streaks of yellow and pink, deeply cut with side canyons and sharp ridges, all similar to other desert ranges. [133]

The men caught a few crabs and gathered clams in the afternoon, which helped out our larder. One of them told about his wife being shot. He said they had a big fiesta and during the drunk, a Seri shot at his head. He happened to be stooping alongside his wife and the bullet buried itself in his wife's thigh. We could feel it through her clothes.

A good many years ago when stages ran between Nogales and Guaymas, the Seris held up the stage, killed the men and captured one Mexican girl. She was brought here and made the wife of one of the chiefs, Coyote Iguana, and she bore children. Some years later her brothers came here to induce her to return, but she refused, saying that she was ashamed to go back and she had children here. About fifteen years ago in a battle with the Papagos, two of her sons were killed. 648 727 563

The Papagos have taken toll of many Seris, these hunted Indians who are such fascinating and ingenious companions, whether they are harpooning turtle or packing water through the thorny wastes. 648

372 516 291

Seris making fire (with fire drill) - Island of Tiburon

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Seri faces

10: Davis E-5 (1922-ca. 1939) 1965 NU31 Seri NU31

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Seri young man

Seri Indian

123 [202] It was a beautiful morning in early May, and the water was still as a pond, reflecting all the sunrise tints like a mirror. After a breakfast of clams and broth, bread and sand and bronco tea, we made a big smoke and were answered by a similar smoke two miles off, so we knew our friends were on the way.

123 482 [415] In one hour they began trailing in, the women each with a load on her head, walking graceful and erect. On one head was an inverted turtle shell containing nearly all the family belongings done up in rags. On the top was the most precious belonging of all---the rifle. The man carried two or three ollas and other things on a shoulder stick. Everything necessary for their home was carried on their heads.

123 Soon the Indian Blanco was seen paddling in his *balsa;* he also had a load and had paddled all the way from Ironwood camp against wind and sometimes tide. As they were all very thirsty we gave them water around. They immediately went to the shore as it was low tide, and began gathering small oysters from the rocks. Soon each woman returned with a half bushel of them on her head.

About three o'clock and for an hour or so thereafter, Antonio Herrera, the Chief's son Chico, the old Chief Juan Tomas, two other men and one woman, came drifting into camp with their dogs. Each one was loaded with things. They were a pretty wild looking bunch. There was very little food and little water for so many.

648 731 The Chief said that a day or two before, some of his men had a fight with some sailors (Mexicans) on the Island of San Estevan four or five miles off the south west corner of Tiburon. Nobody was killed, but the two boats, the wealth of the Island, had drifted away and were lost, leaving eight men marooned on the Island. They had gone there to gather *sescal* to make drink to celebrate a wedding to come off soon. Three men were five days without water. They sent up frantic smoke signals every day. At last they were seen, and help went for them in the only remaining boat on the Island. They were rescued.

648 484 123 The Chief and his men and women, with us, are going to Hermosillo ninety miles afoot with all their belongings to ask the Government for food and help.

142 [622] [302] [291] The Chief looks to be seventy years old, a grim dark-skinned individual with a thin fringe of hair on his upper lip, broad nose, wide nostrils, small black eyes. He is well-built and erect. None of these that I have seen so far have any fat. They are lean and sinewy. The young men are of large build, high cheek bones, some with hair on their lips, their long black hair braided; sometimes with a strand of red worsted. All were either barefooted or wore sandals. I saw one pair of sandals made out of turtle hide; another of burro hide.

648 123 When the Chief arrived, the sail of a vessel was seen over the beach. Bob recognized it as belonging to a launch of a Yaqui Indian

[text continues on p. 180]

10: Davis E-5 (1922-ca. 1939) 1965 NU31 Seri NU31

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Fastening feathers on arrows with sinew held tight in his teeth.
1929

[283]

123 but nothing happened.

123 622 [115] We reached Hermosillo at three in the afternoon, and as we landed Roberto and Sara met us, and Roberto embraced me. Then the Seri Indian Chief rushed up and fairly hugged me in his joy at seeing me again. A timid wild-looking Seri boy, of fifteen years of age, shyly shook hands with the *Americano*, while all the Mexican men and women, fully one hundred in number, looked on open-mouthed and wide-eyed, to see the Chief of the wildest and lowest of savage Indians in North America, rush up and embrace a white man.

We all climbed into Roberto's auto-truck, and my things were brought to Hotel Cohen, and then we all went to Roberto's home and stayed all the afternoon. He had just returned from the coast the day before, and Juan Tomas was determined to come also and greet me, and the boy---a nephew---hung on to the Chief, and finally Roberto said he would have to return on foot if he brought him. Juan Tomas said that made no difference. He would walk to the coast eighty or ninety miles, if only he could come.

• [291] [302] He was probably seventy-five years old. He wore a hat, but his hair was straggly and he had a slight moustache. He wore shirt and trousers and a dirty kilt---remanent of the Pelican-skin-kilt---around his waist, and he was barefooted. The boy had a not unpleasant face, long wild hair, shirt, pants, and a cotton kilt reached to his knees. He, too, was barefooted.

I gave the Chief a knife, and the boy a red crayon and fifty cents. With the crayon he made a V on his kilt. He was very shy and always kept in a shadow, or in the background, and he spoke no Spanish although he knew the Spanish alphabet.

Sara showed some photographs and postcards in a baloptican in a dark room, and among them were pictures of some Seris and myself. These created much excitement with the Chief and the boy, and they jabbered together in the Seri language with animation. They recognized some of the subjects, their own people.

584 622 648 123 Juan Tomas is to be married soon to an elderly Seri dame, and we have been invited to attend the fiesta. He has been laying in the trousseau for the bride, and several gallons of mescal. A steer or burro will have to be provided, and all the fixin's and nothing will be left undone to make a very festive occasion. When asked to show us his gifts he reluctantly brought forth a package which he carefully unwrapped and disclosed eighteen yards of *manta*, two red pieces and one pink piece of Calico, some red handkerchiefs, and one box for painting the face. He carefully wrapped these up again and put them in the room set apart for him and the boy.

[608] [583] The woman he is to marry has no male relatives from whom she can be bought, so the Chief appointed a man and created him Uncle *pro-tempore*, and to him the Chief is going to give a rifle and a blanket as the purchase price. Pretty high!

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Seri Indians at home

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Seri Indians preparing their meal

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Santo Blanco and Edward H. Davis - this hombre gambled away his only shirt - Sonora - 1925

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Seri method of carrying infant

177 been fastened with a string---each child eager for a safety pin. A
123 little child two and a half years old was shoved forward for a pin, its round black eyes dancing with anticipation, but its dress had no opening in front, so I laughed and shook my head and everyone appreciated the joke. But, not to be defeated, a little girl untied the child's waist from behind and spread it open, exposing its little brown body from head to feet, and called my earnest attention to it. I then pinned up the dress. Then the older ones crowded around me, but I had used up a whole paper of pins, so I shook my head. I gave the empty paper to an eager child, although a dozen hands were outstretched for it. By making the children happy I pleased the parents.

123 By this time the flour soup was thick and ready, and Roberto baled it out with a cup into the various vessels eagerly outstretched to receive it. As the cup would drip, little hands caught the priceless drops before they reached the sand. As each got his proportion he began sticking his fingers into the mess and licking them off. Many took their *pinole* to camp and the others secured a taste also. A small piece of bread dropped into the sand was snatched up, by a child, from under the nose of a dog. She rubbed off the sand and devoured it.

When all had vanished to their various camps I opened the box of candies---small round drops of green, red and yellow. I filled our coffee pot and went to each camp and gave each man, woman and child about ten candies.

439 Since I wanted shell necklaces, the women had combed the beaches
123 and gathered plenty of shells, and strung them while resting. This evening they were draped about their necks, and they wished to trade, so I trade for about a dozen---one small round mirror for one, five needles for another, five safety pins for another, blue face paint for another. Mirrors were most in favor.

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206 *Seri outside beauty parlor*

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Maria Jesusa - Great grand-daughter of Lola Casanova and Coyote Iguana. She is self-conscious and embarrassed to face the white man's magic box for the first time. Her face is decorated in blue, in a typical Seri design. Her features are more regular and attractive than the pure Seri and her clothing shows more taste and pride than her half sisters. Taken at La Cruz, island of Tiburon---E.H.D.

10: Davis E-5 (1922-ca.1939) 1965 NU31 Seri NU31

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Seri beauties

10: Davis E-5 (1922-ca. 1939) 1965 NU31 Seri NU31

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Juan Tomas - Chief of Seris, 1922

622 Thus passed a very striking character among the primitive races of Sonora, Mexico. He was brave and fearless in battle; crafty, cautious, and cunning in attack; cruel and merciless to his enemies. He was rarely caught off his guard, and always managed to extricate himself and his men from difficult situations. He was quick to think and act, and was wise with the wisdom learned at first hand on desert and sea from a rugged nature, reluctant to give up her secrets. He was a master hand at *balsa* building, a good hunter, fisherman, harpooner of *cahuama* (sea turtle), a good surfman, a good gambler, and an expert tracker. It was not unusual to possess two or three wives, but the old Chief, while married three times, had only one wife at a time. He was quite fond of the writer, and used to greet him with the true Mexican *abrazo*.

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[123] It was in 1922 that I first met the grim old warrior on the shores of Tiburon, whither I had gone on a quest for the Museum of the American Indian, Heye Foundation, New York.

[142] He was very dark, of medium height, thick set, with a broad, deep chest, very muscular, with shaggy brows and deep set eyes which, even at that age, ninety years, burned like coals of fire, and were suspicious and wary. He wore a braided pigtail down his back which contained a few gray hairs. For clothing, he wore a ragged shirt and an old pair of overalls, with a short kilt hanging from a belt, through which stuck a long naked knife of hoop iron, ground on abrasive rocks and keen as a razor.

[302] [298] [411]

[291] From infancy to the grave, the freedom of his feet was never hampered by shoes. Even at that advanced age, and until his last illness, he was perfectly able to care for himself, and follow his nomadic tribe on its devious trails along the coast and far in the interior. A walk of a hundred miles was not unusual. For ten rifle cartridges a Seri Indian once walked forty or fifty miles to deliver my message to Juan Tomas. From the time we first met, our friendship was never broken.

[484]

10: Davis E-5 (1922-ca.1939) 1965 NU31 Seri NU31

Chico Romero - Seri dressed in Pelican skins - 1926

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Seri Concha in Pelican skin robe or shirt - 1926

123 It was March and the night wind was cold, but we did not dare light
223 a fire, so we hugged our blankets close to us for warmth until Santo Blanco judged the Pelicans were sound asleep. We could hear the waters of the Gulf roaring softly as they broke against the cliffs far below us.

At midnight Santo Blanco lighted his torch and the other Indians
[21] did likewise. They all wore rawhide sandals to keep their feet from being cut on the sharp rocks. Santo Blanco was agile as a cat, as he jumped from rock to rock on the steep slope holding his torch over head. Part way down the party split, leaving Santo Blanco, Roberto and myself. I had a flashlight which threw a feeble ray on nearby
[134] rocks and then shot off into blackness. The rocks were slippery from droppings of thousands of cormorants, gulls, Pelicans and other sea birds and climbing down rocks on the steep slope and that on a dark night, was risky if not dangerous, for if we slipped or missed our footing, we might roll, bump a few times and drop from a high cliff into the sea.

Santo Blanco was far below us and at last we could hear him clubbing Pelicans over the head and by the time we reached him he had several dead Pelicans spread on the rocks and he was bringing in the last of them near where we had stopped.

There lay five of these great silver gray birds, each boasting a wing spread of ten feet, as against seven feet of the golden eagle. The flashlight picked them out, one by one, with their long necks, long bills, and with pouches on the nether mandibles for temporary storage of their catch. They are very awkward and ungainly as they stand in groups on rocks at the edge of the tide, but when their great pinions are spread in flight over the sea, they are the epitome of grace.

That was a heavy load, over one hundred pounds, for one man to pack up those steep slippery rocks. I suggested that we help Santo Blanco to the top, but Roberto said the Pelicans were covered with lice and it was not advisable, but with Santo a few more or less made no difference. So he tied the birds together and swung them over his shoulders leaving his hands free for climbing. His torch had burned out and our only light was my flashlight to pick out hand and foot holds. At times we would reach down and give him a lift where the rocks were steepest, but for the most part he struggled alone. Sometimes he would find a few steps like a stairway and then he would look for an easy way, using both hands to pull himself up, but there was no easy way. It was a herculean task to climb those slippery rocks and one time the load almost pulled him over backward, but he recovered his balance and finally the crest of the hill was reached and the rest was down hill on an easy trail.

The boys already had a camp fire going near the beach and as soon as Santo deposited his load, they all fell to and began skinning the

[text continues on p. 217]

10: Davis E-5 (1922-ca. 1939) 1965 NU31 Seri NU31

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Edward H. Davis and Pelican skin robe made for him by Seri Indians - 1934

123 223 [262] birds. As soon as the skin was off the breast was laid on top of the coals and roasted. The meat was red as raw beef, but it was free of fishy flavor and tasted excellent. The Indians ate pelican flesh till daylight.

252 [123] We gave them a generous helping of flour in a pail and this with water from a canteen, Santo stirred vigorously with a stick and then kneaded the dough with his hands until it was of the right consistency. He rolled hunks of this into little balls of dough about the size of golf balls, which he laid on his blanket. The boys picked these up, patted them flat like pancakes, scraped away ashes and sand from the edge of the fire, placed their pancakes in the hollow, covered them with hot ashes and hot sand, and in about three minutes pulled them out all baked brown. They shook the ashes and sand from them, leaving them clean and ready to eat. I am telling this in detail to show how simple cooking can be done without a dutch-oven, frying pan, or cooking grease, far from civilization.

281 [123] We were soon paddled across to their village on the shores of Kino Bay and the skins turned over to Mrs. Santo. The skins had been split down the back, leaving the breast unmarred. The wings and legs had already been removed, and she sewed the skins together with sinew recovered from the birds. The boys had secured an extra pelican making six, three to a side, then placed together and sewed lengthwise, making a robe three and a half feet wide by seven feet long.

[342] [291] [301]

Pegging out and drying a Pelican skin robe by a Seri Indian woman - 1936

281 The Indians made a mound of sand full length of the robe and amply wide rounding off the top. On this the robe was spread, flesh side up, and pinned to the mound by slender slivers of *carrizo* and left exposed to the sun. The skins were singularly free from oil or fat and in a few hours, the robe was cured. The pins removed, the sand shaken from the plumage, and it was ready to use as a blanket covering at night or in old times, as clothing wrapped around the body.

The robes of silvery gray are from male Pelicans and are larger and more attractive than robes from the female birds, which have white breasts, edged with gray.

• 291 177 Before the garments and costumes of civilization encroached on the Seris, Pelican robes and deer skins were the only clothing worn by the natives, but now they have adopted civilized ways to a great extent, Pelican robes as clothing became obsolete.

To use the clay as paint, a bit of water is placed on a stone and the clay is rubbed into it to make a paste. It is then applied to the face (Fig. 4). It spreads smoothly and adheres firmly to the skin. The blue was formerly used for decorating pottery, clay figurines, headdresses, fetishes, arrows, wrist guards, and cane gaming sticks, as well as for face painting. In curing the sick, the shaman sometimes used the blue for painting crosses on the patient's chest. Also, women made necklaces using beads formed from the blue clay.

FIG. 4. Painting the face with the finished pigment.

3:Davis & Dawson E-5 (1823-1946) 1945
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FIG. 11. PAINTING THE FACE
USING A RED PIGMENT OBTAINED FROM THE TOBOTE.

223 lice-infested carcasses were then gathered
264 and brought to a central place among the stinking rocks where a gluttonous feast was held in the dark, the long ahungered tribesmen gorging themselves with the soft entrails and succulent parts, and carousing in the carnage until overcome by slumber.

281 The day following the slaughter, the
294 matrons collected the carcasses with least damaged plumage and carefully removed the skins, which were then gnawed and sucked clean of flesh and grease and dried in the sun (Fig. 8). From two or more of these skins they made a kilt or robe (Figs. 1, 2), the principal apparel, not so much for protection from cold as from the scratch and prick of the abounding spines and thorns of Seriland. The skins were sewed with sinew and often held in place on the body by a
283 cord made of human hair (Fig. 1). The
302 culture of their long, luxuriant hair, indeed, was an important matter. They brushed their hair regularly with a brush fashioned

[p. 200(A)]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

The second mutilation was the only corporeal modification noted by early missionaries and explorers—it was the perforation of the nasal septum for the insertion of a skewer, perhaps of polished stone (though doubtless more commonly of bone), to which swinging objects were attached. One of the most useful records is that of the Jesuit, Padre Joseph Och, who described the nasal attachment as a small, colored stone suspended by cords from the perforated septum, and guarded with such jealous veneration that "one must give them at least a horse or a cow for one" (ante, p. 78); while according to Hardy's record, the nasal fetish is "a small, round, white bone, 5 inches in length, tapering off at both ends, and rigged something like a cross-jack yard."[1]

FIG. 7.—Snake-skin belt.

The custom is apparently obsolete, and nothing is known directly of details or motives.

Excepting these mutilations the corporeal decoration of the Seri is apparently limited to the face-painting: among the 60 individuals at Costa Rica in 1894 there was no trace of tattooing or scarification of face, limbs, or body; there were no labrets or earrings, and neither lips nor ears were pierced, nor were nasal septa observed to be perforated in accordance with the reputed ancient custom; the teeth were neither filed nor drilled; no indications of amputation or other maiming (save the removal of the incisors) were observed—indeed, the instinct for physical markings of symbolic or decorative character, which seems to be normal to primitive men, was apparently satisfied by the prevalent and persistent face-painting among the females.

The extra-corporeal decorative devices are of a meagerness and pov-

[1] Travels, p. 288.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

erty even transcending the poor apparel, flimsy habitations, and generally ill-developed artifacts of the lowly tribe.

The most prominent personal possession is the pelican-skin robe; it is usually made of six skins, slightly dressed and in full plumage, sewed together with sinew in a conventional pattern of such sort as to give the greatest possible expanse consistent with the irregular outlines of the individual skins, and at the same time to display a conventional color pattern on the feathered side, the colors ranging from the dorsal slate to the ventral white of the fowl (as indicated in plate XXIII); sometimes there are only four skins and rarely there are eight, but the conventional arrangement is maintained. Before the beginning of a

FIG. 8—Dried flower necklace.

fairly regular barter at Rancho de Costa Rica, and hence before the introduction of manta and other stuffs, the pelican-skin robes were supplemented by kilts made of mesquite root or other fibers, spun and twisted in the fingers and woven probably on some primitive device no longer in use; but so far as is known these native fabrics were devoid of decorative patterns in color or weave. Less habitually a short wammus or shirt, with long sleeves, made of a material similar to that of the kilt, was worn; but it, too, was without ornamentation, so far as can be ascertained. The remaining article of utilitarian apparel is the belt, usually consisting of a strip of skin (of deer, rabbit, peccary, etc), slightly dressed with the hair on; frequently this is replaced by a cord or braided band of human hair, while the favorite belt of some of the

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

young warriors is a snake skin (such as that illustrated in figure 7); but so far as was seen the belts are not extended into tassels, decorative appendages, or even flowing ends.

The presumptively decorative costumery observed is limited to necklaces, usually of strung seeds, shells, and beads of wood or bone (figures 8, 9, 10, 11, 12, and 13), though animal appendages, such as hoofs, teeth, etc, are sometimes worn. The most highly prized necklace found at Costa Rica was a human-hair cord with nine crotalus rattles attached (figure 14), worn by a young warrior of the Rattlesnake (?) clan. Not the slightest indication of head-dresses was seen (though deer and lion masks are said by Hardy to have been worn on occasions); there were no bracelets, leg-bands, or rings of any description, and the cheap jewelry given to many of the women and youths at Costa Rica was either strung about the neck or concealed; while it is significant that even the showiest jewelry was less appreciated than bits of manta or lumps of sugar. When it is remembered that the Seri have been in occasional contact with Caucasians for over three and a half centuries, the fact that not a single glass bead was found among them becomes significant; and the significance of the simple fact is increased by the virtual absence of that persistent desire and protean use for beads—or bead-sense—so prominent among most primitive tribes.

FIG. 8.—Seed necklace.

FIG. 10.—Nut pendants.

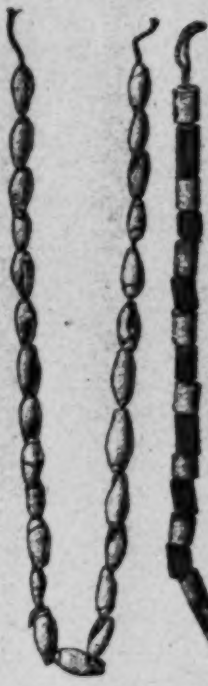

FIG. 11.—Shell beads.

FIG. 12.—Wooden beads.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

Naturally the conditions at Costa Rica were unfavorable to the study of native ideas concerning apparel. The women and some of the children were arrayed chiefly in cast-off habiliments of the rancheras or in nondescript rags, while the men either aped Mexican fashions, like Maabém, or shamefacedly sweltered under the unaccustomed burden of tatterdemalion gear; yet there was a meaningful absence of that desire for finery so prominent among primitive peoples—a fact quite as eloquent in itself as the absence of bracelets and bangles, tassels and trappings. It is probable that the shamans and mystery-bedged crones in the depths of Seriland enhance their influence by the aid of symbolic paraphernalia (indeed, some inkling of such customs is found in the meager records of earlier visitors);[1] yet the conspicuous feature of Seri costumery is the dearth of decorative devices.

FIG. 13—Necklace of wooden beads.

The habitations of the tribe are the simplest of jacales—mere bowers, affording partial protection from sun and wind, but not designed to shed rain or bar cold. Half a dozen of these were examined at Costa Rica in 1894 and probably a hundred more, in various stages of habitability, in Seriland proper in 1895, yet not the slightest trace of decoration was observed—the structures are plainly and barrenly utilitarian in every feature. The same may be said of the balsas in which the Seri navigate their stormy waters; for the peculiarly graceful curves of the craft evidently stand for nothing more than the mechanical solution of a complex problem in balanced forces, wrought out through the experience of generations, while the simple reed bundles are absolutely devoid of paint, of superfluous cord, of fetishistic appendages or markings, of tritons, nereids, or other votive symbols at bow or stern, and of industrially superfluous features or attachments in general—indeed, the only appendages discovered were one or two simple wooden marlinspikes (shown in figure 26), thrust among the reeds to be at hand in case of need for repairs.

Among the utensils employed in the primitive householdry of the Seri the most conspicuous and at the same time the most essential is the olla, or water-jar. Its technical features are described elsewhere; but it may here be noted that the olla is the central artifact about which the very

[1] Hardy noted the use of "a small leathern bag, painted and otherwise ornamented", as a medicine rattle (Travels, p. 362), and also described a wind-symbol and an effigy used for thaumaturgic purposes (ibid., pp. 284, 285).

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

life of the tribe rotates: since the clans never reside and rarely camp nearer than 3 to 15 miles from the aguaje, a large part of the water consumed must be transported great distances in these vessels; since the region is one of extreme aridity, the lives of small parties often depend on the integrity of the olla and on the care with which the fragile vessel is protected from shock or overturning; and hence the utensil must occupy a large if not a dominant place in everyday thought—indeed, the fact that it does so is attested by constant custom and also by its employment as the most conspicuous among

FIG. 14—Rattlesnake necklace.

the mortuary sacrifices. Thus, the relation of the Seri olla to its makers and users is parallel with that of the ever-present earthen pot to the Pueblo people, or that of the cooking basket to the acorn-eaters of California, save that its relative importance is enhanced by the fewness of activital lines and motives in Seri life. Moreover, this most characteristic utensil is established and hallowed in Seri thought by immemorial associations: its sherds are sown over the hundred thousand square miles of ancient "despoblado" from Tiburon to Caborca, Magdalena, Río Opodepe, and Cerro Prieto, and are scattered through the 20 feet of shells forming Punta Antigualla (perhaps the oldest shell mound of America); and all the sherds from the range

2: Kroeber E-5 (1930)1931 NU31 Seri NU31

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FIG. 9 (upper). *Seri children showing variety of expressions at unaccustomed experiences.*
FIG. 10 (lower left). *Young woman with sickly baby.*
FIG. 11 (lower right). *Two girls, the shorter unmarried.*

3:Davis & Dawson F-5 (1823-1949) 1945
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FIG. 11. PAINTING THE FACE
USING A RED PIGMENT OBTAINED FROM THE TOROTE.

223 lice-infested carcasses were then gathered
264 and brought to a central place among the stinking rocks where a gluttonous feast was held in the dark, the long ahungered tribesmen gorging themselves with the soft entrails and succulent parts, and carousing in the carnage until overcome by slumber.

281 The day following the slaughter, the
294 matrons collected the carcasses with least damaged plumage and carefully removed the skins, which were then gnawed and sucked clean of flesh and grease and dried in the sun (Fig. 8). From two or more of these skins they made a kilt or robe (Figs. 1, 2), the principal apparel, not so much for protection from cold as from the scratch and prick of the abounding spines and thorns of Seriland. The skins were sewed with sinew and often held in place on the body by a
283 cord made of human hair (Fig. 1). The
302 culture of their long, luxuriant hair, indeed, was an important matter. They brushed their hair regularly with a brush fashioned

[p. 200(A)]

462 desert plants or littoral fishlets from tide-pools
or of the shellfish. Both men and women will
[224] bring in an occasional rattler, although women
957 are more likely to do this because they spend more
[883] time in the desert. Children of both sexes are
engaged in the female occupations here, but ado-
lescent boys already join in their fathers' hunts
on land or sea.

342 Housing has undergone some changes. In the
184 desert or on Tiburon the Indians construct the
kind of shelter they did in the recorded past,
an ocotillo frame, bent over in the middle and
covered up with dried plant debris and twigs
from the desert, or with the sail cloth. But in
Desemboque they have more substantial houses—
of wattle and adobe, with flat roofs, rectangular
or square, often with corrugated tin or drift
planks and other debris piled up on top, or along
the walls.

178 In the remainder of their material culture, not
much has been left from years past although one
must remember that from the very beginning of
[291] recorded Serian history it has been of a most
412 meager sort. Pelican robes, which some Seris ap-
323 parently still wore in 1930 are gone for good.
301 So are the stone tools. So is the pottery which had
[291] probably disappeared in Kroeber's time. The hu-
man hair necklace with rattlesnake rattles is also
a thing of the past. The rattlesnake skin belts
McGee (1898:170) described and figured are
probably all gone. I havn't seen or heard of any.

412 But what remains much as they had been in
285 1894 are the bone-awls. These are made of burros'
carpals and the blossoming of basketry, owing to

[P. 8A]

9:Malkin E-5 (1953-1955)1962 NU31 Seri NU31

412 the stimulus of the tourist trade, has kept this
285 tool alive. Another survival from McGee's times
301 are *Olivella* shell necklaces.

Seri Antecedants and Relationship

174 For complete lack of archaeological information, little can be deduced about Seri antecedents. Speculations can be made only on the basis of similarities of their post-historic cultures with the cultures of the surrounding tribes.

171 Individual traits between the Seri and their
174 neighbors show discordant connections. Comparative data assembled by Kroeber, Beals and Driver & Massey suggest almost equal possibilities of derivation from the Cochimí, the Gila, Pima and the Yuman tribes but favor much less connections to the south. Much is made of the basketry. Archaeological basketry has been unearthed since the [172] work of Kroeber and Beals was published (Massey, MS.), but it is different from the Serian. Seri basketry shows closest relationship to Pima-Papago complex (Malkin, MS.). But part of this may be not only post-historic but certainly very recent and is hardly an argument in favor of the Pima-Papago connections.

Kroeber (1930:5) thought that on the face of it, the Seri showed greatest affinity to the Cochimí on the grounds of their general development of economy—the hunting and gathering subsistence. But he also pointed out that relationship with the Cochimí may rest ultimately on the linguistic analysis if the Cochimí language can still be recorded—which is most dubious.

[P. 8 B]

MOLLUSCA

VII

USES

Species	Food Prep.	Food Past	Decoration Prep.	Decoration Past	Trade Prep.	Trade Past	Bait
Octopus bimaculatus	x	x				x	x
Codakia distinguenda		x					
Laviocardium elatum		x			x[1]		
Carditomera affinis	x	x					
Acmaea dalliana			x	x	x		
Crucibulum spinosum		x	x	x	x		
Chione undatella	x	x					
Chione californiensis	x	x					
Pteria peruviana	x	?	x	?	x		
Volsella capax	x	x					
Olivella dama			x	x	x		
Cyprea annettae				x[4]			
Tegula rugosa		x		x		x	
Conus regularis		x[3]		x	x	?	
Phyllonotus erythrostomus		x				x	
Turritella broderiana		x[3]			x	?	
Polinices reclusiana	x	x					
Chlamys subdudosa	x	?					
Atrina maura	x	?			x[4]		
Navicula pacifica		x					
Turbo fluctuosa	x	?			x		
Solenostira pallida			x	?	x		
Cerithium stercusmuscarum			x				
Trivia radiana			x				
Ficus ventricosus	x						
Nioche bistriatus	x	x					

[1]Occasionally used as dip spoon

[2]Supposedly used in the past for money

[3]In the past "giants of 300-400 maybe years ago have eaten it."

[4]Only pearls

These figures show then 26 out of 37 species exploited economically in some way, that is 70%. These figures show increase over the figures I have published previously (1956) which were 21 out of 36 species and 58% respectively. The corrected figures are the result of brief additional field work in 1955.

Food

A good part of the molluscan forms are used as food. Altogether 19 species are listed as such, although out of these, only 11 were reported as being part of the diet today while the remainder only in the past. It is obvious that there has been progressive decrease in the Seris' dependence on the molluscan diet within the past few generations.

Four of the species reported as part of the Seri diet at various times had been collected from the kitchen-middens. There are: *Pteria peruviana*, *Chlamys subdudosa*, *Volsella capax*, and *Navicula pacifica*. Of these four, *Navicula* has been reported as eaten in the past "maybe 100 years ago, but not

262 now," while the *Volsella* has been eaten in the past
172 just as much as it is now. The find of these four species in great numbers in the kitchen-middens only indicates that they probably were an important part of the Seri past. Historical records are scarce and no archaeology had ever been done in the region, except for Gifford's (as yet unpublished) excavations at Caborca. But Caborca is far away from the coast. Strong circumstantial evidence suggests that a good many of the kitchen-middens represent relics of the Seris' past encampments.

262 The verbal data for the Seris' past use of some species of molluscs in their diet is uncertain or unavailable. But it is safe to assume that if the animal is eaten today, then it certainly had been [174] also eaten in the past. It is not probable that the Seris should suddenly develop a taste for obscure kinds of animal food, while the entire trend had been in the other direction.

Of the different species the augur shell and the cone shell were said to have been "eaten in the past by the giants. Maybe 300-400 years ago." It is [173] hard to account for this idea except that it probably refers to a myth.

Preparation

252 Preparation of the mulluscan food differs little, if at all, from any other food of animal origin. The animals are simply separated from the shell, the meat is dropped in water and boiled, usually [263] for half an hour. Few ingredients other than salt are added and their use depends entirely on the availability of cash and on the individual tastes of the Indians. As far as I could tell, there is no differentiation in this for people of different sexes
262 or ages. Also there is no preference for different parts of the body.

Preferences

Some species are more liked than others, but this is related to their size rather than anything else. There does not appear to be any belief in the toxicity of molluscs and the occasional justification of the inedibility has been expressed in terms of size. Some species, it had been asserted, are not eaten simply because they are too small to bother. Only *Cardium consors*, as one of the in- * [825] formants suggested, is venomous, but even this, to him, seemed uncertain and dubious for he said "maybe it is venomous."

Other Uses

301 a) *Decoration*: A considerable number of shells
* 825 were reported as used for decoration. The tabulation indicated altogether 10 species that had been or still are used for ornament. Three of these are discarded now, seven still in use. This is mostly in the form of various sorts of necklaces, which the women string on ordinary thread. *Solenostira pallida* is supposed to be worn as such by women and children, while *Cerithium stercusmuscarum* by the boys only. But I have never seen either of them make use of it in any way. On the other hand, *Trivia radiana* and the *Olive shell* are much

9:Malkin E-5 (1953-1955)1962 MU31 Seri MU31

301 worn. I have observed women wearing necklaces
825 of the former and women and very young boys of the latter. The olive shell, incidentally, is made into two sorts, the natural, unroasted shells which retain a greenish-purple, mottled color and the white. The white pallid color is achieved by roasting the shells over fire. The necklaces are mostly made up of either colored or white but occasionally they may be made of mixed shells and then they are usually alternately interlaced, now with one, now with another.

825 b) *Utensils:* Two species had been reported used as occasional drinking or dipping cups and spoons, *Lavicardium elatum* and *Ficus ventricosus*. *Ficus* is presently discarded, but the *Lavicardium* is still occasionally used so. There is no doubt that the incidental use of these shells increases during longer fishing expeditions when the Seris are apt to lose some of their gear.

[412] [415]

[436] c) *Money:* Interestingly, the brown cowry was supposed to have been used as a means of exchange, as money—in the past. If this is so, then the selection of this shell for such purpose is not surprising considering its widespread use throughout the world.

[171]

439 d) *Trade:* Altogether 12 species had been re-
825 ported as traded off either in the past or present. The trade importance of various species of shells varies with the demand of the market and sometimes may be only sporadic and short-lived. Only a few of the species had been indicated as having been of any trade importance in the past, and it may well be that the Seris did not register the species which may have been briefly sold to and outsiders during the short-lived fads of demand. It may be said in general that the trade importance of the shells increases and that greater variety of them are exploited now than formerly. This is surely owing to the increasing accessibility of the Seri country and the increasing tourism, not only visitors from Hermosillo, but also from such far flung places as Tucson, Phoenix and even Los Angeles.

[177]

In some instances, the Seris had no idea what the shells were sold for. The augur shell is on and off sold to some American traders who show up in Desemboque once in a while and for whom the Seri women accumulate these shells. But what uses were made of these, the Indians surely didn't know. Neither did they know what uses were made of the *Murex* shell and the *Turbo*, both of which were periodically sold in bulk to Hermosillo. On the other hand, they had some idea what uses were made of some other shells. *Pteria* and *Atrina* contain pearls and these are much desired. Especially the pearls of *Atrina* which are sold to the Mexicans or to the visitors for 25-50 pesos each and therefore have immense value, for the local market. The *Pteria* shells are said to be used for button making, and the Seris themselves claim that they make buttons of this shell. The most important of all, however, at least at the time of my visits in 1953 and 1955, was the olive shell. It was easily the most commonly and most numerously collected shell of all that the Seris ever collected. Owing to the scarcity of it in Desembo-

[435] [237] [226]

261 will exist on very small rations, bear burdens, and walk long dis-
262 tances. Their food is anything that walks, flies, crawls or swims,
[252] and they eat it raw with the same relish that we eat it cooked. There is but one thing they will not eat; they draw the line on the Gila monster. They are the most perfect type of human being adapted to desert conditions that exists today. Convey them blindfolded many miles into the heart of the desert, empty-handed, remove their blinders, and they will find both food and water where others would perish. The Papagos and Yaquis do almost as well."

302 We gave the women a small bag of flour and three or four cubes of
[123] sugar around, and the men three packets of tobacco each and two boxes of matches. Matches with them are very precious and are rarely used. Rather than use a match a woman came over to our fire and borrowed some coals to rebuild her fire. From this point the nearest matches are a good deal over one hundred and twenty miles distant, so they have to economize in every thing.

422 Each rag is valuable, and flour, sugar, coffee and rifle shells
[434] are absolutely priceless. While they know money, it has no value here.
[437] Only commodities go here. The most highly prized things are boards to
[389] make boats and rifle shells to get game and protect themselves. All empty shells are saved, the primer punched out, straightened, a match head put in, a little pinch of powder on top, the shell filled up, a long bullet inserted, the shell pinched tight, and a fresh set of ammunition is made.

142 The women and children certainly did look wild. Their hair was
291 frowsy and unkempt, their skirts and waists a patchwork of dirty rags
302 coming just below the knees; their features seamed and hard and cruel. Their complexion was very dark. They had no under garments. The children wore only a dirty shirt coming a little below their thighs, and even that is ragged. One or two of the women had a dirty bandanna over their heads. How I wished I could have seen them in their ancient, picturesque pelican-skin kilts!

302 I happened to witness the operation of a Seri beauty parlor. A
[224] mother brushed the hair of her thirteen-year-old daughter with a brush
[293] made from the fibrous roots of a certain grass tied together with
[515] sinew. During the operation if she came across a *piojo*, and she found several, she plucked him away from his feeding ground and dropped him in the fire.

The hair neatly brushed, the mother then mixed paint in a small vessel and with a tiny stick painted a bright blue design under the eyes and across the cheeks and nose, and then she added narrow white stripes, which, contrasting with the blue and the dark skin, produced a very striking effect. This paint is easily removed and the women often paint and remove three different face designs in one day.

304 I did not see tattoo work on either men or women, nor did they
• 301 wear ceremonial feathers as did our western Indians.

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[301]

Seri beauties

123 223 [262] birds. As soon as the skin was off the breast was laid on top of the coals and roasted. The meat was red as raw beef, but it was free of fishy flavor and tasted excellent. The Indians ate pelican flesh till daylight.

252 [123] We gave them a generous helping of flour in a pail and this with water from a canteen, Santo stirred vigorously with a stick and then kneaded the dough with his hands until it was of the right consistency. He rolled hunks of this into little balls of dough about the size of golf balls, which he laid on his blanket. The boys picked these up, patted them flat like pancakes, scraped away ashes and sand from the edge of the fire, placed their pancakes in the hollow, covered them with hot ashes and hot sand, and in about three minutes pulled them out all baked brown. They shook the ashes and sand from them, leaving them clean and ready to eat. I am telling this in detail to show how simple cooking can be done without a dutch-oven, frying pan, or cooking grease, far from civilization.

281 [123] We were soon paddled across to their village on the shores of Kino Bay and the skins turned over to Mrs. Santo. The skins had been split down the back, leaving the breast unmarred. The wings and legs had already been removed, and she sewed the skins together with sinew recovered from the birds. The boys had secured an extra pelican making six, three to a side, then placed together and sewed lengthwise, making a robe three and a half feet wide by seven feet long.

[342] [291] [301]

Pegging out and drying a Pelican skin robe by a Seri Indian woman - 1936

To use the clay as paint, a bit of water is placed on a stone and the clay is rubbed into it to make a paste. It is then applied to the face (Fig. 4). It spreads smoothly and adheres firmly to the skin. The blue was formerly used for decorating pottery, clay figurines, headdresses, fetishes, arrows, wrist guards, and cane gaming sticks, as well as for face painting. In curing the sick, the shaman sometimes used the blue for painting crosses on the patient's chest. Also, women made necklaces using beads formed from the blue clay.

FIG. 4. Painting the face with the finished pigment.

302

302 TOILET--shaving and depilation; hair styles (e.g., cutting, parting, arranging); care of the hair (e.g., washing, brushing); care of the nails (e.g., cutting, filing); body painting; use of cosmetics, ointments and perfumes; age, sex, and status differences in toilet; associated beliefs and practices; etc. See also:

Electrical appliances	403	Bathing and laving	515
Combs, brushes, etc.	412	Decorative art	531
Barbering tools	413	War paint	714
Elimination	514	Menstrual hygiene	841

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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BUREAU OF AMERICAN ETHNOLOGY — SEVENTEENTH ANNUAL REPORT PL. XII

GROUP OF SERI INDIANS ON TRADING EXCURSION

[FACING P. 121]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

its astounding protective efficiency being attested by the readiness with which the Seri run through cactus thickets so thorny as to stop horses and dogs, or over conglomerated spall-beds so sharp that even the light coyote leaves their trail. In the absence of measurements it may merely be noted that the hands and feet of the Seri are materially larger, not only absolutely but relatively to their stature, than those of neighboring tribesmen or even of Mexican and American workmen. And, on the whole, it may be said that in their proportions, as in their stature and color, the Seri are strikingly uniform, their range being less than that commonly observed in contemporary tribes, and the differences between them and their neighbors much exceeding the range among themselves. 142

Somatically distinctive as is the Seri at rest, he (or she) is much more so in motion—though the characteristics so readily caught by the eye are not easily analyzed and described. Perhaps the most conspicuous element in their walk is a peculiarly quick knee movement, bringing the foot upward and forward at the end of the stride; this merges into an equally quick thrust of the foot forward and downward, with toe well advanced, toward the beginning of the next stride; and these motions combine to produce a singular erectness and steadiness of carriage, the body moving in a nearly direct line with a minimum of lateral swaying or vertical oscillation, while the legs neither drag nor swing, but spurn the ground in successive strokes. Thus the walk seems notably easy and graceful, while the walker carries an air of alertness and reserve power, as if able to stop short at any point of a pace or to bolt forward or backward or sidewise with equal facility; he simulates the "collected" animal whose feet tap the ground lightly and swiftly while his body appears to yield freely to voluntary impulse. In this deer-like or antelope-like movement all the Seri are much alike, and all are decidedly removed from their neighbors, even the light-footed Papago. The component motions are most conspicuous in leisurely walking, though the resultant movement is more striking in rapid walk or the incredibly swift run of youths and adults. The general movement is akin to that shaped by the habit of carrying burdens balanced on the head, as the Seri women actually carry their water ollas for astonishing distances; but the carriage is shared—indeed, best displayed—by the warriors and growing boys, who are not known to carry water in this way. 481 [482]

Among the conspicuous but nondistinctive somatic characters of the Seri is luxuriant straight hair habitually worn long and loose. Commonly the hair is jet-black for most of the length, growing tawny toward the tips; sometimes it is black throughout, while again the tawny tinge, or perhaps a bleached appearance, extends well toward the scalp. Age-grayness seems not to be characteristic; the most aged matrons known have no more than a few inconspicuous and scattered gray hairs, though the pelage of some is slightly bleached or faded. None of the warriors at Costa Rica showed the slightest grayness except 142 [302] 142 145

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

142 Mashém (aged about 50 years), who had a few gray strands about the
145 temples; but it may be significant that the hair of the tribal outlaw
Kolusio, who has lived with white men for full three score years, is iron-
[115] gray. Kolusio's pelage is trimmed in Caucasian fashion; that of Mashém
is cut off mid-length in a manner exciting comment, if not derision,
on the part of his fellows and others, and resulting in his (Spanish)
[302] sobriquet, Pelado (literally, Peeled, or idiomatically, Shorn); but with
few exceptions the hair is kept long as it can be made to grow, and
receives careful attention to this end. Naturally the length is some-
what variable; in many cases it depends to or slightly below the waist,
while in other cases it merely sweeps the shoulders; and in general it
appears to increase in both length and luxuriance not only throughout
adolescence, but up to late maturity, for the best pelages are presented
by moderately aged persons, while none of the youths are so luxuriantly
tressed as their elders. Not the slightest trace of baldness appears.
The infantile pelage is short, brownish in color, soft or even silky, and
inclined to curl toward the tips. It is not until the age of several
months that the hair begins to acquire the adult character, and at
least some children retain traces of the infantile pilary character up to
5 or even 10 years; and none of the children display such jet-black
shock-heads as are frequently found among other tribes, whose adult
pelage may nevertheless be much less luxuriant than that of the Seri.
On the whole, it may be said that the Seri hair is luxuriant and vigorous
beyond the aboriginal average, and that it, like various other somatic
features, indicates a relatively late maturation in the life-history of the
individual.

Both sexes are beardless. The female faces seen were entirely free of
142 strong pilary growth; one or two of the warrior faces showed scattering
hairs, and Mashém sported a feeble and downy but jet-black mustache
with an exceptional number of scattered hairs about the chin; while
Kolusio shaved regularly, and might, apparently, have grown moder-
ately stiff but straggling mustaches and beard. Axillary hair seems to
be wanting; pubic hair is said to be scanty; otherwise the bodies are
practically hairless (more nearly so than those of average Caucasians).

The teeth are solid, close-set, and even, and impress the observer as
large; they close with the upper incisors projecting slightly beyond
the lower denture in the usual manner.

The skeletal characteristics of the Seri are known only from a single
128 specimen obtained in the course of the 1895 expedition in such manner
141 as to establish the identification beyond shadow of question. This
skeleton was submitted to Dr Aleš Hrdlička for measurement and
discussion.[1]

In making his examination, Dr Hrdlička compared the unquestion-

[1] A separate cranium was obtained by the 1895 expedition, having been sought and picked up by a Mexican member of the party in verification of his account of the killing of one of the Seri; but, in view of the possibility of erroneous identification, this skull was not submitted in connection with

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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SERI MOTHER AND CHILD

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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GROUP OF SERI BOYS

[p. 144 A]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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MASHEM, SERI INTERPRETER

[p. 146 A]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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"JUANA MARIA," SERI ELDERWOMAN

[p. 150 A]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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TYPICAL SERI WARRIOR

[p. 154 A]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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TYPICAL SERI MATRON

[p. 156 A]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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SIOUX MATRON

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1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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YOUTHFUL SERI WARRIOR

[p. 162 A]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

DEMOTIC CHARACTERS

000 The Seri, like all other peoples, are characterized by various collective attributes which vastly transcend in interest and importance the somatic attributes exhibited by the individuals. These superorganic attributes are essentially activital—i. e., they represent what the people *do* rather than what they merely *are;* and in both collective and activital aspects they serve to distinguish the human realm from the organic realm, and to afford a basis for the classification of mankind—i. e., they combine to form demotic characters.

128 The demotic characters of the Seri, like those of other peoples, may be classed as (1) esthetic, (2) industrial, (3) institutional, (4) linguistic, and (5) sophic; and in this order the essentially human attributes of the tribe (except the last named) may be described. It is a matter of deep regret that the data concerning the demotic characters of the tribe are too meager to afford more than a mere outline of their activities, and that their suggestive mythology must be passed over for the present.

SYMBOLISM AND DECORATION

FACE-PAINTING

302 One of the most conspicuous customs of the Seri is that of painting the face in designs by means of mineral pigments. Of the 55 members of the tribe shown in the group forming plate XIII, 28 (in the original photograph; a somewhat less number in the reproduction) exhibit face-painting more or less clearly, and this proportion may be regarded as typical; i. e., about half of the tribe are painted.

On noting the individual distribution of face-painting, it is found to be practically confined to the females, though male infants are sometimes marked with the devices pertaining to their mothers, as adult warriors are said to be on special occasions; and so far as observed all the females, from aged matrons to babes in arms, are painted, though sometimes the designs are too nearly obliterated by wear to be traceable. About 35 of the individuals shown in the group (plate XIII) are females; of these, fully four-fifths showed designs or definite traces of the paint, while the remaining fifth bore traces too faint to be caught by the camera; but none of the men or larger boys were painted. In the smaller group shown in plate XIV all of the females display paint, as does the small boy in the center also, while the man (husband of the middle-aged matron) reveals no trace of the symbol. The two pictures typify the prevalence and the distribution by sex of the painting.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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SERI BELLE

[p. 164 A]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

The painted designs vary among different individuals, but are fairly persistent for each. The prevailing design at Costa Rica in 1895 was that of the aged matron known as Juana María (plate XVIII), with variations in detail such as that exhibited by her unmarried daughter Candelaria (the Seri belle shown in plate XXIV); next in frequency were the designs, in white and red, exhibited by the matrons portrayed in plates XX and XXII. Other designs observed are indicated in plate XXVI. The variations in individual designs are apparently due either to varying care in the application of the paint or to the degree of obliteration by wear—e. g., the withered Juana María sometimes put on her design askew and was negligent of details, while the blooming Candelaria greatly elaborated the details of the pattern and carefully perfected the symmetry of the whole when preparing for her full dress sitting before the camera (plate XXIV), so that her design was then gorgeous by contrast with the nearly obliterated blur of a half-hour before. The designs are renewed every few days, especially for ceremonious occasions, and hence are practically permanent.

When grouped in relation to their wearers, the designs are found to exhibit family connection. Thus, Juana María's design is repeated, with greater elaboration of detail and with a pair of supplementary marks, in that of her daughter Candelaria; the winged symbol of the Seri matron portrayed in plate XX is repeated with minor variations in that of her daughter, the Seri maiden pictured in plate XXV; while the symbols of the mother and infant daughter depicted in plate XV are essentially alike. It is noticeable, too, that in the nearly spontaneous arrangement of individuals in the group shown in plate XIII there is a tendency toward subgrouping by symbols; and it was constantly observed that the family groups gathered about particular jacales (such as that shown in plate XIV) displayed corresponding designs, though there were frequent visitors from neighboring jacales bearing other designs. Briefly, all the observed facts, as well as the supplementary information gained by inquiry, indicate that the designs are hereditary in the female line, but are susceptible of slight modification both in elaborateness of detail and in the addition of minor supplementary features.

The principal apparatus and materials used in the face-painting are illustrated in plate XXVII. The chief pigments are ocher, gypsum, and the rare mineral dumortierite; the ocher yields various shades of red, ranging from pink to brown; the gypsum affords the white used in most of the designs; while the dumortierite is the source of the slightly varying tints of blue. So far as was observed, the pigments are not blended by mixing, though there is some blending due to overlapping in application. The ocher is commonly extracted and transported as lumps of ocherous clay or ocherous gypsum (plate XXVII, figures 1 and 5), though it is sometimes reduced to powder and transported in bits of skin or rag, or in cylinders of cane (plate XXVII, figures 3 and 4); and it is

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

prepared by trituration with a pebble or rubbing with the fingers, usually in a shell cup. Sometimes the shell used for the purpose is the valve of a *Cardium*, which serves indiscriminately as cup, spoon, skin-scraper, etc; but preference is apparently given to thick and strong shells, such as the wave-worn valve of *Chama* (?), shown in plate XXVII, figure 7, which are consecrated to the use and eventually buried with the user, together with a supply of the paint (like that illustrated in the cane cylinder—figure 4—which was a mortuary sacrifice). The gypsum is usually carried in natural slabs or other fragments, perhaps rounded by wear (plate XXVII, figures 6 and 8); it is prepared by wetting and rubbing two pieces together, the larger being reduced to metate shape by the operation. The dumortierite was observed only in the form of a pencil made by pulverizing the substance and mixing with sufficient clay to give consistency. The several pigments are applied wet by means of human-hair brushes kept for the purpose, the process occupying from half an hour to three or four hours for the more elaborate designs. So far as observed at Costa Rica in 1894, the paints were mixed in water only; but since painting outfits found on Tiburon island in 1895 were smeared with grease, it is probable that either water or fats may serve for menstrua, at the convenience of the artists. Commonly the process of painting is measurably cooperative. The matron usually depicts her devices on the faces of her daughters up to the age of 12 or 15 years, when they learn to make the applications themselves; and frequently two or more women (usually those with similar devices) work together in preparing and applying the pigments, each laying the paint on her own face and apparently guiding her hand partly by the sense of feeling and partly by suggestions from her coworkers; but Candelaria and some other of the younger women at Costa Rica frequently worked alone, aided by a mirror in the form of a shallow bowl of water set in the shadow while the brilliant desert glare fell full on the face.

The mines yielding the pigments were not located. The geologic conditions are such that the ochers are undoubtedly abundant; but it is probable that the gypsum is uncommon and confined to a remote locality or two, and that the dumortierite is rare and scanty here as elsewhere. The care with which the paints are preserved, prepared, and applied, the fact that they are indispensable feminine appurtenances even on the longest journeys, and their sacred rôle in the mortuary customs, all combine to indicate that they are among the most highly prized possessions of the people and by far the most precious of their minerals.

The somatic functions of the designs are esoteric, yet an inkling of their meaning was obtained through Mashém, the interpreter at Costa Rica in 1894; from his expressions it appears that the designs are sacred insignia of totemic character, serving to denote the clans of which the tribe is composed. But three clans were identified, and

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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SERI MAIDEN

Cp. 166 A)

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

those only with some uncertainty, viz, the Turtle clan,[1] denoted by the symbols of Juana Maria (plate XVIII) and Candelaria (plate XXIV and the upper left figure in plate XXVI); the Pelican clan, denoted by the designs of two typical matrons (plates XX and XXII) and a typical maiden (plate XXV), and probably also by those of the medio-lateral figures in plate XXVI; and (still less certainly) the Rattlesnake clan, denoted by the symbol of the lower left figure in this plate. The special somatic values of the colors also are esoteric, and were not ascertained; even in the case of the simple pelican design, the difference in meaning between the solid red pattern of one group and the similar pattern of white in another group was successfully concealed. So, too, the significance of the various subordinate or supplementary devices—the distinct border-line shown in plate XX, the lower cheek devices in plate XXIV, the separate chin mark in plate XXV, the fetish-like symbols on the lower cheeks in the lower left figure of plate XXVI, etc—eluded inquiry; while some of the minor features of both form and color were sufficiently variable in the devices borne by different faces of the same family, and even in successive paintings of the same face, to suggest some individual freedom in carrying out the detail of the generally uniform designs.

The telic functions, or ultimate purposes, of the face-painting are also esoteric, though not beyond the reach of inference from the somatic functions, coupled with general facts of zoic and primitive human customs. Even at first sight the painted devices bring to mind the directive markings of lower animals defined by Professor Todd[2] and interpreted by Ernest Seton-Thompson;[3] and in view of the implacably militant habit of the Seri it would seem evident that the artificial devices are, at least in their primary aspect, analogous to the natural markings. On analyzing the directive markings of animals, it is convenient to divide them into two classes, distinguished by special function, usual placement, and general relation to animal economy: the first class serve primarily to guide flight in such manner as to permit ready reassembling of the flock; they are usually posterior, as in rabbit, white-tail deer, antelope, and various birds; and they primarily signify inimical relations to alien organisms, with functional exercise under stress of fear. The second class of markings serve primarily for mutual identification of approaching individuals; as comports with this function, they are usually facial, or at least anterior; and their functional exercise is normally connected with peaceful association—though the strongly emphasized facial symbols of the males doubtless

[1] This tendency may be the clue; it was described as a water monster instrumental in the creation and gave the food, but the identification is not beyond doubt. Cf. p. 170.

[2] American Naturalist, vol. xxii, 1888, pp. 201-207.

[3] Wild Animals I Have Known, 1898, p. 130; Century Magazine, vol. lix, 1900, pp. 656-660. In his lectures, Mr Seton-Thompson extends his interpretations to anterior as well as to posterior markings, especially the conspicuous and persistent facial features of deer, antelope, mongrel (or ancestral) dog, etc. Such facial markings seem especially characteristic of gregarious animals, and they are peculiarly significant as social symbols rather than as mere beacons for guidance in flight.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

302 blazon forth the alternative meanings of preference for peace or readiness for strife, like the calumet tomahawk of the Siouz warrior (as interpreted by Cushing). So the directive markings of the first class are substantially beacons of danger and fear, while those of the second are just as essentially standards of safety and confidence; and they may properly be designated as *beacon-markings* and *standard-markings*, respectively.[1] On seriating the two classes in terms of development, it is at once found that the beacon-markings are in large measure connected with excursive movement and are centrifugal in effect, while the standard-markings are connected mainly with incursive movement and are centripetal in effect; at the same time the latter express not only the higher intelligence, but also the greater degree of that conjustment which forms the basis of collective organization; so that the latter unquestionably represents the higher developmental stage. Now, the primary functions of these directive markings of the higher grade—signalization (or attentionization) and identification—correspond precisely with paramount needs of the alien-hating and clan-loving Seri; so that careful analysis would seem fully to justify the casual impression of functional similitude between the Seri face-painting and the directive markings of social animals.

While the first survey establishes a certain analogy between the primitive face-painting and the standard-markings of animals, an important disparity is noted when the survey is extended to individuals; for among beasts and birds the standards are usually the more conspicuously displayed by the males, while the paint devices of the Seri are confined to the females. A suggestion pointing toward explanation of this disparity is readily found in the seriation of developmental stages marked by (1) the fear-born beacon-markings, (2) the confidence-speaking standard-markings, and (3) the painted symbols; for the artificial devices coincide with an immeasurably advanced mental development, with concomitant advance in safety and peace on the one hand and in artificializing weapons on the other hand. This suggestion alone fails to explain the disparity fully, yet it raises another, growing out of the great social advancement connected with the mental development—i. e., the effect of the distinctively drastic organization of the human genus as represented by the Seri people. On considering this organization, it is found strictly maternal: the tribe is made up of clans defined by consanguinity reckoned only in the female line; each clan is headed by an elderwoman, and comprises a hierarchy of daughters, granddaughters, and (sometimes) great-granddaughters, collectively incarnating that purity of uncontaminated blood which is the pride of the tribe; and this female element is supplemented by a masculine element in the persons of brothers, who may be war-chiefs or shamans, and may hence dominate the movements of groups, but whose

302 614

[1] The fundamental distinction in term (the less valid by reason of the occasional combination of functions, or as the catalogs "chrysanthemum" interpreted by Asa Thompson.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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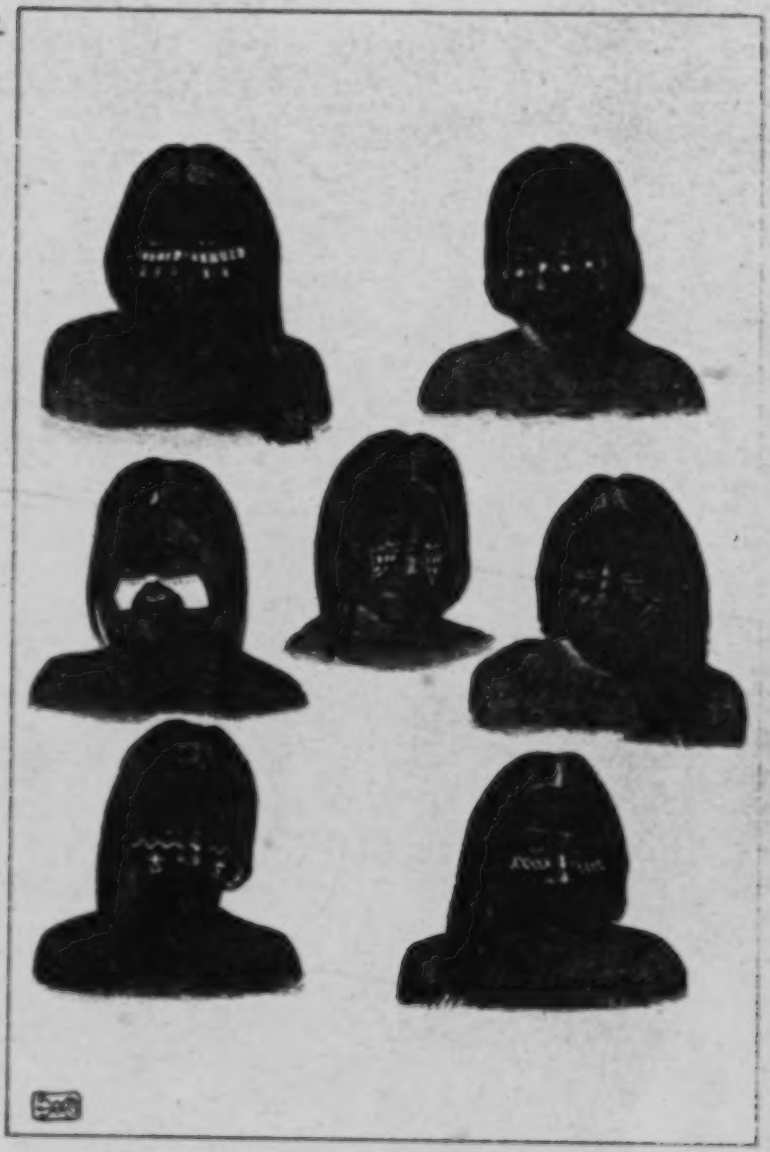

CHARACTERISTIC FACE PAINTING

(p. 168 A)

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

blood counts as nothing in the establishment and maintenance of the clan organization. Thus the females alone are the blood-carriers of the clans; they alone require ready and certain identification in order that their institutional theory and practice may be maintained; and hence they alone need to become bearers of the sacred blood-standards. The warriors belong to the tribe, and are distinguished by luxuriantly flowing hair, by the up-stepping movement from which the people derive their appellation, by their unique archery attitude, and by their dark skin-color; the boys count for little until they enter the warrior class; but on the females devolves the duty of defining and maintaining the several streams of blood on which the rigidly guarded tribal integrity depends.[1] Undoubtedly the blood-markings play an important rôle in courtship and marriage, but too little is known of the esoteric life of the tribe to permit this rôle to be traced.

In brief, the Seri face-painting would seem to be essentially *zoosematic*, or symbolic of zoic totalaries, and to signify subspecific (or subvarietal) characteristics maintained by the clan organization and kept prominent by the militant habit of the tribe; at the same time it is noteworthy that the purely symbolic motive is accompanied by a nascent decorative tendency, displayed by the individual refinement of form and color in the symbol proper to each of the groups.

DECORATION IN GENERAL.

Aside from the face-painting there is a conspicuous dearth of decoration or tangible symbolism among the Seri.

The symbolic or decorative modification of the physique would seem to be limited to two classes of mutilations, of which one was observed at Costa Rica in 1894 while the other is apparently obsolete. The observed corporeal modification is the absence of medial superior incisors of the females, in consequence of forcible removal at a period not definitely ascertained. The interpreter at Costa Rica was uncommunicative on the subject; Don Pascual opined that the mutilation formed part of an elaborate puberty ceremonial, and this opinion would seem to be corroborated by the condition of the cranium of an immature female examined by Dr Hrdlicka; but since the half-dozen adult maidens at the rancho in 1894 were free from the mutilation while all the wives bore its gruesome trace, it would seem more probable that the custom is connected with marriage. Whatever the period of the infliction, Mashém's guarded expressions seemed to indicate that it was a mark of physical inferiority; and this suggestion, interpreted in the light of the Seri use of teeth as weapons of offense and defense, would seem to indicate that the mutilation is at once the badge of corporeal inferiority and a means of maintaining the physical superiority of the males—*of course* in that theoretically fiducial but actually forceful way characteristic of primitive culture.

[1] The essentially concrete nature of Seri law and custom is set forth postea, p. 194.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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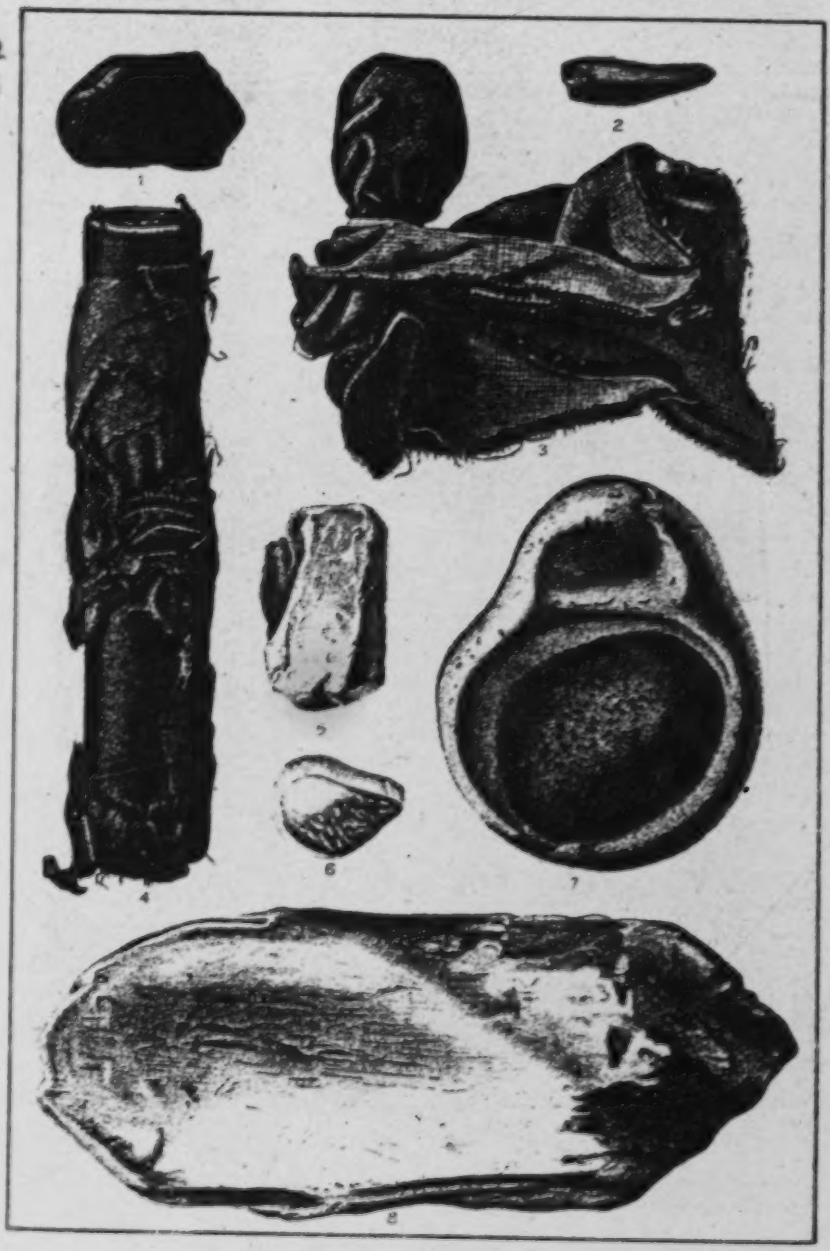

SERI FACE PAINTING PARAPHERNALIA

(p. 170 A)

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

281 apparently dried without dressing, together with
513 skins of rabbits, mountain sheep, antelope, etc, usually tattered or torn into fragments. Commonly the hides and pelts are nearly or quite in natural condition, retaining the hair, fur, or feathers. The dressing is apparently limited to scratching and gnawing away superfluous flesh, followed by some rubbing and greasing; tanning is apparently unknown. By far the most abundant of the collective possessions are the pelican-skin robes, which form
[439] the sole article of recognized barter with aliens. The aggregate stock accumulated at any time is but meager, never too much to be borne on the heads and backs of the clan in case of unexpected decamping.

412 Aside from the painting paraphernalia, there is
302 but a single conspicuous toilet article; this is a hair-brush made of yucca fiber bound into cylindrical form, as illustrated in figure 29. This article is in frequent use; both women and men give much attention to brushing their own long and luxurious locks and cultivating the hair and scalps of their children, the process being regarded as not only directly useful but in some measure sacramental. Ordinarily the hair is parted in the middle and brushed straight, the tresses being permitted to wander at will and never braided or bound or restrained by fillets save in imitation of Caucasian customs on the frontier; though in certain ceremonies the pelage is gathered in a lofty knot on the top-head.[1]

854 The Seri cradle is merely a bow of paloblanco or other switch with rude cross-sticks lashed on, as shown in figure 30. On this is laid a small pelican-skin robe, with a quantity of pelican down for a diaper, and perhaps a few pelican feathers attached as plumes to wave over the occupant's face; though on the frontier these primitive devices are largely replaced by rags.

283 Among the important appurtenances of Seri life are the cords used for belts and necklaces, as well as for the attachment of ceremonial headdresses, for converting the kilts into bags, and for numberless minor purposes. The finest of these are made from human hair; and for this purpose the combings are carefully kept, twisted into strands, and wound on thorns or sticks in slender bobbins, such as that illustrated

FIG. 31.—Hair spindle.

[1] Cf. Hardy, Travels, p. 262.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

As an illustration of the ordination in some 129
what unusual circumstances, it may be noted that when the "Seri 562
belle" (Candelaria) refused to pose for a photograph she was supported 626
by the clanmother (Juana María) until the latter was placated by presents; and that when the belle refused to obey the mother's command—to the vociferous scandal of the entire group—Juana María appealed to Señor Encinas, as the conqueror of the tribe and hence as the virtual head of both rancho and rancheria. And when a younger Seri maiden (plate XXV) similarly refused to pose, and in like manner disobeyed her mother (again to the general disgust), the latter appealed to Mashém; when he, after first exacting additional presents for both girl and mother and a double amount for himself, put hands on the recalcitrant demoiselle and forced her into the pose required, despite the shrinking and tremulous terror perceptible even in the picture.

Commonly the regimentation of family, clan, and larger group appears 592
to be indicated approximately by the placement assumed spontaneously in the idle lounging of peace and plenty. A typical placement of a small group is illustrated in plate XIV. Here the family are assembled outside the jacal, but in the relative positions which would be assumed within. The matron (a Red Pelican woman) squats in easy reach of her few and squalid possessions; on her left, i. e., in the group-background and place of honor, sits the elderwoman of the rancheria (a Turtle); then comes the daughter of the family, followed by two girl-child guests of the group, the three occupying positions pertaining to chiefs or elder brothers or, in their absence, to daughters; opposite the matron sits a younger brother,[1] whose wife is a Turtle woman (daughter of the dame in the place of honor) and matron of another jacal. A few feet behind this brother (just outside the limits of the photograph reproduced, though shown on the duplicate negative) squats the husband, with his side to the group and face toward the direction of natural approach; while the place belonging to the sons of the family on the matron's right is temporarily occupied by a White Pelican girl, together with a dog, notable in the local pack for largely imported blood and correspondingly docile disposition. The place for the babe, were there one in the family, would be on the heap of odds and ends behind the matron. As in this group so in most others, the place of the sons is vacant; for the boys are at once the most restless and the most lawless members of the tribe—indeed, the striplings seem often to ignore [858] the maternal injunctions and even to evade the rarely uttered avuncular orders, so that their movements are practically free, except in so far as they are themselves regimented or graded by strength and fleetness and success in hunting. [882]

The raison d'être of the proprietorship and regimentation reflected in 302
the everyday customs is satisfactorily indicated by that totemic feature 614
of the social organization revealed in the face-painting described in

[1] This man was one of those involved in the Robinson butchery on Tiburon island a few months before the picture was taken; and he was one of those executed or transported for the affair during the horrors between the Mex and Am expeditions.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

614 earlier paragraphs (pp. 164–169); these symbols evidently represent an
[302] exclusively maternal organization into clans consecrated to sole tutelaries. The tutelaries, or totems, together with the clan names and all personal designations connected with the totems, are highly esoteric, and were not ascertained save in the few cases mentioned above.[1]

593 It should be observed that the identification of kindred by the alien observer is difficult and somewhat uncertain, since the relationships recognized in Seri society are not equivalent to those customary among Caucasians. It was found especially difficult to identify the husband
[582] of the jacal, partly because he is commonly incongruously younger (and hence relatively smaller) than the mistress, and partly because of the undignified position of outer guard into which he is forced by the tribal etiquette. Moreover, his connection with the house is veiled by the absence of authority over both children and domestic affairs, though he exercises such authority freely (within the customary limits) in the jacales of his female relatives. There is, indeed, some question as to
[842] the clear recognition of paternity; certainly the females have no term
601 for "my father", i. e., the term is the same as that for "my mother", *em*, though the males distinguish the maternal ancestor by a suffixed syllable (*e-m*="my father"; *e-ta* or *i-taA*="my mother"), which seems to be a magnificative or an intensificative element. It is noteworthy that the kinship terminology is strikingly meager; also that while the records suggest various significant points, the material is hardly rich enough to warrant complete synthesis of the consanguineal system.

421 While the burden of the more permanent property pertains to the women, there is a decided differentiation of labor with a concomitant vesting of certain property in the warriors—the distinctively masculine chattels comprising arrows, quivers, bows, turtle-harpoons, etc. There are indications that the balsas, too, are regarded as masculine property. The impermanent possessions—water, food, etc—seem to be the common property of men, women, and children, except in so far as the
[264] right is regulated by regimentation; for the privileges of eating and drinking are enjoyed in the order of seniority. In the reckoning of
554 seniority, the chief (who is comonly such in virtue of his position as
602 nominal elder brother of a prolific dame) ranks first, and is followed by other warriors in an order affected in an undetermined way by conjugal relations as well as by their prowess or sagacity (the equivalents of age in primitive philosophy) down to an undetermined point—apparently fixed by puberty; then comes the clanmother, followed by her daughters in the order of nominal age, which is affected by the status of spouses and the number of living offspring; finally come the children, practically in the order of their strength (which also is deemed an equivalent of age), though the girls—especially those

[121] [1] The chief object of the 1895 expedition was to pursue the inquiries concerning social organization, totems, etc; but, as mentioned elsewhere, this object was defeated by the troublous history of the tribe during the earlier part of 1895, and the consequent revival and intensification of their animosity toward aliens.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

bolic weapon, the counterfeit cartridge, the imitation machete, or other charm against alien power; it is usually he who wears the white man's hat or random garment in lieu of the deer or lion mask of earlier days; and during recent years his most-prized fetish, and one which practically insures the support of his fellows, is a written certificate of his chiefship from Señor Encinas, or, still better, from El Gobernador at Hermosillo. Yet he is a throneless and even homeless potentate, sojourning, like the rest of his fellows, in such jacales as his two or three or four wives may erect, wandering with season and sisterly whim, chased often by rumors of invasion or by fearsome dreams, and restrained by convention even from chiding his own children in his wives' jacales save through the intercession of female relatives.

In 1894 the head chief was reported to be on Tiburon; the putative chief of the rancheria at Costa Rica was the taciturn giant known as El Mudo (plate XIX); while Mashem (or Juan Estorga) was the head of one of the Pelican clans.

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[648]

ADOPTION

One of the more important factors in demotic development among primitive peoples (probably second only to interclan marriage in extending sympathy and unifying law) is adoption; and special efforts were made to obtain data relating to the subject. Direct inquiries were futile, the responses indicating that the entire subject is foreign to the thought of the tribe; but three sporadic and measurably incongruous examples of quasi adoption are worthy of record.

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[124]

The most specific case is that of Lieutenant Hardy, who visited Isla Tiburon in 1826, and was fortunate in gaining the confidence of the tribe through successful medical treatment of the wife of the chief. On his second landing he was greeted with many expressions of gratitude, which were especially exuberant on the part of the daughter of the family (always a personage in Seri custom), who insisted on painting his face. He specifies:[1]

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> Not wishing to deny her the indulgence of this innocent frolic, I quietly suffered her to proceed. She mixed up part of a cake of blue color, which resembles ultramarine (and of which I have a specimen), in a small shell; in another, a white color, obtained by ground talc, and in a third was mixed a color obtained from the red flint-stone of the class which I before stated was to be found on Seal Island, and resembled cinnabar. With the assistance of a pointed stick the tender artist formed perpendicular narrow stripes down my cheeks and nose, at such distances apart as to admit of an equally narrow white line between them. With equal delicacy and skill the tops and bottoms of the white lines were finished off with a white spot. If the cartilage of my nose at the nostrils had been perforated so as to admit a small, round, white bone, five inches in length, tapering off at both ends and rigged something like a cross-jack yard, I might have been mistaken for a native of the island. As soon as the operation was finished, the whole party set up a roar of merry laughter, and called me "Hermano, Capitan Tiburon," being the very limited extent of their knowledge of Spanish.

[386]

[302]

[1] Travels, p. 288.

2: Kroeber E-5 (1930)1931 NU31 Seri NU31

As to the "total absence" (p. 285) of marriage purchase, whereas I found it, such purchase can hardly be believed to have originated wholly within the last 35 years, in view of its wide distribution in native America.

The whole matter of maternal lineages crystallized into totemic clans with matron rule (pp. 10-11, 167-8, 269 seq.) seems a fantasy. A careful reading of the passages in questions reveals how much McGee has built up on statements which he conscientiously admits to have been slender, probable only, and subject to possible misunderstanding. It must be remembered that in 1894 the matriarchate as original and primitive was still standard anthropological doctrine. At any rate, I got nothing suggesting even matrilineal reckoning in my indirect approaches to the subject, and explicit denials when it was directly presented.

That house-building may now and then be "accompanied by a chant" (p. 223) is possible, though it seems out of accord with the haphazard and shiftless methods of Seri work and the flimsy irregularity of their homes; but that the chant was "usually led by the eldest matron" seems more matriarchate.

That the Upanguayma, Guayma, and Tepoka were successively "extruded" (p. 75) would be correct if there were anything to show that the Seri were the parent stock of superior virtue, conservatism, and faithful attachment to their original habitat.

The statement (p. 11) that "kinship terms are strikingly scanty," made in the face of round-about and imperfect speech communications with the Seri, I cite only as an indication of the degree of McGee's readiness to fall back upon his preconceptions when facts became thin.

I did not note the absence of superior medial incisor teeth observed by McGee (p. 169) in married women. If a regular practise, its connection with the puberty rite would be a natural inference. But knocking out of teeth is a rare custom in America.

McGee's statements (pp. 196-7) that it is "undignified, if not wrong" to kill deer other than with the hands, and that jackrabbits are "customarily taken alive to camp," seem over-emphases. That a sense of sport or passing pride, or lack of weapons, now and then leads to such happenings, I do not doubt; but the Seri seem too practical and unromantic to exact rules on the point. I suspect that a youth who insisted on living up to them would soon be considered a vain lore. I may add that I saw a crippled wild duck hobble about the camp on Tiburon for two days, being played with occasionally by the children—without unusual roughness or unkindliness—and that finally it wandered to the water and gradually drifted off without notice being taken.

Face painting is construed by McGee as sematic of totemic line-

2: Kroeber E-5 (1930) 1931 NU31 Seri NU31

ages (pp. 164-167), and Hardy's story of his being painted is interpreted as ceremonial adoption (pp. 277-8). My conviction is that the Seri paint primarily for adornment, and that further significance is either secondary or absent. When I reached the island and about thirty people, including visitors from other settlements, were gathered to receive and inspect me, all the younger women and one or two adolescent boys were freshly and very neatly painted. After all, their ragged cast-off civilized garments were nothing to make a show with on a state occasion. In former times, the everyday-wear pelican robes would not have served much better. The ocher red, dumortierite blue, and gypsum white pigments however gave a chance for decoration and display. Three days later, when our party was an old story, some of the faces still carried paint, but it was worn, defaced, and bedraggled. It seems unlikely that people should greet strangers by decorating themselves with representations of lineage totems which they at the same time denied or tried to conceal from their knowledge. The construal of Hardy's painting as an adoption-rite rests on the same blood-kin interpretation. It was probably nothing more than an act of friendliness tinged with the simple humor of which the Seri have a strong sense.

Face painting in fact seems to be the chief if not only purely aesthetic expression of Seri culture, their mode of life and psychophysiological habits being such as almost to prohibit any other form of art. In this painting, on the other hand, they have achieved a high degree of stylization and taste. The designs I saw were throughout in the manner illustrated by McGee in his plates 13-16, 18, 20, 22, 24-26.

Ethnographically, the interest of this style lies in its similarity to the river Yuman face paintings. The Seri first of all specialize on a horizontal bar across the nose and cheeks, immediately below the eyes; in addition to this, there may be vertical elements dependent over the cheeks. The design deliberately breaks across the natural lines of the face in such a way as to orient itself with reference to the eyes without touching them. Bordering or enclosing of the eyes is avoided; neither are planes like the cheeks, forehead, or chin felt as fields to be filled in with decoration. The fundamental plan attacks the face at once drastically and subtly. That the style has both feeling and rigor is shown by the fact that none of the endless variations of color and design detail depart much from the basic scheme. That this scheme is old is shown by Hardy's description of a century ago. It is a true art of high order within its narrow compass.

The Mohave paintings[9] are somewhat freer and more variable, but also less classical or chaste stylistically. The transverse element

[9] Kroeber, Handbook, BAE-B 78, fgs. 60-62, 1925. With the Mohave, contrary to the Seri, the vertical elements predominate over the horizontal. The Gila Pima style (Russell, pl. 59), and the Havasupai (Spier, AMNH-AP 20:190, 1928), are also related.

2: Kroeber E-5 (1930)1931 NU31 Seri NU31

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302 below the eyes and the verticals below them are predominant in most cases. Even where the design extends above the eyes, it does not cover the forehead, but terminates in a straight edge paralleling the one below. Where the chin is involved, the Mohave bring solid triangles up from the jaw and then leave the chin itself blank, instead of accentuating its contour with color, as a less sophisticated style would do. Like the Seri, the Mohave are a people with deficient material culture and little dress suitable for display. The two tribal styles are unquestionably connected in their history.

2: Kroeber E-5 (1930)1931 NU31 Seri NU31

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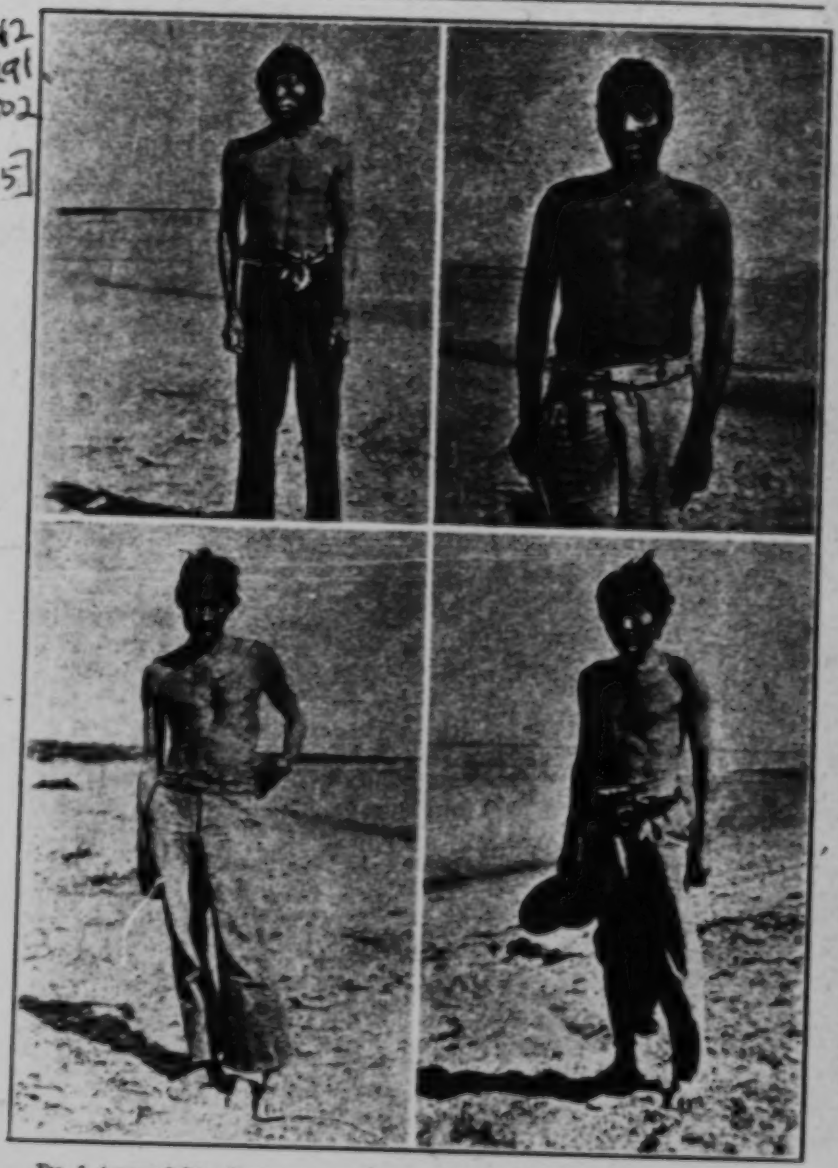

FIG. 1 (upper left). *Young man with long hair.*

FIG. 2 (upper right). *Chico Romero, official Seri chief and principal informant. The largest individual seen.*

FIG. 3 (lower left). *Elderly man of the spare Seri type.*

FIG. 4 (lower right). *Native policeman for the Mexican government.*

2: Kroeber E-5 (1930) 1931 NU31 Seri NU31

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FIG. 5 (upper left). *Maria, wife of Chico, with their baby.*

FIG. 6 (upper right). *Heavier Seri type on beach of Tiburon Island, a bay of El Infiernillo in background.*

FIG. 7 (lower left). *Men, youth, and boy.*

FIG. 8 (lower right). *On Punta San Miguel, mainland, mangroves in background.*

2: Kroeber E-5 (1930)1931 NU31 Seri NU31

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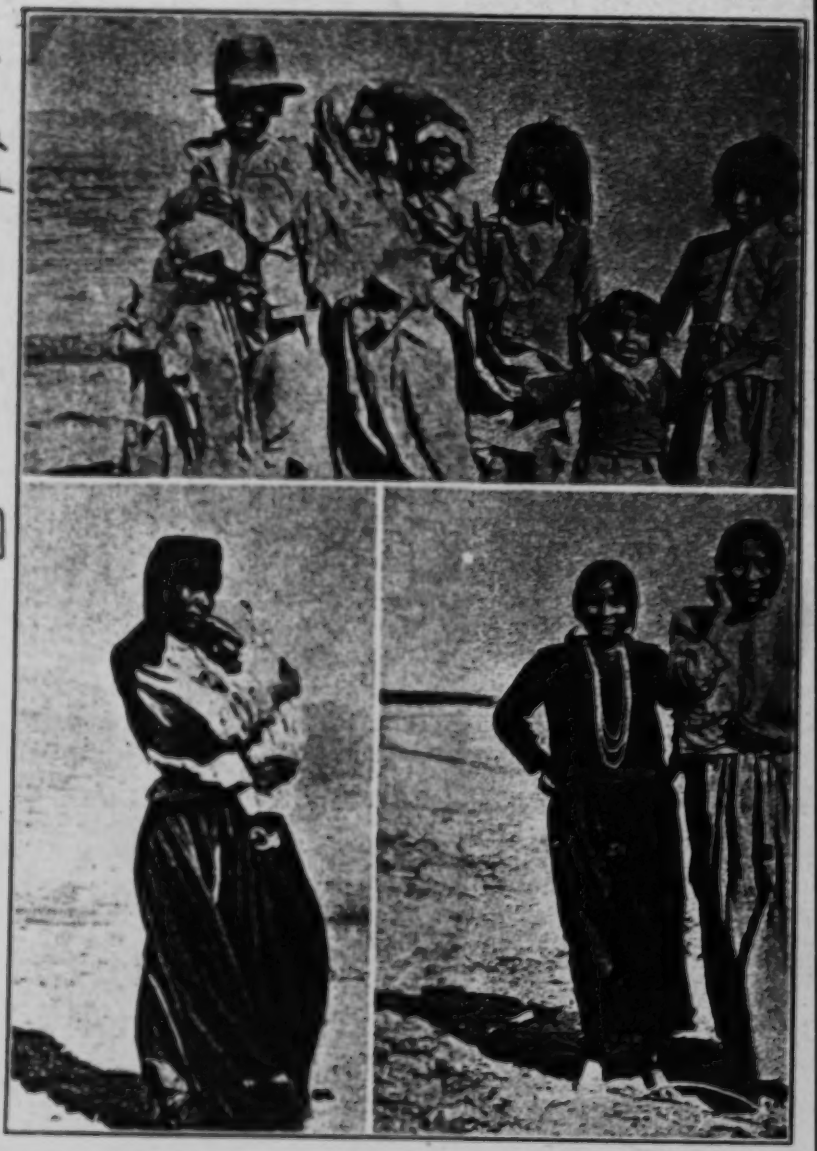

FIG. 9 (upper). *Seri children showing variety of expressions at camera experience.*
FIG. 10 (lower left). *Young woman with sickly baby.*
FIG. 11 (lower right). *Two girls, the shorter unmarried.*

3:Davis & Dawson E-5 (1922-1940) 1945
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FIG. 10. SERI BELLE
WEARING A PAINTED DESIGN SUCH AS FORMERLY WAS INDICATIVE OF THE BLOOD LINE OF A GIVEN CLAN.

264 but, the rotting flesh and cartilage of its noisome interior to be explored and mouthed by the toddling children or gnawed by the cringing coyote-curs attached to the rancheria.

223 At certain seasons or when deemed propitious by the elders of the family, a pelican harvest was planned. Isla Tasne, some fifteen miles from Tiburon Island, is the haunt and breeding ground of the pelican that served not only as a valuable food supply for the Seris, but also as the chief source of apparel. At such seasons temporary rancherias were set up on the shores of Bahia Kino, and when conditions were favorable, or when hunger prompted them, the balsas [502] would be launched in the evening toward Isla Tasne, the women of the party lying prone on the cane bundles and propelling the craft by paddling with their hands or with large hatchet clam shells. Reaching the island after dark, the balsas were left in charge of the women while the men and older boys, armed with clubs, crept up over the slippery, guano-covered rocks to rush on the roosting fowls and slaughter them. The [264]

[p. 99(B)]

3:Davis & Dawson E-5 (1822-1942) 1965
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FIG. 11. PAINTING THE FACE
USING A RED PIGMENT OBTAINED FROM THE TORPEDO.

223 lice-infested carcasses were then gathered
264 and brought to a central place among the stinking rocks where a gluttonous feast was held in the dark, the long ahungered tribesmen gorging themselves with the soft entrails and succulent parts, and carousing in the carnage until overcome by slumber.

281 The day following the slaughter, the
294 matrons collected the carcasses with least damaged plumage and carefully removed the skins, which were then gnawed and sucked clean of flesh and grease and dried in the sun (Fig. 8). From two or more of these skins they made a kilt or robe (Figs. 1, 2), the principal apparel, not so much for protection from cold as from the scratch and prick of the abounding spines and thorns of Seriland. The skins were sewed with sinew and often held in place on the body by a
283 cord made of human hair (Fig. 1). The
302 culture of their long, luxuriant hair, indeed, was an important matter. They brushed their hair regularly with a brush fashioned

[p. 200(A)]

2:Davis & Dawson I-5 (1923-1960) 1945
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283 from coarse, wiry grass stems, and saved all
302 the brushings to be used in the making of strong threads and cords.

The fleetness of foot and remarkable physical endurance of these people attest to the
147 rigorous and difficult life in Seriland where
481 the ability of an individual to survive a season of want depended upon the reserve energy of his own body by which he could carry himself long distances in search of food and yet have strength to return to a waterhole, left miles behind. The slender, sinewy limbs and capacious chests of the Seris, in whom no trace of obesity has ever been observed, show clearly the result of untold centuries of selection of the strong by the severity of the environment, where water,
[312] too heavy for transport, too difficult of storage, is yet always within reach of an organism strong enough to journey ten, twenty, or even fifty miles in search of it.

Perhaps the most severe physical exercise
224 practiced by the Seris was the chase of animal game, particularly since it was often resorted to only after a period of weakening hunger which prompted the all-out effort to obtain adequate food supply. Days of wandering over the deserts in search of vegetable food were sometimes unrewarded, and although rabbits were to be had for the chase, they were too small to be of much consequence in the feeding of a family. The deer were fairly plentiful and provided excellently for a lasting feast.

The deer hunt was conducted by several tribesmen without weapons. When an animal was sighted it was followed by one and circled by others of the party, chased until frantic and exhausted, whereupon one of the men rushed upon it, threw it to the ground and caved in its skull with a stone.

The most avidly sought prey in the Seri chase were the helpless young and heavily pregnant does which were pursued and rent to fragments with a horrible fury, particularly with intent upon the succulent tidbits afforded by the fetal flesh.

222 A time of ease and plenty came each summer, for usually in late May or June the cactus plants with which Seriland abounds begin to mature their fruits. In the foothills of Sierra Seri on the mainland, great

3:Davis & Dawson E-6 (1925-1940) 1945
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222 forests of giant cacti (Fig. 9) provide during this season an unlimited supply of "pitahayas" toward which the tribespeople customarily moved to accomplish the annual harvest. The fruits were readily knocked down by means of long poles and, when ripe, the spines were easily brushed off, leaving a luscious pulp as big as a fig. During the height of the season all the clans withdrew from the coast and gave their undivided attention to the collection and consumption of the cactus fruit, gorging tremendous quantities for weeks until waning supply and cloying appetite drove them back to the more severe hunt for turtle and pelican.

252 262 514 Perhaps the only germ of thriftiness in the Seris is shown by a peculiar custom with respect to the pitahayas. The fruits, eaten in such enormous quantity, were imperfectly digested, the hard-coated seeds particularly passing through the body unchanged. Using [45] [25] large seashells, the feces containing these seeds were collected and preserved with some care. Thus, when the harvest of fresh fruits was over, there remained a hoard of these dry, nutritious discharges which were ground on the stone abat, winnowed in a shallow basket and made into a meal to be eaten, either dry, as a watery atole, or mixed with turtle grease to form a thick paste.

614 Although the Seri's omnipresent problems of food-getting and of personal subsistence have been of particular interest, the lost social customs of the tribe deserve a moment's attention. Before the death of all [161] but a few of the 2,000–3,000 Seris at the hands of invading Spaniard and Mexican, the tribe consisted of a number of conspicuous maternal clans, each of which was presided over by a sole tutelary such as the Pelican, the Turtle, the Rattlesnake, or the Badger. The totemic symbols denoting the 302 various beast-gods and incidentally indicating the blood-carriers of clans dedicated to 386 them, consisted of elaborate designs painted 614 upon the face (Fig. 10). In accord with their savagery in which the social organization was based on blood kinship reckoned in the female line, under ordinary circumstances, the faces only of the females were painted. Colored minerals pounded to powder afforded the pigments for the paint-

[p. 201(A)]

3:Davis & Dawson E-6 (1923-1940) 1945
MU31 Smi MU31

[142]
[291]
[487]
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[231]
[853]

FIG. 12. SERI MOTHER AND BABE

SERI MOTHERS COMMONLY HAVE TOO MUCH MILK AND FREQUENTLY RELIEVE THEMSELVES BY SUCKLING AN ORPHANED PUPPY OR SOMETIMES EVEN A BABY PIG.

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ing, and were carried in cane tubes. The paints were carefully prepared, applied, and preserved, and, as indispensable feminine accompaniments even on the longest journeys, were among the most highly prized of the people's possessions. The importance of the face-painting custom, established in the old tribal life, remained strong even as the slaughter of the warring tribe progressed

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[p. 201(B)]

S:Davis & Dawson E-5 (1922-1949) 1965
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302 614 and the maternal clans disappeared. Today, with the entire tribe numbering no more than 150 persons, the meaning of the painted symbols has become vague and meaningless with respect to the nonexistent clans, yet the custom persists, now largely for personal adornment, and even a male tribesman may sometimes be seen squatting before little dishes of pigments, peering into a ten cent store mirror as he carefully applies the colors (Fig. 11).

619 Had it not been for the Seris' intolerance of aliens they might today constitute a numerous and thriving people, or at least have been absorbed by the polyglot Mexican popu-

[p. 202 (A)]

3:Davis & Dawson E-5 (1922-1940) 1945
MU21 San MU21

372 773 it take its two hands, rub them over its head and then rub them together a few times? The Indians noticed this and in this way we were taught by this little fly how to make fire by rubbing a stick back and forth between our two hands."

773 In response to comments about the nocturnal howling of the coyote, Chico told another interesting tribal legend. "A long time ago all fleris were birds or animals. The badger had charge of the saints or gods, which were little images carried in a pouch and hung around his neck by black strings.

[142] [302]

[643] FIG. 19. CHICO ROMERO
WHO SUCCEEDED OLD JUAN TOMAS AS CHIEF OF SERIS.

Coyote got to quarreling with badger and, watching his chance, grabbed the bag, tore it loose and ran off with it, giving his derisive laugh as he ran, and ever since coyote has been laughing at badger and all others.

[p.266(A)]

7: Marroquin E-5 (1955) 1957 NU31 Seri NU31

Distribución geográfica

000 Los indios seris viven en dos pequeñas poblaciones de la costa del Estado de Sonora, frente al Golfo de California, en Desemboque y en Punta Chueca. De allí pasan con alguna frecuencia a la Isla de Tiburón en el mencionado Golfo de California.

En Desemboque viven aproximadamente 35 familias seris y en Punta Chueca 16. Tan solo en el primero de estos dos lugares se hallan establecidas 5 familias "yoris" (mestizas).

Problemas sanitarios

Los seris carecen de defensa ante ciertas enfermedades que, como el sarampión y la gripe, adquieren en sus relaciones con los "yoris"; estas enfermedades causan muchas defunciones entre los indígenas.

[302]
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Familia indígena seri de Desemboque, Sonora. *Foto Enriqueta Yarchesco.*

Según el anciano seri Chico Romero, último gobernador seri, hubo una fuerte epidemia de viruela allá por 1897, que causó la muerte de una tercera parte de la tribu que se encontraba residiendo en Costa Rica, ranchería de la costa de Sonora.

En 1955 se propagó el sarampión entre los seris, ocasionando gran número de víctimas, niños y adultos; la actividad del maestro rural Leo Sandoval, del lingüista Eduardo Mosser y de las autoridades sanitarias de Hermosillo, lograron contener la mortalidad; no obstante, el número de defunciones llegó al 5 % del total de la población nativa.

Geographical Distribution

The Seri Indians live in two small Indian villages on the coast of the Gulf of California, State of Sonora, Desemboque and Punta Chueca. From there they frequently go to Isla Tiburón in the Gulf of California. 131 [484]

Approximately 35 Seri families live in Desemboque and 16 in Punta Chueca. Only in the first of these two places are there five "yori" (mestizo) families. 162 [563]

Sanitary Problems

The Seris have no defense against certain diseases which, like measles and flu, they acquire in their relations with the "yoris"; these diseases cause many deaths among the Indians. According to the an- 164 731 [751]

[291] [854] [302]

Seri Indian woman of Desemboque, Sonora. *Photo Henriette Yurchenco.*

cient Seri Chico Romero, last Seri Governor, there was a great smallpox epidemic there about 1897 which caused the death of a third of the tribe which was living in Costa Rica, a small ranch on the coast of Sonora.

In 1955 measles appeared among the Seris, with a great number of victims, children and adults; the actions of the rural teacher Leo Sandoval, the Linguistic Eduardo Mosser and of the sanitation authorities of Hermosillo, succeeded in keeping the mortality rate down; nevertheless, the number of deaths reached 5% of the total native population. [165] [744]

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Seri Indians

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Blind Seri Indian, 1939
Best paddler we had

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Candelario completes his decoration one of our paddlers - 1936

123 handed to show their friendliness.

142 One was a young man with rather pleasant features, his braided
291 hair hanging below his shoulders. His name was Antonio Herrera. The
123 other was a wild-looking specimen called Ramon Blanco. His hair was a
[302] tangled mat with a short braid behind, suspicious black piercing eyes,
long sparse moustache and chin-beard hiding a broad cruel mouth. He
[411] wore the remnants of an old sweater, a short dirty kilt, or skirt,
nearly to his knees, a belt full of cartridges, mostly empty, and a
long knife in a rawhide scabbard.

123 The young man had been baptized and given a name by Roberto, who
[785] had acted as godfather or *patrona*, many years ago. He wore a hat,
[291] jacket, and pants of blue denim, and *guaraches*, or sandals of rawhide.

We shook hands all around and then they called and halloed in the brush and soon three women and a lot of children, wild and half-
[415] clothed, filed into camp. The women were tall, gaunt, unkempt, ragged
[482] and barefooted, paying us not the slightest notice. They were bearing
[423] on their heads large baskets filled with all their earthly posses-
[854] sions---cooking ollas, scraps of cloth, pieces of turtle meat, bone
[231] brads, hair brushes, and odds and ends. They carried, also, an infant or two wrapped in odd bits of rags. Several gaunt dogs followed in their wake.

342 In all, three families came trailing in, removed their household equipment from their heads and resumed their interrupted and primitive
[542] housekeeping. Each family occupied its apartment in the row of brush shelters, separated from each other only by brush partitions with a total lack of privacy. These shelters, always open to the sea, serve as shade from the fierce rays of the sun, and also as windbreaks, but
[361] are no protection from infrequent rains. They are occupied only for a brief period and then their nomadic tenants move on to fresh *cahuama*, or sea turtle range.

123 Soon, a third man arrived while we were near the huts, Manuel
[142] Encina. He was a man of sixty-five, gray hair and mustache, seamed features, and not evil looking. He was out of breath. He had gone for water to the same water hole where we had been yesterday, struck our tracks, had left his water cans and hurried back to warn his people. He was greatly relieved to find friends.

Since he had gone for water, inquiry revealed there had been no water in camp for two days, and six adults and one girl of thirteen and six children were thirsty. We gladly gave them one of our five-
[225] gallon cans of water and they were very grateful. They had caught a
[262] sea turtle the day before and gave us some turtle steaks which looked like beef or mutton.

312 As the camp was without water and we were running short, the young
482 man and Encina offered to get some. Each took a *palanca*, or short
123 shoulder pole with knotched ends, fitted empty five-gallon cans in

Seri - wild boy - 1924

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[297]

Seri child

261 will exist on very small rations, bear burdens, and walk long dis-
262 tances. Their food is anything that walks, flies, crawls or swims,
[253] and they eat it raw with the same relish that we eat it cooked. There is but one thing they will not eat; they draw the line on the Gila monster. They are the most perfect type of human being adapted to desert conditions that exists today. Convey them blindfolded many miles into the heart of the desert, empty-handed, remove their blinders, and they will find both food and water where others would perish. The Papagos and Yaquis do almost as well."

302 We gave the women a small bag of flour and three or four cubes of
[123] sugar around, and the men three packets of tobacco each and two boxes of matches. Matches with them are very precious and are rarely used. Rather than use a match a woman came over to our fire and borrowed some coals to rebuild her fire. From this point the nearest matches are a good deal over one hundred and twenty miles distant, so they have to economize in every thing.

422 Each rag is valuable, and flour, sugar, coffee and rifle shells
[434] are absolutely priceless. While they know money, it has no value here.
[437] Only commodities go here. The most highly prized things are boards to
[389] make boats and rifle shells to get game and protect themselves. All empty shells are saved, the primer punched out, straightened, a match head put in, a little pinch of powder on top, the shell filled up, a long bullet inserted, the shell pinched tight, and a fresh set of ammunition is made.

142 The women and children certainly did look wild. Their hair was
291 frowsy and unkempt, their skirts and waists a patchwork of dirty rags
302 coming just below the knees; their features seamed and hard and cruel. Their complexion was very dark. They had no under garments. The children wore only a dirty shirt coming a little below their thighs, and even that is ragged. One or two of the women had a dirty bandanna over their heads. How I wished I could have seen them in their ancient, picturesque pelican-skin kilts!

302 I happened to witness the operation of a Seri beauty parlor. A
[029] mother brushed the hair of her thirteen-year-old daughter with a brush
[293] made from the fibrous roots of a certain grass tied together with
[515] sinew. During the operation if she came across a *piojo*, and she found several, she plucked him away from his feeding ground and dropped him in the fire.

The hair neatly brushed, the mother then mixed paint in a small vessel and with a tiny stick painted a bright blue design under the eyes and across the cheeks and nose, and then she added narrow white stripes, which, contrasting with the blue and the dark skin, produced a very striking effect. This paint is easily removed and the women often paint and remove three different face designs in one day.

304 I did not see tattoo work on either men or women, nor did they
301 wear ceremonial feathers as did our western Indians.

wear ceremonial feathers as did our western Indians. I saw no skin or cutaneous disease, or evidence of tuberculosis or of trachoma---the curse of our Indians.

One boy-child of five years was a handsome child---fat, round, sturdy, with roving great black eyes, large thick lips, a picture of perfect health. He was almost naked. His hair was done in a pigtail with a red string braided into it. His face like all the others was dirty, but he waded into the shallow water with a short spear and I saw him catch two crabs with his little harpoon. The water did not bother his face.

They had no plates or eating tools, except large deep clam shells, cast up by the sea, which served as cups and dippers. Their long, keen belt knives were used for cutting, carving or skinning, and always the fingers for eating. They gathered in a circle around an olla of seeds of long grass growing on the sea bottom prepared by winnowing, parching and grinding, and then cooked with turtle oil. Each one dipped his or her fingers into the olla and conveyed them to the mouth without losing a drop, and licked them off with great relish.

The dogs eat with the family. There were six or seven half-starved ones. If someone picked up a piece of turtle flipper the dog often took the first lick at it, bit off a piece or licked it before it reached the owner's mouth. The dogs were not punished. They were just slapped to keep them out of the pots.

We had a great time that evening in Seriland. The young man played his violin. This consisted of a hollow box cut out of a *palo verde* tree, and a piece of pine about sixteen inches long; terminating in a hollow where a single peg was fitted. The one string was twisted deer sinew, and the bridge was a small round clam shell at the far end. The bow was a small bent stick and some black horsehair. On the handle was a wad of rosin fastened underneath. By fingering this string a few weak squeaky notes were made, and this was the classical music of the Seris.

Manuel Encina seized his gourd rattle and began chanting. Herrera tapped a tin can and I beat on an inverted basket and the orchestra was in full swing. A young girl, Rosa, dragged out a turtle shell and standing on it began to dance. This dance consisted of stepping up and down quickly with each foot alternately, and this stamping, barefooted, emitted a hollow sound. Every once in a while I let out an Indian yell which pleased the Seris very much. For two hours they had a real swell time. We took one flashlight of the proceeding.

Each family was in their hut, which afforded very slight shelter as they were only partially roofed over and the sides were broken down in places. The huts were all adjoining and each had a little campfire, which did not give much illumination, so the dancing was in semi-darkness.

[text continues on p. 163]

10: Davis E-5 (1922-ca.1939) 1965 NU31 Seri NU31

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Poised for harpooning sea turtles off Tiburon Island - 1936

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The catch

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Seri faces

10: Davis E-5 (1922-ca. 1939) 1965 NU31 Seri NU31

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Seri young man

Seri Indian

123 [202] It was a beautiful morning in early May, and the water was still as a pond, reflecting all the sunrise tints like a mirror. After a breakfast of clams and broth, bread and sand and bronco tea, we made a big smoke and were answered by a similar smoke two miles off, so we knew our friends were on the way.

123 482 [415] In one hour they began trailing in, the women each with a load on her head, walking graceful and erect. On one head was an inverted turtle shell containing nearly all the family belongings done up in rags. On the top was the most precious belonging of all---the rifle. The man carried two or three ollas and other things on a shoulder stick. Everything necessary for their home was carried on their heads.

123 Soon the Indian Blanco was seen paddling in his *balsa;* he also had a load and had paddled all the way from Ironwood camp against wind and sometimes tide. As they were all very thirsty we gave them water around. They immediately went to the shore as it was low tide, and began gathering small oysters from the rocks. Soon each woman returned with a half bushel of them on her head.

About three o'clock and for an hour or so thereafter, Antonio Herrera, the Chief's son Chico, the old Chief Juan Tomas, two other men and one woman, came drifting into camp with their dogs. Each one was loaded with things. They were a pretty wild looking bunch. There was very little food and little water for so many.

648 731 The Chief said that a day or two before, some of his men had a fight with some sailors (Mexicans) on the Island of San Estevan four or five miles off the south west corner of Tiburon. Nobody was killed, but the two boats, the wealth of the Island, had drifted away and were lost, leaving eight men marooned on the Island. They had gone there to gather *sescal* to make drink to celebrate a wedding to come off soon. Three men were five days without water. They sent up frantic smoke signals every day. At last they were seen, and help went for them in the only remaining boat on the Island. They were rescued.

648 484 123 The Chief and his men and women, with us, are going to Hermosillo ninety miles afoot with all their belongings to ask the Government for food and help.

142 [622] The Chief looks to be seventy years old, a grim dark-skinned individual with a thin fringe of hair on his upper lip, broad nose, wide nostrils, small black eyes. He is well-built and erect. None of these that I have seen so far have any fat. They are lean and sinewy. [302] [291] The young men are of large build, high cheek bones, some with hair on their lips, their long black hair braided; sometimes with a strand of red worsted. All were either barefooted or wore sandals. I saw one pair of sandals made out of turtle hide; another of burro hide.

648 123 When the Chief arrived, the sail of a vessel was seen over the beach. Bob recognized it as belonging to a launch of a Yaqui Indian

[text continues on p. 180]

123 but nothing happened.

123 We reached Hermosillo at three in the afternoon, and as we landed
622 Roberto and Sara met us, and Roberto embraced me. Then the Seri
[116] Indian Chief rushed up and fairly hugged me in his joy at seeing me again. A timid wild-looking Seri boy, of fifteen years of age, shyly shook hands with the *Americano*, while all the Mexican men and women, fully one hundred in number, looked on open-mouthed and wide-eyed, to see the Chief of the wildest and lowest of savage Indians in North America, rush up and embrace a white man.

We all climbed into Roberto's auto-truck, and my things were brought to Hotel Cohen, and then we all went to Roberto's home and stayed all the afternoon. He had just returned from the coast the day before, and Juan Tomas was determined to come also and greet me, and the boy---a nephew---hung on to the Chief, and finally Roberto said he would have to return on foot if he brought him. Juan Tomas said that made no difference. He would walk to the coast eighty or ninety miles, if only he could come.

[291] He was probably seventy-five years old. He wore a hat, but his
[302] hair was straggly and he had a slight moustache. He wore shirt and trousers and a dirty kilt---remanent of the Pelican-skin-kilt---around his waist, and he was barefooted. The boy had a not unpleasant face, long wild hair, shirt, pants, and a cotton kilt reached to his knees. He, too, was barefooted.

I gave the Chief a knife, and the boy a red crayon and fifty cents. With the crayon he made a V on his kilt. He was very shy and always kept in a shadow, or in the background, and he spoke no Spanish although he knew the Spanish alphabet.

Sara showed some photographs and postcards in a baloptican in a dark room, and among them were pictures of some Seris and myself. These created much excitement with the Chief and the boy, and they jabbered together in the Seri language with animation. They recognized some of the subjects, their own people.

584 Juan Tomas is to be married soon to an elderly Seri dame, and we
622 have been invited to attend the fiesta. He has been laying in the
648 trousseau for the bride, and several gallons of mescal. A steer or
123 burro will have to be provided, and all the fixin's and nothing will be left undone to make a very festive occasion. When asked to show us his gifts he reluctantly brought forth a package which he carefully unwrapped and disclosed eighteen yards of *manta*, two red pieces and one pink piece of Calico, some red handkerchiefs, and one box for painting the face. He carefully wrapped these up again and put them in the room set apart for him and the boy.

[608] The woman he is to marry has no male relatives from whom she can
[583] be bought, so the Chief appointed a man and created him Uncle *pro-tempore*, and to him the Chief is going to give a rifle and a blanket as the purchase price. Pretty high!

123 Clustered near this well were brush windbreaks joined together, divided
[36] by brush partitions all open on one side. Here were gathered several
[3/2] Seri families. There was no such thing as privacy or seclusion.
[3/2]

As soon as we stopped and unloaded we were immediately surrounded by a curious, half-starved mob of forty men, women and children, about fifteen to twenty children. All dirty, all ragged, all hungry. Some of them I recognised: others were new to me.

While preparing and eating our supper this motley crowd formed a circle about us and hungrily watched every mouthful. We gave them a little food and an orange all around, and they finally left. By that time we had also finished our bread and coffee and followed to the brush shelters.

535 A dance was immediately started. A place was hollowed in the sand,
123 a few short planks placed over it, and the dance was on. Music was
[53] furnished by men tapping on an inverted basket and chanting. Only one man danced at a time. Sand was thrown over the planks and the Indian danced a shuffle, scraping his bare feet on the boards. He held a staff in his right hand and danced to a song called in Spanish *El*
[37] *Toro*. Later on other dancers performed, then gave us the *venadó* (deer) dance, taught them by the Yaquis.

This dancer represents a timid deer, hopping up and down to the time of a rattle held in the right hand, and the chanting of the singers. The *venado* dancers stooped over frequently, turning first to one side and then the other to look behind. Manuel Encina was the *venado* and Chico Romero, a very large young Seri, acted the part of a coyote, crawling and jumping on all fours and barking and every once in a while biting the calf or thigh of the *venado*, then jumping back and barking. It was acted with great realism, and the onlookers, especially the children, enjoyed it immensely.

A wilder, more barbaric scene was probably seldom witnessed in America than this gathering of Seris on the shores of the Gulf of California, dancing the *venado*. The camp fire threw a flickering light over dark fierce faces with low foreheads and frowsy unkempt hair.
[30] One man, Luis Torres, the head "ship carpenter" with a moustache and chin beard, his hair low-down framing his dark face, looked like a savage from the wilds of New Guinea. Another, Santo Blanco, a secondary chief below Juan Tomas, has a straggling moustache curling over cruel projecting lips which rarely smile, while his fierce black eyes peering through his black thatch of hair, have a perpetual scowl. The monotonous sing-song chant accompanied by the soft roar of the surf added an indescribable eeriness and weirdness to the dark night.

123 We soon turned in as it was then eleven o'clock, and we all fell asleep lulled by the waves of the sea.

10: Davis E-5 (1922-ca.1939) 1965 NU31 Seri NU31

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Seri Indians at home

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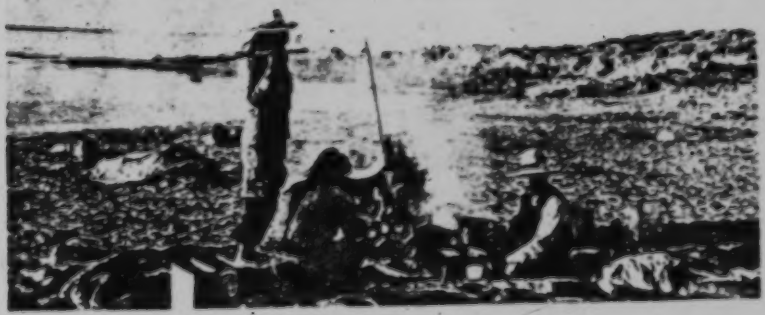

Seri Indians preparing their meal

177 been fastened with a string---each child eager for a safety pin. A
123 little child two and a half years old was shoved forward for a pin, its round black eyes dancing with anticipation, but its dress had no opening in front, so I laughed and shook my head and everyone appreciated the joke. But, not to be defeated, a little girl untied the child's waist from behind and spread it open, exposing its little brown body from head to feet, and called my earnest attention to it. I then pinned up the dress. Then the older ones crowded around me, but I had used up a whole paper of pins, so I shook my head. I gave the empty paper to an eager child, although a dozen hands were outstretched for it. By making the children happy I pleased the parents.

123 By this time the flour soup was thick and ready, and Roberto baled it out with a cup into the various vessels eagerly outstretched to receive it. As the cup would drip, little hands caught the priceless drops before they reached the sand. As each got his proportion he began sticking his fingers into the mess and licking them off. Many took their *pinole* to camp and the others secured a taste also. A small piece of bread dropped into the sand was snatched up, by a child, from under the nose of a dog. She rubbed off the sand and devoured it.

When all had vanished to their various camps I opened the box of candies---small round drops of green, red and yellow. I filled our coffee pot and went to each camp and gave each man, woman and child about ten candies..

439 Since I wanted shell necklaces, the women had combed the beaches
123 and gathered plenty of shells, and strung them while resting. This evening they were draped about their necks, and they wished to trade, so I traded for about a dozen---one small round mirror for one, five needles for another, five safety pins for another, blue face paint for another. Mirrors were most in favor.

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206 *Seri outside beauty parlor*

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Maria Jesusa - Great grand-daughter of Lola Casanova and Coyote Iguana. She is self-conscious and embarrassed to face the white man's magic box for the first time. Her face is decorated in blue, in a typical Seri design. Her features are more regular and attractive than the pure Seri and her clothing shows more taste and pride than her half sisters. Taken at La Cruz, island of Tiburon---E.H.D.

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[301]

Seri beauties

10: Davis E-5 (1922-ca. 1939) 1965 NU31 Seri NU31

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Juan Tomas - Chief of Seris, 1922

622 Thus passed a very striking character among the primitive races of Sonora, Mexico. He was brave and fearless in battle; crafty, cautious, and cunning in attack; cruel and merciless to his enemies. He was rarely caught off his guard, and always managed to extricate himself and his men from difficult situations. He was quick to think and act, and was wise with the wisdom learned at first hand on desert and sea from a rugged nature, reluctant to give up her secrets. He was a master hand at *balsa* building, a good hunter, fisherman, harpooner of *cahuama* (sea turtle), a good surfman, a good gambler, and an expert [575] tracker. It was not unusual to possess two or three wives, but the old Chief, while married three times, had only one wife at a time. He was quite fond of the writer, and used to greet him with the true Mexican *abrazo*.

[123] It was in 1922 that I first met the grim old warrior on the shores of Tiburon, whither I had gone on a quest for the Museum of the American Indian, Heye Foundation, New York.

[142] He was very dark, of medium height, thick set, with a broad, deep chest, very muscular, with shaggy brows and deep set eyes which, even at that age, ninety years, burned like coals of fire, and were sus- [302] picious and wary. He wore a braided pigtail down his back which con- 290 tained a few gray hairs. For clothing, he wore a ragged shirt and an [411] old pair of overalls, with a short kilt hanging from a belt, through which stuck a long naked knife of hoop iron, ground on abrasive rocks and keen as a razor.

[291] From infancy to the grave, the freedom of his feet was never [489] hampered by shoes. Even at that advanced age, and until his last illness, he was perfectly able to care for himself, and follow his nomadic tribe on its devious trails along the coast and far in the interior. A walk of a hundred miles was not unusual. For ten rifle cartridges a Seri Indian once walked forty or fifty miles to deliver my message to Juan Tomas. From the time we first met, our friendship was never broken.

12: Moser L-5 (no date) 1964
(ca. 1960) NU31 Seri NU31

SERI BLUE

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ABSTRACT

The blue which the Seri Indians of Sonora, Mexico, use in face painting is not the mineral dumortierite, as previously believed, but is a prepared pigment. This paper is a description of the process in which three elements are combined to produce this pigment.

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McGee and Kroeber reported the mineral dumortierite as the source of the blue pigment used in Seri face painting (McGee 1898: 165-6; Kroeber 1931: 27). Coolidge described two blues, one a mixture of gypsum and a boiled root, the other a blue stone found on Tiburon Island (Coolidge 1939: 200). Xavier mentioned dumortierite and commercial bluing. She also referred to a third blue obtained from a plant on Tiburon (Xavier 1946). Present investigation has shown that as far as the Seri know, the only blues they have ever used are *ika?óil* "to cause to be blue" (commercial bluing) and the highly prized *?antezj kóil* "blue clay" of their own manufacture.[1]

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The components and the method of manufacture of *?antezj kóil* are said to have been taught to the women long ago by *?ant i?akímxoj* "they who tell the things about the earth." The actual color transformation is veiled in mystery to the Seri who say that if the process of making the clay is observed by any girl who has not passed the menarche, the blue will not appear. Its appearance is not attributed to shaman power, however.

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?antezj kóil has been in less demand during the last few decades since commercial bluing has been readily available. Nevertheless, *?antezj kóil* is the blue preferred by those women who continue to adorn their faces in the traditional manner.

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The three ingredients used in making the blue clay are the root bark of *xkoktz (Franseria dumosa)*, *iki kóizj* "to grind with" (a mixed clay in which montmorillonitic layers predominate), and *mokni óoxW* "excrement (sap) of *mókni (Guaiacum coulteri)*." The Seri say that the *iki kóizj* and the *mókni* are found only on Tiburon Island. The root bark of *tinkl (Franseria ambrosioides* Cav.) or of *xneejan siiktoj (Stegnospermum halimifoliam)* can be used instead of *xkoktz*. *tinkl* gives a distinct aroma to the clay. The plants mentioned are fairly common along the Sonoran coast.*

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*EDITOR'S NOTE: It is interesting to note that none of the ingredients is blue in its unaltered state.

To use the clay as paint, a bit of water is placed on a stone and the clay is rubbed into it to make a paste. It is then applied to the face (Fig. 4). It spreads smoothly and adheres firmly to the skin. The blue was formerly used for decorating pottery, clay figurines, headdresses, fetishes, arrows, wrist guards, and cane gaming sticks, as well as for face painting. In curing the sick, the shaman sometimes used the blue for painting crosses on the patient's chest. Also, women made necklaces using beads formed from the blue clay.

FIG. 4. Painting the face with the finished pigment.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

142 Amerindian[1] average; the feet are set straight in walking, as befits the pedestrian habit; the arms are not elongated, and the thighs seem no [144] longer in proportion to other elements of the stature than are those of the highest human types. In like manner the bodies are notably free from artificial deformation; the skulls are not flattened or otherwise ●[304] distorted; there is no scarification, or even tattooing; neither ears nor lips are pierced for pendants or labrets; the teeth are not filed or drilled, though in some cases at least the first incisors of females are extracted; and while there are trustworthy records of the piercing of the nasal septum for the insertion of pendants, no examples were found at Costa Rica in 1894. The food habits and other customs of the tribe indicate, or at least suggest, more or less specialized and perhaps distinctive internal characters; but, without actual examination of the organs, these inferred characters demand little more than passing notice.

On reviewing the more prominent somatic characters of the Seri, it is found that the greater number are either functional or preeminently correlated with function, and that only a few—chiefly stature and color—are simply structural; accordingly a comparison of the peculiar somatic features and the peculiar individual habits of the tribe would seem to be instructive in more than ordinary degree.

361 The most striking trait of the Seri is the pedestrian habit. The warriors and women and children alike are habitual rovers; their jacales and even their largest rancherias are only temporary domiciles, evidently vacant oftener than occupied; the principal rancherias are separated by a hard day's journey or more; and none of the known [312] rancherias or jacales of more persistent use are nearer than 4 to 10 miles from the fresh water by which their occupants are supplied. Probably the most persistently occupied rancherias of the last half century have been those located from time to time near Costa Rica, yet even these were seldom occupied by the same group for more than a fortnight or possibly a month, and were often vacated within a day or two after erection. Still more temporary camps intervene between jacales, and their sites may be seen in numbers in the neighborhood of the better-beaten paths, or along the shores, or even over the trackless spall-strewn plains; they may be merely trampled spots, sparsely strewn with oyster shells and large bones gnawed at the ends, usually in the lee of a shrub or rock; in places of small shrubbery or exceptionally abundant grass there may be two or three or perhaps half a dozen "forms" (suggesting the temporary resting places of rabbits), in which robust bodies nestled and shrugged themselves into the warm earth and under the meager vegetation. Rarely there are ashes and cinders hard by, to mark the site of a tiny fire, and more frequently battered and stained or greasy bowlders record their own use as meat-

[1] The term *Amerind* (with the self-explanatory notations *Amerindian*, *Amerindic*, etc.) has been established by the Anthropological Society of Washington as a convenient collective designation for the aboriginal American tribes (American Anthropologist, new series, vol. 1, 1899, p. 562).

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

blood counts as nothing in the establishment and maintenance of the clan organization. Thus the females alone are the blood-carriers of the clans; they alone require ready and certain identification in order that their institutional theory and practice may be maintained; and hence they alone need to become bearers of the sacred blood-standards. The warriors belong to the tribe, and are distinguished by luxuriantly flowing hair, by the up-stepping movement from which the people derive their appellation, by their unique archery attitude, and by their dark skin-color; the boys count for little until they enter the warrior class; but on the females devolves the duty of defining and maintaining the several streams of blood on which the rigidly guarded tribal integrity depends.[1] Undoubtedly the blood-markings play an important rôle in courtship and marriage, but too little is known of the esoteric life of the tribe to permit this rôle to be traced.

In brief, the Seri face-painting would seem to be essentially *emblematic*, or symbolic of zoic tutelaries, and to signify subspecific (or subvarietal) characteristics maintained by the clan organization and kept prominent by the militant habit of the tribe; at the same time it is noteworthy that the purely symbolic motive is accompanied by a nascent decorative tendency, displayed by the individual refinement of form and color in the symbol proper to each of the groups.

DECORATION IN GENERAL

Aside from the face-painting there is a conspicuous dearth of decoration or tangible symbolism among the Seri.

The symbolic or decorative modification of the physique would seem to be limited to two classes of mutilations, of which one was observed at Costa Rica in 1894 while the other is apparently obsolete. The observed corporeal modification is the absence of medial superior incisors of the females, in consequence of forcible removal at a period not definitely ascertained. The interpreter at Costa Rica was uncommunicative on the subject; Don Pascual opined that the mutilation formed part of an elaborate puberty ceremonial, and this opinion would seem to be corroborated by the condition of the cranium of an immature female examined by Dr Hrdlička; but since the half-dozen adult maidens at the rancho in 1894 were free from the mutilation while all the wives bore its gruesome trace, it would seem more probable that the custom is connected with marriage. Whatever the period of the infliction, Mashém's guarded expressions seemed to indicate that it was a mark of physical inferiority; and this suggestion, interpreted in the light of the Seri use of teeth as weapons of offense and defense, would seem to indicate that the mutilation is at once the badge of corporeal inferiority and a means of maintaining the physical superiority of the males—of course in that theoretically fiducial but actually forceful way characteristic of primitive culture.

[1] The essentially sacerdotal nature of Seri law and custom is set forth *postea*, p. 204.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

301 The second mutilation was the only corporeal modification noted by early missionaries and explorers—it was the perforation of the nasal [304] septum for the insertion of a skewer, perhaps of polished stone (though doubtless more commonly of bone), to which swinging objects were attached. One of the most useful records is that of the Jesuit, Padre [114] Joseph Och, who described the nasal attachment as a small, colored stone suspended by cords from the perforated septum, and guarded with such jealous veneration that "one must give them at least a horse or a cow for one" (ante, p. 78); while according to Hardy's record, the nasal fetish is "a small, round, white bone, 5 inches in length, tapering off at both ends, and rigged something like a cross-jack yard."[1]

[237] [291]

FIG. 7.—Snake-skin belt.

The custom is apparently obsolete, and nothing is known directly of details or motives.

Excepting these mutilations the corporeal decoration of the Seri is 301 apparently limited to the face-painting: among the 60 individuals at 304 Costa Rica in 1894 there was no trace of tattooing or scarification of face, limbs, or body; there were no labrets or earrings, and neither lips nor ears were pierced, nor were nasal septa observed to be perforated in accordance with the reputed ancient custom; the teeth were neither filed nor drilled; no indications of amputation or other maiming (save the removal of the incisors) were observed—indeed, the instinct for physical markings of symbolic or decorative character, which seems to be normal to primitive men, was apparently satisfied by the prevalent and persistent face-painting among the females.

291 The extra-corporeal decorative devices are of a meagerness and pov-

[1] Travels, p. 286.

2: Kroeber E-5 (1930)1931 NU31 Seri NU31

114 583 As to the "total absence" (p. 285) of marriage purchase, whereas I found it, such purchase can hardly be believed to have originated wholly within the last 35 years, in view of its wide distribution in native America.

114 614 The whole matter of maternal lineages crystallized into totemic clans with matron rule (pp. 10-11, 167-8, 269 seq.) seems a fantasy. A careful reading of the passages in questions reveals how much McGee has built up on statements which he conscientiously admits to have been slender, probable only, and subject to possible misunderstanding. It must be remembered that in 1894 the matriarchate as original and primitive was still standard anthropological doctrine. At any rate, I got nothing suggesting even matrilineal reckoning in my indirect approaches to the subject, and explicit denials when it was directly presented.

114 342 That house-building may now and then be "accompanied by a chant" (p. 223) is possible, though it seems out of accord with the haphazard and shiftless methods of Seri work and the flimsy irregularity of their homes; but that the chant was "usually led by the eldest matron" seems more matriarchate.

114 174 That the Upanguaymá, Guayma, and Tepoka were successively "extruded" (p. 75) would be correct if there were anything to show that the Seri were the parent stock of superior virtue, conservatism, and faithful attachment to their original habitat.

114 601 The statement (p. 11) that "kinship terms are strikingly scanty," made in the face of round-about and imperfect speech communications with the Seri, I cite only as an indication of the degree of McGee's readiness to fall back upon his preconceptions when facts became thin.

114 304 I did not note the absence of superior medial incisor teeth observed by McGee (p. 169) in married women. If a regular practise, its connection with the puberty rite would be a natural inference. But knocking out of teeth is a rare custom in America.

114 224 McGee's statements (pp. 196-7) that it is "undignified, if not wrong" to kill deer other than with the hands, and that jackrabbits are "customarily taken alive to camp," seem over-emphases. That a sense of sport or passing pride, or lack of weapons, now and then leads to such happenings, I do not doubt; but the Seri seem too practical and unromantic to exact rules on the point. I suspect that a youth who insisted on living up to them would soon be considered a vain bore. I may add that I saw a crippled wild duck hobble about the camp on Tiburon for two days, being played with occasionally by the children—without unusual roughness or unkindliness—and that finally it wandered to the water and gradually drifted off without notice being taken.

114 302 614 Face painting is construed by McGee as sematic of totemic line-

261 will exist on very small rations, bear burdens, and walk long dis-
262 tances. Their food is anything that walks, flies, crawls or swims,
[252] and they eat it raw with the same relish that we eat it cooked. There is but one thing they will not eat; they draw the line on the Gila monster. They are the most perfect type of human being adapted to desert conditions that exists today. Convey them blindfolded many miles into the heart of the desert, empty-handed, remove their blinders, and they will find both food and water where others would perish. The Papagos and Yaquis do almost as well."

302 We gave the women a small bag of flour and three or four cubes of
[123] sugar around, and the men three packets of tobacco each and two boxes of matches. Matches with them are very precious and are rarely used. Rather than use a match a woman came over to our fire and borrowed some coals to rebuild her fire. From this point the nearest matches are a good deal over one hundred and twenty miles distant, so they have to economize in every thing.

422 Each rag is valuable, and flour, sugar, coffee and rifle shells
[436] are absolutely priceless. While they know money, it has no value here.
[437] Only commodities go here. The most highly prized things are boards to
[389] make boats and rifle shells to get game and protect themselves. All empty shells are saved, the primer punched out, straightened, a match head put in, a little pinch of powder on top, the shell filled up, a long bullet inserted, the shell pinched tight, and a fresh set of ammunition is made.

142 The women and children certainly did look wild. Their hair was
291 frowsy and unkempt, their skirts and waists a patchwork of dirty rags
302 coming just below the knees; their features seamed and hard and cruel. Their complexion was very dark. They had no under garments. The children wore only a dirty shirt coming a little below their thighs, and even that is ragged. One or two of the women had a dirty bandanna over their heads. How I wished I could have seen them in their ancient, picturesque pelican-skin kilts!

302 I happened to witness the operation of a Seri beauty parlor. A
[924] mother brushed the hair of her thirteen-year-old daughter with a brush
[293] made from the fibrous roots of a certain grass tied together with
[515] sinew. During the operation if she came across a *piojo*, and she found several, she plucked him away from his feeding ground and dropped him in the fire.

The hair neatly brushed, the mother then mixed paint in a small vessel and with a tiny stick painted a bright blue design under the eyes and across the cheeks and nose, and then she added narrow white stripes, which, contrasting with the blue and the dark skin, produced a very striking effect. This paint is easily removed and the women often paint and remove three different face designs in one day.

• 304 I did not see tattoo work on either men or women, nor did they
301 wear ceremonial feathers as did our western Indians.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

133 fortable haven at high tide, it is mostly mud-flat and sand-waste at extreme low tide—a condition which explains the stranding of an 80-foot whale in this treacherous harbor about 1887. The rada is between two and three miles in length. It abounds in marine life of
136 kinds preferring quieter waters: clams are plentiful in its mud-flats, a sponge lines portions of the bottom toward its inner extremity, oysters cluster numerously on bowlders and on the mangrove-like roots and trunks of a large shrub along the outer shore, and various fishes find refuge here from the fierce currents and the hungry sharks and porpoises of the open strait; these and other creatures form food for innumerable waders and other water-fowl that seek shelter in the quiet bay, which is still further protected by salt-enduring shrubbery on the bars of the point and by the shrubby thickets and wave-cast banks and wind-built dunes on the mainland side.

The combination of conditions renders this portion of the Tiburon
361 coast the optimum habitat of the Seri Indians. There are, indeed, no houses or other traces of permanent habitation on Punta Tormenta itself, which is not only swept by gales but must sometimes be inundated by gale-driven waters at high spring tide; but at the inner end of the long sand-spit, and also on the mainland opposite the outer portion of Rada Ballena, there are extensive and well-kept rancherias, capacious enough to accommodate comfortably thirty or forty Seri families, i. e., 150 or 200 persons. Toward its landward end the sand-spit is built
311 largely of pebbles and cobbles, of which thousands of tons are adapted to industrial use; sea-food is practically unlimited and is readily taken; water-fowl literally crowd the protected rada within arrow-shot of natural cover; the outer slope of the bar is admirably suited for landing and embarking balsas in calm weather, while the bay is an ideal harbor for the portable craft, and the shrub-grown shores give unlimited opportunity for concealing them when not in use; the dunes and banks are high enough to protect the low jacales from storm-winds, while the abundant sponges and turtle-shells afford material for thatching and shingling the more exposed walls and roofs; and finally,
[312] it is but a favorite distance (about 4 miles) to the permanent fresh water of Tinaja Anita. From this Seri metropolis well-trod trails
487 radiate toward all other parts of the island; the best beaten leads to the tinaja, sending branches into all the neighboring gorges, in which game is sometimes taken; next best-worn is the trail laid across Sierra Kunkaak to strike Arroyo Carrizal mid-length of its permanently wet portion; others pass northward to rancherias at different points on the coast, and still another skirts the coast southward by several smaller rancherias to the considerable jacal collection near Punta Narragansett—this, like other longshore routes, having alternative trails, the evanescent fair-weather one following the beach, while the permanent path threads the thorn-set thickets marking the crest of the sea-cliff or cuts across the longer salients. The Narragansett rancheria is

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133 of the water: the product of the semiannual storms suffices to form a meager supply of ground water, which is diffused in the sands and softer rocks of the plains, and concentrated in the narrow channels carved through the dense granites of the sierras; and enough of the flow passes the barriers to supply deep wells in the terminal fan, as at the frontier ranchos Libertad (abandoned) and Santa Ana, just as the subterranean seepage from the Sonora more richly supplies the deep well at San Francisco de Costa Rica. In these lower reaches the mineral salts, normally present in minute quantities, are concentrated so that the water from these wells is slightly saline, while deeper in the desert the scanty water is quite salt.

133 In Seriland proper the distribution of potable water is conditioned
312 by the meager precipitation, the local configuration (shaped largely by sheetflood erosion), and the disturbance of equilibrium of the scanty ground-water due to the tilting of the province. The most abundant permanent supply of fresh water is that of Arroyo Carrizal, which is fed by drainage and seepage from the broad and lofty mass of pervious rocks forming the southern part of Sierra Kunkaak, the abundant supply being due to the fact that the eastern tributaries are energetically retrogressing into the mass in deep gorges which effectually tap the water stored during the semiannual storms. The arroyo and valley of Agua Dulce are less favorably conditioned by reason of a trend against the tilting of the province and by reason of the narrower and lower mass of tributary rock in the northern part of the range, and the flow is impermanent, as indicated by the absence of canes and other stream plants; yet four explorers (Ugarte, 1721; Hardy, 1826; Espence, 1844; Dewey, 1875) reported fresh water, apparently in a shallow well tapping the underflow, at the embouchure of the arroyo. On the eastern slope of Sierra Kunkaak there are several arroyos which carry water for weeks or even months after the winter rains, and sometimes after those of summer; but the only permanent water—Tinaja Anita—is at the base of a stupendous cliff of exceptionally pervious and easily eroded rocks, so deeply cut that ground-water is effectually tapped, while an adjacent chasm—Arroyo Millard—is so situated that the cliff-faced spur of the sierra above the tinaja absorbs an exceptional proportion of the surface flowage from the main crest. The tinaja (figure 3) is permanent, as indicated by a canebrake some 20 by 50 feet in extent, and by a native fig and a few other trees—though the dry-season water-supply ranges from mere moisture of the rocks to a few gallons caught in rock basins within the first 50 yards of the head of the arroyo. No other permanent supplies of fresh water are known on the island, though there are a few rather persistent tinajas along the western base of Sierra Menor above Willard point.

On the mainland tract there is a cliff-bound basin, much like that of Tinaja Anita, at the head of Arroyo Mitchell and base of Johnson peak, christened Tinaja Trincheras; but the range is narrow and the rocks

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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granitic, and hence the supply is not quite permanent.[1] A practically permanent supply of water is found in one or more pools or barrancas at the head of Playa Noriega in Desierto Encinas. The liquid lies in pools gouged by freshets in the bottoms of arroyos coming in from the northward, just where the flow is checked by the spread of the waters over the always saline playa; and, since they are modified by each freshet, they are sometimes deep, sometimes shallow, sometimes entirely sand-filled. When the barrancas are clogged, or when their contents are evaporated, coyotes, deer, horses, and vaqueros obtain water by excavating a few feet in the sand lining the larger arroyos. Commonly the barranca water is too saline for Caucasian palates save

FIG. 3—Tinaja Anita.

in dire extremity, but the salinity diminishes as the arroyos are ascended. An apparently permanent supply of saline and nitrous water is found in a 10-foot well, known as Pozo Escalante, or Agua Amarilla (yellow water), near the southern extremity of Desierto Encinas, reputed to have been excavated by Juan Bautista de Escalante in 1700, and still remaining open; its location is such that it catches the subterranean seepage from both Bacuache and Sonora rivers. The water is potable but not palatable. Among the vaqueros of San Francisco de Costa Rica there is a vague and ancient tradition of a carrizal-marked tinaja or arroyo (Aguaje Parilla) at the eastern base of the southern portion of Sierra Seri; and both vaqueros and Indians

[1] Tinaja Trinchera was entirely dry and without trace of carrizal in December, 1894.

1:McGee E-5 (1894-1895)1898 NU31 Seri NU31

133 refer to one or more saline barrancas about the western base of the
312 same semirange, probably in Arroyo Mariana.

In brief, Arroyo Carrizal, Tinaja Anita, and Pozo Escalante are the only permanent waters, and Pozo Hardy, Barranca Salina, and Tinaja Trinchera the only subpermanent waters actually known to Caucasians in all Seriland, though it seems probable that permanent water may exist at Aguaje Parilla and in Arroyo Mariana, and impermanent supplies near Bahia Espence. There may be one or two additional places of practically permanent water in smaller quantity, and a few other places in which saline water might be found either at the surface or by slight excavation, and which may be approximately located by inspection of the map under guidance of the principles set forth in the preceding paragraphs; but this would seem to be the limit of trustworthy water supply. During the humid seasons the waters are naturally multiplied, yet it is improbable that any of the arroyos except Carrizal and Agua Dulce and a few minor gulches along the more precipitous shores shed water into the gulf save at times of extraordinary local flood.[1]

133 The geologic structure of the Sonoran province is complex and not well understood. So far as the meager observations indicate, the basal rocks are granites, frequently massive and sometimes schistose, sometimes intersected by veins of quartz, etc. The granitic mass is upthrust to form the nuclei of Sierra Madre and other considerable ranges; it also approaches the surface over large areas of plains. Resting unconformably on the granites lie heavy deposits of shales and limestones, commonly more or less metamorphosed; these rocks outcrop on the slopes of most of the main ranges and form the entire visible mass of some of the lower sierras and buttes, while they, too, sometimes approach the surface of the sheetflood-carved plain. The rocks, both calcareous and argillaceous, combine the characters of the vast Mesozoic limestone deposits of eastern Mexico and the immense shale accumulations of corresponding age in California, and hence probably represent the later half of the Mesozoic. This is the only sedimentary series recognized in the province. Both the granites and the sedimentary beds are occasionally overlain by volcanic deposits, chiefly in the form of much-eroded lava-sheets and associated tuff-beds, which sometimes form considerable ranges and buttes (notably Sierra Kunkaak, of Isla Tiburon); these remnantal volcanic deposits are probably late Mesozoic or early Tertiary. Newer volcanics occur locally, forming mesas, as about Agua Nueva (40 miles northwest of Hermosillo), or even coulees apparently filling barrancas of modern aspect, as in the vicinity of Bacuachita,[2] or rising into cinder cones surrounded by

113 [1] The physiographic features of the Sonoran province in general are treated in greater detail in a paper on Sheetflood Erosion, Bull. Geol. Soc. Am., vol. VIII, 1897, pp. 87-112, and in a paper on Papagueria, Nat. Geog. Mag., vol. IX, 1898, pp. 365-371; while certain local features are described in a paper on Seriland, prepared jointly with Willard D. Johnson, Nat. Geog. Mag., vol. VII, 1896, pp. 125-133. The aggregate available fresh water of Seriland is estimated on p. 121.

[2] Noted by Willard D. Johnson.

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[1] The term *Amerind* (with the self-explanatory notations *Amerindian*, *Amerindic*, etc.) has been established by the Anthropological Society of Washington as a convenient collective designation for the aboriginal American tribes (American Anthropologist, new series, vol. 1, 1899, p. 562).

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

blocks or metates, though it is manifest that most of the camps were fireless and many foodless. It is particularly noteworthy that even the more temporary resting-places are seldom if ever less than a mile or two from the nearest fresh water. In short, the Seri are not a domiciliary folk, but rather homeless wanderers, customarily roving from place to place, frequently if not commonly sleeping where overtaken by exhaustion or storm, ordinarily slumbering through a part of the day and watching by night, habitually avoiding fresh waters save in hurried and stealthy visits, and apparently gathering in their flimsy huts only on special occasions.

In conformity with their rovinguess the Seri are notable burden-bearers. They habitually carry their entire stock of personal belongings (arms, implements, utensils, and bedding), as well as their stock of food and—weightiest burden of all—the water requisite for prolonged sustenance amid scorching deserts, in all their wanderings, the water being borne chiefly by women, in ollas, either balanced on the head singly or slung in pairs on rude yokes like those of Chinese coolies. And they have never grasped the idea of imposing their burdens on their bestial associates; their coyote-curs are not harnessed or even led; when they surround and capture horses, burros, and kine they make no use of ropes, never think of mounting even when pursued by vaqueros, but immediately break the necks or club out the brains of the beasts, perchance to tear the writhing body into quarters and flee for their lives with the reeking flesh still quivering on their sturdy heads and brawny shoulders—and scores of vaqueros agree in the affirmation (wholly incredible as it would be if supported by fewer witnesses) that even when so burdened the Seri skim the sand wastes of Desierto Encinas more rapidly than avenging horsemen can follow.

The hardly conceivable fleetness of the Seri is conformable with their habitual rovinguess and their ability as burden-bearers; and this faculty is established by cumulative evidence so voluminous and consistent as to outweigh the presumption arising from the standards attained among other peoples. A few minutes after they were photographed, the group of boys shown in plate XVI, with several others of about the same size, provided themselves with a stock of their favorite human-hair cords, "rounded up" a dozen mongrel coyote-dogs haunting the rancheria at Costa Rica, and herded the unwilling animals toward a shrubbery-free space a quarter of a mile away, in order to rope them in imitation of the work of the Mexican cowboys earlier in the morning. From time to time as they went a frightened cur sneaked or broke through the cordon of boys, and made for distant shrub-tufts at top speed; yet in every case a boy darted from the ring, headed off the animal within one or two hundred yards, and lashed it back to its place. On arriving at their miniature rodeo the boys widened their ring, and at a signal scattered and frightened the dogs; then, when the fleeing animals had a fair start, each selected his victim and fol-

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

147 do swift stroke and strong grasp and dexterous digitation, are mainly
182 such as urge manual development more strenuously than would be normal among tribesmen connected with their environment through the medium of tools. The demand for manual strength and skill is intensified among the Seri by both natural and domestic conditions; the ever-ready (and almost the sole) material suitable for simple adjunct to the hand abounds in the form of wave-worn cobbles; these cobbles are easily usable in such wise as to serve all ordinary purposes, and their abundance discourages the production of more highly differentiated tools; while their habitual use promotes manual strength and deftness, coupled with that digital freedom (required, for example, in grasping a ball) which most clearly distinguishes the human hand from the subhuman paw. Conjoined with these natural conditions are domestic demands tending to cultivate manual fitness and eliminate the manually unfit; for, in addition to the direct industrial premium on dexterity, through which the dexterous survive while the clumsy starve, there is a special premium growing out of the marriage custom, through which
[143] only the manually efficient (and at the same time morally acceptable) are put in the way of leaving lines of descendants.[1] Naturally, in view of the combination of factors, all traceable directly or indirectly to environmental conditions, the Seri afford a peculiarly striking example of cheirization extended to an entire tribe (if not to a genetic stock of people)—indeed the remarkably developed Seri hands and feet first suggested the importance of this process of human development and led to its formal characterization.

Accordingly, the robust-bodied and slender-limbed yet big-fisted and
143 big-footed Seri seem to be adjusted, so far as several of their more
182 striking somatic characters are concerned, to distinctive habits themselves reflecting a distinctive habitat; and the coincidences appear to reveal and establish the law of interaction between the human organism and its environment—an interaction effected through the habits and hence through the normal functioning of the individual organisms as constrained through their collective relations. And recognition of the
147 law of interaction opens the way to consideration of other correspond-
143 ences between structures and functions and environing conditions.
182 Conspicuous among the more strictly functional traits of the Seri is
● 312 the intensity of action characteristic especially of the warriors, though in less degree of the entire tribe—an intensity made all the more striking by contrast with the extreme inertness between streams. Manifestly the capacity for concentrated effort is in harmony with the tribal habits, themselves reflecting habitat. The resource of prime importance in Seriland—that which directly and constantly conditions the very existence of human inhabitants—is potable water. This prime source of life is too heavy to be transported and too unstable to be stored with the facilities of primitive culture, yet it is always within reach of an organism strong enough to journey ten or twenty or fifty

[1] The marital customs of the tribe are described [illegible], pp. 150-161.

1: McGee E-5 (1894-1895)1893 NU31 Seri NU31

miles in search of it, and acute enough to follow trails and indications. Naturally the meager water-supply serves as a mechanism for sorting out and preserving the strong and the acute, and for eliminating the weakly and the dull; and hence the tribe have developed a faculty, or perhaps a potentiality, of distinctive sort—the potentiality of providing against thirst-death by a reserve power in the organism itself rather than in the form of mechanical devices such as characterize higher culture. Quite similar are the relations to the resource of second importance, i. e., ordinary food. Habituated to dispensing with storage and transportation of their primary resource, and accustomed to finding food whenever forced to sufficiently active effort to obtain it, the Seri have never grasped that first principle of thrift expressed in the accumulation of food supplies; and accordingly they intuitively rely on successful fishing or chase or search of vegetal edibles for sustenance, and habitually delay effort until they are stirred into activity by the pangs of hunger. Naturally this improvidence serves as another mechanism for perpetuating families of stored vitality, and especially those able to prevail over swift or strong or cunning quarry by sustained vigor and alertness after prolonged deprivation; and the effect of this mechanism, too, is to develop a reserve power in the organism itself, in lieu of the material reserve made through thrift in higher culture. Similar in their consequences are the relations of the individual organisms to the third industry of Seriland, i. e., navigation of the gale-swept and tide-troubled waters. Even the buoyant balsa can not weather the williwaws or ride the tideripa of El Infiernillo without exercise of the utmost strength and skill on the part of the navigators; while the often persistent storms may delay for days embarkation on voyages in quest of fresh water or food. Naturally, the frequent delays and not infrequent perils of such navigation constitute a mechanism for selecting navigators possessed of reserve powers adequate to meet desperate emergencies with vigor and judgment even after enervating waits for wind and tide, while those not so well endowed are either brought up to standard in their hard training school or expelled from their class by drowning or dashing on the rocks, as may happen; so that the effect of this mechanism also is to preserve individuals and perpetuate generations characterized by reserve power, and hence to develop latent potentiality in the tribe. Now, the normal product of these and other natural mechanisms immediately reflecting environmental conditions is capacity for sports, or for intense functioning under severe stress, despite accentuation of the stress by thirst or hunger or exhaustion, or by all combined—i. e., the effect of habitat and habit is to produce precisely such a somatic regimen as that so conspicuously displayed by the Seri folk. So the intensified activity with long intervals of inertness, simulating the habits of carnivorous and some other lower animals, and hence suggesting primitive condition, would appear to be largely a phylogenetically acquired character expressing specific adjustment to environment.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

INDUSTRIES AND INDUSTRIAL PRODUCTS

105 The pacific vocations of the Seri are few. They are totally without agriculture, and even devoid of agricultural sense, though they consume certain fruits and seeds in season; they are without domestic animals, though they live in cotoleration with half-wild dogs, and perhaps with pelicans; and they are without commerce, save that primitive and inimical interchange commonly classed as pillage and robbery. Accordingly, their pacific industries are limited to those connected with (1) sustentation, chiefly by means of fishing and the chase; (2) navigation and carrying, (3) house-building, (4) apparelling, and (5) manufacturing their simple implements and utensils; and these constructive industries are balanced and conditioned by the destructive avocation of (6) nearly continuous warfare.

FOOD AND FOOD-GETTING

● 312 The primary resource of Seriland is raised to the first place in realized importance only by its rarity, viz, potable water—a commodity so abundant in most regions as to divert conscious attention from its paramount role in physiologic function as well as in industrial economy. The overwhelming importance of this food-source is worthy of closer attention than it usually receives. Classed by function, human foods are (1) nutrients, including animal and vegetal substances which are largely assimilated and absorbed into the system; (2) assimilants, including condiments, etc, which promote alimentation and apparently aid metabolism; (3) paratriptics, or waste preventers, including alcohol and other stimulants, which in some little-understood way retard the waste of tissue and consequent dissipation of vital energy; and (4) diluents, which modify the consistency of solid foods and thereby facilitate assimilation, besides maintaining the water of the system. Classed by chemic constitution, the foods may be divided into (1) proteids, or nitrogenous substances, including the more complex animal and vegetal compounds; (2) fats, or nonnitrogenous substances in which the ratio of hydrogen and oxygen is unlike that of water, and which are second in complexity among animal and vegetal compounds; (3) carbohydrates, or nonnitrogenous compounds of carbon with hydrogen and oxygen in the proportions required to form water, which are among the simpler vegetal and animal compounds; and (4) minerals, chiefly water, with relatively minute quantities of various salts. Both classifications are somewhat indefinite, largely because most articles of food combine two or more of the classes; yet they are useful in that they indicate the high place of the simple mineral water among food substances. Quantitatively this constituent stands far in the lead among foods; the human adult consumes a daily mean of about 4½ pounds of simple liquids and 2½ pounds of nominally solid, but actually more than half watery, food; so that the

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

average man daily ingests nearly 6 pounds of water and but little over 1 pound of actually solid nutrients. Thus the ratio of the consumption of liquid food to that of solids is (naturally, in view of that readier elimination of the liquid constituent so characteristic especially of arid regions) somewhat larger than the ratio of water to solids in the human system, the ratios being nearly 6:1 and 4:1, respectively.[1] This analysis serves measurably to explain the peculiarly developed water-sense of all desert peoples, a sense finding expression in the first tenets of faith among the Pueblos, in the fundamental law of the Papago, and in the strongest instinct of the Seri; for among folk habituated to thirst through terrible (albeit occasional) experience, water is the central nucleus of thought about which all other ideas revolve in appropriate orbits—it is an ultimate standard of things incomparably more stable and exalted than the gold of civilized commerce, the constantly remembered basis of life itself.

The potable water of Seriland is scanty in the extreme. The aggregate daily quantity available during ten months of the average year (excluding the eight wettest weeks of the two moist seasons) can hardly exceed 0.1 or 0.2 of a second-foot, or 60,000 to 125,000 gallons per day, of living water, i. e., less than the mean supply for each thousand residents of a modern city, or about that consumed in a single hotel or apartment house. Probably two-thirds of this meager supply is confined to a single rivulet (Arroyo Carrizal) in the interior of Tiburon, far from the food-yielding coasts, while the remainder is distributed over the 1,500 square miles of Seriland in a few widely separated aguajes, of which only two or three can be considered permanent; and this normal supply is supplemented by the brackish seepage in storm-cut runnels, as at Barranca Salina, or in shallow wells, as at Pozo Escalante and Pozo Hardy, which is fairly fresh and abundant for a few weeks after each moist season, but bitterly briny if not entirely gone before the beginning of the next. The scanty aggregate serves not only for the human but for the bestial residents of the Seri principality; and its distribution is such that the mean distance to the nearest aguaje throughout the entire region is 8 or 10 miles, while the extreme distances are thrice greater.

The paucity of potable water and the remoteness of its sources naturally affect the habits of the folk; and the effect is intensified by a curious custom, not fully understood, though doubtless connected with militant instincts fixed (like the habits of primitive men generally) by abounding faith and persistent ritualistic practice—i. e., the avoidance of living waters in selecting sites for habitations or even temporary camps. Thus the principal rancherias on Tiburon island, about Bahia Ballena, are some 4 miles from Tinaja Anita, the nearest aguaje; the

[1] The place of water among food substances is more fully discussed in The Potable Waters of Eastern United States, 14th Ann. Rpt. of the U. S. Geol. Survey, 1894, pp. 5-6; the physiologic consequences of deprivation of water are outlined in The Thirst of the Desert, Atlantic Monthly, April 1898, pp. 483-489.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

312 361 extensive rancherias near Punta Narraganzett measure 10 miles by trail from the same aguaje; the half dozen jacales about Campo Navidad are separated by some 15 miles of stony and hilly pathway from the alternative watering places of Tinaja Anita and Arroyo Carrizal;[1] and the huts crowning the great shell-heap of Punta Antigualla—one of the most striking records of immemorial occupancy in America—are nearly or quite 10 miles by trail from Pozo Escalante, and still further from Aguaje Parilla, the nearest sources of potable water. These are but typical instances; and while there are ruined huts (evidently regarded as temporales) near the dead waters of Barranca Salina and Pozo Escalante, they tell the tribal policy of locating habitations in places surprisingly remote from running water. Like other desert folk, the Seri have learned to economize in water-carrying by swigging incredible quantities on their occasional visits to the aguajes; it is probable, too, that their systems are inured, somewhat as are those of [271] the desert animals that survive deprivation of water for days or months, to prolonged abstinence from liquid food; yet it seems safe to assume that at least half of the water required in their vital economy (say 2 or 3 pounds apiece daily, on an average) is consumed after transportation over distances ordinarily ranging from 4 to 12 miles. Under these conditions the Seri have naturally produced a highly developed water industry; they are essentially and primarily water-carriers, and all their other industries are subordinated to this function.

147 312

415 Concordantly with their customs, the Seri have a highly differentiated aquarian device in the form of a distinctive type of olla, which is remarkable for the thinness and fragility of the ware, i. e., for largeness of capacity in proportion to weight. Representative specimens are illustrated in plates XXXII and XXXIII (the former painted, as already described). The dimensions of the two vessels are as follows: painted olla, height 34 cm. (13½ inches), mean diameter 32.5 cm. (12¾ inches); plain olla, height 32 cm. (12½ inches), mean diameter 33 cm. In both specimens the walls are slightly thickened at the brim, those of the painted vessel measuring about 4 mm. and those of the plain vessel about 4.5 to 5 mm. in thickness. Below the brim the walls are thinned to about 3 mm., as is shown in the fractured neck of the painted specimen. The capacity of these Seri vessels in proportion to their weight, compared with that of typical examples of ware produced by other desert peoples, is shown in the accompanying table.

171 415 Comparison of the mean ratios indicates that the Seri ware is almost exactly twice as economical as that of the Pueblos—i. e., that its capacity is twice as great in proportion to the weight of the vessel; and that

[122] [1] The preciousness of water in this hard province was impressed in the 1895 expedition, during which the cost of the commodity, reckoned on the basis of the time and labor involved in obtaining it, was estimated at $10 or $12 per gallon, or about the wholesale price of the finest champagnes.

105 groups or clans between the waterholes and
182 their temporary dwellings by the sea, chasing for game or searching for cactus fruits, sleeping wherever weariness overtook them, or where the successful end of a hunt left them gorged and drowsy. Under a climate where frost is almost unknown they needed no protection except from the sun, and built no other dwellings than their brush-heap jacals (Fig. 3). Living in animal-like savagery, without commerce or industry, the Seri's every bodily character and function were directed toward the provision, day by day, of the food and water necessary for life.

312 Potable water, a commodity so abundant in most regions as to divert conscious attention from its paramount role in physiologic function and in industrial economy, attained in Seriland the primary place of importance because of its rarity. In that arid land it is scanty to the extreme. Two thirds of the meager supply is confined to a single rivulet in the interior of Tiburon Island (Fig. 4). Because of this and other widely separated aguajes within the island whose shores provided the greater part of their food resources, the Seris early found this island the most tolerable habitat in their desolate realm.

225 The most conspicuous single article in the
[262] dietary of the Seri, and undoubtedly that which first determined the location of his habitat, is the green sea turtle which is abundant throughout the Gulf of California, but particularly so in the narrow channel between Tiburon Island and the mainland. There the shallow lagoons abound with its marine grass food plant, and the sandy beaches provide optimum conditions for egg laying and hatching. In consequence of this natural provision for abundant food, easily obtained, perhaps half the aggregate life of the Seri tribe came to be spent within easy reach of the feeding and breeding grounds of the turtle.

[361] The most extensive and permanent of all Seri communities was established on the channel side of the island, just back of the lagoon in which the turtles feed and whose sands provided eggs and the succulent flesh
225 of newly-hatched turtle young. When fe-
501 males could not be captured at the laying grounds, the big chelonians were speared

[p. 194(B)]

[text continues on p 195(B)]

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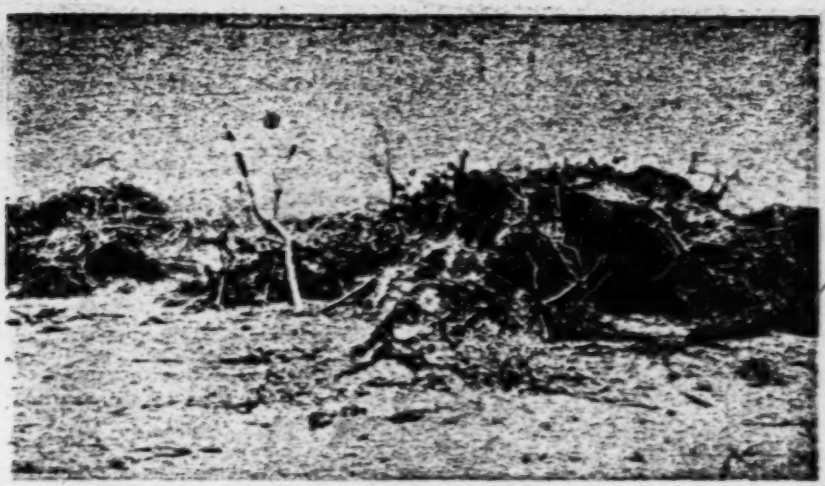

FIG. 3. THE SERI HOME—A BOWER OF BRUSH

133
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FIG. 4. AN AGUAJE ON TIBURON ISLAND
THE PRINCIPAL WATER SUPPLY AND SOURCE OF THE CARRIZO REED USED IN CONSTRUCTING THE BALSA.

[p. 195]

614 hundred Seris at a time. They lived in maternal groups or clans in which the elder females were of great prominence in the management of everyday affairs. When, in 342 the wanderings of a family a new camp was [462] decided upon, the elder matron usually erected the jacal alone, without the aid of men or boys, gathering the long poles of the ocotillo or the branches of desert trees and fashioning them into an arched framework over which a covering of brush, and often later of turtle shells, served to give protection from the desert sun. After the house- 361 hold was prepared, she took her place within 592 easy reach of the meager and squalid family possessions, and around this nucleus other matrons and their children gathered in the course of a day or two. It was usually three or four days, and sometimes a week, before the brothers and husbands came wandering in from their roving search for food to take their places at the new camp site.

482 From the turtle fishing camps on the chan- 312 nel, the nearest fresh water was at a distance

[p.196(A)]

312 482 of four miles by a rough and stony trail. In other parts of the island, habitations were occupied as distant as 15 miles from the nearest watering places. Under these conditions the Seris became essentially and primarily water carriers, and all their other industries were subordinated to this function. [271] They learned to economize on water carrying by gulping incredible quantities on their occasional visits to the aguajes, yet, more than half of the water required in their vital economy was consumed after transportation over distances of four to twelve miles. The 312 women were ordinarily the water bearers and for this important business manufactured a 482 distinctive vessel for the purpose. From fine 323 adobe clay they hollowed, expanded and shaped by manipulation with the fingers and without the aid of implements of any sort, a large olla of remarkably light weight in proportion to its capacity. Its mouth was made no larger than the hand that shaped it, thus to prevent spilling on the trail. From 482 yucca fiber a cylindrical cushion was also

[p. 196(B)]

[text continues on p. 197(B)]

283 302 from coarse, wiry grass stems, and saved all the brushings to be used in the making of strong threads and cords.

147 481 The fleetness of foot and remarkable physical endurance of these people attest to the rigorous and difficult life in Seriland where the ability of an individual to survive a season of want depended upon the reserve energy of his own body by which he could carry himself long distances in search of food and yet have strength to return to a waterhole, left miles behind. The slender, sinewy limbs and capacious chests of the Seris, in whom no trace of obesity has ever been observed, show clearly the result of untold centuries of selection of the strong by the severity of the environment, where water, too heavy for transport, too difficult of storage, is yet always within reach of an organism strong enough to journey ten, twenty, or even fifty miles in search of it. [312]

224 Perhaps the most severe physical exercise practiced by the Seris was the chase of animal game, particularly since it was often resorted to only after a period of weakening hunger which prompted the all-out effort to obtain adequate food supply. Days of wandering over the deserts in search of vegetable food were sometimes unrewarded, and although rabbits were to be had for the chase, they were too small to be of much consequence in the feeding of a family. The deer were fairly plentiful and provided excellently for a lasting feast.

The deer hunt was conducted by several tribesmen without weapons. When an animal was sighted it was followed by one and circled by others of the party, chased until frantic and exhausted, whereupon one of the men rushed upon it, threw it to the ground and caved in its skull with a stone.

The most avidly sought prey in the Seri chase were the helpless young and heavily pregnant does which were pursued and rent to fragments with a horrible fury, particularly with intent upon the succulent tidbits afforded by the fetal flesh.

222 A time of ease and plenty came each summer, for usually in late May or June the cactus plants with which Seriland abounds begin to mature their fruits. In the foothills of Sierra Seri on the mainland, great

3:Davis & Dawson E-5 (1922-1940) 1945
NU31 Seri NU31

[342]
[415]
[732]

FIG. 17. SERI BLIND MAN
BEING LED BY A BOY. NOTE THE CRUDE SHELTER OF POLES AND BRUSH SERVING AS AN AIRY DWELLING.

231 destitute of nourishment, tough and strong as rawhide; but hope springs eternal in an Indian dog's stomach, and again and again he will search out and mouth the same old pelican bone or fish head, discouraged never. The dogs, beside keeping the camp clean, lick all the cooking utensils when they are not tended, and also are allowed to lick clean the infants after they have performed their natural defecations. A Seri girl was seen placing a small can of water for a dog to drink from, [312] afterward drinking some of the remainder herself and then pouring the rest back into the family five-gallon can.

732 Although the conditions of existence for the Seris had from time immemorial been too precarious to permit of anyone living who 734 was unable by physical disability to hunt or fish to get his meat, there were two or three men, blind or nearly so, whose wives got an uncertain living for them by the hardest struggle (Fig. 17). If a Seri, however, became ill of a disease which the tribe feared, he was often taken into the desert and left with a little food and water, either to get well and return or to perish.

[P. 265(A)]

5:Dawson N-5 (1940) 1944 NU31 Seri NU31

of nutritious material which was ground to powder on their stone ahsts, winnowed in shallow baskets and made into a meal or paste.

The abundant cacti of many species served several other functions in the domestic economy of the Seris. The thorny cholla whose insipid fruits were not fit to eat and whose spines were a constant threat to the unprotected bodies of the Seris, found one use, nevertheless, in the burial procedure. After a body was partly covered with earth in the three foot deep grave, it was densely overlaid with chollas before leveling, to discourage the coyotes from digging for the body.

The dry skeletons of the giant cacti provided the long, cylindrical poles used in knocking off ripe pitahayas as well as in all other instances in which a straight, slender pole was needed. Since the advent of the open boat in modern times, the cactus skeleton has come in for a new use, for after trituration between stone ahst and hupf, it was found to yield a satisfactory caulking compound when mixed with sea-lion oil.

The barrel cacti, *Feroçactus Wislizenii* and *F. Coulteri*, though ordinarily abundant on the Sonoran desert are rare in Seriland and practically absent from Isla Tiburon where they may easily have been exterminated by the improvident Seris during their centuries of occupancy on account of their recognized value as water providers on the wastelands over which the Seris so frequently ventured.

These Indians found housing no problem, for, living under a climate in which frost is rare and rain infrequent, they found little need for shelters except for protection against the blazing desert sun. Camps that were occupied for more than a day or two, however, usually saw the appearance of a group of crude sun shelters. These were usually made of long, flexible ocotillo branches, *Fouquieria splendens*, stuck in the sand and fashioned into an arched framework over which a more or less complete covering of brush was piled. If, by the sea, a windbreak were desired, the brush top and siding were usually augmented by the addition of several empty turtle shells.

On the delta plain of the Rio Sonora, the mesquite, *Prosopis juliflora*, grows in remarkable luxuriance, these gnarled, spiny trees forming an almost continuous open forest 20-40 feet high. Its fruit, consisting of small, hard beans borne in slender, woody pods forms a concentrated, starchy food that the Seris found highly nutritious if not appetizing. In late summer when all fresh vegetable food had withered and disappeared, provided the turtle fisheries had not yet attracted them back to their island, they often spent some weeks gathering the beans and grinding them into a meal which was eaten as a watery atole or as a paste mixed with sea-lion oil. The more straggly and thorny cat's claw mesquite, *Acacia Greggii*, and the ironwood, *Olneya tesota*, also yielded woody beans in limited quantity.

In the deeper gorges of the mountains the Seris found *Guaiacum Coulteri* yielding a berry of medicinal properties and also *Jacquinia pungens* which produced a nut, edible when not quite ripe, and forming a favorite rattlebead when dry.

Along sandy washes, particularly on the lower flood plain of the llano grows a low, shrubby weed, *Hymenoclea monogyra*. Although during times of drought it shrinks to stunted tussocks, after periods of heavy rain its flourishing fens produce abundant seeds eaten both by the beasts of the plain and formerly by the Seris.

Before the advent of the tin can and the cardboard carton, basketry was an important handicraft among these Indians

[TEXT CONTINUES ON P. 138--Analyst]

9:Malkin E-5 (1953-1955)1962 NU31 Seri NU31

I

INTRODUCTION

121 localities, but I think it is advisable to include others, whose nature is not so different from the main places of Seris' habitations.

361 13 I have selected then 25 localities and I shall give their main characteristics below:

[491] 1. **Punta Peñasco** — a village along the upper shores of the Gulf of California, close to the U.S., connected by a paved highway from Gila Bend. Typical Sonoran zone with extensive sand flats. Very rarely visited by the Indians.

2. **Porto Libertad** — rocky shores, located some 30 miles north of Desemboque. A Mexican village frequently visited by the Seris.

[172] 3. **Desemboque** — Seris' main settlement after 1940, just north of and around Punto Tepopa, only a few miles from Tiburon. A narrow strip of poor land, thoroughly permeated with alkali and salt. Vegetation is very sparse. The mesquite, elephant bush, creosote bush, *Cholla* and *Sahuaro* are the main trees. No *Palo Verde* or *Palo Fierro*. *Ocotillios*, *Sahuaros* and mesquite are stunted and scarce, only toward the mountains increasing in frequency and size. Along the shores, sand dunes with kitchen middens, partly covered by vegetation. An arroyo nearby is empty except on a few occasions during the year when flash flood after rains rushes through. Rainfall very scarce. During the summer of 1953 I spent there, it rained very little—only twice and that was short and feeble. [312] Water is obtained from a well, near which there is a Mexican ranch where, owing to irrigation, some vegetables are grown and weeds are present such as *Datura*. The coast is largely rocky. Narrow beaches lack wide sand bars. Hence the fauna here is poor.

4. **Estero Sargente** — alkali flats and mud flats some 25 km. south of Desemboque along the coast. Vegetation very scarce. *Sahuaros* and *Ocotillios* and other desert trees grow some distance from the shore. Short grasses in some places clump the coastal dunes. Breeding and feeding place of many shore birds, especially of willets and egrets. On the alkali flats near the shore are many peculiar insects, not found in Desemboque, particularly tiger beetles and Oedemerids.

[103] 5. **Campo Vivora** — little more than half way down toward Desemboque from Estero Sargente, also along the coast. So named after supposedly numerous rattlesnakes. Clumpy grasses. Favorite encampment of the Seris and others while fishing and hunting turtle. The only loggerhead turtle I have seen was right here.

[491] 6. **Porto Kino** — fishing village directly due east of Hermosillo, nowdays connected with Sonora's

[P. I [illegible]

13 17. **San Lorenzo Island** — a narrow long island along the coast of Baja, California, and opposite to Tiburon. Altitude up to 1200 feet. Fauna limited, owing to the distance from the mainland. Vegetation much as elsewhere but impoverished. Visited incidentally as is San Esteban.

18. **Angel de la Guarda** — large island along the coast of the peninsula, longer but narrower than Tiburon, slightly lower at its highest point, pretty much waterless. Vegetation as elsewhere, fauna limited. Visited by the Seris very rarely.

[312]

19. **Desemboque (Mountains)** — high mountains immediately back of Desemboque, 5 miles away, rising perhaps to 1200 feet. Vegetation much richer than in Desemboque, with giant *Sahuaro* growing to considerable size. More moisture than immediately near the sea-shore. Full Sonoran fauna with cougar and bighorn. Frequently visited during hunts.

20. **Tepopa (Mountains)** — in distinction from Punto Tepopa as a whole, this refers only to the rugged head. The mountain reaching to over 1800 feet. Thus by Punto Tepopa are meant only the shores and the littoral.

21. **Buena Vista** — a ranch inland on the way to Hermosillo, newly deserted. Water present in the large well and periodically in the dry river. Willows, large mesquite, Palo Verde, etc. Now only incidentally visited by the Seris but formerly of some importance as a camp site.

[312]

[361]

22. **San Francisco de Costa Rica**—a ranch inland halfway between Kino and Hermosillo near the main road, presently a large Mexican ranch. Formerly a frequent Seri campsite. The distinctive feature of this locality is extensive sandy areas with very peculiar fauna.

[361]

23. **Hermosillo**—capital of Sonora of some 40,000 people. Extensive agriculture, irrigation, river and water-dammed reservoir and cattle and cotton ranges. Once the Seris ranged almost as far as this town but presently they come here only on special business, to the hospital or for a ride to town, with the Mexican truckers. Their observations in Hermosillo are only incidental.

[484]

24. **Nogales**—U.S.-Mexican frontier town. Seris come here very rarely and only certain individuals. Observations less than incidental.

[484]

25. **Campo Utah** — large track of irrigated flat lands given up to cotton, operated by the Utah Construction Company between San Francisco and Hermosillo. Somewhat off the main road. Selected as a distinct region owing to the irrigation and cotton fields with their ecological peculiarities. Seris visit this only in transit or on most unusual occasions when they work a few days for the Mexicans.

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[464]

The Problem

121 The basic problem concerns the state of Seris' zoological knowledge, that is the general knowledge of the natural history of animals in its main outlines; of their ecology, habits, reproduc-

[P28]

825

tant factors in their knowledge. At the one pole we have the kangaroo rat, an animal so abundant that it has been indicated for all 23 localities; at the other extreme is the jaguarundi, as already indicated, little known to them, for which no distributional data is available.

The chart shows at once that the informants thought certain animals completely absent from the islands in the Gulf. Thus the cougar, bighorn, deer, badger and cottontail were indicated as absent in the islands. This indeed is the case with most of these certainly, with the possible exception of the cottontail. Its presence or absence in the islands should be verified, especially in that the informants mention the jackrabbit as present in all three of the Tiburon localities although absent from the remaining islands. A number of other animals had been indicated as being absent from Tiburon. Here belong the peccary, porcupine and the sea lion. In the latter case, what the Seris must have in mind is the absence of the rookeries and "permanent settlements" of the sea lions. Individual specimens undoubtedly do show up on the Tiburon coast.

In several instances, the Seris indicated reasons for the presence or absence of a given animal in a locality, usually in the form of comments concerning the ecological features and preferences of the species. In several cases, it may be seen at once how the particular locality is related to the essential habitat features. The cougar and the bighorn are both found in the mountainous, craggy areas, hence the Seris cited Desemboque mountains and Buena Vista for the cougar, and the "big mountains" near Porto Kino, Punto Tepopa and Desemboque mountains for the bighorn. And likewise, all of the localities indicated for the sea lion are those that have rocky beaches.[1]

Local preferences within the sea were indicated also for all three of the marine *Cetacea*. This took the form of a blanket statement that they prefer deeper waters and for the grey whale also preference for more distant waters of the area, those surrounding the islands of San Lorenzo and Angel de la Guarda.

b) Seasonal

Although the mammals are less subject to the seasonal restrictions than other animals, the Seris have observed certain seasonality, at least for some of the species. Information is available for 12 species of mammals and in that number for six no differences in the seasonal occurance are known to the Seris, while preference for the cold or hot season has been indicated for three species each. Preference for the cold or hot season has been usually connected with the migratory habits. This has been indicated especially for the killer

[1] The coyotes, the informants thought, were more numerous on Tiburon and especially at Tecomate than on the mainland. This may be owing to the fact that these animals are intensively hunted by the Mexicans and the Americans on the mainland and near Desemboque because of the danger they represent to the domestic stock. As for Tecomate—there is a long standing Seri encampment there and a water hole—which two factors may attract the coyotes.

[361]
[312]

[P. 14A]

000 possible for producing domestic crops of any kind. There is no water
312 for irrigation, and drinking water is very scarce, rising in only a few parts of the Island in places known only to the Indians.

648 For centuries these nomads of the wastes have borne an evil repu-
[101] tation as killers and cannibals, and many an expedition to the Island for trade or exploration has never left its beautiful shores. Lured away from their boats by friendly gestures of the Indians, every last man has been killed by arrow or rifle and the expedition never heard from. No survivor has ever returned to relate his experience and, up to the time of my visit, a man risked his life to go among the Seris on their Island.

Time after time, for four hundred years, the Spaniards, and later the Mexicans, have tried to exterminate them. They have been ambushed, hunted, killed on sight for years; diseases have decimated them: they have been the Ishmaelites among the native tribes of Mexico, with every man's hand against them. Now only a small remnant survives.

[13] They have also taken heavy toll of those who have invaded their territory, which at one time extended from Altar on the north to Guaymas on the south, and from Hermosillo to the coast. When hard pressed, they retired to their Island sanctuary where, deep in the rugged ranges, they have defied pursuit. They are strong, brave, neither asking nor giving quarter in battle---men of marvelous endurance, tireless walkers, swift runners, wonderful trackers.

Within the last few years the Government has definitely set aside Tiburon as their exclusive home and sanctuary, with a strip along the mainland as their hunting and fishing ground, and where they can harvest the fruits of the giant cacti without fear of being killed. No person is allowed on this Island without special permission from the Governor of Sonora, or their Superintendent and devoted friend, Roberto Thomson. The Government has declared a permanent closed season on Seris.

175 As to the reputation of these nomads of the wastes of being can-
648 nibals, I quote the following extract from the *Life of Bill Fain:*

266 After I had been in Yuma some time, a Yuma school teacher asked what I knew about Tiburon Island and the Seris. He said he had heard there was gold on the Island and he in company with a sailor intended to go down there. I said "Partner, I have been at the head of the Gulf several times, and interviewed many Mexican sailors and fishermen. These Seris are murderers and cannibals and my advice is, don't go, for as sure as God made little apples, you and your friend will make a fine feast for the *Tiburones.*"

He said the sailor would manage the boat and they would prospect on the Island and pack the gold out. And besides, they were going unarmed and trust themselves to the tender mercies of the most treacherous Indians in North America. I told him, "My advice is to stay just as far away from that Island as you can, if you want to teach school any longer." My advice was thrown away.

Some weeks later several mining men in skirting the coast opposite Tiburon, came across a place where the Seris had evidently been feasting on human flesh,

123 rancheria of about ten or fifteen huts, half tumbled down, all facing
361 the sea and surrounded by turtle shells and deer bones, and sea shells. Things were dropped wherever they ate. This rancheria was deserted also.

We set sail again and landed on a sandy beach near another deserted rancheria called *Palo Fierro*. We hauled the boat way up and took out all our things and carried them up to the huts. In this place there were twenty-one huts---sometimes three built together. Many of them were in a good state of preservation. They were all in a long row with bleaching bones and turtle shells on all sides. From the inside of one hut I counted thirteen turtle shells around the base. There must have been about a hundred turtle shells here, and a few land tortoises.

123 There were two or three fragments of painted parts of a boat---
[648] probably remains of a boat belonging to seven fishermen who got drunk and landed here, and were all killed by the Seris two years ago. Six months ago a single Seri was captured by some Mexican fishermen and killed in reprisal.

As the wind increased it kicked up an ugly sea and we decided to camp over night. As we were reduced to about six gallons of water, Roberto suggested we take two empty five-gallon cans and go for water. I had offered to stay with the boat but was told the Seris would kill me if they found me alone.

[312] A Seri had told Roberto to follow a certain trail from the rancheria and go between the mountains and he would find a *pozo*, or well, not far away. Ricardo left his private sign and the five of us marched away, following a well-worn trail. For the full distance broken shards of ollas lined the trail at short distances, so we knew we were on
137 the right trail. Brush began at the sea shore and we passed various
123 kinds of desert vegetation---several kinds of cactus, especially the *zarbueso*. This starts with a single great trunk two or three feet in diameter, and then branches out like a vase, running up fifteen to twenty or more great columns like the *saguaro*. They were thirty or forty feet high. In some of these were piled a great accumulation of sticks and trash ten feet high or more, and on the top where the sea eagle makes its nest. There were a number of these.

Then we came to the *pitahalla*, *cholla*, *ocotillo*, and others, and the strange *terote* tree. This tree is the *Bursura Microphylla*, and has an odor like turpentine. It is a fat, dropsical tree like stuffed sausage, with crooked ungainly branches coming out at all angles. There are three varieties---the *terote colorado*, *blanco*, and *negro*, according to the color of the cut bark. Another strange tree was the *palo blanco*. Then there was the *palo verde*, *palo fierro* and *mesquite*. The *mesquite* was rare.

123 A number of signs were marked in the sand. We could not translate
[212] them. We walked single file, rifles in hand, and revolvers handy.

[text continues on p. 155]

10: Davis E-5 (1922-ca. 1939) 1965 NU31 Seri NU31

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Alverto Mendoza and Lupe Astorga getting water from cactus - used for cooking

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Child leading Petra - blind woman, Kino Bay - 1936

123 Mile after mile. We got very dry and had almost given up finding the [133] water. We had gone up a sandy wash for miles, barren arid mountains terminating in regular saw tooth pinnacles on all sides, some of beautiful red rock---red as blood; some gray and some lavender.

• 312 123 At last we came to the water hole which had also been frequented by coyotes, skunks and other animals, and their flavor was easy to taste. But we had ceased to be critical long ago. The hole was really a crooked shaft and led down crude steps worn into the rock for ten or twelve feet. It had been dug by clam shells and bones and sticks, and may have dated back many years. Part of it was through rock and it was a work of great patience to dig with such primitive tools.

123 At the foot, a seepage came through the sand and formed a shallow pool from which, in the semi-darkness, we dipped water and filled our cans. After a rest, all partook of a generous drink. It took us two and a quarter hours---six miles to go there, and we were probably the only white men who had ever been there. I am glad I went for the experience, but we were all completely exhausted on reaching camp. Ricardo and the Mexican carried the cans of water six miles on a stick balanced over the shoulder. Roberto left his sign along the trail. We slept in the Seri huts, all tired out. My feet were tender from walking on the sharp shells and my shoes had shrunk from being wet in salt water, and that pained my feet greatly by cramping them too much.

We heard many interesting tales about the Seris: their wonderful endurance, their susceptibility to disease, their marvelous feats of tracking and swimming, their habit of getting food only when necessary and laying up none ahead, and other queer customs.

The breaking of dawn brought a marvelously beautiful sunrise. It was very low tide and the boat was stranded nearly two hundred feet from water. The sky and sea were crimson and the mountains purple on the Sonora side. The sea was calm, without a ripple, and mirrored every peak and color and made a picture of indescribable beauty.

We ate a hasty breakfast and strained ourselves to the utmost to move the boat. It slowly slid over the grass and shells to the water's edge, and then we had to push it out seventy-five feet in the water to get it deep enough to float. A slight breeze was blowing, so we raised the sail and rounded the point and headed across for another point, across a stretch of water five or six miles.

[202] At last we saw a few huts and as we neared shore we saw two men with rifles. We waved the white banner, laid our rifles handy, fixed our revolvers, and ran the boat ashore. The men had darted back into the brush as experience had told them to beware of strangers. Roberto and his brother Nene leaped out, leaving their rifles, seized the white flag, ran after the men and called to them and said they were friends who had come to see them. They recognized Roberto, returned to the brush shelters, left their rifles and came to the boat bare-

[text continues on p. 157]

123 handed to show their friendliness.

142 One was a young man with rather pleasant features, his braided
291 hair hanging below his shoulders. His name was Antonio Herrera. The
123 other was a wild-looking specimen called Ramon Blanco. His hair was a
[302] tangled mat with a short braid behind, suspicious black piercing eyes,
long sparse moustache and chin-beard hiding a broad cruel mouth. He
[411] wore the remnants of an old sweater, a short dirty kilt, or skirt,
nearly to his knees, a belt full of cartridges, mostly empty, and a
long knife in a rawhide scabbard.

123 The young man had been baptized and given a name by Roberto, who
[795] had acted as godfather or *patrona*, many years ago. He wore a hat,
[291] jacket, and pants of blue denim, and *guaraches*, or sandals of rawhide.

We shook hands all around and then they called and halloed in the
brush and soon three women and a lot of children, wild and half-
[415] clothed, filed into camp. The women were tall, gaunt, unkempt, ragged
[482] and barefooted, paying us not the slightest notice. They were bearing
[422] on their heads large baskets filled with all their earthly posses-
[854] sions---cooking ollas, scraps of cloth, pieces of turtle meat, bone
[231] brads, hair brushes, and odds and ends. They carried, also, an infant
or two wrapped in odd bits of rags. Several gaunt dogs followed in
their wake.

342 In all, three families came trailing in, removed their household
equipment from their heads and resumed their interrupted and primitive
[512] housekeeping. Each family occupied its apartment in the row of brush
shelters, separated from each other only by brush partitions with a
total lack of privacy. These shelters, always open to the sea, serve
as shade from the fierce rays of the sun, and also as windbreaks, but
[361] are no protection from infrequent rains. They are occupied only for a
brief period and then their nomadic tenants move on to fresh *cahuama*,
or sea turtle range.

123 Soon, a third man arrived while we were near the huts, Manuel
[142] Encina. He was a man of sixty-five, gray hair and mustache, seamed
features, and not evil looking. He was out of breath. He had gone for
water to the same water hole where we had been yesterday, struck our
tracks, had left his water cans and hurried back to warn his people.
He was greatly relieved to find friends.

Since he had gone for water, inquiry revealed there had been no
water in camp for two days, and six adults and one girl of thirteen
and six children were thirsty. We gladly gave them one of our five-
[225] gallon cans of water and they were very grateful. They had caught a
[262] sea turtle the day before and gave us some turtle steaks which looked
like beef or mutton.

312 As the camp was without water and we were running short, the young
482 man and Encina offered to get some. Each took a *palanca*, or short
123 shoulder pole with knotched ends, fitted empty five-gallon cans in

123 312 [482] nets of twisted fiber, hooked the nets in the ends of the notched stick and started off nine or ten miles to the water hole in the heart of the mountains.

Water carried so far over loose, sandy soil, dodging cactus, threading a devious way among the *talus* thrown off the cliffs and slopes of canyon walls, with the water-bearer barefoot, acquires a value absolutely unknown to the man who draws an unlimited supply from a faucet.

The two men were gone six hours and when they returned they were almost staggering under the heavy loads of water, each man carrying at least one hundred and ten pounds of water, as the cans were full. In addition, one man had a canteen full.

The thirsty people drank sparingly, and a little Seri maid poured some of the precious liquid into a cooking olla for a thirsty dog. After the dog had lapped sufficient to allay his thirst, she carefully poured the residue back into the can, never losing a drop. One drop of water could not be spared after that arduous trip.

484 147 648 Bob says a man goes to Hermosillo occasionally and returns to the coast, ninety miles, with two to five cans of *mescal*. It takes probably four days to do it, but it is a wonderful feat of endurance. He said about thirty years ago a woman walked the ninety miles during one night, afoot, and reported to the Government House when it was opened at nine in the morning that about fifty of her people had been shot by Roberto's uncle at various times. This uncle was a very hard rough man and the Seris were fond of his mares and steers for meat, and used to steal, so he began shooting a goodly number. Fearing a man messenger would be shot, as men were frequently shot while going along the road, they sent a woman.

Ysabel was Governor at the time. Judgment was rendered against the uncle, and it is probable that a hanging squad would have been sent out to execute him. The Governor, a great friend of the family, sent for him, and he rode ninety miles at night on horseback and was saved with the Governor's help.

Roberto saw twelve Seris pack meat from two mares, two steers and two yearling heifers, for four or five miles to their boats. Their endurance and strength is phenomenal. The question naturally arises, "Why are not burros used by the Seris on the Island to ride and pack, as they are by their Mexican neighbors on the mainland?" It has been [492] tried, but things were reversed; the Seris packed the burros around in their stomachs.

261 262 Roberto said: "These people, living on the verge of starvation, never having a continuous food supply, would kill and eat every burro, and it is a common thing on the mainland, if a cow or horse dies, and Seris are in the neighborhood, they will try to beat the buzzards to it. They will gorge in times of plenty, and when food is scarce they

[text continues on p. 160]

123 the same as do children and dogs, even though it may be hauled for
[132] six or eight miles on mule-back.
[137]

With gifts and hand-shaking all around, we bade goodbye to Lupe and the children and started on our way.

After leaving San Carlos we travelled through a cholla and giant cactus country until we reached Roberto's ranch at Santa Cruz. We had picked up Pancho Oliverria at San Carlos.

Just before leaving the ranch several men lifted a poor woe-begone mare to her feet. She was so poor and weak she could not get up by herself, but once up she managed to stand and finally staggered out into the *mesquital*, the place of mesquite. One eye was missing and watery matter was oozing out and running down her cheek. A night or two before, a lion caught and destroyed her colt, and probably in an effort to protect it the mare came too near the scene and the lion tore out her eye with one sweep of its paw.

Midway to Santa Cruz we stopped a moment at Blevens ranch *Costa Rica*. Blevens is a large, florid white-haired American who has lived in this country for fifteen or twenty years and hasn't much use for the Seris as they have killed so much of his stock.

[244] At one time he noticed a dead cow which was all swelled up and badly spoiled. No white man could stand the smell. He told some Seris about it, and they flocked around it, and when they had finished all that was left were the hoofs and horns.

Nene's wife cooked dinner for us at their house which was composed of *carrizos* and mud roofed with earth, all supported by mesquite logs. Surrounding it was a hog tight mesquite fence, and in this corral was a fifty-foot deep well which furnished the water supply. Half a bull's hide laced on to an iron hoop and holding about fifteen or twenty gallons, was the water bucket. This was hauled up by a long rawhide rope passing through an over-head block drawn by a mule.

After leaving Santa Cruz with none added to our crew, we wended our way through a maze of mesquite, cottonwood and other timber, gradually working out of the timber to more open country where traveling was not so strenuous. The steering gear was worn so that the old truck would often head for a saguaro or mesquite and stop just short of being smashed.

At last we reached a region of flat baked lake-beds, covered in flood times. Sometimes we could travel fast at fifteen miles and then again we would go in the low where it was soft. About three miles from our destination we took off half our load and piled it to one side and jogged along through a wild desert country with no roads or trails, through chollas, desert brush and terote trees.

123 When we neared a hill of dark volcanic rock a number of Seri In-
312 dians darted out, and with their help we reached a camp near the coast
341 where Roberto had recently located a small well of sweet water.

123 Clustered near this well were brush windbreaks joined together, divided
[361] by brush partitions all open on one side. Here were gathered several
• [342] Seri families. There was no such thing as privacy or seclusion.
[342]

As soon as we stopped and unloaded we were immediately surrounded by a curious, half-starved mob of forty men, women and children, about fifteen to twenty children. All dirty, all ragged, all hungry. Some of them I recognized: others were new to me.

While preparing and eating our supper this motley crowd formed a circle about us and hungrily watched every mouthful. We gave them a little food and an orange all around, and they finally left. By that time we had also finished our bread and coffee and followed to the brush shelters.

535 A dance was immediately started. A place was hollowed in the sand,
123 a few short planks placed over it, and the dance was on. Music was
[523] furnished by men tapping on an inverted basket and chanting. Only one man danced at a time. Sand was thrown over the planks and the Indian danced a shuffle, scraping his bare feet on the boards. He held a staff in his right hand and danced to a song called in Spanish *El*
[371] *Toro*. Later on other dancers performed, then gave us the *venado* (deer) dance, taught them by the Yaquis.

This dancer represents a timid deer, hopping up and down to the time of a rattle held in the right hand, and the chanting of the singers. The *venado* dancers stooped over frequently, turning first to one side and then the other to look behind. Manuel Encina was the *venado* and Chico Romero, a very large young Seri, acted the part of a coyote, crawling and jumping on all fours and barking and every once in a while biting the calf or thigh of the *venado*, then jumping back and barking. It was acted with great realism, and the onlookers, especially the children, enjoyed it immensely.

A wilder, more barbaric scene was probably seldom witnessed in America than this gathering of Seris on the shores of the Gulf of California, dancing the *venado*. The camp fire threw a flickering light over dark fierce faces with low foreheads and frowsy unkempt hair.
[302] One man, Luis Torres, the head "ship carpenter" with a moustache and chin beard, his hair low-down framing his dark face, looked like a savage from the wilds of New Guinea. Another, Santo Blanco, a secondary chief below Juan Tomas, has a straggling moustache curling over cruel projecting lips which rarely smile, while his fierce black eyes peering through his black thatch of hair, have a perpetual scowl. The monotonous sing-song chant accompanied by the soft roar of the surf added an indescribable eeriness and weirdness to the dark night.

123 We soon turned in as it was then eleven o'clock, and we all fell asleep lulled by the waves of the sea.

3: Davis & Dawson E-5 (1922-1940)1945 NU31 Seri NU31

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FIG. 20. SERI WOMEN BEARING FIRE WOOD TO THE CAMP AT KINO

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FIG. 21. A MEXICAN TOTUAVA CATCH ON THE BEACH AT KINO

[p.267(A)]

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Carrying firewood

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Seri basket maker - 1934

535 semi-darkness.
123 Soon two little boys joined the dance, stepping up and down in the sand. Lighted only by the flickering flames of the driftwood fires on the shores of this mysterious and dreaded isle, the soft murmur of the sea as a refrain to the wild chanting, the weird circling of glittering eyes, and wild dark faces, presented a scene of uncanny and savage fascination witnessed by white men probably for the first time.

[533] After each stanza there was a short rest. The singing was similar to most other tribal chanting.

582 836 622 Bob made the remark that the girl was old enough to be broken in by the old Chief. I said, "How?"

583 [839] He said, when a girl thirteen or fourteen has her menses, the Chief takes her and goes through the family act. This is called 'breaking her in'. She is then eligible for marriage. A young man desiring marriage has to purchase the girl by giving the father a boat or rifle, both being necessary to the Seri's existence and protection. At the wedding they have sort of a fiesta and much mescal is drunk, which properly solemnizes a wedding.

844 845 When a girl has a baby it usually comes very naturally and easily, but I remember one girl's first baby was three days in coming, and she suffered a great deal. This was on a subsequent trip. She was staying with many of her people on the mainland and someone asked them if they didn't want a doctor or other help. They said: No, they had one. It was a Medicine Man who chanted over the girl and dug hollows in the sand to fit her heels into. He said that the legs had to be kept apart. This was all he did. But ordinarily there is no trouble, and if a baby is born at noon the mother is up and doing, and cooks supper for her lord and master. The men treat their wives with kindness and each shares with the other any delicacy.

462 [313] [482] In Seriland domestic duties are reversed from the usual Indian methods. The men get the water and the women get the wood. This consists mostly of driftwood gathered along the shore, and it is a picturesque sight to see a string of women and girls bringing in loads of wood in baskets on their heads at sunset.

622 595 There are no plural marriages, but sometimes when a Chief is old, or rather when his wife is old and can have no more babies, he can take a younger woman as his wife. The present Chief is getting old now, almost too old to break in the girls, so they may get a younger man. This might be called the perquisites of office. He takes the cream.

832 825 They hunt lice in the head and eat them. This is said to increase the amorous desires. The penis of the male turtle is cut out and dried. This is pounded and pulverized and placed in the food of the women. This is said to create a desire for a man and the family act.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

The painted designs vary among different individuals, but are fairly persistent for each. The prevailing design at Costa Rica in 1893 was that of the aged matron known as Juana María (plate XVIII), with variations in detail such as that exhibited by her unmarried daughter Candelaria (the Seri belle shown in plate XXIV); next in frequency were the designs, in white and red, exhibited by the matrons portrayed in plates XX and XXII. Other designs observed are indicated in plate XXVI. The variations in individual designs are apparently due either to varying care in the application of the paint or to the degree of obliteration by wear—e. g., the withered Juana María sometimes put on her design askew and was negligent of details, while the blooming Candelaria greatly elaborated the details of the pattern and carefully perfected the symmetry of the whole when preparing for her full dress sitting before the camera (plate XXIV), so that her design was then gorgeous by contrast with the nearly obliterated blur of a half-hour before. The designs are renewed every few days, especially for ceremonious occasions, and hence are practically permanent. 302

When grouped in relation to their wearers, the designs are found to exhibit family connection. Thus, Juana María's design is repeated, with greater elaboration of detail and with a pair of supplementary marks, in that of her daughter Candelaria; the winged symbol of the Seri matron portrayed in plate XX is repeated with minor variations in that of her daughter, the Seri maiden pictured in plate XXV; while the symbols of the mother and infant daughter depicted in plate XV are essentially alike. It is noticeable, too, that in the nearly spontaneous arrangement of individuals in the group shown in plate XIII there is a tendency toward subgrouping by symbols; and it was constantly observed that the family groups gathered about particular jacales (such as that shown in plate XIV) displayed corresponding designs, though there were frequent visitors from neighboring jacales bearing other designs. Briefly, all the observed facts, as well as the supplementary information gained by inquiry, indicate that the designs are hereditary in the female line, but are susceptible of slight modification both in elaborateness of detail and in the addition of minor supplementary features. 302 424 593

The principal apparatus and materials used in the face-painting are illustrated in plate XXVII. The chief pigments are ocher, gypsum, and the rare mineral dumortierite; the ocher yields various shades of red, ranging from pink to brown; the gypsum affords the white used in most of the designs; while the dumortierite is the source of the slightly varying tints of blue. So far as was observed, the pigments are not blended by mixing, though there is some blending due to overlapping in application. The ocher is commonly extracted and transported as lumps of ocherous clay or ocherous gypsum (plate XXVII, figures 1 and 5), though it is sometimes reduced to powder and transported in bits of skin or rag, or in cylinders of cane (plate XXVII, figures 3 and 4); and it is 386 [317] [915]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

prepared by trituration with a pebble or rubbing with the fingers, usually in a shell cup. Sometimes the shell used for the purpose is the valve of a *Cardium*, which serves indiscriminately as cup, spoon, skin-scraper, etc; but preference is apparently given to thick and strong shells, such as the wave-worn valve of *Chama* (?), shown in plate XXVII, figure 7, which are consecrated to the use and eventually buried with the user, together with a supply of the paint (like that illustrated in the cane cylinder—figure 4—which was a mortuary sacrifice). The gypsum is usually carried in natural slabs or other fragments, perhaps rounded by wear (plate XXVII, figures 6 and 8); it is prepared by wetting and rubbing two pieces together, the larger being reduced to metate shape by the operation. The dumortierite was observed only in the form of a pencil made by pulverizing the substance and mixing with sufficient clay to give consistency. The several pigments are applied wet by means of human-hair brushes kept for the purpose, the process occupying from half an hour to three or four hours for the more elaborate designs. So far as observed at Costa Rica in 1894, the paints were mixed in water only; but since painting outfits found on Tiburon island in 1895 were smeared with grease, it is probable that either water or fats may serve for menstrua, at the convenience of the artists. Commonly the process of painting is measurably cooperative. The matron usually depicts her device on the faces of her daughters up to the age of 12 or 15 years, when they learn to make the applications themselves; and frequently two or more women (usually those with similar devices) work together in preparing and applying the pigments, each laying the paint on her own face and apparently guiding her hand partly by the sense of feeling and partly by suggestions from her coworkers; but Candelaria and some other of the younger women at Costa Rica frequently worked alone, aided by a mirror in the form of a shallow bowl of water set in the shadow while the brilliant desert glare fell full on the face.

The mines yielding the pigments were not located. The geologic conditions are such that the ochers are undoubtedly abundant; but it is probable that the gypsum is uncommon and confined to a remote locality or two, and that the dumortierite is rare and scanty here as elsewhere. The care with which the paints are preserved, prepared, and applied, the fact that they are indispensable feminine appurtenances even on the longest journeys, and their sacred rôle in the mortuary customs, all combine to indicate that they are among the most highly prized possessions of the people and by far the most precious of their minerals.

The sematic functions of the designs are esoteric, yet an inkling of their meaning was obtained through Mashém, the interpreter at Costa Rica in 1894; from his expressions it appears that the designs are sacred insignia of totemic character, serving to denote the clans of which the tribe is composed. But three clans were identified, and

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[For the use of various plants and minerals in the preparation of ?antezj kóil or blue clay used in Seri facial ornamentation, see category 386.]

I: McGee E-5 (1894-1895)1898 NU31 Ser: NU31

monly the carapace and the longer bones from the flippers of the larger specimens are preserved entire for other uses, and are cleaned only by teeth and talons and tongues, aided by time but not by fire; but the plastron, unless broken up and consumed immediately, is subjected to a cooking process in which it serves at once as skillet and outlet—it is laid on the fire, flesh side up, and at intervals the shriveling tissues are clawed off and devoured, while at last the scorched or charred scutes themselves are carried away to be eaten at leisure.[1]

Perhaps the most significant fact connected with the Seri turtle-fishing is the excellent adaptation of means to ends. The graceful and effective balsa is in large measure an appurtenance of the industry; the harpoon is hardly heavier and is much simpler than a trout-fishing tackle, yet serves for the certain capture of a 200-pound turtle; and the art of fishing for a quarry so shy and elusive that Caucasians may spend weeks on the shores without seeing a specimen is reduced to a perfection even transcending that of such artifacts as the light harpoon and fragile olla. Hardly less significant is the nonuse of that nearly universal implement, the knife, in every stage of the taking and consumption of the characteristic tribal prey; for it may fairly be inferred that the comparative inutility of the knife in dissevering the hard and horny chelonian derm, and the comparative effectiveness of the shell-breaking and bone-crushing hapf, have reacted cumulatively on the instincts of the tribe to retard the adoption of cutting devices. Of much significance, too, is the limited cooking process; for the habitual consumption of raw flesh betokens a fireless ancestry at no remote stage, while the crude cooking of (and in) that portion of the shell not consecrated to other uses might well form the germ of broiling or boiling on the one hand and of culinary utensils on the other hand. On the whole, the Seri turtle industry indicates a delicate adjustment of both vital and activital processes to a distinctive environment, in which the abundant chelonian fauna ranks as a prime factor.

Analogy with other primitive peoples would indicate that the flesh of the turtle is probably tabu to the Turtle clan, that the consumption of the quarry is preceded by an oblation, and that there are seasonal or other ceremonial rites connected with turtle-fishing; but no information has been obtained on any of these points save a few vague and unwilling suggestions from Mashém tending to establish the analogy.

Flotsam and stolen metal have played a rôle in the industries of Seriland so long that it is difficult to learn much of the turtle fishing

[1] These details were furnished largely by Mashem and Sobor Encinas, but were verified in essentials by personal observation of distinctive customs at Costa Rica in 1894; and they were corroborated by observations on both shores of El Infiernillo and Bahía Kanhank in 1895. Especially significant were the remnants of a turtle feast on the southern beach of Punta Miguel interrupted by the approach of the surveying party. The indications were clear that the turtle had been landed and largely consumed before the fire was kindled, and that the cooking of the firmer portions had hardly been commenced before the camp was abandoned so hurriedly that not only the nearly eaten turtle and the glowing embers, but the harpoon (the specimen illustrated in figure 90), the still bloody and greasy hapf (that represented in plate LVI), and the fire-sticks were left behind. Charred fragments of charred plastrons are common relics about hastily abandoned camps generally.

8: Ascher E-5 (1960) 1962 NU31 Seri NU31

for the point may come from the transmission of an abandoned car or from flotsam. The wood for the hafting can be mesquite or ironwood, both indigenous in the area; waste from boat construction or other scraps of wood may also be used. Rubber for the gasket may be obtained from a worn automobile tire. The wrapping cord and lead cord are store bought, and mesquite gum is used to seal the hafting.

In manufacturing foreshafts Seri fishermen use three tools: a knife, a hacksaw blade, and a triangular file. The hacksaw blade is used to cut an appropriate length of metal for the point and to rough out the barb; the triangular file is employed to finish the point barb and stem; the tang of the file is used to puncture the hole in the gasket which is to receive the point. The shaping of the hafting and gasket, and the cutting and wrapping of the lead cords, are accomplished with a knife.

With regard to the method of manufacture, all fishermen report essentially the same procedure. They describe the pattern as a series of steps under two headings: (1) shaping and (2) assembling. Two individuals did not mention steps 1c and 2b, and the others considered these two steps to be optional.

1) Shaping
   a) Shaping the metal into a point
   b) Shaping the wood for hafting the point
      α) Shaping the general form
      β) Splitting the form lengthwise and grooving each half to receive the point (see section in Figure 1)
   c) Shaping the rubber for the gasket

2) Assembling
   a) Placing the mesquite gum in the grooved portions of each half of the hafting (see section in Figure 1)
   b) Placing the gasket on the point
   c) Inserting the point base into the hafting and reuniting the split hafting form
   d) Wrapping with the wrapping cord and with it interweaving the lead cord
   e) Refinishing the hafting base to fit the mainshaft socket

Four men were able to explain the foregoing procedure in detail and were in agreement in the following matters. The point is shaped before the hafting because its length determines the length of the latter, and because the diameter of the point base dictates the grooving of the haft. The gasket is shaped after the point and the hafting because the diameter of its hole is determined by that of the point base and its total diameter by that of the hafting. The mesquite gum then secures the point and seals the hafting. Interweaving the lead cord with the wrapping cord secures the former to the hafting.

The amount of time required to complete a foreshaft shows marked variation. This is not primarily a function of the working habits of the artisan. If all the materials are present, the time it takes to make a foreshaft ranges from four to eight hours, but if all the materials are not available, as much as a year may be required. There may, for example, be a considerable lapse of time between the shaping of a point and the shaping of a gasket when material for the

262 en simply because their flesh is disliked and unfit for human consumption. But it may also well be that some of them, especially of the giant variety, are not eaten simply because they are far too large to tackle and the Seris fear hunting them.

The Seris indicated also in some cases that larger specimens of fishes are eaten when they reach the size which would justify the effort. This is true of *Malacoctenus zonifer* which they indicated is "eaten when large," that is when at least 10 cm. long.

[226] Although only sometimes did the Seris specifically indicate that certain fishes are used for bait, it is very likely that almost all small or lesser fishes are so used.

262 178 In some cases the Indians indicated changes in preference for given fishes, with the time. For unexplained reason *Gymnothorax casteneus*, the morene, has been claimed to have been eaten in the past but not for the last 11 years. It isn't clear why the figure of 11 had been used and why suddenly in the early 40's they should stop eating it while the Mexican drool over it. But it may be also that here we have merely personal preference of the informants, as so often happens. As for the *pescara* it was formerly taken for food [439] but now it is merely sold to the Mexicans. This practice is increasing also to include the immense *mero*, even larger than the *pescara*. The fish is mainly sold but rarely eaten by the Seris themselves.

Food Preparation and Preferences

252 Food preparation is simple and in the main differs not at all from the preparation of other animal diet. The fish are either boiled whole or in part or else are roasted over slow fire on a grill. The entrails are usually discarded, but otherwise the beasts are eaten entire, eyes, brains and the rest, while the tiny fishlets are eaten complete with the scales and guts.

262 As for the preferences, as expected, there are some fishes that the Seri like better than others. The *bama* in the first place and the *pinto* in the second lead the list. The Seri prefer them to all others and consider them a real delicacy. On the other hand, there are some fishes that they'll eat only under protest, meaning when times are hard. *Girella simplicidens* is one such creature. The *Puerco* or *Cochi* is another. I have seen boat loads of puercos brought in with the other fish and un- [231] ceremoniously dumped out on the beach to the dogs. Literally! The Seris took to this fish only when fishing was poor during the wintry days when they were held ashore by the weather. Even [183] then, they tried to eat the despised creatures on the sly, avoiding being seen doing this, and when I or the Mexicans picked up fresh fish from the beach to take home they laughed saying that we acted as a *cochi* (pig) would!

Other Economic Uses

* 825 237 ●322 One use made of fish concerns two species of sharks, the *chato* and *camposo*. Here, the informants claimed, the oil from their liver had been used in earlier times for polishing wood. This is

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quite possible but I couldn't substantiate the story from contemporary evidence. Perhaps during the height of the shark hunting for the liver oil, the Seris used the oil also for wood polish, although it isn't very clear just what sort of artifact they make would require such treatment. The wooden tools or artifacts among them are in short supply at all times. Finally, the huge horned manta was supposedly hunted also for its hide but just in what circumstances it was not explained. It is the only fish which the Seri ever mentioned as having been put to such use.

Fishing

As already mentioned, fishing nowadays is largely accompanied from flat-bottomed boats with hook and line. The old ways of getting fish by spearing are almost gone for good. Recently, an attempt has been made to teach the Seris siene fishing, but 10 years of these endeavors accomplished only ruination of a number of expensive nets and of much fishing gear and the desertion of the project by the Indians. It may be that their individualistic and almost anarchistic attitudes preclude cooperation, essential in this type of fishing.

The bait is obtained in any one of the three ways: by dynamiting fish in tide pools or along the shore, or by catching small fry with small hook and line, or finally by collecting small fishlets in the tide pools, prying them out from under rocks or simply—and here the Seri boys excel—by shooting them in the tide pools with tiny toy arrows or simply spearing them with a stick. The dynamiting is done with the purchased sticks of dynamite which the Seris obtain in the tiendas. The procedure is often risky and down right dangerous. Some of the Seris have blown themselves up with dynamite. I have seen one of them, who lost both arms and had a jaw broken during a dynamiting trial. He went about with a dirty rag tied up over his head to support the wrecked jaw-bone. He was carried off by measles two years later in the 1955 epidemic.

The Seris' commercial fishing is pretty much controlled and exploited by the two or three Mexican fish traders from Nogales and Hermosillo. These have their tiendas in Desemboque, which at set price sell things to the villagers. They also provide the Indians with the five horse-power motors for fishing trips and pleasure cruises and with the oil and gasoline essential to run these—also at set price. They finally purchase the fish—at a set price—and from the proceeds the Seris purchase goods at the tiendas, completing the cycle. Not all Seris are compelled to work for the Mexicans, and, in fact, they do not always do so. Some families stay away from Desemboque and depend on the sail and oars for propulsion. They come to the village only once every few months to obtain supplies. Even when in the village, the Seris make little effort to fish for more than they wish to get in order to satisfy their immediate needs.

Fishing expeditions usually take place in the morning. Most Seris will set off before daybreak and will return with the catch by 11 a.m. or noon.

[P. 33 A]

123 We have given the Seris so much we are now short ourselves. Variety is very restricted. We haven't enough tin dishes or tools to go around, but that does not trouble us at all. All the cleaning is done in salt water and sand. Fresh water is only used to drink. Nothing else. We can't even take a shave. Not a drop of water. We are very lax in our personal toilets and appearance. We are barefooted always in the boat, as we have to wade to get the boat in deep water, and often the waves slosh on board.

This boat is made of a hollowed log twenty feet long and three feet, three inches wide, and she is very cranky. She almost upset with us several times. When everybody is placed in it, it is difficult to even change a posture without endangering everybody. She has no keel and leaks some, so we have to bail out often. But she is a good sea boat and rides the waves well if they are not too rough.

123 439 [207] [484] One evening we decided to get a message through to Juan Tomas, the Chief, some twenty or thirty miles distant. Herrera promised to go if we gave him twenty thirty-thirty cartridges. He would go one day and return the next, a round trip of about fifty miles. We gave him the message to tell those people we had a lot of things to trade for the things they use in every day life. Pelican skin kilts, bows and arrows, ollas, baby cradles, hair brushes and other interesting things. I had already made a trade with Blanco for his *balsa*, promising him sufficient lumber, nails and tools, to make a boat large enough to carry five men. This promise I fulfilled to the letter, and later on another expedition to Seriland I had the pleasure of sailing in this boat, which was well built and seaworthy. The unusual part of this bargain was that Blanco permitted me to deprive him of his only means (apparently) of making a living in hunting *cahuama* for himself and his family, freely and without hesitation, simply on my promise of lumber in the future. I was deeply touched by the trust reposed in me by this old sea rover.

322 [50] These people are splendid mechanics with the crudest of tools---rocks, fire, bones, knives. For instance, the pole of the harpoon was composed of five pieces of driftwood and a seagoing boat which I saw in Guaymas, captured by Mexican fishermen after killing the Seri crew, was composed of fully one hundred pieces of driftwood fastened with nails made of wire, and tied with fiber, and all the seams were filled with a black composition of native origin resembling pitch. Previous [325] to the use of old iron, harpoon points were made of ironwood, but now iron is universally used.

283 [123] I asked old Blanco for some of his native rope. He gave me some of it. He said they get the slender roots of the mesquite and peel the bark, and then the girls and women chew the fibrous wood. This is shredded and twisted into small two-stranded ropes. It is this rope, tied around and around, that holds the *carriso balsa* together.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

ripening); most of the larger muscles were already gnawed away, leaving loose ends of fiber and strings of tendon clinging to the bone, the condition being such that the remaining flesh might easily have been cut and scraped away by means of a knife; yet whenever a warrior or woman or youth hungered he or she took down the heavy joint, squatted or sat on the ground with back to one side of the doorway, held the mass at the height of the mouth, and gnawed, sucked, and swallowed, frequently tearing the tissue by twisting and backward jerks of the head, and not only masticating, but swallowing the free ends of tendons still attached to the bone. This process was varied only by seizing with the hands and tearing off a strip of flesh or skin already loosened by the teeth; and it was continued until the bones were practically clean, when they were wrenched apart by the stronger men in order that the cartilaginous cushions and epiphyses might be gnawed away. The only approach to cooking or carving was a parboiling of the foot, after the leg was wrenched off at the hock, until the hoof was sufficiently softened to be knocked off with the protolithic hupf[1] shown in plate XLIII, when half a dozen matrons and well-grown maidens gathered about to gnaw the gelatinous tissue (already softened by incipient decay as well as by the parboiling) investing the coffin bone. The entire procedure in this as in many other cases proclaimed the absence of knife-sense. The Caucasian huntsman does not have to think of his knife when game is to be bled or skinned or dissected; his habit-trained hand knows where to find the implement, how to seize it, and in most cases how to wield it advantageously; but the Seri hand possesses no such cunning, and uses the knife only clumsily and at second thought, if at all. The Seri huntsman, on the other hand, does not have to think of nails and teeth, for they are trained and coordinated by hereditary habit to spontaneously act in unison and with the utmost possible or needful vigor; while the Caucasian at least has completely lost the claw-and-teeth instinct of offense and defense.

Conformably with their striking independence of knives, the Seri are conspicuously unskilful in all mechanical operations involving the use of tools. Their most elaborate manufacture is the balsa, made from reeds broken at the butts and with the leaves and tops removed by the hands or by fire, bound together with hand-made cords; next in elaborateness come the bow and arrow, normally made without cutting tools; then follows their fictile ware, which is made wholly by hand, without aid of the simple molds and paddles and other devices used by neighboring tribes; while their primitive fabrics were apparently of hand-extracted fibers, twisted and woven wholly by hand, with the aid of wood or bone perforators in sewing and possibly in weaving. Practically the Seri possess but a single tool, and this is applied to a peculiarly wide variety of purposes—it is the originally natural cobble used for crushing bones and severing tendons, for grinding seeds and

[1] Pictured postea, p. 166.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

and the shell-strata are so like and so different from any other fictile ware as to be distinguished at a glance. Hence it would seem manifest that the Seri olla must constitute a normal nucleus for the Seri esthetic; yet even here the field is practically barren, as is shown by the study of a score of usable and mortuary specimens and of thousands of sherds. The most ornate specimen seen is that depicted in plate XXXII. Its form, like that of the balsa, is a mechanical equation of forces and materials; its body-color is that of the clay, blotched and blackened irregularly by the smoke of the firing; and its decoration is limited to 17 faint lines or bands radiating downward from the ill-shaped neck. The radial bands were evidently drawn by a finger dipped in clayey water after the vessel was otherwise finished for the firing; they are irregular in placement, width, length, and direction; they generally run in pairs, two straight lines alternating with two zigzag lines, though the circuit is completed by two zigzags drawn wide apart and separated by a single straight line. The meaning of the device (if meaning there be) was not directly ascertained; but it is suggestive that its maker and owner was the mother of the youthful warrior from whom the rattlesnake necklace was obtained (her face-symbol is that shown in the lower left figure of plate XXVI), and that the vessel was surrendered more reluctantly than any other article obtained from the tribe.

Another utensil of some importance to the tribe is a basket of the type illustrated in figure 24. It is manufactured with much skill and is used for various domestic purposes, being practically water-tight and unbreakable, and materially lighter than even the unparalleledly light fictile ware of the Seri. In form and size and weave the half dozen examples seen correspond with widespread southwestern types; yet it is noteworthy that while otherwise similar baskets are habitually decorated by other basket-making tribes, the Seri specimens were absolutely devoid of decorative devices.

Practically the only remaining artifacts available for decoration are those connected with archery; and it suffices to say that while the bows are skilfully made and the arrows constructed with exceeding pains, not a single specimen seen showed the slightest trace of symbolism or of nonutilitarian motive.

Summarily, the Seri are characterized by extreme esthetic poverty. This has been noted by the early missionaries and by the few other travelers who have approached their haunts, as well as by the vaqueros on the Encinas and Serna and other ranchos bordering their range, who know them as "los pobrecitos". All observers have been struck with their destitution and squalor; yet when the impressions are particularized they are seen to denote absence of the poor luxuries, rather than the bare necessities, of primitive life. The people are pathetically poor in the industrial sense; their equipment in artifacts—implements, weapons, utensils, habitations, apparel—is meager almost, if not quite, beyond parallel in America; yet their esthetic equipment, practically

I: McGee E-5 (1894-1895)1898 NU31 Seri NU31

even the ware of the wide-wandering Papago is more extravagant than that of the Seri in the ratio of 100 to 84. It is noteworthy, too, that the typical Seri ware is much more uniform than that of the other tribes; the various specimens seen in use at Costa Rica, and nearly entire in various parts of Seriland, were closely similar in form and nearly alike in dimensions; while the innumerable smaller fragments scattered over Seriland and the neighboring "despoblado" or buried amid the shells of Punta Antigualla correspond precisely in thickness, in curvature, in material, and in finish with the ware observed in use.

Neither the manufacture of the ware nor the sources of material have been observed by Caucasians. Examination of the specimens indicates that the material is a fine and somewhat micaceous clay, apparently an adobe derived from granitoid rocks; and such material might be

Ratio of capacity to weight among Indian ollas[1]

	Capacity	Weight	Ratio	Mean ratio
Seri:	*Liters*	*Kilograms*		
Plain	15.14	1.91	0.126	0.137
Painted	15.61	2.30	.147	
Papago:				
No. 1	17.03	4.00	.230	.233
No. 2	8.51	2.36	.279	
Sia	15.14	3.82	.252	.271
Zuñi	13.30	3.18	.258	
Acoma	15.61	4.31	.276	
Hopi	13.72	4.06	.295	

obtained in various parts of Seriland. The structure of the ware reveals no trace of coiling or other building process, nor does the texture clearly attest the beating process employed by the Papago potters; but there is a well-defined lamellar structure, and the surfaces (especially inner) are striated circumferentially or spirally in such manner as to suggest a process of rubbing under considerable pressure. All the specimens are so asymmetric as to indicate the absence of mechanical devices approaching the potter's wheel, while the necks are of such size as to admit the hand and forearm of an adult female but not of a warrior. Some suggestion of the manufacturing process is afforded by miniature fetishistic and mortuary specimens, such as those depicted in figures 17 and 18, and the larger specimens shown in figure 39, which were evidently shaped from lumps of suitable clay first hollowed and then gradually expanded by manipulation with the fingers, with little if any aid from implements of any sort. On putting the various indi-

[1] In this table the ratio is expressed by the weight in kilograms for each liter in capacity. The Papago and Pueblo specimens were selected from typical material in the National Museum and at random, save that in the Pueblo silos choice was made of specimens corresponding approximately in size with those of the Seri.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

On putting the indi-
323 [462] cations together it would seem probable that the ware is made by the women, and that each piece is shaped from a lump of tempered and well-kneaded clay of suitable size, first hollowed and rudely shaped over one hand, and gradually expanded by spiral rubbing, kneading, and pressure between the hands of the maker. The burning is incomplete and variable, suggesting a little outdoor fire in a shallow pit adapted to a single vessel. The ware is without glaze or slip or other surficial treatment save that the lamellar texture is best developed toward the surfaces; hence it is so porous that the filled vessel is moist even in the sun.

482 [462] Ordinarily women are the water-bearers, each carrying an olla balanced on the head with the aid of a slightly elastic annular cushion, usually fashioned of yucca fiber (plate XXXII and figure 15), though in some cases two ollas are slung in nets at the ends of a yoke (figure 16) after the Chinese coolie fashion (this device being apparently acultural).

FIG. 15.—Seri olla ring.

415 The function of the conventional Seri olla is exclusively that of a canteen or water-carrying vessel, and its form is suited to no other use; while its lines, like its thinness of wall, are adapted to the stresses of internal and external pressure in such wise as to give maximum strength with minimum weight. It is by reason of this remarkably delicate adaptation of materials to purposes that the plain olla figured in plate XXXIII, weighing an ounce or two more than 10 pounds in dry air, holds and safely carries three and one-third times its weight of water. When such ollas are broken, the larger pieces may be used as cups or

FIG. 16.—Water-bearer's yoke.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

dishes, or even as kettles, in the rare culinary operations of the tribe (as shown in plate X); but the entire vessels appear to be religiously devoted to their primary purpose.

While some three-fourths of the observed fictile ware of the Seri and a still larger proportion of the scattered sherds represent conventional ollas, there are a few erratic forms. The most conspicuous of these is a smaller, thicker-walled, and larger-necked type, of which three or four examples were observed; two of these were in use (one is represented lying at the left of the jacal in plate X), and another was found cracked and abandoned on the desert east of Playa Noriega. The vessels of this type are used primarily as kettles and only incidentally as canteens. In both form and function they suggest accultural origin; but the ware is much like that of the conventional type. Another erratic type takes the form of a deep dish or shallow bowl, of rather thick walls and clumsy form, which may be accultural; a single example was observed in use (it is shown in plate XIV). There are also mortuary forms, including a miniature olla (figure 39) and bowl (figure 41), and such still smaller examples as those illustrated in figures 17 and 18. In addition to the utensils a few fictile figurines were found. Most of these were crude or distorted animal effigies, and one (broken) was a rudely shaped and strongly caricatured female figure some 2 inches high, with exaggerated breasts and pudenda. Analogy with neighboring tribes suggests that the very small vessels and the figurines are fetishistic appurtenances to the manufacture of the pottery; e. g., that the fetish is molded at the same time and from the same material as the olla, and is then burned with it, theoretically as an invocation against cracking or other injury, but practically as a "draw-piece" for testing the progress of the firing.

FIG. 17.—Symbolic mortuary olla.

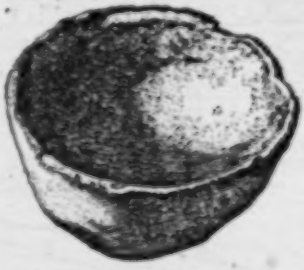

FIG. 18.—Symbolic mortuary dish.

By far the most numerous of the utensils connected with potable water are drinking-cups and small bowls or dishes; but these are merely molluscan shells of convenient size, picked up alongshore, used once or oftener, and either discarded or carried habitually without other treatment than the natural wear of use (an example is illustrated in figure 19). Larger bowls or trays are improvised from entire carapaces of the tortoise (probably *Gopherus agassizii*), which are carried considerable distances; and still larger emergency water-vessels consist of carapaces of the green turtle (*Chelonia agas-*

2: Kroeber E-5 (1930) 1931 NU31 Seri NU31

it was set up by an archer in front of himself, or carried for him by another man. At any rate it suggests open fighting besides raids and ambushes. 714

Pottery, which is thin, porous, and reddish-buff to gray, was not seen made. The clay is said to be tempered with jackrabbit or horse dung. The vessel is started, apparently by coiling, in a dish or receptacle. It is certainly built up by coiling, the sausages being somewhat less than the thickness of a finger. It dries fast, the bottom becoming somewhat hard as the top is being built. The coils are smoothed as they are added, with a stone inside, a shell to scrape the outside. A paddle is not used. The vessel is further smoothed with the stone and dried for a day. It is fired with wood, sufficient manure being unavailable on the island. 323 ● [372]

312 of four miles by a rough and stony trail. In
482 other parts of the island, habitations were occupied as distant as 15 miles from the nearest watering places. Under these conditions the Seris became essentially and primarily water carriers, and all their other industries were subordinated to this function.
[271] They learned to economize on water carrying by gulping incredible quantities on their occasional visits to the aguajes, yet, more than half of the water required in their vital economy was consumed after transportation over distances of four to twelve miles. The
312 women were ordinarily the water bearers and
482 for this important business manufactured a
323 distinctive vessel for the purpose. From fine adobe clay they hollowed, expanded and shaped by manipulation with the fingers and without the aid of implements of any sort, a large olla of remarkably light weight in proportion to its capacity. Its mouth was made no larger than the hand that shaped it.
482 thus to prevent spilling on the trail. From yucca fiber a cylindrical cushion was also

[p. 196(B)]

[text continues on p. 197(B)]

462 desert plants or littoral fishlets from tide-pools or of the shellfish. Both men and women will [224] bring in an occasional rattler, although women [857] are more likely to do this because they spend more [883] time in the desert. Children of both sexes are engaged in the female occupations here, but adolescent boys already join in their fathers' hunts on land or sea.

342 Housing has undergone some changes. In the 184 desert or on Tiburon the Indians construct the kind of shelter they did in the recorded past, an ocotillo frame, bent over in the middle and covered up with dried plant debris and twigs from the desert, or with the sail cloth. But in Desemboque they have more substantial houses—of wattle and adobe, with flat roofs, rectangular or square, often with corrugated tin or drift planks and other debris piled up on top, or along the walls.

178 In the remainder of their material culture, not much has been left from years past although one must remember that from the very beginning of recorded Serian history it has been of a most [291] meager sort. Pelican robes, which some Seris ap- [412] parently still wore in 1930 are gone for good. So are the stone tools. So is the pottery which had [323] probably disappeared in Kroeber's time. The hu- [301] man hair necklace with rattlesnake rattles is also a thing of the past. The rattlesnake skin belts [291] McGee (1898:170) described and figured are probably all gone. I havn't seen or heard of any.

412 But what remains much as they had been in 285 1894 are the bone-awls. These are made of burros' carpals and the blossoming of basketry, owing to

[p. 8A]

285 [824] I watched a woman make a basket. She used young branches from the terote tree, I think *terote blanco*. The bark was peeled and shredded into two parts, the heart taken out and kept separate. The coils of the round part were put in a pot of hot water to soften, and the edge of the basket was soaked a little in hot water. The center of the coils or woof consisted of six or eight strips of heart while the outer sap wood was woven around in regular coil-weave fashion.

[237] [412] A brad of deer shin-bone sharpened on pumice to a needle point was used as a brad. With this brad she split the fiber, held one piece in her mouth, and stripped the back down. Then she punched a hole in the bone brad, inserted the sharp end of the fiber and pulled it almost through. She then repeated the operation, adding a strip of heart once in a while. These baskets are coarse and unattractive, but they are hard and tough and stand heavy use.

• 323 Cooking vessels consist of two or three cooking ollas that nest together to facilitate transportation. These are made of coarse clay, solely for utility without regard for beauty of shape, color or design. In burning these ollas they use the shell of the sea turtle. [237] [372] The cells of the shell are filled with a fine oil and this burns the ollas. On most of the other places on the mainland, the Indians use cow chips, or dried droppings to fire the clay.

283 484 123 [277] We proposed to shift camp to Tinajanita, our first landing place, where Herrera was to meet us in two days with the Chief and some of his men. Since it was blowing, he said the men couldn't fish and they would be on land probably hunting, so he would be able to see them. At this time they gathered *sescal* on an island off the west coast to make the liquor they used at fiestas, weddings and other celebrations.

Herrera left at five o'clock in the morning, with a swinging gait, for the opposite side of the Island. The distance around by boat would be fifty miles, and across, only about twenty or twenty-five---a full day's trip and hard, as mountains would have to be crossed and the rocks were sharp and the way difficult.

123 We had breakfast on rice and bread. Our rations are running low and we expect to move this morning. We made arrangements about the native boat and saw Blanco trot off with two five-gallon cans for water, a distance of ten miles. We went to the camp to get a few things---an old basket, a Pelican hide and other things, and then we asked the help of everybody to get the boat down to water---the tide was very low. The one man, the women and five of us were required to drag and push the boat to water.

We waved goodbye, loaded her up and then rowed against the tide and wind for miles, and finally landed in a lovely sheltered lagoon, built our fire and had lunch. A few crabs were speared, and late in the afternoon the wind shifted. We loaded the boat again and pushed off for Tinajanita, our first landing place. After rowing, we raised

[text continues on p.174]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

and discarded hupfs, a broken fictile figurine, etc), was the still ruder arrowpoint represented in figure 37*b* (both figures are natural size). The specimens are nearly identical in material—a jet-black slaty rock with a few lighter flecks interspersed, weathering gray on long exposure (as is shown by the partly natural surface of the larger point); similar rock abounds in several easterly spurs of Sierra Seri. The smaller specimen was evidently finished and used; its features indicate fairly skilful chipping, though its general form is crude—in addition to the asymmetric shouldering, the entire point is curved laterally in such manner as to interfere with accurate archery. The larger specimen is still more strongly curved laterally, and the chipping is childishly crude; while the rough surface, clumsy tang, and unfinished air indicate that it was never used even to the extent of shafting. It is possible that the specimens may have been imported by aliens, but the probabilities are strong that they were manufactured by the Seri. No other arrowpoints and no chips or spalls suggesting stone arrow-making were found in all Seriland, though the entire party of twelve were on constant lookout for them for a month. The natural inference from these facts is that the ancestral Seri, like their descendants, were not habitual stone arrow-makers.

There is a final category of Seri artifacts which would be classed as distinctive by Caucasians on the basis of material, though they are combined with the stone artifacts by the tribesmen; it comprises arrow-points of hoop-iron or other metal, harpoon-points of nails, spikes, or wire, awls of like materials, and other metallic adjuncts to ordinary implements. The use of iron is of course post-Columbian, and its ordinary sources are wreckage and stealage. The date of introduction is unknown, and probably goes back to the days of Cortés and Mendoza; certainly the value of metal was so well understood in 1709 that when Padre Salvatierra's bilander was beached in Seriland the tribesmen at once began to break her up for the nails (ante, page 67); yet the metal is wrought cold and only with hupf and abat like the local materials, and is habitually regarded and designated as a stone. By reason of the primitive methods of working, the metals are of course available only when in small pieces or slender shapes. There is a tradition among the vaqueros of the frontier that a quantity of hoop-iron designed for use in making casks was carried away from a rancheria in the vicinity of Bacanchito during a raid in the seventies, and that this stock has ever since served to supply the Seri with material for their arrowpoints; but it is probable that the chief supply is derived from the flotsam swept into the natural drift trap of Bahia Kunkaak by prevailing winds and tidal currents, and cast up on the long sandspit of Punta Tormenta after every storm. A surprising quantity and variety of wreckage was found on this point, and thence down the coast to Punta Narragansett, by the 1895 expedition: staves and heads of casks broken up after beaching, a telegraph pole crossbar which had evidently

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

177 brought in a cargo of large wire, and a piece of door-frame with heavy
502 strap-iron hinges attached with screws, were among the troves of the tribesmen within a few weeks; and it was noted that while even the hinge screws and the tacks attaching tags to the cask-heads had been extracted by breaking up the wood, the roughly forged hinges of 2 by ½-inch wrought iron had been abandoned after a tentative battering with cobbles, and lay among the refuse stones about the jacales.

412 A rough census of the stone implements of Seriland is not without interest, even though it be no more than an approximation. Some 20 or 25 habitable and recently inhabited jacales were visited, with about twice as many more in various stages of ruin, fully two-thirds of these being on the island; and at least an equal number of camps or other houseless sites were noted. About these 150 jacales and sites there were, say, 50 ahsts, ranging from nearly natural bowlders to the comparatively well-wrought specimen illustrated in plate XXXIX, and an equal number of cobbles used interchangeably as ahsts and hupfs; there were also 200 or 300 pebbles bearing traces of use as hupfs, of which about a third were worn so decidedly as to attest repeated if not regular use; while no flaked or spalled implements were observed save the two doubtful examples illustrated in plates XLVII and L, and only two chipped arrowpoints. It may be assumed that the sites visited and the artifacts observed comprise from a tenth to a fifth of those of all Seriland, in addition to, say, 75 finished hupfs habitually carried by Seri matrons in their wanderings; and it may be assumed also that 50 or 100 metallic harpoon-points and several hundred hoop-iron arrowpoints are habitually carried by the warriors and their spouses.

[324] The most impressive fact brought out by this census is the practical absence of stone artifacts wrought by flaking or chipping in accordance with preconceived design; excepting the exceedingly rare arrow-points there are none of these. And the assemblage of wrought stones demonstrates not merely that the Seri are practically without flaked or chipped implements, but that they eschew and discard stones edged by fracture whether naturally or through accident of use.

Summarily, the Seri artifacts of inorganic material fall into three groups, viz: (I) The large and characteristic one comprising regularly-used hupfs and ahsts, with their little-used and discarded representatives; (II) the small and aberrant group represented by chipped arrow-points, and (III) the considerable group comprising the cold-wrought metal points for arrows and harpoons and awls—though it is to be remembered that the Seri themselves combine the second and third of these groups.

I. On reviewing the artifacts of the larger group it becomes clear (1) that they immediately reflect environment, in that they are characteristic natural objects of the territory; (2) that they come into use as implements through chance demands met by hasty selection from the

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

abundant material; (3) that the great majority of the objects so employed are discarded after a use or two; (4) that when the object proves especially serviceable, and other conditions favor, it is retained to meet later needs; (5) that the retained objects are gradually modified in form and surface by repeated use; (6) that if the modification diminishes the serviceability of the object in the notion of the user (e. g., by such fracture as to produce sharp edges), it is discarded; (7) that if the modification enhances the serviceability of the specimen in the mind of the user it is the more sedulously preserved; and (8) that through the instinctive desire for perservation, coupled with the thaumaturgic cast of primitive thinking, the object acquires at once an artificialized form and a fetishistic as well as a utilitarian function. The significant feature of the development is the total absence of foresight or design, save in so far as the concepts are fiducial rather than technical or directly industrial.

II. On reviewing the almost insignificantly small group of chipped stone artifacts, it seems clear that while the material is local the design is so incongruous with custom and characteristic thought as to raise the presumption that stone-chipping is an alien and imperfectly assimilated craft. The conspicuous and significant feature of the chipped stone artifact is the shapement in accordance with preconceived design.

III. On reviewing the arbitrarily separated group of metallic artifacts it is found clear (1) that the material is foreign; (2) that it is avidly sought and sedulously saved and utilized; (3) that it is wrought only by the crude methods used for fashioning the most primitive of implements and tools; and (4) that it is used chiefly as a substitute for organic substances employed in symbolic imitation of the natural organs and functions of animals. The significant features of the use of iron artifacts are (*a*) the absence of either alien or specialized designs, and (*b*) the mimicry of bestial characters as conceived in primitive philosophy.

Classed by material and motive jointly, the three groups are diverse in important respects: The first is local in material, local in motive; the second is local in material, foreign in design; the third is foreign in material, local in motive.

On recapitulating the several phases of Seri handicraft, the devices are found to fall into genetic classes of such sort as to illumine certain notable stages of primitive technic.

The initial class comprises teeth, beaks and mandibles, claws, hoofs, and horns, used in imitation or symbolic mimicry of either actual or imputed function of animals, chiefly those to which the organs pertain, together with vegetal spines and stalks or splints, used similarly under the zootheistic imputation of animal powers to plants; also carapaces and pelts, used as shields combining actual and symbolic protective functions. While this class of devices is well displayed by the Seri, it is by no means peculiar to them; clear vestiges of the devices have

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

included a heavy Springfield "remodeled" rifle, lacking not only ammunition but breechblock and firing pin; while Don Andrés Noriega, of Costa Rica, and L. K. Thompson, of Hermosillo, described a rifle of modern make captured similarly two years before, which was in good working order and charged with a counterfeit cartridge ingeniously fashioned from raw buckskin in imitation of a center-fire brass shell and loaded with a polished stone bullet.[1] The finders opined that the rifles were carried to bluff the enemy, and even that the counterfeit cartridge was designed to do deadly execution; but it would better accord with Seri customs, and with the law of piratical acculturation which they typify,[2] to infer that the weapons were regarded rather as symbols of mystical potencies than as simple scarecrows. Of related import were two or three pseudomachetes made from rust-pitted cask hoops, reported by the majordomo and several vaqueros at Costa Rica; and of still greater significance was a machete picked up in a just-abandoned jacal by Don Ygnacio Lozania—veteran of the Andrade expedition and the Encinas conquest—which was laboriously rasped and scraped out of paloblanco wood, colored in imitation of iron blade and mahogany handle by means of face-paints, and even furnished with "eyes" replacing the handle-rivets, in the form of embedded iron scales. Some of the Seri are familiar with the normal use of firearms, as was demonstrated by the Robinson and other episodes, and many of them modernly make some use of machetes or other knives, as shown by various rudely whittled wooden artifacts; yet the burden of proof indicates that the chief use of the Caucasian's weapons in the heat of actual warfare is shamanistic and symbolic. This interpretation is, in fact, practically established by the experience of the frontier; for the vaqueros and local soldiery have little fear of the ill-understood firearms and clumsily handled machetes occasionally seen in Seri hands, though they dread unspeakably the necromantic arrows and flesh-rending teeth with which the agile foes are credited.

The mystical potency ascribed to Caucasian firearms and cutlery by the zoomimic tribesmen is of interest as a reflection of motives and methods pervading the entire range of their activities; at the same time it suggests the genesis of the aberrant technolithic craft displayed in arrow-chipping. The information obtained from Mashém and his mates concerning chipped arrowpoints implied that the process was hieratic and little understood by the body of the tribe, its place in the tribal knowledge, indeed, being similar to that of the brewing of the arrow "poison", which is the special work of shamans; and this information, comporting as it does with the rarity of the chipped points and

[439]

[1] The imitative skill of the Seri was illustrated at Costa Rica some years ago, when the petty accounts for labor, etc, were kept by means of tokens stamped from sheet brass. While a Seri rancheria was maintained near the rancho, the storekeeper detected a number of counterfeits of his tokens, so well executed as to pass readily over the counter in ordinary exchange—and after extended detective work the counterfeiting was traced to the rancheria.

[2] American Anthropologist, vol. XI, August, 1898, pp. 243-248.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

the crudeness of the work, strongly supports the inference that the stone arrow-making of the Seri was originally a fetishistic mimicry of alien devices—a plane, indeed, above which the craft has hardly risen even in recent decades.

While the Seri are devoid of military tactics in the strict sense of the term, they have certain customs of warfare which seem to be scrupulously observed. These customs are closely akin to those followed in hunting the larger land animals—indeed, the warfare of the tribe is merely an intensified counterpart of their chase.

The favorite tactical device of the warriors, as indicated by the great majority of their battles, is the ambuscade, laid and sprung either with or without the aid of decoys (usually aged women). Sometimes a considerable body act in concert under a prearranged plan; more commonly a few warriors only are involved at the outset, though these may be joined as the crisis approaches by companions lurking behind rocks and shrubs to be either on hand at the finish or in the way of ready flight, according to the turn of the battle-tide; and it is probable that the greater part of the ambuscades prove stillborn by reason of the oozing courage of leaders and the shirking of their supporters if the prospective victims present a bold front, or if the final omens are otherwise adverse. The ambuscade, with its flying contingent, grades into the device of stalking a stationary or slowly moving enemy, the stealthy approach terminating either in covert attack at close range or in sudden rush by a superior force. The theory, or rather the instinctive plan, of the campaign is to seek advantage in both position and numbers, to keep under cover until the instant of attack, to have sure and ample lines of retreat, and in every way to minimize individual risk.

There is a widespread notion toward the Seri frontier that the savages are given to sorties and surprises by night; but both specific testimony and the records indicate, when carefully analyzed, that this tactical device is much less common in practice than in repute, and is not, indeed, characteristic of the tribe. A few known battles began in attacks by night; but the war parties, like the hunting and fishing parties (save in the semiceremonial pelican pilgrimages), display decided preference for daylight in their forays—indeed, there are various indications that the folk are much more timid and oppressed with superstitious fears by night than by day.

In rare cases small parties of aliens have been half openly surrounded and done to death by considerably larger parties of the savage folk; but this method, too, is incongruous with the fixed habits of the tribe and with the deep-planted instinct of avoiding personal exposure.

A considerable number of the long list of homicides charged against the Seri, and marking the beginning of many of their battles, were individual rather than collective, the consummation of inimical impulse sometimes treacherously concealed for favorable opportunity, as in the

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

and discarded hupfs, a broken fictile figurine, etc), was the still ruder arrowpoint represented in figure 37*b* (both figures are natural size). The specimens are nearly identical in material—a jet-black slaty rock with a few lighter flecks interspersed, weathering gray on long exposure (as is shown by the partly natural surface of the larger point); similar rock abounds in several easterly spurs of Sierra Seri. The smaller specimen was evidently finished and used; its features indicate fairly skilful chipping, though its general form is crude—in addition to the asymmetric shouldering, the entire point is curved laterally in such manner as to interfere with accurate archery. The larger specimen is still more strongly curved laterally, and the chipping is childishly crude; while the rough surface, clumsy tang, and unfinished air indicate that it was never used even to the extent of shafting. It is possible that the specimens may have been imported by aliens, but the probabilities are strong that they were manufactured by the Seri. No other arrowpoints and no chips or spalls suggesting stone arrow-making were found in all Seriland, though the entire party of twelve were on constant lookout for them for a month. The natural inference from these facts is that the ancestral Seri, like their descendants, were not habitual stone arrow-makers.

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225 In fishing for turtle, one man stands at the bow of the boat, holding the mainshaft and extension cord in one hand. When he sights a turtle, he propels the mainshaft at the animal's carapace, retaining a firm grip on the mainshaft and the extension cord. If it is struck, the turtle lurches away, loosening the foreshaft and unplugging it from the mainshaft. Tired eventually by the tension [411] applied by the fisherman on the extension cord, the turtle is finally stunned by a wooden club and lifted into the boat.

225 There is evidence that the turtle-fishing complex has consider-175 able time depth and stability. The Seri were using similar apparatus and methods at least as early as 1825 (Hardy 1829: 296-297). At [501] this time they employed balsa boats rather than wooden boats with outboard motors and torches of cactus fibers instead of kerosene lamps. The complex continued, apparently with little change, through 1896 (McGee 1898: 187-193). Wooden boats and kerosene [177] lamps began to be adopted during the 1920s, and outboard motors were introduced in the 1940s.

411 During the entire period of 135 years (1825-1960), however, the harpoon tackle underwent only one important innovation. The 225 gasket on the foreshaft was introduced by a Seri Indian about the 176 year 1935. The addition of the gasket was related to, and coincided [439] in time with, the first attempts of the Seri to supply turtles to the commercial market. When they caught turtles solely for their own use, they did not need to keep the animals alive for very long, but when they began to sell them it became important to preserve them alive until they reached the market. The gasket acts like the hilt on a sword, preventing the entrance of the foreshaft hafting into the turtle's body. Through its contact with the carapace, it restricts the rotation of the point within the animal's body and provides a seal which inhibits the loss of blood, and thus prevents early death. After the turtle is stunned with a club and lifted into the boat, the foreshaft is removed and the hole which it made is stuffed with a piece of cloth.

124 Seri men were shown a harpoon foreshaft from a museum archive and asked what it was for and whether they themselves made similar 411 ones. If an informant acknowledged that he made them, he was asked, at the minimum, to detail the materials he used, the procedures he followed, and the approximate amount of time it would take him to produce one. Later he was requested to show the field worker examples of the foreshafts he had made. Of the approximately 40 adult Seri males, about 25 were available for questioning. Of these, approximately ten did not make foreshafts or had made them in the past but did so no longer; they were mainly older men and those [474] engaged in the administration of the Sociedad Cooperative de Pro-[887] duccion Pesquera Seri. Five men either would not or could not volunteer information. Data were obtained from the remaining ten adult men and from one eight-year-old boy; they include 21 foreshafts made by these eleven people.

411 The materials from which a foreshaft can be shaped and as-325 sembled vary within what is available in the Seri environment. Iron

8: Ascher E-5 (1960) 1962 NU31 Seri NU31

for the point may come from the transmission of an abandoned car or from flotsam. The wood for the hafting can be mesquite or ironwood, both indigenous in the area; waste from boat construction or other scraps of wood may also be used. Rubber for the gasket may be obtained from a worn automobile tire. The wrapping cord and lead cord are store bought, and mesquite gum is used to seal the hafting.

In manufacturing foreshafts Seri fishermen use three tools: a knife, a hacksaw blade, and a triangular file. The hacksaw blade is used to cut an appropriate length of metal for the point and to rough out the barb; the triangular file is employed to finish the point barb and stem; the tang of the file is used to puncture the hole in the gasket which is to receive the point. The shaping of the hafting and gasket, and the cutting and wrapping of the lead cords, are accomplished with a knife.

With regard to the method of manufacture, all fishermen report essentially the same procedure. They describe the pattern as a series of steps under two headings: (1) shaping and (2) assembling. Two individuals did not mention steps 1c and 2b, and the others considered these two steps to be optional.

1) Shaping
   a) Shaping the metal into a point
   b) Shaping the wood for hafting the point
      α) Shaping the general form
      β) Splitting the form lengthwise and grooving each half to receive the point (see section in Figure 1)
   c) Shaping the rubber for the gasket

2) Assembling
   a) Placing the mesquite gum in the grooved portions of each half of the hafting (see section in Figure 1)
   b) Placing the gasket on the point
   c) Inserting the point base into the hafting and reuniting the split hafting form
   d) Wrapping with the wrapping cord and with it interweaving the lead cord
   e) Refinishing the hafting base to fit the mainshaft socket

Four men were able to explain the foregoing procedure in detail and were in agreement in the following matters. The point is shaped before the hafting because its length determines the length of the latter, and because the diameter of the point base dictates the grooving of the haft. The gasket is shaped after the point and the hafting because the diameter of its hole is determined by that of the point base and its total diameter by that of the hafting. The mesquite gum then secures the point and seals the hafting. Interweaving the lead cord with the wrapping cord secures the former to the hafting.

The amount of time required to complete a foreshaft shows marked variation. This is not primarily a function of the working habits of the artisan. If all the materials are present, the time it takes to make a foreshaft ranges from four to eight hours, but if all the materials are not available, as much as a year may be required. There may, for example, be a considerable lapse of time between the shaping of a point and the shaping of a gasket when material for the

123 We have given the Seris so much we are now short ourselves. Variety is very restricted. We haven't enough tin dishes or tools to go around, but that does not trouble us at all. All the cleaning is done in salt water and sand. Fresh water is only used to drink. Nothing else. We can't even take a shave. Not a drop of water. We are very lax in our personal toilets and appearance. We are barefooted always in the boat, as we have to wade to get the boat in deep water, and often the waves slosh on board.

This boat is made of a hollowed log twenty feet long and three feet, three inches wide, and she is very cranky. She almost upset with us several times. When everybody is placed in it, it is difficult to even change a posture without endangering everybody. She has no keel and leaks some, so we have to bail out often. But she is a good sea boat and rides the waves well if they are not too rough.

123 439 [203] [484] One evening we decided to get a message through to Juan Tomas, the Chief, some twenty or thirty miles distant. Herrera promised to go if we gave him twenty thirty-thirty cartridges. He would go one day and return the next, a round trip of about fifty miles. We gave him the message to tell those people we had a lot of things to trade for the things they use in every day life. Pelican skin kilts, bows and arrows, ollas, baby cradles, hair brushes and other interesting things. I had already made a trade with Blanco for his *balsa*, promising him sufficient lumber, nails and tools, to make a boat large enough to carry five men. This promise I fulfilled to the letter, and later on another expedition to Seriland I had the pleasure of sailing in this boat, which was well built and seaworthy. The unusual part of this bargain was that Blanco permitted me to deprive him of his only means (apparently) of making a living in hunting *cahuasa* for himself and his family, freely and without hesitation, simply on my promise of lumber in the future. I was deeply touched by the trust reposed in me by this old sea rover.

322 [508] These people are splendid mechanics with the crudest of tools---rocks, fire, bones, knives. For instance, the pole of the harpoon was composed of five pieces of driftwood and a seagoing boat which I saw in Guaymas, captured by Mexican fishermen after killing the Seri crew, was composed of fully one hundred pieces of driftwood fastened with nails made of wire, and tied with fiber, and all the seams were filled with a black composition of native origin resembling pitch. Previous [325] to the use of old iron, harpoon points were made of ironwood, but now iron is universally used.

283 [122] I asked old Blanco for some of his native rope. He gave me some of it. He said they get the slender roots of the mesquite and peel the bark, and then the girls and women chew the fibrous wood. This is shredded and twisted into small two-stranded ropes. It is this rope, tied around and around, that holds the *carriso balsa* together.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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RECENTLY OCCUPIED RANCHERIA, TIBURON ISLAND

TYPICAL HOUSE INTERIOR, TIBURON ISLAND

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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HOUSE FRAMEWORK, TIBURON ISLAND

HOUSE COVERING, TIBURON ISLAND

1: McGee E-5 (1894-1895)1898 NU31 Smi. NU31

and larger bones, smoked up the blood stains, and buried the few remains in cactus thickets, impenetrable save by their own hardy limbs and bodies. Nor did any of the tribe except the two restrained neophytes ever really enter the collective life of the patriarchal group headed by Don Pascual; they attended no industrial or social or churchly function save in response to reminder and solicitation; they craved the white man's medicines in slight disorders, but rejected them in extremis; and the dying or dead were spirited away to be inhumed and mourned, according to their wont, in their harsh but beloved motherland.

During this period of mutual toleration the Seri were so deeply influenced by the white contact that, for probably the only time in their history, they voluntarily allowed an alien free entry into their territory; and Don Pascual explored the coast of Bahía Kino, projected a port, and even visited Isla Tiburon twice or thrice. In one of these visits he was ferried over Boca Infierno on a balsa, but, finding himself unable to keep pace with the swift-footed Seri on their hilly pathways, he returned for his saddle mule; halfway across, the poor animal swimming behind the balsa suddenly plunged and struggled, and, on landing, hobbled out on three legs—the fourth having being snapped by a shark. Warned by this incident, Don Pascual abandoned a half-formed plan of stocking the island, and afterward brought up a small vessel from Guaymas in which he carried across a dozen caballeros (including Don Ygnacio Lozania, who had visited the island with the Andrade expedition); and this party examined the southeastern quarter of the island, watering two or three times at Tinaja Anita, and pushing as far westward as Arroyo Carrizal. On this trip he studied the Seri house-building, and was the first to note the large use of turtle-shells and sponges in the process.[1]

About the middle fifties it became apparent that the Seri were dividing into a parasitical portion clustered about the rancho (as their forbears gathered about Populo and Pueblo Seri long before), and a more independent faction clinging to their rugged ranges and gale-swept fishing grounds; and it became evident, too, that the thievery of the dependent faction would soon ruin the rancho if not checked, or at least greatly diminished. Accordingly the passive policy was modified by introducing a more active police service. At first the penalties for theft and misdemeanors were light, and the system promised well—especially as even a slight punishment was equivalent to banishment, the criminal fleeing to Tiburon on his escape or immediately after the crime; yet the experience of a year or two proved that the escaped parasites seldom resumed the hard customs of their tribal life, but generally returned to the borderland and there preyed on the wandering stock from the rancho. Finally, driven to extremity, and supported

[1] Typical Seri jacales, as described by Don Pascual in 1895, were observed on Tiburon by the 1898 expedition, as shown by the photographs reproduced in plates VII, VIII, and IX.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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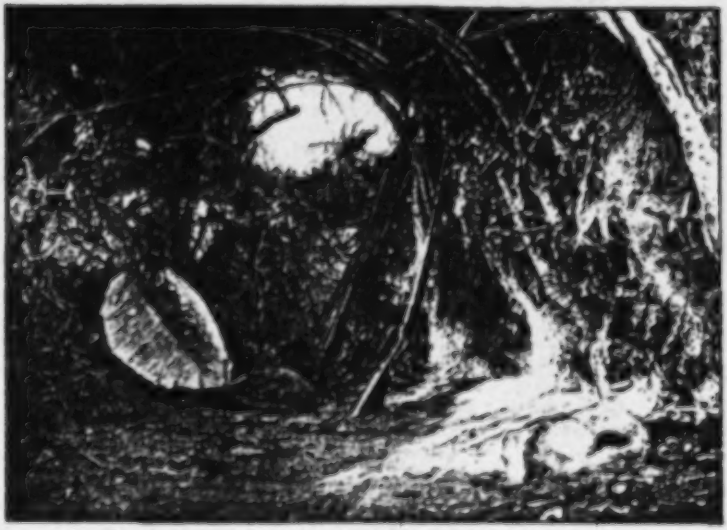
SPONGE USED FOR HOUSE COVERING, TIBURON ISLAND

Cp. 112 A]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

●342

HOUSE SKELETON, TIBURON ISLAND



INTERIOR HOUSE STRUCTURE, TIBURON ISLAND

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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354
415
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SEVENTEENTH ANNUAL REPORT PL. X

BUREAU OF AMERICAN ETHNOLOGY

TYPICAL SERI HOUSE ON THE FRONTIER

[FACING P. 117]

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516

OCCUPIED RANCHERIA ON THE FRONTIER

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

[FACING P. 119]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

Naturally the conditions at Costa Rica were unfavorable to the study of native ideas concerning apparel. The women and some of the children were arrayed chiefly in cast-off habiliments of the rancheras or in nondescript rags, while the men either aped Mexican fashions, like Mashém, or shamefacedly sweltered under the unaccustomed burden of tatterdemalion gear; yet there was a meaningful absence of that desire for finery so prominent among primitive peoples—a fact quite as eloquent in itself as the absence of bracelets and bangles, tassels and trappings. It is probable that the shamans and mystery-bedged crones in the depths of Seriland enhance their influence by the aid of symbolic paraphernalia (indeed, some inkling of such customs is found in the meager records of earlier visitors);[1] yet the conspicuous feature of Seri costumery is the dearth of decorative devices.

FIG. 13.—Necklace of wooden beads.

The habitations of the tribe are the simplest of jacales—mere bowers, affording partial protection from sun and wind, but not designed to shed rain or bar cold. Half a dozen of these were examined at Costa Rica in 1894 and probably a hundred more, in various stages of habitability, in Seriland proper in 1895, yet not the slightest trace of decoration was observed—the structures are plainly and barrenly utilitarian in every feature. The same may be said of the balsas in which the Seri navigate their stormy waters; for the peculiarly graceful curves of the craft evidently stand for nothing more than the mechanical solution of a complex problem in balanced forces, wrought out through the experience of generations, while the simple reed bundles are absolutely devoid of paint, of superfluous cord, of fetishistic appendages or markings, of tritons, nereids, or other votive symbols at bow or stern, and of industrially superfluous features or attachments in general—indeed, the only appendages discovered were one or two simple wooden marlinspikes (shown in figure 26), thrust among the reeds to be at hand in case of need for repairs.

Among the utensils employed in the primitive householdry of the Seri the most conspicuous and at the same time the most essential is the olla, or water-jar. Its technical features are described elsewhere; but it may here be noted that the olla is the central artifact about which the very

[1] Hardy noted the use of "a small leathern bag, painted and otherwise ornamented", as a medicine rattle (Travels, p. 282), and also described a wind-symbol and an effigy used for thaumaturgic purposes (ibid., pp. 284, 288).

I: McGee E-5 (1894-1895)1898 NU31 Seri NU31

in which men lived alongshore and adjusted themselves to maritime conditions rather than to terrestrial environments; a stage evidently but barely passed by the Seri, since they still subsist mainly on sea food, still retain their suggestive navigation, and still view their stormy straits and bays as the nucleus and noblest portion of their province. 501

HABITATIONS

Among the Seri, as among primitive folk generally, the habitation reflects local conditions, especially climate and building materials. Now, Serriland is a subtropical yet arid tract, where rain rarely falls, frost seldom forms, and snow is known only as a fleeting mantle on generally distant mountains, so that there is little need for protection from cold and wet; at the same time the district is too desert to yield serviceable building material other than rock, which the lowly folk have not learned to manipulate. Moreover, the tribesmen and their families are perpetual fugitives (their movements being too erratic and aimless to put them in the class of nomads); they are too accustomed to wandering and too unaccustomed to long resting at particular spots to have a home-sense, save for their motherland as a whole; and, just as they rely on their own physical hardihood for preservation against the elements, so they depend on their combined fleetness and prowess for preservation against enemies. Accordingly, the Seri habitation is not a permanent abode, still less a domicile for weaklings or a shrine for household lares and penates, not at all a castle of proprietary sanctity, and least of all a home; it is rather a time-serving lair than a house in ordinary meaning. 182 342

Despite the poverty of the material and the squalor of the structure, certain features of the Seri jacal are notably uniform and conventional. In size and form it recalls the passing "prairie schooner", or covered wagon; it is some 10 or 12 feet long, half as wide measured on the ground, and about 4½ feet high, with one end (the front) open to the full width and height, and the other nearly or quite closed. The conventional structural features comprise the upright bows and horizontal tie-sticks forming the framework. The bows are made of okatilla stems (*Fouquiera splendens*) roughly denuded of their thorns; each is formed by thrusting the butts of two such stems (or more if they are slender) into the ground at the requisite distance apart, bending the tops together into an overlap of a yard or two, and securing them partly by intertwisting, partly by any convenient lashing; and about five or six such bows suffice for a jacal (the appearance of the bows is fairly represented by the ruin shown in plate VII). Next come the tie-sticks, which consist of any convenient material (okatilla stems, cane-stalks, paloblanco branches, mesquite roots, saguaro ribs, etc.), and are lashed to the butts by means of withes, splints, or fiber wisps, at a height of some 4 feet above the ground, or about where the walls merge into the roof. With the placing of these sticks the conventional part 342

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

of the building process may be said to end; for up to this point the process is a collective one and the materials are essentially uniform, while thereafter the completion of the work depends largely on individual or family caprice, and the materials are selected at random. Moreover, the framework is fairly permanent, usually surviving a number of occupancies extending over months or years, and outlasting an equal number of outer coverings; so that all habitable Seriland is dotted sparsely with jacal skeletons, sometimes retaining fragments of walls or roof, but oftener entirely denuded.

The conversion of the framework into a habitable jacal is effected by piling around and over it any convenient shrubbery, by which it is made a sort of bower; sometimes the conversion is aided by the attachment of additional tie-sticks both above and below the main horizontal pieces, as illustrated in the upper figure of plate IX; sometimes, too, the material of walls and roof is carefully selected and interwoven with such pains as to form a rude thatch, as in the chief jacal at Rada Ballena (the upper figure in plate VI); but more commonly the covering is collected at random and is laid so loosely that it is held in place only by gravity and wind pressure, and may be dislodged by a change of wind. Ordinarily the walls are thicker and denser than the roofs, which are supplemented in time of occupancy by haunches of venison, remnantal quarters of cattle and horses, half-eaten turtles, hides and pelts, as well as bird-skin robes, thrown on the bows partly to keep them out of reach of coyotes and partly to afford shade. Most of the jacales about the old rancheria at Punta Tormenta (abandoned at "The Time of the Big Fish"), which may be regarded as the center of the turtle industry, are irregularly clapboarded with turtle-shells and with sheets of a local sponge, as illustrated in plate VII. This sponge abounds in the bight of Rada Ballena, where at high water it spreads over the silty bottom in a slimy sheet, and at low water with off-shore gales is left by the waters to dry into a light and fairly tenacious mat, which is gathered in sheets for bedding as well as for house making material (a specimen of the sponge—probably *Chalina*—is shown on larger scale in plate VIII). On the frontier the jacales may be modified by the introduction of sawed or riven lumber, as illustrated by some of the structures at Costa Rica (shown in plate XI); but even here there is a strong disposition to adhere to the customary form, and especially to the conventional framework, as indicated by the example in plate X.

While the jacales are not consistently oriented, they reveal a primary preference for facing away from the prevailing wind and toward the nearest sea, with a secondary preference for southern and eastern exposures—the former preference being easily explained, since a gale from the front quickly strips walls and roof and scatters the materials afar. No definite order is observed in the placement of the several jacales in the larger rancherias; apparently the first is located at the choice of the leading elderwoman, and the others are clustered about it at the com-

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

mon convenience. Usually the several jacales are entirely separate, but at Punta Tormenta, Punta Narragansett, and still more notably at Roda Ballena, individual huts were found either extended to double length or joined obliquely in such wise as to show two fronts (as illustrated in plate VI). The conventional frameworks appear to be common tribal property, at least to the extent that an abandoned skeleton may be preempted by any comer; while the addition of walls and roof appears to afford a prescriptive proprietary right to the elderwoman and family by whom the work is done—though the right seems to hold only during occupancy, or until the temporary covering is dislodged. 361 [342] 423

The jacales are without semblance of furnishing, beyond an occasional ahat and a few loose pebbles used as hupfa; though the nooks behind the bows and tie-sticks sometimes serve as places of concealment for paint-cups, awls, hair bobbins, and other domestic trifles. There is no floor but earth, and this remains in natural condition, except for trampling and wearing into wallows, recalling those of fowls and swine, which afford a rough measure of the periods of occupancy; there is no fireplace—indeed, fires are rarely made in the jacales, nor for that matter frequently anywhere; and there are no fixed places for bedding, water ollas, or other portable possessions, none of which are left behind when the householders are abroad. 352 [342]

Little is known of the actual process of jacal building, especially in Seriland proper; but the observations of Señor Encinas and his vaqueros on the frontier corroborate Mashém's statements that the houses are built by (and belong to) the matrons; that several women customarily cooperate in the collection of the okatilla and erection of the framework; that the only tools used in the processes are hupfa and miscellaneous sticks; and that the placing and fitting of the beams and tie-sticks are accompanied by a chant, usually led by the eldest matron of the group. The same informants support the ready inference from the structure that the shrubbery and other material forming walls and roofs are gathered and placed from time to time by the women occupying the jacales. 342 462 [423]

The Seri building chant is suggestive. Neither Señor Encinas nor Mashém regarded it as religious or even ritualistic, but merely as a work-song designed (in the naive notion of the latter) to make the task lighter; and it seems probable that the local interpretation is correct. If so, the simple chant at once offers rational explanation for its own existence, and opens the way to explanation of the elaborate building rituals of more advanced tribes. The work-song is a common device in many lowly activities, ranging from those of children at play to those of sailors at the windlass, and undoubtedly serves a useful purpose in guiding, coordinating, and concentrating effort; to some extent the vocal accompaniment to the manual or bodily action apparently expresses that normal interrelation of functions manifested by second- 182 342 533

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

182 ary sense-effects (as when the sense of smell is intensified by exercise
342 of the organs of taste), or, in another direction, by the habit of the
533 youthful penman who shapes his letters by aid of lingual and facial contortion; yet it is a characteristic of primitive life—one doubtless due to the interrelations of psycho-physical functions—to not only employ but to greatly exalt vocal formulas associated with manual activities, so that words, and eventually *the* Word, acquires a mystical or talismanic or sacred significance pervading all lower culture—indeed the savage shaman is unable to work his marvels without mumbled incantations ending in some formulated and well-understood utterance, and his practice persists in the meaningless mummery and culminating "presto" of modern jaggiery. So, viewed in the light of psycho-physical causes and prevalent customs connected with vocal formulas, it would seem probable that the conventional features of the Seri jacales are crystallized in the tribal lore quite as effectually through the associated work-chants as through direct memory of the forms and structures themselves. And the simple runes chanted in unison by Seri matrons engaged in bending and lashing their okatilla house-bows apparently define a nascent stage in the development of the elaborate fiducial house-building ceremonies characteristic of various higher tribes; for the spontaneous vocal accompaniment tends naturally to run into ritual under that law of the development of myth or fable which explains so many of the customs and notions of primitive peoples.[1]

APPARELING

177 Slightly as they have been affected by three centuries of sporadic
291 contact with higher culture, the Seri reveal many marks of acculturation; and the most conspicuous of these are connected with clothing, especially on the frontier, where women and even warriors habitually wear a livery of subserviency in the form of cast-off Caucasian rags (as illustrated in most of the photographs taken at Costa Rica). Even in the depths of Seriland the native fabrics are largely replaced by white men's stuffs, obtained by barter, beggary, and robbery; yet it is easy to distinguish the harlequin veneer of borrowed trappings from the few fixed types of covering that seem characteristic.

The most distinctive piece of apparel is a kilt, extending from waist to knees, worn alike by men and women and the larger children. Aboriginally it was either a birdskin robe or a rectangle of coarse textile fabric, secured at the waist by a hair-cord belt; acculturally it is usually a rectangle of manta (coarse sheeting) or other stuff, preferably cotton or linen but sometimes woolen, fastened either by tucking in the corners or by a belt of cord. Good specimens of the acultural cloth kilt worn by men and larger boys are illustrated in plates XVI

[1] The law of fable in its relation to primitive surgery is formulated in the Sixteenth Ann. Rep. Bur. Am. Eth., 1897, p. 22.

2: Kroeber E-5 (1930) 1931 NU31 Seri NU31

in a paddle blade being cut separately from the shaft, the inventive step from attaching one blade to attaching two blades would have been insignificant—in fact, would be an improvement or variation rather than an invention. The determining factor as to its adoption would probably be the type of navigation as set by water conditions. This is borne out by the distribution of the double paddle, which clings to areas of open salt-water navigation or large bays approximating open water conditions. On rivers and lakes the double paddle would rarely help and often be in the way. In this way the varying association with skin boat, wooden boat, and raft boat seems accounted for. Another factor must be size of the vessel navigated. A broad or high canoe would scarcely allow of alternate paddling on both sides. This may be the cause of the absence of the implement on the Northwest Coast. Whether the Arctic and the California-Seri occurrences are to be historically connected, must probably be left an open question for the present. An answer in favor of connection will evidently depend on the establishment of sufficient other connections to set up a favorable presumption. Until then, the considerations just mentioned make the possibility of independent origin equally plausible.

The single-bladed paddles seen by McGee (p. 219) and myself were two-piece and hafted with nails. McGee is more interested in balsa propulsion by recumbent women with hands, shells, or unhandled blades. That such crude devices were used along shore or in bays often enough to be mentioned, is wholly in line with the conspicuous Seri indifference, slovenliness, and lack of standards; but it is also obvious that real paddles being known and made, these would be the ones taken on open sea voyages of a dozen miles in a region of notably variable winds and currents. The Seri are never fools in practical matters within their compass; and they could not have acquired their indubitable navigating skill by letting their women do most of their paddling with bare hands. The one woman I saw aboard was carried as a passenger across the Infiernillo.

What is typical of Seri habits is that the harpoon shaft is also used for poling, and the harpoon cord as anchor rope, tow-line along shore, sheet rope, and for tying a blanket to a mast and pole to serve as sail; just as the bailer of a leaky skiff is an enamel-ware plate or pot employed at other times for food. The whole harpoon, including the rod-iron point, but dismounted, seems regularly to be taken along on a transport voyage.

The Seri houses I saw opposite Punta San Miguel were like those described by McGee (pp. 221-223): long, narrow, low, and open at least at one end; but they were unroofed. There was also one of double length, and another "joined obliquely"—that is, annexes occupied by younger kin and their families. The lengthwise double house was open through, though constricted at both ends and the

2: Kroeber E-5 (1930)1931 NU31 Seri NU31

middle. Two imperfect wind-breaks of brush, less than a quarter of a circumference in curvature, stood near the camp..

On the subject of textiles and textile clothing (pp. 171, 225-232), McGee is necessarily vague on account of lack of specimens. He says that native kilts, from waist to knee, were either of birdskin or "a rectangle of coarse textile fabric," "woven probably on some primitive device"; that it is practically certain that a long-sleeved, short-bodied shirt or wammus is "of local aboriginal design" and was "made primitively of haircloth or native textiles"; that the probable genetic series of Seri garments was: 1, the pelican-skin robe used as a kilt, 2, the textile shirt, 3, the textile kilt; and that Seri fabrics, according to a Mexican informant, "resemble coarse bagging, and are woven or netted quite plainly."

Human hair cord could be netted, or twined in double weft into basket-like bags or mats; it could hardly be woven into cloth without a loom. The same holds of *ixtle*, agave fiber. Bast of willow, cottonwood, beanstalk, such as was spun and twined, and perhaps woven on a limited scale, by the Colorado river Yuman tribes, was not available to the Seri, though they may have had nearly equally soft substitutes, even in their desert. Cotton they did not have. *Ixtle* is a strong, harsh fiber, excellent for cordage, nets, open-mesh bags, and the like, and still largely used in Mexico for such purposes. It would also serve well for fringe-aprons, for which the Lower Californians used it. A fabric from it would be rough and stiff, giving little warmth, not very satisfactory for a kilt, and quite unserviceable for a fitted garment like a sleeved shirt. Cotton was the prevailing garment material found along the coast by the first Spaniards, north up to the Cahita (Ka'ita, namely Tehueco, Mayo, Yaqui); here *ixtle* became more prevalent though cotton persisted; but the type of garment is not clear.

As to looms, *ixtle* is today woven into carrying bags on a heddled belt-loom by the Nahua-speaking Indians of Sinaloa. The Mayo weave woolen girdles on a similar loom. They also weave woolen blankets on a demountable horizontal loom, the warp passing continuously around the two heavy yarn beams. It is not clear whether this is a hybrid Spanish or a purely native apparatus. The Opata and Pima Bajo loom is not known. The American Pima weave cotton both on a belt-loom and on a staked horizontal loom, but with warps in a single plane.[4] It is difficult to imagine these looms existing among the Seri, except the first mentioned; and this would not yield them much in the way of garments. There is no reason why they should have worn more than the Lower Californian women's fringe-aprons, supplemented perhaps by birdskin blankets and loin covers. They no doubt secured occasional garments from neighboring tribes, as they gladly but irregularly wear those of whites today; and this

[4] Russell, BAE-R, 26:148-153, 1908.

2: Kroeber E-5 (1930)1931 NU31 Seri NU31

114 583 As to the "total absence" (p. 285) of marriage purchase, whereas I found it, such purchase can hardly be believed to have originated wholly within the last 35 years, in view of its wide distribution in native America.

114 614 The whole matter of maternal lineages crystallized into totemic clans with matron rule (pp. 10-11, 167-8, 269 seq.) seems a fantasy. A careful reading of the passages in questions reveals how much McGee has built up on statements which he conscientiously admits to have been slender, probable only, and subject to possible misunderstanding. It must be remembered that in 1894 the matriarchate as original and primitive was still standard anthropological doctrine. At any rate, I got nothing suggesting even matrilineal reckoning in my indirect approaches to the subject, and explicit denials when it was directly presented.

114 342 That house-building may now and then be "accompanied by a chant" (p. 223) is possible, though it seems out of accord with the haphazard and shiftless methods of Seri work and the flimsy irregularity of their homes; but that the chant was "usually led by the eldest matron" seems more matriarchate.

114 174 That the Upanguayma, Guayma, and Tepoka were successively "extruded" (p. 75) would be correct if there were anything to show that the Seri were the parent stock of superior virtue, conservatism, and faithful attachment to their original habitat.

114 601 The statement (p. 11) that "kinship terms are strikingly scanty," made in the face of round-about and imperfect speech communications with the Seri, I cite only as an indication of the degree of McGee's readiness to fall back upon his preconceptions when facts became thin.

114 384 I did not note the absence of superior medial incisor teeth observed by McGee (p. 169) in married women. If a regular practise, its connection with the puberty rite would be a natural inference. But knocking out of teeth is a rare custom in America.

114 224 McGee's statements (pp. 196-7) that it is "undignified, if not wrong" to kill deer other than with the hands, and that jackrabbits are "customarily taken alive to camp," seem over-emphases. That a sense of sport or passing pride, or lack of weapons, now and then leads to such happenings, I do not doubt; but the Seri seem too practical and unromantic to exact rules on the point. I suspect that a youth who insisted on living up to them would soon be considered a vain bore. I may add that I saw a crippled wild duck hobble about the camp on Tiburon for two days, being played with occasionally by the children—without unusual roughness or unkindliness—and that finally it wandered to the water and gradually drifted off without notice being taken.

114 302 614 Face painting is construed by McGee as sematic of totemic line-

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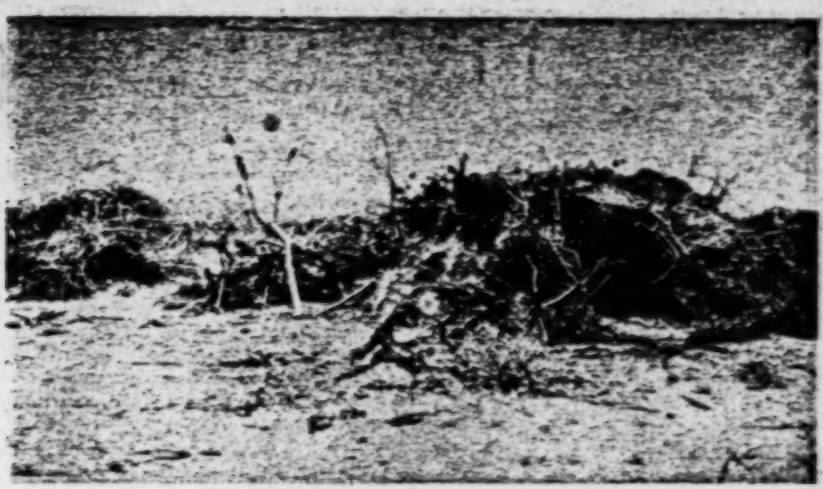

FIG. 3. THE SERI HOME—A BOWER OF BRUSH

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FIG. 4. AN AGUAJE ON TIBURON ISLAND

THE PRINCIPAL WATER SUPPLY AND SOURCE OF THE CARRIZO REED USED IN CONSTRUCTING THE BALSA.

[p.195]

614 hundred Seris at a time. They lived in maternal groups or clans in which the elder females were of great prominence in the management of everyday affairs. When, in
342 the wanderings of a family a new camp was
[462] decided upon, the elder matron usually erected the jacal alone, without the aid of men or boys, gathering the long poles of the ocotillo or the branches of desert trees and fashioning them into an arched framework over which a covering of brush, and often later of turtle shells, served to give protection from the desert sun. After the household was prepared, she took her place within
361 easy reach of the meager and squalid family
592 possessions, and around this nucleus other matrons and their children gathered in the course of a day or two. It was usually three or four days, and sometimes a week, before the brothers and husbands came wandering in from their roving search for food to take their places at the new camp site.

482 From the turtle fishing camps on the chan-
312 nel, the nearest fresh water was at a distance

[p. 196(A)]

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FIG. 6. DOMESTIC SCENE IN A SERI VILLAGE

[p. 197(A)]

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FIG. 7. CARRYING WATER FROM A DESERT AGUAJE

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FIG. 8. STRETCHING AND DRYING THE PELICAN SKIN BOBE

[p. 198(A)]

3: Davis & Dawson E-5 (1922-1940)1945 NU31 Seri NU31

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FIG. 13. PREPARING BASKETRY MATERIAL

THE SPLINTS ARE MADE BY HAND AND MOUTH STRIPPING OF THE BRANCHES OF TOBOSI AND PALO MANSO.

[p. 261(C)]

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FIG. 16. FAMILY DOGS ARE OFTEN MORE NUMEROUS THAN THE PEOPLE
HERE A GROUP OF SEVEN SERIS IN THE VILLAGE NEAR KINO KEEPS TEN OR MORE OF THE MONGREL CANINES.

[p. 264(C)]

3:Davis & Dawson E-5 (1922-1940) 1945
NUBI Seri NUBI

[342]
[415]
[732]

FIG. 17. SERI BLIND MAN
BEING LED BY A BOY. NOTE THE CRUDE SHELTER OF POLES AND BRUSH SERVING AS AN ARMY DWELLING.

231 destitute of nourishment, tough and strong as rawhide; but hope springs eternal in an Indian dog's stomach, and again and again he will search out and mouth the same old pelican bone or fish head, discouraged never. The dogs, beside keeping the camp clean, lick all the cooking utensils when they are not tended, and also are allowed to lick clean the infants after they have performed their natural defecations. A Seri girl was seen placing [312] a small can of water for a dog to drink from, afterward drinking some of the remainder herself and then pouring the rest back into the family five-gallon can.

732 Although the conditions of existence for
734 the Seris had from time immemorial been too precarious to permit of anyone living who was unable by physical disability to hunt or fish to get his meat, there were two or three men, blind or nearly so, whose wives got an uncertain living for them by the hardest struggle (Fig. 17). If a Seri, however, became ill of a disease which the tribe feared, he was often taken into the desert and left with a little food and water, either to get well and return or to perish.

[P. 265(A)]

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FIG. 22. SOME SERI WOMEN OF THE VILLAGE NEAR KINO

[p. 268(A)]

h:Davis & Dawson E-5 (1823-1940) 1945
MU33 Semi MU33

621 are four or five hundred people there, more during the peak of the season, and some fifty or more wattle and daub shacks arranged without plan or order, facing at every angle, but all near the beach on which the fishing boats land and are pulled up on shore. Refrigerated trucks carry fifteen to twenty-five tons of fish away daily during the height of the season, mostly the huge endemic totuava (Fig. 21). These great fish are dragged from the boats and lined up on the shore, where the heads are chopped off and the entrails are pulled out and left to be carried away by the tides or consumed by hundreds of
[131] scavenger gulls of the beach. A quarter mile north of Kino is the present-day Seri village where nearly all the Seris now live semi-permanently because of the easy money and
[439] living. They have their own boats, fish a little for profit, and also bake the discarded
[262] fish heads for food. The Seri dwellings are now scarcely inferior to many of the wattle
● 342 and daub shacks of the Mexicans. Indeed, many of the Mexican shacks are built by
[439] Seris in exchange for manta cloth or food.

[p. 268(B)]

3:Davis & Dawson E-5 (1922-1940) 1945
NU31 Seri NU31

342 They are mostly of ocotillo sticks and mesquite branches stood up in the sand, lashed together, and plastered with mud for protection from the wind, but not from the rain (Fig. 22). When the fishing season ends
221 about Holy Week, they all move away to the turtle grounds on Tiburon Island, where they also hunt deer. Then in June and July they go into the desert hills to reap the harvest of cactus fruit, retiring to the lowlands thereafter to harvest the mesquite beans and to await the recurrence of the big fish. In and about Kino they are reasonably well fed and clothed, and were it not for their susceptibility to disease they would be as well-
164 off as many of the Mexicans. Influenza
161 strikes them heavily, however, and pneumonia is common, usually fatal. Their numbers dwindle and their extinction is in sight, yet for a little while these strange people will continue to tread the rocks and thorns of their desert land, a handful of Nature's primitive creatures, through whose veins flows the blood of thoroughbred American aborigines.

[p.268(C)]

5:Dawson N-5 (1940) 1944 NU31 Seri NU31

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1. A basket of cactus meal.

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2. A Seri village on Tiburon Island. Note the large shells of the sea turtle that serves as food.

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3. Making the Seri basket. House is constructed of ocotillo branches and brush.

5:Dawson N-5 (1940) 1944 NU31 Seri NU31

252 of nutritious material which was ground to powder on their stone ahsts, winnowed in shallow baskets and made into a meal or paste.

764 824 The abundant cacti of many species served several other functions in the domestic economy of the Seris. The thorny cholla whose insipid fruits were not fit to eat and whose spines were a constant threat to the unprotected bodies of the Seris, found one use, nevertheless, in the burial procedure. After a body was partly covered with earth in the three foot deep grave, it was densely overlaid with chollas before leveling, to discourage the coyotes from digging for the body.

396 824 The dry skeletons of the giant cacti provided the long, cylindrical poles used in knocking off ripe pitahayas as well as in all other instances in which a straight, slender pole was needed. Since the advent of the open boat in modern times, the cactus skeleton has come in for a new use, for after trituration between stone ahst and hupf, it was found to yield a satisfactory caulking compound when mixed with sea-lion oil.

312 824 The barrel cacti, *Ferocactus Wislizenii* and *F. Coulteri*, though ordinarily abundant on the Sonoran desert are rare in Seriland and practically absent from Isla Tiburon where they may easily have been exterminated by the improvident Seris during their centuries of occupancy on account of their recognized value as water providers on the wastelands over which the Seris so frequently ventured.

342 [132] 824 These Indians found housing no problem, for, living under a climate in which frost is rare and rain infrequent, they found little need for shelters except for protection against the blazing desert sun. Camps that were occupied for more than a day or two, however, usually saw the appearance of a group of crude sun shelters. These were usually made of long, flexible ocotillo branches, *Fouquieria splendens*, stuck in the sand and fashioned into an arched framework over which a more or less complete covering of brush was piled. If, by the sea, a windbreak were desired, the brush top and siding were usually augmented by the addition of several empty turtle shells.

262 824 On the delta plain of the Rio Sonora, the mesquite, *Prosopis juliflora*, grows in remarkable luxuriance, these gnarled, spiny trees forming an almost continuous open forest 20-40 feet high. Its fruit, consisting of small, hard beans borne in slender, woody pods forms a concentrated, starchy food that the Seris found highly nutritious if not appetizing. In late summer when all fresh vegetable food had withered and disappeared, provided the turtle fisheries had not yet attracted them back to their island, they often spent [252] some weeks gathering the beans and grinding them into a meal which was eaten as a watery atole or as a paste mixed with sea-lion oil. The more straggly and thorny cat's claw mesquite, *Acacia Greggii*, and the ironwood, *Olneya tesota*, also yielded woody beans in limited quantity.

[618] 534 In the deeper gorges of the mountains the Seris found *Guaiacum Coulteri* yielding a berry of medicinal properties and also *Jacquinia pungens* which produced a nut, edible when not quite ripe, and forming a favorite rattlebead when dry.

Along sandy washes, particularly on the lower flood plain of the llano grows a low, shrubby weed, *Hymenoclea monogyra*. Although during times of drought it shrinks to stunted tussocks, after periods of heavy rain its flourishing fens produce abundant seeds eaten both by the beasts of the plain and formerly by the Seris.

365 [191] Before the advent of the tin can and the cardboard carton, basketry was an important handicraft among these Indians

[TEXT CONTINUES ON P. 138--ANALYST]

7: Marroquin E-5 (1955) 1957 NU31 Seri NU31

In general, the Seris have a healthy appearance; the most frequent complaints are gastro-intestinal and visual defects due to avitaminosis. It is very possible that given the difficult living conditions resulting from the desert environment, a rigorous selective process among the newborn takes place so that only those who possess exceptional physical qualities survive. This explains why the majority of them retain the physical characteristics described by Hardy more than a century ago: "the Indians of Isla Tiburón are tall, healthy and well built".

In spite of attempts at education, the Seris do not practice the elemental rules of hygiene; their way of life, neglecting this aspect, contributes to increase the unhealthy foci which exist in the places where they have established themselves.

Dwellings.—The Seris retain many vestiges of their nomadic life, among them the hut which serves as their living quarters; many of them are simple provisional arrangements for sheltering themselves from wind and sun, and they bear no relationship to the stability and durability of our dwellings. The Seri hut was made to meet the necessities of a nomadic people who had no reason to spend much time nor work on making a dwelling which would only be used for a season (one, two or at the most three months). Nevertheless, some innovations have been introduced in the last 20 years, so that we must distinguish between two types of houses. The primitive model consists of a series of scrub pine arches interwoven with branches from the same shrub almost totally covered by foliage, tortoise shells, *zacate*, etc., with only a small hole in one of its ends as an entrance (this type of hut is the same that McGee saw in 1894 when the Seris still led a nomadic life).

In the new model more resistent woods are used, like *sahueso*, *torote*, etc., and poles, between which is laid a layer mud. The house is rectangular, without windows; with only one entrance, but always larger than the entrance to the brush hut. Other models would have to be added to these two, due to the incorporation and utilization of tents made in the United States which some U. S. tourists or the Society of Friends have given them. The tent is used as permanent living quarters; or sometimes combined with branches to cover the primitive type huts.

Domestic Animals.—The Seris are very fond of domestic animals like the dog, cat, and finally, the chicken. For all practical purposes these animals live together with the family; they rest on the piles of rags and sand which serve the Indians as beds; lick the plates and cooking utensils; dirty the house; increase the household fauna with their fleas and other vermin thus contributing to create and unhealthy atmosphere in the home.

Problems of Intoxication.—Their dealings with the fish buyers, in whose stores are sold beer, mezcal and tequila, has turned them to the consumption of these drinks. The Seri drinks liquor in an uncontrolled

9:Malkin E-5 (1953-1955)1962 NU31 Seri NU31

462 desert plants or littoral fishlets from tide-pools or of the shellfish. Both men and women will [224] bring in an occasional rattler, although women [857] are more likely to do this because they spend more [883] time in the desert. Children of both sexes are engaged in the female occupations here, but adolescent boys already join in their fathers' hunts on land or sea.

342 Housing has undergone some changes. In the 184 desert or on Tiburon the Indians construct the kind of shelter they did in the recorded past, an ocotillo frame, bent over in the middle and covered up with dried plant debris and twigs from the desert, or with the sail cloth. But in Desemboque they have more substantial houses—of wattle and adobe, with flat roofs, rectangular or square, often with corrugated tin or drift planks and other debris piled up on top, or along the walls.

178 In the remainder of their material culture, not much has been left from years past although one must remember that from the very beginning of recorded Serian history it has been of a most [291] meager sort. Pelican robes, which some Seris ap- [412] parently still wore in 1930 are gone for good. 323 So are the stone tools. So is the pottery which had probably disappeared in Kroeber's time. The hu- [301] man hair necklace with rattlesnake rattles is also a thing of the past. The rattlesnake skin belts [291] McGee (1898:170) described and figured are probably all gone. I havn't seen or heard of any.

412 But what remains much as they had been in 285 1894 are the bone-awls. These are made of burros' carpals and the blossoming of basketry, owing to

[p. 8A]

10: Davis E-5 (1922-ca: 1939) 1965 NU31 Seri NU31

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Seri Indians

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123 the boat and took dinner. Afterward, we pulled out into the Gulf and skirted the coast, rowing for miles. We passed great red mountains with the sea beating against their rugged breasts, hollowing out deep caverns; then sandy bluffs with mountains receding, but the horizon was always notched with rugged, pinnacled desert ranges.

We landed for the night on a sandy point and made camp. After our supper two fires were built, Roberto's signal that he was on hand. [202] Also a white scarf was tied to a long pole as a signal of friendship. No answering signal appeared. Probably the people were on the opposite side of the Island.

At sunset the sea became calm as a pond and the mountains on Tiburon in the distance turned purple and lavender. The sea reflected all the sky and mountain colors like a mirror.

The next morning we got an early start and it required our united strength to push the boat down to the water as it was low tide. The beach was strewn with various shells and a lot of colored pumice stone which had drifted in from seventy-five miles north, where there are some pumice hills near the sea.

The nearest point of Tiburon was only one and a half miles distant, a short row across. The water was pure green, indicating a shallow sea. [361] We rounded the point and rowed into a bay and then to the head of the bay where there were a few huts called *Rancheria Tinajanita*, or Little Tanks. The water was so shallow in places we had to get out and push the boat a long way out and walk up a long muddy beach over shells and a sort of coral that bruised and cut our bare feet, so that we went as if walking on eggs.

342 The rancheria was built on the shore with no shade; each hut facing
361 the water. The huts were very crude---the frames of *carriso* reed and ocotillo, covered with coarse brush and blankets of dried seaweed. [35] Around the bottoms, or sides, of each hut were piled sea turtle shells three and a half feet high and two and a half feet wide. Over these were piled seaweed and brush, not fastened. Round about were turtle bones and shells, and sea shells, bones and anything that contained meat.

This was just a temporary camp of about eight huts.

123 We left this camp, raised the sail, which consisted of several
202 flour sacks sewed together, and lay in the bottom of the dug-out, while the one-eyed Mexican steered with a paddle. Before leaving, Ricardo left his sign---a sign agreed between him and the Seris. Since he and his family had been so kind to them, they would never harm him or kill his horses and cattle. He erected a stick with a rag to call attention, made a circle with his heel, and inside the circle made the tracks of his right bare foot and right hand.

123 At the bow we carried the white banner always to signify peace.
361 We crossed the bay to a sandy point and came upon another small

[text continues on p. 153]

123 handed to show their friendliness.

142 One was a young man with rather pleasant features, his braided
291 hair hanging below his shoulders. His name was Antonio Herrera. The
123 other was a wild-looking specimen called Ramon Blanco. His hair was a
[302] tangled mat with a short braid behind, suspicious black piercing eyes,
long sparse moustache and chin-beard hiding a broad cruel mouth. He
[411] wore the remnants of an old sweater, a short dirty kilt, or skirt,
nearly to his knees, a belt full of cartridges, mostly empty, and a
long knife in a rawhide scabbard.

123 The young man had been baptized and given a name by Roberto, who
[705] had acted as godfather or *patrona*, many years ago. He wore a hat,
[291] jacket, and pants of blue denim, and *guaraches*, or sandals of rawhide.

We shook hands all around and then they called and halloed in the brush and soon three women and a lot of children, wild and half-
[415] clothed, filed into camp. The women were tall, gaunt, unkempt, ragged
[482] and barefooted, paying us not the slightest notice. They were bearing
[422] on their heads large baskets filled with all their earthly posses-
[854] sions---cooking ollas, scraps of cloth, pieces of turtle meat, bone
[231] brads, hair brushes, and odds and ends. They carried, also, an infant or two wrapped in odd bits of rags. Several gaunt dogs followed in their wake.

342 In all, three families came trailing in, removed their household equipment from their heads and resumed their interrupted and primitive
[592] housekeeping. Each family occupied its apartment in the row of brush shelters, separated from each other only by brush partitions with a total lack of privacy. These shelters, always open to the sea, serve as shade from the fierce rays of the sun, and also as windbreaks, but
[361] are no protection from infrequent rains. They are occupied only for a brief period and then their nomadic tenants move on to fresh *cahuama*, or sea turtle range.

123 Soon, a third man arrived while we were near the huts, Manuel
[142] Encina. He was a man of sixty-five, gray hair and mustache, seamed features, and not evil looking. He was out of breath. He had gone for water to the same water hole where we had been yesterday, struck our tracks, had left his water cans and hurried back to warn his people. He was greatly relieved to find friends.

Since he had gone for water, inquiry revealed there had been no water in camp for two days, and six adults and one girl of thirteen and six children were thirsty. We gladly gave them one of our five-
[225] gallon cans of water and they were very grateful. They had caught a
[262] sea turtle the day before and gave us some turtle steaks which looked like beef or mutton.

312 As the camp was without water and we were running short, the young
492 man and Encina offered to get some. Each took a *palanca*, or short
123 shoulder pole with knotched ends, fitted empty five-gallon cans in

000 wear ceremonial feathers as did our western Indians. I saw no skin or
164 cutaneous disease, or evidence of tuberculosis or of trachoma---the curse of our Indians.

142 One boy-child of five years was a handsome child---fat, round,
302 sturdy, with roving great black eyes, large thick lips, a picture of
[241] perfect health. He was almost naked. His hair was done in a pigtail
[837] with a red string braided into it. His face like all the others was dirty, but he waded into the shallow water with a short spear and I saw him catch two crabs with his little harpoon. The water did not bother his face.

415 They had no plates or eating tools, except large deep clam shells,
412 cast up by the sea, which served as cups and dippers. Their long, keen
264 belt knives were used for cutting, carving or skinning, and always the
[237] fingers for eating. They gathered in a circle around an olla of seeds of long grass growing on the sea bottom prepared by winnowing, parching and grinding, and then cooked with turtle oil. Each one dipped his or her fingers into the olla and conveyed them to the mouth without losing a drop, and licked them off with great relish.

231 The dogs eat with the family. There were six or seven half-starved
264 ones. If someone picked up a piece of turtle flipper the dog often took the first lick at it, bit off a piece or licked it before it reached the owner's mouth. The dogs were not punished. They were just slapped to keep them out of the pots.

123 We had a great time that evening in Seriland. The young man played
534 his violin. This consisted of a hollow box cut out of a *palo verde*
[824] tree, and a piece of pine about sixteen inches long; terminating in a
[282] hollow where a single peg was fitted. The one string was twisted deer
[237] sinew, and the bridge was a small round clam shell at the far end. The
[533] bow was a small bent stick and some black horsehair. On the handle was a wad of rosin fastened underneath. By fingering this string a few weak squeaky notes were made, and this was the classical music of the Seris.

Manuel Encina seized his gourd rattle and began chanting. Herrera tapped a tin can and I beat on an inverted basket and the orchestra
535 was in full swing. A young girl, Rosa, dragged out a turtle shell and
123 standing on it began to dance. This dance consisted of stepping up and down quickly with each foot alternately, and this stamping, barefooted, emitted a hollow sound. Every once in a while I let out an
[126] Indian yell which pleased the Seris very much. For two hours they had a real swell time. We took one flashlight of the proceeding.

[342] Each family was in their hut, which afforded very slight shelter
[362] as they were only partially roofed over and the sides were broken
[354] down in places. The huts were all adjoining and each had a little
[361] campfire, which did not give much illumination, so the dancing was in semi-darkness.

[text continues on p. 163]

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Carrying firewood

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Seri basket maker - 1934

123 [361] [312] Clustered near this well were brush windbreaks joined together, divided by brush partitions all open on one side. Here were gathered several Seri families. There was no such thing as privacy or seclusion.

• [342] As soon as we stopped and unloaded we were immediately surrounded by a curious, half-starved mob of forty men, women and children, about fifteen to twenty children. All dirty, all ragged, all hungry. Some of them I recognized: others were new to me.

While preparing and eating our supper this motley crowd formed a circle about us and hungrily watched every mouthful. We gave them a little food and an orange all around, and they finally left. By that time we had also finished our bread and coffee and followed to the brush shelters.

535 123 [529] A dance was immediately started. A place was hollowed in the sand, a few short planks placed over it, and the dance was on. Music was furnished by men tapping on an inverted basket and chanting. Only one man danced at a time. Sand was thrown over the planks and the Indian danced a shuffle, scraping his bare feet on the boards. He held a staff in his right hand and danced to a song called in Spanish *El Toro*. Later on other dancers performed, then gave us the *venado* (deer) [171] dance, taught them by the Yaquis.

This dancer represents a timid deer, hopping up and down to the time of a rattle held in the right hand, and the chanting of the singers. The *venado* dancers stooped over frequently, turning first to one side and then the other to look behind. Manuel Encina was the *venado* and Chico Romero, a very large young Seri, acted the part of a coyote, crawling and jumping on all fours and barking and every once in a while biting the calf or thigh of the *venado*, then jumping back and barking. It was acted with great realism, and the onlookers, especially the children, enjoyed it immensely.

A wilder, more barbaric scene was probably seldom witnessed in America than this gathering of Seris on the shores of the Gulf of California, dancing the *venado*. The camp fire threw a flickering light over dark fierce faces with low foreheads and frowsy unkempt hair. [302] One man, Luis Torres, the head "ship carpenter" with a moustache and chin beard, his hair low-down framing his dark face, looked like a savage from the wilds of New Guinea. Another, Santo Blanco, a secondary chief below Juan Tomas, has a straggling moustache curling over cruel projecting lips which rarely smile, while his fierce black eyes peering through his black thatch of hair, have a perpetual scowl. The monotonous sing-song chant accompanied by the soft roar of the surf added an indescribable eeriness and weirdness to the dark night.

123 We soon turned in as it was then eleven o'clock, and we all fell asleep lulled by the waves of the sea.

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Seri Indians at home

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Seri Indians preparing their meal

10: Davis E-5 (1922-ca.1939) 1965 NU31 Seri NU31

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Santo Blanco and Edward H. Davis - this hombre gambled away his only shirt - Sonora - 1929

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Seri method of carrying infant

birds. As soon as the skin was off the breast was laid on top of the coals and roasted. The meat was red as raw beef, but it was free of fishy flavor and tasted excellent. The Indians ate pelican flesh till daylight.

We gave them a generous helping of flour in a pail and this with water from a canteen, Santo stirred vigorously with a stick and then kneaded the dough with his hands until it was of the right consistency. He rolled hunks of this into little balls of dough about the size of golf balls, which he laid on his blanket. The boys picked these up, patted them flat like pancakes, scraped away ashes and sand from the edge of the fire, placed their pancakes in the hollow, covered them with hot ashes and hot sand, and in about three minutes pulled them out all baked brown. They shook the ashes and sand from them, leaving them clean and ready to eat. I am telling this in detail to show how simple cooking can be done without a dutch-oven, frying pan, or cooking grease, far from civilization.

We were soon paddled across to their village on the shores of Kino Bay and the skins turned over to Mrs. Santo. The skins had been split down the back, leaving the breast unmarred. The wings and legs had already been removed, and she sewed the skins together with sinew recovered from the birds. The boys had secured an extra pelican making six, three to a side, then placed together and sewed lengthwise, making a robe three and a half feet wide by seven feet long.

Pegging out and drying a Pelican skin robe by a Seri Indian woman - 1936

BAND V

642 These people were apparently hunters, gatherers, and fishermen. It is said that they speared fish from the shore since they did not use *balsas*. They too apparently raided the ranches. Their warring nature has already been discussed; it resulted in the acquisition of few friends. However, several marriages between members of this band and members of subdivision 2 of Band III are said to have occurred.

BAND VI

The members of Band VI lived on San Esteban Island and were the most primitive of the tribe. They lived in huts made of driftwood and in caves and made extensive use of the *balsa*. Although they did not have the bow and arrow, they did become expert in the use of the spear. The people depended mainly on a seafood, iguana, and maguey diet.

621 628 578 Perhaps it was due to the confined living space on the small island with the accompanying lack of fresh water that relations between the four subdivisions were precarious and fights broke out frequently. The Seri today stress the fact that the members of this band were impetuous and unpredictable.

642 Their relations with the other bands were generally good however. Seri from Band III were free to visit San Esteban where they were well treated.

The San Esteban people seldom traveled to the mainland, and, since they spoke no Spanish, it is probable that they made no peaceful contact with non-Seri groups.

COLLAPSE OF THE BAND SYSTEM

642 628 578 648 Internal strife in the Seri tribe was probably a major factor in the establishment of the band system. External strife was a major factor in its downfall.

Reference has been made to the plundering, killings and rustling of cattle to which certain of the bands were dedicated. The concern of the Sonora government was aroused, and steps were taken to crush the rebellious groups. According to the present-day Seri, military action by army units and rancher outfits against the various bands resulted in the near-destruction of the whole tribe.[11]

123 the boat and took dinner. Afterward, we pulled out into the Gulf and skirted the coast, rowing for miles. We passed great red mountains with the sea beating against their rugged breasts, hollowing out deep caverns; then sandy bluffs with mountains receding, but the horizon was always notched with rugged, pinnacled desert ranges.

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361 We crossed the bay to a sandy point and came upon another small

[text continues on p. 153]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

mon convenience. Usually the several jacales are entirely separate; but at Punta Tormenta, Punta Narragansett, and still more notably at Rada Ballena, individual huts were found either extended to double length or joined obliquely in such wise as to show two fronts (as illustrated in plate VI). The conventional frameworks appear to be common tribal property, at least to the extent that an abandoned skeleton may be preempted by any comer; while the addition of walls and roof appears to afford a prescriptive proprietary right to the elderwoman and family by whom the work is done—though the right seems to hold only during occupancy, or until the temporary covering is dislodged.

The jacales are without semblance of furnishing, beyond an occasional shat and a few loose pebbles used as hupfs; though the nooks behind the bows and tie-sticks sometimes serve as places of concealment for paint-cups, awls, hair bobbins, and other domestic trifles. There is no floor but earth, and this remains in natural condition, except for trampling and wearing into wallows, recalling those of fowls and swine, which afford a rough measure of the periods of occupancy; there is no fireplace—indeed, fires are rarely made in the jacales, nor for that matter frequently anywhere; and there are no fixed places for bedding, water ollas, or other portable possessions, none of which are left behind when the householders are abroad.

Little is known of the actual process of jacal building, especially in Seriland proper; but the observations of Señor Encinas and his vaqueros on the frontier corroborate Mashém's statements that the houses are built by (and belong to) the matrons; that several women customarily cooperate in the collection of the okatilla and erection of the framework; that the only tools used in the processes are hupfs and miscellaneous sticks; and that the placing and fitting of the beams and tie sticks are accompanied by a chant, usually led by the oldest matron of the group. The same informants support the ready inference from the structure that the shrubbery and other material forming walls and roofs are gathered and placed from time to time by the women occupying the jacales.

The Seri building chant is suggestive. Neither Señor Encinas nor Mashém regarded it as religious or even ritualistic, but merely as a work-song designed (in the naïve notion of the latter) to make the task lighter; and it seems probable that the local interpretation is correct. If so, the simple chant at once offers rational explanation for its own existence, and opens the way to explanation of the elaborate building rituals of more advanced tribes. The work-song is a common device in many lowly activities, ranging from those of children at play to those of sailors at the windlass, and undoubtedly serves a useful purpose in guiding, coordinating, and concentrating effort; to some extent the vocal accompaniment to the manual or bodily action apparently expresses that normal interrelation of functions manifested by second-

237 On the other hand, the hides of all of these three animals had been traded off to the Mexicans, [439] but this again was now discarded. This would [182] merely indicate the fluctuation of collapse of the demand from the outside rather than any intrinsic change in the Seri values.

Incidental use of the horns of the bighorn had been denied by all of the younger informants although admitted by Miguel Barnett. However, as [415] I observed, the horns of this sheep are sometimes [181] used as drinking cups. Several of them were lying around in the usual disorderly way of the Seris, now and then picked up for drinking and then again discarded. But the use of them struck me as most casual.

224 411 *Hunting:* Hunting takes a variety of forms and includes a variety of weapons, from .22 caliber and .30/.30 caliber rifles to spear, stone and throwing stick. Bighorn and deer are followed on foot but without dogs, probably because without dogs they may be easier to surprise. This hunt takes place in daytime. But the peccary is hunted with both the spear and the rifle and with a pack [231] of dogs, and only by the adult men. There is an [985] emphasis on the "adult," this surely owing to the certain amount of danger connected with the chase of the peccaries. The weapons of the chase dwindle to the throwing stick or a stone when it comes to the jackrabbit. Badgers, I was told, are also killed with the same weapons. But formerly, the informants said, bow and arrow was much instrumental in hunting the smaller beasts.

* 825 Other animals, according to the Seris, are not [224] hunted now, nor had they been in the past. Justification for this ranged from the usual "because it isn't done" to the more specific reasons. The skunk is "neither hunted nor eaten because it [225] stinks." The whale is considered "too big to kill" while the killer whale is "too fierce." The harmless *tonifa* (dolphin)[1] was reported somewhat hazily as "sometimes killed" but the comments were inconclusive and were denied by other informants.

[224] Two other species had been reported as hunted in the past but not at the present time. The Ringtail cat was supposedly hunted with the slings [225] while the sea lion was hunted down "with a rifle or rock but not with the harpoon because of its great strength, it would break the harpoon." This, however, was "perhaps 25 years ago." Why the sea lion is no longer pursued is uncertain, unless there is again a lack of demand from the outside while the Serian economy is so much centered on fishing.

231 *Pets:* How many species of animals are kept as pets on and off is difficult to say. Like most hunting and gathering groups the Seris are fond of pets but their interest in them depends entirely on an accidental capture. Among the wild mammals of the region there are few that could be captured and tamed easily. The badger which I mentioned already was the only mammal I saw

[237] [353] [1] I have seen bones of beached whales used for stools and also the skull of the *tonifa* used as a chair. But it must be remembered that these animals got stranded on the beach. They were not deliberately hunted down.

[P 10 B]

½ [Lie - deer, bighorn and peccary - Analyst]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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TYPICAL SERI HOUSE ON THE FRONTIER

[FACING P. 117]

262 them to their shelter and held them there for several days before they and their families finally ate them up. The turtles are also a well-liked item.

As already indicated in some instances there exists preference for a particular part of an animal. Of the Gila monster only the fat tail was said to have been eaten, and of both rattlers, the head and the tail are discarded on the grounds
* [825] that they contain toxin. Finally the toad and the gecko and *Xanthusia* are all rejected as completely venomous.

178 It is also evident that changes in the Seri
262 taste have occured in the course of the past several decades. Some animals are on their way out as food, and here we have the Gila monster, the whipcoach, the red racer and smaller lizards. In several cases, and this includes the Gila monster, the responses indicated that the animal had been eaten in the past. I also observed that on the sly, the Seris would eat them when other food was in short order. But they are reluctant to admit this and often altogether denied it.

Hunting

224 Most reptiles are captured by hand or else killed
[225] with a stick, stone or pea-shooter. Except for the turtles, the Seris will not make special expeditions. But it is certain that if they find themselves on any of the islands near the shores of Baja California they will go ashore deliberately in search of the chuckawalla.

225 The turtles are another matter. Here now, just as in the past, special expeditions are made in order to get them. These expeditions take place
[501] nowadays in the usual flat-bottomed plank boats, either motor or oar propelled. The hunt takes place only during unusually quiet and dark nights, when the Gulf is smooth and calm and there is neither wind nor ripple. With the slightest disturbance,
● [354] turtle fishing is impossible. It is all done with the
[411] torch lights or Coleman lanterns. The principal and only weapon is the harpoon, identical with that described and illustrated by McGee. The turtles are then harpooned, dragged into the boat and either left alive, when the hunters have a sale of live ones in mind, or pounded to death with a
[251] club or oar, quartered and then either consumed on the spot or else dried and salted.[1]

[224] While the collecting of the smaller animals us-
[462] ually falls to the children or women, turtle hunting is men's job. Men, too, usually get the chuckawalla because they usually visit more distant islands.

Pets

231 None of the reptiles are pets in a real sense. Those few that might be kept are only held until the day when they are butchered and eaten. It is motivated more by the wish to preserve fresh food than by any affection for the animal. The turtles, the tortoises and the chuckawalla belong here. Occasionally a Seri boy will string a lizard, a *Sceloporus*

[1] The loggerhead is hunted in the daytime because, owing to its great strength, night hunt would be too dangerous. Two harpoons are always used on it, while for the smaller species, one harpoon usually suffices.

000 wear ceremonial feathers as did our western Indians. I saw no skin or
164 cutaneous disease, or evidence of tuberculosis or of trachoma---the curse of our Indians.

142 One boy-child of five years was a handsome child---fat, round,
302 sturdy, with roving great black eyes, large thick lips, a picture of
(241) perfect health. He was almost naked. His hair was done in a pigtail
(857) with a red string braided into it. His face like all the others was dirty, but he waded into the shallow water with a short spear and I saw him catch two crabs with his little harpoon. The water did not bother his face.

415 They had no plates or eating tools, except large deep clam shells,
412 cast up by the sea, which served as cups and dippers. Their long, keen
264 belt knives were used for cutting, carving or skinning, and always the
[238] fingers for eating. They gathered in a circle around an olla of seeds of long grass growing on the sea bottom prepared by winnowing, parching and grinding, and then cooked with turtle oil. Each one dipped his or her fingers into the olla and conveyed them to the mouth without losing a drop, and licked them off with great relish.

231 The dogs eat with the family. There were six or seven half-starved
264 ones. If someone picked up a piece of turtle flipper the dog often took the first lick at it, bit off a piece or licked it before it reached the owner's mouth. The dogs were not punished. They were just slapped to keep them out of the pots.

123 We had a great time that evening in Seriland. The young man played
534 his violin. This consisted of a hollow box cut out of a *palo verde*
(824) tree, and a piece of pine about sixteen inches long; terminating in a
(283) hollow where a single peg was fitted. The one string was twisted deer
(237) sinew, and the bridge was a small round clam shell at the far end. The
(533) bow was a small bent stick and some black horsehair. On the handle was a wad of rosin fastened underneath. By fingering this string a few weak squeaky notes were made, and this was the classical music of the Seris.

Manuel Encina seized his gourd rattle and began chanting. Herrera tapped a tin can and I beat on an inverted basket and the orchestra
535 was in full swing. A young girl, Rosa, dragged out a turtle shell and
123 standing on it began to dance. This dance consisted of stepping up and down quickly with each foot alternately, and this stamping, barefooted, emitted a hollow sound. Every once in a while I let out an
[126] Indian yell which pleased the Seris very much. For two hours they had a real swell time. We took one flashlight of the proceeding.

[342] Each family was in their hut, which afforded very slight shelter
[343] as they were only partially roofed over and the sides were broken
[354] down in places. The huts were all adjoining and each had a little
[361] campfire, which did not give much illumination, so the dancing was in semi-darkness.

(text continues on p. 163)

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

into the sequoia forests of the eastern base of Sierra Seri; on the east it is miles in breadth, passing gradually into the normal Sonoran plain; on the south it widens still farther, stretching all the way to Arenales de Gil and Pozo Escalante, and merging into the playa-like mud-flats bordering Laguna la Cruz, into which the gulf waters are sometimes forced by southwesterly gales at high spring tides. Throughout this portion of the desert, marine shells are scattered over the playa-like flats or lodged in the adjacent banks, sometimes in great beds; the vegetation is scantier than usual and largely of salt-loving habit; the mud-flats are usually coated with saline and alkaline crusts, while the dunes are soft and fluffy, and expand into broad belts perforated with the tunnels of the surprisingly abundant rodents. Across this plain of bitter sand-dust lie the two hard land routes to Seriland—the supposed Escalante route of 1700, down the fan of Rio Bacuache and thence by Barranca Salina; and the Encinas route, down the northern border of the Rio Sonora fan and thence by Pozo Escalante to the shores of Bahia Kino.[1]

Desierto Encinas is an impossible human habitat in any proper sense; it is merely a broad and hardly passable boundary between habitats. The hardy stock of the frontier ranchos, pasturing partly on the thorny fruit of the cholla, push far out on the plains, and are sometimes watered for short periods, under strong guards of heavily armed vaqueros, at Barranca Salina; yet the greater part of the expanse is trodden only by the Seri. Two or three ruined frames of Seri jacales and a few graves crown the low knoll near Pozo Escalante, and there are one or two house remnants near Barranca Salina; these are notable not only as the easternmost remaining outposts of Seri occupancy, but because they represent the only known instances in all Seriland of the erection of even temporary houses adjacent to water. Distinct paths, trodden deep by bare Seri feet, radiate from both waters toward the Seriland interior, but no traceable trails extend eastward.

The southern limit of Desierto Encinas is marked either by the broad mud-flats opening into Laguna la Cruz or by the coast of the gulf, the coast cutting the lower portions of the plain being accentuated by a sand-bank 30 or 40 feet high, against which the surf thunders in nearly continuous roar, audible halfway or all the way to Pozo Escalante. A Seri trail skirts the crest of this bank, sending occasional branches into

[1] Both the routes were traversed by the expedition of 1895, the former from the headwaters of Rio Bacuache in the upper portion of its alluvial fan, and thence from the abandoned Rancho Libertad on the lower portion of the fan across Desierto Encinas by way of Barranca Salina. In the northern crossing a light vehicle (the first to traverse this portion of the desert), drawn by four horses and aided by several horsemen, was taken from Rancho Libertad across the northern portion of Playa Noriega and thence up Arroyo Mitchell to a point midway between Barranca Salina and Johnson peak, and was brought back over the same route. The Rancho trail from Rancho San Francisco de Costa Rica was traversed four times each way by the same outfit, and once each way by the running gear of a heavy wagon carrying the rude craft (about 1,000 pounds in weight) in which the Seri waters were navigated, this vehicle being drawn by 8 to 12 horses, frequently changed. Typical aspects of both routes are shown in plate III, the upper figure representing the Rancho trail and the lower a distant view of Sierra Seri, taken from Playa Noriega, in the depths of Desierto Encinas.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

the interior. At Punta Antigualla the bank expands and rises into a great mammillated shell-mound nearly 100 feet high, with several of the crests occupied by more or less ruined jacales; and occasionally occupied houses occur midway thence to the southernmost point of Sierra Seri, and again at the base of the first spur east of Punta Ygnacio. Beyond Punta Antigualla the sweep of the waves is stronger than in Bahia Kino, and the coastal sand-bank is generally higher. Between the rocky buttresses of Punta Ygnacio and the next spur eastward the sand-ridge rises fully 50 feet above mean low tide, and here, as elsewhere, its verge is protected by a fog-fed chaparral thicket with occasional clumps of okatilla and other cacti. Behind the coast barrier lie lagoon-like basins, generally dry and floored with saline silt-beds, though sometimes occupied by briny pools formed through seepage during southwesterly gales; and there are physiographic indications that the northwestward extension of Laguna la Cruz formerly stretched some miles farther than now and lay in the rear of Punta Antigualla in such wise as to form a source of supply of the clam-shells of which the eminence is built.

2. Sierra Seri is a double range, divided mid-length by a broad saddle barely 2,000 feet in height.[1] Like other Sonoran ranges, the nuclear portions are exceedingly rugged and precipitous—at least two of its pinachos shoot so boldly that they commonly seem to overhang, and have been called leaning peaks. In large part the precipices rise abruptly from a symmetrical dome molded by sheetflooding, much as the insulated buttes rise from the Bacuache fan in northeastern Seriland; so that the tract lying between Desierto Encinas and El Infiernillo is a composite of exceptionally precipitous and exceptionally smooth mountain slopes. One of the Seri trails radiating from Barranca Salina lies across the mid-sierra saddle; others push into several mountain valleys, and the largest leads to Tinaja Trincbera, at the base of Johnson peak, where there are a few low walls of loose-laid rubble, somewhat like those of the trincheras (entrenched mountains) farther eastward—the only structures of the sort seen in Seriland. Toward the southern end of the range lie various trails, the most conspicuous paralleling the coast, either near the shore or over the steep salients, according to the configuration; while here and there ruinous jacales a few yards from the coast attest sporadic habitation. The eastern shore of Bahia Kunkaak from Punta Ygnacio northward reveals a typical geologic section of the Sonoran province: the transgressing waves have carved in the granitic subterrane a broad shelf lying just below mean low tide and usually stretching several furlongs offshore; this shelf is relieved here and there by remnantal crags of oblaerate rocks, cumbered by bowlders and locally sheeted with sand and arkose derived from mechanically disintegrated granite; while the

[1] The northern portion, as seen from the east, is shown in plate III; the southern portion, as seen from the west, appears in the upper part of plate IV, while the southwesternmost point is shown in the lower part of the same plate.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

133 inner margin of the shelf is a sea-cliff, usually 30 to 50 feet high, of which the lower half is commonly granite and the upper half unconsolidated and recent-looking mechanical debris collected by sheetflood erosion. Sometimes the granite of the subterrane is replaced by volcanics; sometimes ancient and firmly cemented talus deposits separate the superficial mantle from the subterrane, as shown in the lower part of plate V; sometimes the line of sheetflood planation passes below tide-level, when the waves beat against the unconsolidated deposits in a deep embayment; sometimes the sharply defined planation surface ends abruptly at the sides of subranges or buttes shooting upward in the abrupt slopes characteristic of the sierra proper; yet this 10-mile stretch of coast is a nearly continuous revelation of the structure of sheetflood-carved plains and of modern marine transgression. The debris of the combined processes forms an abundant and varied assortment of bowlders, cobbles, and pebbles, whence the inhabitants readily derive their simple implements without need for studied forethought or manual cunning.

The long sand-spit terminating in Punta Miguel and the shorter one terminating in Punta Arena are the product of geologically recent wave building, and consist of irregular series of V-bars, backed by lagoon-like basins and enclosing considerable bodies of brine in the central portions; and the bars and basins become successively higher outward, in such wise as to attest the secular subsidence of this coast.

[361] Several jacales are located on the higher portion of the southern sand-
[487] spit, midway between Punta Granita and Punta Miguel, while foot-paths traverse the flat and skirt the coast. Toward the terminal portion of the spit the sand is blown into hummocks, held by clumps of salt enduring and sand-proof shrubbery; but there are no rancherias here, despite the fact that it is a natural point of embarkation—doubtless because no Seri structure could withstand the sand-drifting gales and storm inundations of this exposed spot. The more protected

[136] lagoons behind the outer bars harbor abundant waterfowl, within bowshot of shrub-clumps and dunes well adapted to the concealment of hunters, while the mud-flats open to the tide abound in clams and other edible things. The features of the Punta Miguel sand-spit are repeated with variations along the eastern shore of El Infiernillo; and

[361] Seri jacales, evidently designed for temporary occupancy, occur here and there, usually on higher banks above reach of the severer storms.

3. Tiburon island itself is apparently the chosen home of the Seri—
[131] a habitat to which the mainland tract is at once a dependency, an alternative refuge, and a circumvallation. Its dominant range, Sierra Kunkaak, mates Sierra Seri in its essential features, though the rocks are for the greater part ordinarily obdurate eruptives rather than exceptionally obdurate granites, as in the mainland sierra; accordingly the range is somewhat lower and broader, while the sheetflood sculpture, with its sharp transition into precipitous cliffs, is somewhat less trench-

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

ast. Sierra Menor is a third term in the mountain series, in structure 133
and geomorphy as in altitude; while the interior plain is a homologue
of that portion of Desierto Encinas lying north of Playa Noriega—
i. e., of its (potentially) free-drained portion. Almost the entire perim-
eter of Tiburon is suffering marine transgression, and is faced with
erosion cliffs overlooking wave-carved shelves; and in both form and struc-
ture the greater part of the coast repeats, with minor variations, the
features of the mainland coast from Punta Ygnacio northward. Partly
because of the superior magnitude and height of its debris-yielding
sierra, partly because of protection from the wave-beat of the open
gulf, the eastern shore is skirted with a talus-shape slope, usually two
to four miles wide; and while there are unmistakable evidences of
sheetflood carving in the higher portions of this plane, the coastal cliff
commonly reveals nothing but heterogeneous debris, sometimes rising
thirty or forty feet above tide. Somewhat the greater part of the vol- 133
ume of this debris is fine—i. e., sand and silt and nondescript rock- 135
matter; but there is always a considerable element of larger rock-
fragments, which gather along the shore in a pavement of bowlders
and cobbles (upper figure of plate v). These coarse materials—impor-
tant factors in aboriginal industry—are harmoniously distributed: more
conspicuously on the ground than on the map, the coast is set with
salients (of which Punta Narragansett is a type), consisting merely of
exceptional accumulations of debris from gorges in the sierra and from
shallow arroyos, or pebble washes, traversing the coastwise plain. These
salients owe their prominence partly to the relative coarseness, partly
to the abundant supply, of fragmental material from the heights; and
about their extremities the beach is paved with bowlders, which grade
to cobbles or even to pebbles along the recurrent shores on either
hand. This distribution of cobbles is one of the conditions govern-
ing the placement of Seri rancherias; and in many cases the jacales are [36]
located, either singly or in groups, where the coastal salients and
recurrents meet, and where there is an abundant supply of cobbles of
convenient size and wave-tested hardness.

The coastwise plain skirting eastern Tiburon has a few wave-built 133
projections analogous to those east of El Infiernillo; the most con-
spicuous of these are Punta Tormenta, Punta Tortuga, and Punta
Perla with its tide-swept extensions, Bajios de Ugarte. All of these
are located primarily by sierra-fed arroyos, but all are greatly extended
by wave-borne material laid down along lines determined by the pre-
vailing currents of this best-protected portion of the coast. The long
outer face of Punta Tormenta, shaped by the storms of Bahia Kun-
kaak, is strikingly regular and symmetric; its broad extremity and
inner face are diversified by subordinate bars and lagoons, evidently
tending to connect with the main coast toward Punta Tortuga, and
thereby to transform the whole of Rada Ballena into a lagoon.
Already the narrow embayment is so shallow that, although a con-

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

133 fortable haven at high tide, it is mostly mud-flat and sand-waste at extreme low tide—a condition which explains the stranding of an 80-foot whale in this treacherous harbor about 1887. The rada is between two and three miles in length. It abounds in marine life of
136 kinds preferring quieter waters: clams are plentiful in its mud-flats, a sponge lines portions of the bottom toward its inner extremity, oysters cluster numerously on bowlders and on the mangrove-like roots and trunks of a large shrub along the outer shore, and various fishes find refuge here from the fierce currents and the hungry sharks and porpoises of the open strait; these and other creatures form food for innumerable waders and other water-fowl that seek shelter in the quiet bay, which is still further protected by salt-enduring shrubbery on the bars of the point and by the shrubby thickets and wave-cast banks and wind built dunes on the mainland side.

361 The combination of conditions renders this portion of the Tiburon coast the optimum habitat of the Seri Indians. There are, indeed, no houses or other traces of permanent habitation on Punta Tormenta itself, which is not only swept by gales but must sometimes be inundated by gale-driven waters at high spring tide; but at the inner end of the long sand-spit, and also on the mainland opposite the outer portion of Rada Ballena, there are extensive and well-kept rancherias, capacious enough to accommodate comfortably thirty or forty Seri families, i. e., 150 or 200 persons. Toward its landward end the sand-spit is built
311 largely of pebbles and cobbles, of which thousands of tons are adapted to industrial use; sea-food is practically unlimited and is readily taken; water-fowl literally crowd the protected rada within arrow-shot of natural cover; the outer slope of the bar is admirably suited for landing and embarking balsas in calm weather, while the bay is an ideal harbor for the portable craft, and the shrub-grown shores give unlimited opportunity for concealing them when not in use; the dunes and banks are high enough to protect the low jacales from storm-winds, while the abundant sponges and turtle-shells afford material for thatching and shingling the more exposed walls and roofs; and finally,
[312] it is but a favorite distance (about 4 miles) to the permanent fresh
487 water of Tinaja Anita. From this Seri metropolis well-trod trails radiate toward all other parts of the island; the best beaten leads to the tinaja, sending branches into all the neighboring gorges, in which game is sometimes taken; next best-worn is the trail laid across Sierra Kunkaak to strike Arroyo Carrizal mid-length of its permanently wet portion; others pass northward to rancherias at different points on the coast, and still another skirts the coast southward by several smaller rancherias to the considerable jacal collection near Punta Narragansett—this, like other longshore routes, having alternative trails, the evanescent fair-weather one following the beach, while the permanent path threads the thorn-set thickets marking the crest of the sea-cliff or cuts across the longer salients. The Narragansett ranchería is

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

also a center for radiating trails, the best-beaten of these leading toward the fresh waters of Tinaja Anita and Arroyo Carrizal; and even the rancherías half-way thence to Punta Mashém send their most permanent paths over 15 miles of intervening ranges and spall-strewn valleys toward the same waters. According to Mashém's cautious statements, there is a minor Seri metropolis at the northwestern spur of Sierra Kunkaak, within reach of Pozo Hardy and Arroyo Agua Dulce, and two or three smaller rancherías along the western shore; but these were not reached by the 1895 expedition.

4. The seas washing Seriland are notably troubled by tides and winds. Gaping toward the Pacific, and narrowing and shoaling for the 800 miles of its length (measured from midway between Islas de Tres Marías and Cabo San Lucas), Gulf of California approaches Bay of Fundy, Bristol channel, and Broad sound as a tide accumulator; while the semidiurnal sweep of the waters in the upper half of the gulf is conditioned by the constriction of the basin to a fraction of its average cross-section at the narrows between Isla Tiburon and Punta San Francisquito. Toward the head of the gulf the ordinary spring tides range from 20 to 25 feet, and may be much increased by favoring winds; the debacles culminate there, but the currents culminate off Seriland in the great tide-gate half dammed by the islands of Tiburon, San Esteban, San Lorenzo, and Salsipuedes,[1] with their marine buttresses, and through the breaches of Paaaje Ulloa, Estrecho Alarcon, and Canal de Salsipuedes flow, four times daily, some two or three cubic miles of water in tremendous tidal floods, probably unsurpassed in vigor elsewhere on the globe. Naturally the islands and the adjacent coasts afford extraordinary examples of marine transgression; and while exceptional wave-work is a factor, the transgression is undoubtedly due mainly to the extraordinary tidal currents in this gateway of the gulf. The fierce currents and the frequent storms of the region condition local navigation, and have undoubtedly contributed to the development of the peculiarly light, strong, and serviceable water-craft of the aboriginal navigators among the islands.

El Infiernillo derives its distinctive characteristics largely from the local character of the tides. Bahía Kunkaak is a funnel-shape embayment so placed as to catch half the volume of the incoming tide and to

[1] Originally the name Islas Sal si puedes (Get out if canst) was applied to the various islands of the gateway of the gulf, including San Lorenzo, San Esteban, and San Agustin (now Tiburon), together with the smaller islets, as shown in the map of Padre Fernando Consag (in Noticia de la California y de su Conquista, etc., por el Padre Miguel Venegas, 1757, tomo iii, p. 194); and Padre Consag's account of the currents encountered in 1746 explains the designation: "The great sea which runs here even in fair weather would not allow us to stay, and it was with great difficulty we took in a little water. We now attempted to weather the Cape of San Gabriel de Sal si puedes, so greatly dreaded by seamen on account of these islands, several contiguous points of land and many ledges of sunken rocks extending a great way from the land. Here the sea is so agitated by the current that a gale or a calm makes but little difference" (English translation of Venegas' Noticia, titled A Natural and Civil History of California, 1759, vol. ii, pp. 312-313). Hittell spoke of "the group of islands known as Salsipuedes, the largest of which is now called Tiburon" (History of California, 1898, vol. i, p. 225). Dubrey restricted the name to a single small island near the Baja California coast. Further references to the islands and their designations are noted passim, p. 66.

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142 Ameriadian[1] average; the feet are set straight in walking, as befits the pedestrian habit; the arms are not elongated, and the thighs seem no [144] longer in proportion to other elements of the stature than are those of the highest human types. In like manner the bodies are notably free from artificial deformation; the skulls are not flattened or otherwise [304] distorted; there is no scarification, or even tattooing; neither ears nor lips are pierced for pendants or labrets; the teeth are not filed or drilled, though in some cases at least the first incisors of females are extracted; and while there are trustworthy records of the piercing of the nasal septum for the insertion of pendants, no examples were found at Costa Rica in 1894. The food habits and other customs of the tribe indicate, or at least suggest, more or less specialized and perhaps distinctive internal characters; but, without actual examination of the organs, these inferred characters demand little more than passing notice.

On reviewing the more prominent somatic characters of the Seri, it is found that the greater number are either functional or presumptively correlated with function, and that only a few—chiefly stature and color—are simply structural; accordingly a comparison of the peculiar somatic features and the peculiar individual habits of the tribe would seem to be instructive in more than ordinary degree.

361 The most striking trait of the Seri is the pedestrian habit. The warriors and women and children alike are habitual rovers; their jacales and even their largest rancherias are only temporary domiciles, evidently vacant oftener than occupied; the principal rancherias are separated by a hard day's journey or more; and none of the known [312] rancherias or jacales of more persistent use are nearer than 4 to 10 miles from the fresh water by which their occupants are supplied. Probably the most persistently occupied rancherias of the last half century have been those located from time to time near Costa Rica, yet even these were seldom occupied by the same group for more than a fortnight or possibly a month, and were often vacated within a day or two after erection. Still more temporary camps intervene between jacales, and their sites may be seen in numbers in the neighborhood of the better-beaten paths, or along the shores, or even over the trackless spall-strewn plains; they may be merely trampled spots, sparsely strewn with oyster shells and large bones gnawed at the ends, usually in the lee of a shrub or rock; in places of small shrubbery or exceptionally abundant grass there may be two or three or perhaps half a dozen "forms" (suggesting the temporary resting places of rabbits), in which robust bodies nestled and shrugged themselves into the warm earth and under the meager vegetation. Rarely there are ashes and cinders hard by, to mark the site of a tiny fire, and more frequently battered and stained or greasy bowlders record their own use as meat-

[1] The term *Amerind* (with the self-explanatory variations *Amerindian*, *Amerindic*, etc.) has been established by the Anthropological Society of Washington as a convenient collective designation for the aboriginal American tribes (American Anthropologist, new series, vol. I, 1899, p. 149).

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

blocks or metates, though it is manifest that most of the camps were fireless and many fireless. It is particularly noteworthy that even the more temporary resting-places are seldom if ever less than a mile or two from the nearest fresh water. In short, the Seri are not a domiciliary folk, but rather homeless wanderers, customarily roving from place to place, frequently if not commonly sleeping where overtaken by exhaustion or storm, ordinarily slumbering through a part of the day and watching by night, habitually avoiding fresh waters save in hurried and stealthy visits, and apparently gathering in their flimsy huts only on special occasions. 361 [312]

In conformity with their rovingness the Seri are notable burden-bearers. They habitually carry their entire stock of personal belongings (arms, implements, utensils, and bedding), as well as their stock of food and—weightiest burden of all—the water requisite for prolonged sustenance amid scorching deserts, in all their wanderings, the water being borne chiefly by women, in ollas, either balanced on the head singly or slung in pairs on rude yokes like those of Chinese coolies. And they have never grasped the idea of imposing their burdens on their bestial associates; their coyote-curs are not harnessed or even led; when they surround and capture horses, burros, and kine they make no use of ropes, never think of mounting even when pursued by vaqueros, but immediately break the necks or club out the brains of the beasts, perchance to tear the writhing body into quarters and flee for their lives with the reeking flesh still quivering on their sturdy heads and brawny shoulders—and scores of vaqueros agree in the affirmation (wholly incredible as it would be if supported by fewer witnesses) that even when so burdened the Seri skim the sand wastes of Desierto Eubinas more rapidly than avenging horsemen can follow. 482 [231] 224 177 [481]

The hardly conceivable fleetness of the Seri is conformable with their habitual rovingness and their ability as burden-bearers; and this faculty is established by cumulative evidence so voluminous and consistent as to outweigh the presumption arising from the standards attained among other peoples. A few minutes after they were photographed, the group of boys shown in plate XVI, with several others of about the same size, provided themselves with a stock of their favorite human-hair cords, "rounded up" a dozen mongrel coyote-dogs haunting the rancheria at Costa Rica, and herded the unwilling animals toward a shrubbery-free space a quarter of a mile away, in order to rope them in imitation of the work of the Mexican cowboys earlier in the morning. From time to time as they went a frightened cur sneaked or broke through the cordon of boys, and made for distant shrub-tufts at top speed; yet in every case a boy darted from the ring, headed off the animal within one or two hundred yards, and lashed it back to its place. On arriving at their miniature rodeo the boys widened their ring, and at a signal scattered and frightened the dogs; then, when the fleeing animals had a fair start, each selected his victim and fol- 177 231 481 857

I: McGee E-5 [1896-1895]1898 NU31 Seri NU31

average man daily ingests nearly 6 pounds of water and but little over 1 pound of ostensibly solid nutrients. Thus the ratio of the consumption of liquid food to that of solids is (naturally, in view of that peculiar silicic constitution of the liquid constituent so characteristic especially of arid regions) somewhat larger than the ratio of water to solids in the human system, the ratios being nearly 6:1 and 4:1, respectively.[1] This analysis serves measurably to explain the peculiarly developed water-sense of all desert peoples, a sense finding expression in the first tenets of faith among the Pueblos, in the fundamental law of the Papago, and in the strongest instinct of the Seri; for among folk habituated to thirst through terrible (albeit occasional) experiences, water is the central nucleus of thought about which all other ideas revolve in appropriate orbits—it is an ultimate standard of things incomparably more stable and exalted than the gold of civilized commerce, the constantly remembered basis of life itself.

The potable water of Seriland is scanty in the extreme. The aggregate daily quantity available during ten months of the average year (excluding the eight wettest weeks of the two moist seasons) can hardly exceed 0.1 or 0.2 of a second-foot, or 60,000 to 125,000 gallons per day, of living water, i. e., less than the mean supply for each thousand residents of a modern city, or about that consumed in a single hotel or apartment-house. Probably two-thirds of this meager supply is confined to a single rivulet (Arroyo Carrizal) in the interior of Tiburon, far from the food-yielding coasts, while the remainder is distributed over the 1,500 square miles of Seriland in a few widely separated aguajes, of which only two or three can be considered permanent; and this normal supply is supplemented by the brackish seepage in storm-cut runnels, as at Barranca Salina, or in shallow wells, as at Pozo Escalante and Pozo Hardy, which is fairly fresh and abundant for a few weeks after each moist season, but bitterly briny if not entirely gone before the beginning of the next. The scanty aggregate serves not only for the human but for the bestial residents of the Seri principality; and its distribution is such that the mean distance to the nearest aguaje throughout the entire region is 8 or 10 miles, while the extreme distances are thrice greater.

The paucity of potable water and the remoteness of its sources naturally affect the habits of the folk; and the effect is intensified by a curious custom, not fully understood, though doubtless connected with militant instincts fixed (like the habits of primitive men generally) by abounding faith and persistent ritualistic practice—i. e., the avoidance of living water in selecting sites for habitations or even temporary camps. Thus the principal rancherias on Tiburon island, about Rada Ballena, are some 4 miles from Tinaja Anita, the nearest aguaje; the

[1] The place of water among food substances is more fully discussed in The Potable Waters of Eastern United States, 16th Ann. Rep. of the U. S. Geol. Survey, 1896, pp. 1-6; the physiologic consequences of deprivation of water are outlined in The Thirst of the Desert, Atlantic Monthly, April 1898, pp. 483-488.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

extensive rancherias near Punta Narraguasett measure 10 miles by trail from the same aguaje; the half dozen jacales about Campo Navidal are separated by some 15 miles of stony and hilly pathway from the alternative watering places of Tinaja Anita and Arroyo Carrizal;[1] and the huts crowning the great shell-heap of Punta Antigualla—one of the most striking records of immemorial occupancy in America—are nearly or quite 10 miles by trail from Pozo Escalante, and still further from Aguaje Parilla, the nearest sources of potable water. These are but typical instances; and while there are ruined huts (evidently regarded as temporales) near the dead waters of Barranca Salina and Pozo Escalante, they tell the tribal policy of locating habitations in places surprisingly remote from running water. Like other desert folk, the Seri have learned to economize in water-carrying by swigging incredible quantities on their occasional visits to the aguajes; it is probable, too, that their systems are inured, somewhat as are those of the desert animals that survive deprivation of water for days or months, to prolonged abstinence from liquid food; yet it seems safe to assume that at least half of the water required in their vital economy (say 2 or 3 pounds apiece daily, on an average) is consumed after transportation over distances ordinarily ranging from 4 to 12 miles. Under these conditions the Seri have naturally produced a highly developed water industry; they are essentially and primarily water carriers, and all their other industries are subordinated to this function.

Concordantly with their customs, the Seri have a highly differentiated aquarian device in the form of a distinctive type of ollas, which is remarkable for the thinness and fragility of the ware, i. e., for largeness of capacity in proportion to weight. Representative specimens are illustrated in plates XXXII and XXXIII (the former painted, as already described). The dimensions of the two vessels are as follows: painted olla, height 34 cm. (13½ inches), mean diameter 32.5 cm. (12¾ inches); plain olla, height 32 cm. (12½ inches), mean diameter 31 cm. In both specimens the walls are slightly thickened at the brim, those of the painted vessel measuring about 4 mm. and those of the plain vessel about 4.5 to 5 mm. in thickness. Below the brim the walls are thinned to about 3 mm., as is shown in the fractured neck of the painted specimen. The capacity of these Seri vessels in proportion to their weight, compared with that of typical examples of ware produced by other desert peoples, is shown in the accompanying table.

Comparison of the mean ratios indicates that the Seri ware is almost exactly twice as economical as that of the Pueblos—i. e., that its capacity is twice as great in proportion to the weight of the vessel; and that

[1] The preciousness of water in this land previous was impressed in the 1895 expedition, during which the cost of the commodity, reckoned on the basis of the time and labor involved in obtaining it, was estimated at $10 or $15 per gallon, or about the wholesale price of the finest champagnes.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

262 Probably second in importance among Seri prey, as a food-source merely, stand the multifarious fishes with which the waters of Seriland teem, particularly if the class be held to comprise the cetaceans and seals and selachians ranked as leaders of the fish fauna in Seri lore.

225 Naturally, whales lie outside the ordinary range of Seri game, yet they are not without place in the tribal economy. During the visit to the Seri rancheria near Costa Rica in 1894, it was noted that various [173] events—births, deaths, journeys, etc—were referred to "The Time of the Big Fish"; and it was estimated from apparent ages of children and the like that this chronologic datum might be correlated roughly with the year 1887. The era-marking event was memorable to Mashém, to the elder women of the Turtle clan, and to other mature members of the group, because they had been enabled thereby to dispense with hunting and fishing for an agreeably long time, and because they had moved their houses; but the providential occurrence was not interpreted at the time. On visiting Isla Tiburon in 1895, the interpretation became clear; along 172 the western shore of Ilada Hallena, near the first sand spit north of the bight, lay the larger bones of a whale, estimated from the length of the mandibles and the dimensions of the vertebræ to have been 75 or 80 feet long. It was evident that the animal had gone into the shoal water at exceptionally high tide and had stranded during the ebb; while the condition of the bones suggested an exposure to the weather of perhaps half a dozen years. On the shrubby bank above the beach, [361] hard by the bleaching skeleton, stood the new rancheria, the most extensive seen in Seriland, comprising some fifteen or twenty habitable jacales; and fragments of ribs and other huge bones about and within the huts[1] attested transportation thither after the building, while the shallowness of the trails and the limited trampling of the fog 172 shrubbery gave an air of freshness to the site and surroundings. The 262 traditions and the relics together made it manifest that "The Time of the Big Fish" had indeed marked an epoch in Seri life; that when the leviathan landed (whether through accident or partly through efforts of balsa men) it was quickly recognized as a vast contribution to the Seri larder; and that some of the clans, if not the entire tribe, gathered to gorge first flesh and blubber, next sun-softened cartilage and chitin, and then epiphyses and the softer bones. Some of the ribs were splin- [252] tered and crushed, evidently by blows of the hupf, in order to give access to the cancellate interiors; several of the vertebræ were battered and split, and nearly all of the bones bore marks of hupf blows, aimed to loosen cartilaginous attachments, start epiphyses, or remove spongy and greasy processes. Little trace of fire was found; in one case a mandible was partly scorched, though the burning appeared to be fortuitous and long subsequent to the removal of the flesh; and a bit of charred and gnawed epiphysis, much resembling the fragments of half-cooked turtle plastron scattered over Seriland, was picked up in

[1] One of the smaller vertebræ and part of a rib are shown in the upper figure of plate VI.

1: McGee E-S (1894-1895)1898 NU31 Seri NU31

ing and at the same time enrich the tribal larder with a game beneath the dignity of the warriors; while still smaller boys similarly chase the rabbit, which is commonly scorned by the striplings. The conventional hare-hunting party is three, and it is deemed disreputable to increase this number greatly. The youths spread at sight of the game and seek to surround it, taking ingenious and constant advantage of the habit of the hare to run obliquely or in zigzags to survey more readily the source of its fright; for some time they startle it but slightly by successive appearances at a distance, but gradually increase its harassment until it bounds hither and thither in terror, when they rapidly close in and seize it, the entire chase commonly lasting but a few minutes. The quarry is customarily taken alive to camp, where it is quickly rent to fragments and the entrails and flesh and most of the bones consumed; the skin usually passes into possession of a matron for use as infantile clothing or cradle bedding, while the ears are kept by the youth who first seized the game until his feat is eclipsed by some other event—unless chance hunger sooner tempts him to transmute his trophy into pottage.

While the collective, semiceremonial style of chase alone is thoroughly good form in Seri custom, it is often rendered impracticable by the scattering of the tribe in separate families or small bands, in which case the hare and its associates, like the larger carnivores customarily, are taken by strategy rather than by strength. This form of chase is largely individual; in it archery plays a leading rôle; and in it, too, ambuscade, stealthy lying in wait, and covert assault attain high development. It is closely analogous with the warfare typical of the tribe; and it is especially noteworthy as one of the most effective stimuli to intellectual activity, and hence to the development of invention—if the term may be applied to industrial products so lowly as those of the Seri.

The chief artifact produced by the strategic chase on land would seem to be the analogue of the harpoon used at sea, i. e., the arrow. This weapon is one of the three or four most highly differentiated and thoroughly perfected of the Seri artifacts, ranking with canteen olla and balsa, and perhaps outranking the turtle-harpoon. It is fabricated with great care and high skill, and with striking uniformity in details of material and construction. A typical example is 25 inches in length and consists of three pieces—point, foreshaft, and main shaft (feathered toward the nock). The foreshaft is 8¼ inches long, of hard wood carefully ground by rubbing with quartzite or pumice into cylindrical form, about three-eighths of an inch in diameter at the larger end and tapering slightly toward the point; the larger end is extended by careful grinding into a tang which is fitted into the main shaft, the joint being neatly wrapped with sinew. This main shaft is a cane-stalk (*Phragmites communis*?) 15 or 16 inches long, carefully selected for size and well straightened and smoothed; it is feathered with three equidistantly-

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

342 of the building process may be said to end; for up to this point the process is a collective one and the materials are essentially uniform, while thereafter the completion of the work depends largely on individual or family caprice, and the materials are selected at random. Moreover, the framework is fairly permanent, usually surviving a number of occupancies extending over months or years, and outlasting an equal number of outer coverings; so that all habitable Seriland is dotted sparsely with jacal skeletons, sometimes retaining fragments of walls or roof, but oftener entirely denuded.

The conversion of the framework into a habitable jacal is effected by piling around and over it any convenient shrubbery, by which it is made a sort of bower; sometimes the conversion is aided by the attachment of additional tie-sticks both above and below the main horizontal pieces, as illustrated in the upper figure of plate IX; sometimes, too, the material of walls and roof is carefully selected and interwoven with such pains as to form a rude thatch, as in the chief jacal at Rada Ballena (the upper figure in plate VI); but more commonly the covering is collected at random and is laid so loosely that it is held in place only by gravity and wind pressure, and may be dislodged by a change of wind. Ordinarily the walls are thicker and denser than the roofs, which are supplemented in time of occupancy by haunches of venison, remnantal quarters of cattle and horses, half-eaten turtles, hides and pelts, as well as bird-skin robes, thrown on the bows partly to keep them out of reach of coyotes and partly to afford shade. Most of the jacales about the old rancheria at Punta Tormenta (abandoned at "The Time of the Big Fish"), which may be regarded as the center of the turtle industry, are irregularly clapboarded with turtle-shells and with sheets of a local sponge, as illustrated in plate VII. This sponge abounds in the bight of Rada Ballena, where at high water it spreads over the silty bottom in a slimy sheet, and at low water with off-shore gales is left by the waters to dry into a light and fairly tenacious mat, which is gathered in sheets for bedding as well as for house making material (a specimen of the sponge—probably *Chalina*—is shown on larger scale in plate VIII). On the frontier the jacales may be modified by the introduction of sawed or riven lumber, as illustrated by some of the structures at Costa Rica (shown in plate XI); but even here there is a strong disposition to adhere to the customary form, and especially to the conventional framework, as indicated by the example in plate X.

● 361 While the jacales are not consistently oriented, they reveal a primary preference for facing away from the prevailing wind and toward the nearest sea, with a secondary preference for southern and eastern exposures—the former preference being easily explained, since a gale from the front quickly strips walls and roof and scatters the materials afar. No definite order is observed in the placement of the several jacales in the larger rancherias; apparently the first is located at the choice of the leading elderwoman, and the others are clustered about it at the com-

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

mon convenience. Usually the several jacales are entirely separate; but at Punta Tormenta, Punta Narraganseett, and still more notably at Rada Ballena, individual huts were found either extended to double length or joined obliquely in such wise as to show two fronts (as illustrated in plate VI). The conventional frameworks appear to be common tribal property, at least to the extent that an abandoned skeleton may be preempted by any comer; while the addition of walls and roof appears to afford a prescriptive proprietary right to the elderwoman and family by whom the work is done—though the right seems to hold only during occupancy, or until the temporary covering is dislodged. 361 [342] 423

The jacales are without semblance of furnishing, beyond an occasional ahst and a few loose pebbles used as hupfs; though the nooks behind the bows and tie-sticks sometimes serve as places of concealment for paint-cups, awls, hair bobbins, and other domestic trifles. There is no floor but earth, and this remains in natural condition, except for trampling and wearing into wallows, recalling those of fowls and swine, which afford a rough measure of the periods of occupancy; there is no fireplace—indeed, fires are rarely made in the jacales, nor for that matter frequently anywhere; and there are no fixed places for bedding, water ollas, or other portable possessions, none of which are left behind when the householders are abroad. 352 [342]

Little is known of the actual process of jacal building, especially in Seriland proper; but the observations of Señor Encinas and his vaqueros on the frontier corroborate Mashém's statements that the houses are built by (and belong to) the matrons; that several women customarily cooperate in the collection of the okatilla and erection of the framework; that the only tools used in the processes are hupfs and miscellaneous sticks; and that the placing and fitting of the beams and tie-sticks are accompanied by a chant, usually led by the eldest matron of the group. The same informants support the ready inference from the structure that the shrubbery and other material forming walls and roofs are gathered and placed from time to time by the women occupying the jacales. 342 462 [423]

The Seri building chant is suggestive. Neither Señor Encinas nor Mashém regarded it as religious or even ritualistic, but merely as a work-song designed (in the naive notion of the latter) to make the task lighter; and it seems probable that the local interpretation is correct. If so, the simple chant at once offers rational explanation for its own existence, and opens the way to explanation of the elaborate building rituals of more advanced tribes. The work-song is a common device in many lowly activities, ranging from those of children at play to those of sailors at the windlass, and undoubtedly serves a useful purpose in guiding, coordinating, and concentrating effort; to some extent the vocal accompaniment to the manual or bodily action apparently expresses that normal interrelation of functions manifested by second- 182 342 533

groups or clans between the waterholes and their temporary dwellings by the sea, chasing for game or searching for cactus fruits, sleeping wherever weariness overtook them, or where the successful end of a hunt left them gorged and drowsy. Under a climate where frost is almost unknown they needed no protection except from the sun, and built no other dwellings than their brush-heap jacals (Fig. 3). Living in animal-like savagery, without commerce or industry, the Seri's every bodily character and function were directed toward the provision, day by day, of the food and water necessary for life.

Potable water, a commodity so abundant in most regions as to divert conscious attention from its paramount role in physiologic function and in industrial economy, attained in Seriland the primary place of importance because of its rarity. In that arid land it is scanty to the extreme. Two thirds of the meager supply is confined to a single rivulet in the interior of Tiburon Island (Fig. 4). Because of this and other widely separated aguajes within the island whose shores provided the greater part of their food resources, the Seris early found this island the most tolerable habitat in their desolate realm.

The most conspicuous single article in the dietary of the Seri, and undoubtedly that which first determined the location of his habitat, is the green sea turtle which is abundant throughout the Gulf of California, but particularly so in the narrow channel between Tiburon Island and the mainland. There the shallow lagoons abound with its marine grass food plant, and the sandy beaches provide optimum conditions for egg laying and hatching. In consequence of this natural provision for abundant food, easily obtained, perhaps half the aggregate life of the Seri tribe came to be spent within easy reach of the feeding and breeding grounds of the turtle.

The most extensive and permanent of all Seri communities was established on the channel side of the island, just back of the lagoon in which the turtles feed and whose sands provided eggs and the succulent flesh of newly-hatched turtle young. When females could not be captured at the laying grounds, the big chelonians were speared

[p. 194(B)]
[text continues on p 195(B)]

614 hundred Seris at a time. They lived in maternal groups or clans in which the elder females were of great prominence in the management of everyday affairs. When, in 342 the wanderings of a family a new camp was [462] decided upon, the elder matron usually erected the jacal alone, without the aid of men or boys, gathering the long poles of the ocotillo or the branches of desert trees and fashioning them into an arched framework over which a covering of brush, and often later of turtle shells, served to give protection from the desert sun. After the house- 361 hold was prepared, she took her place within 592 easy reach of the meager and squalid family possessions, and around this nucleus other matrons and their children gathered in the course of a day or two. It was usually three or four days, and sometimes a week, before the brothers and husbands came wandering in from their roving search for food to take their places at the new camp site.

482 From the turtle fishing camps on the chan- 312 nel, the nearest fresh water was at a distance

[p. 196(A)]

[89 cont.]

000 abundant flying and, especially, marine fauna.

For a modern technology, their region has great resources,
511 but for the culture of the Seri it is frankly inhospitable. The standard of living is exceedingly low, as is proclaimed by natives and foreigners and as is demonstrated by the illnesses and hunger that weaken the population.

[90] The Seri truly form part of our Western society, in
226 so far as they catch fish, with fishhooks and motorboats, to sell
439 in the markets of Hermosillo, Nogales, and Tucson, and they
[177] obtain payments in national specie and coin. The part that
182 they form, however, has its own internal structure, which regulates the relations with the environment and among its mem-
[161] bers, even though a group of 218 persons, which suffers severe alterations in percentages from disasters like the sinking of a boat or strokes of good luck like the establishment of a prosperous fishing camp, is almost insignificant for the nation.

Most probably they have never been much more numerous, and they must not have had great cohesion in the past, a situation explicable in view of their nomadic gathering economy.
621 Toward the close of the 18th century they were divided into bands, of which it is known that the most important were the Guaymas, Upanguaymas, Tepocas, Tiburones, and Salineros.
[648] They banded together at various times in order to defend themselves and to attack the nuclei of Mexicans of the zone, achieving combined action, but without effective political unity.

619 At present they seem to form a single group without marked subdivisions, although they recognize affiliations like that of "Tiburones," "half-Papago," etc., which appear to have little real classificatory significance.

184 There is great uniformity: they speak a single language
619 incomprehensible to the rest of humanity; they have a relatively uniform culture, and there is tribal unification for matters involving sexual exchange.

361 The most obvious relations are spatial; they have important settlements that sprung up around the fishing establishments and are more or less permanently occupied. Of these, "El Desemboque," close to the mouth of a river from which they have been displaced, is the most important, with 80 per cent of the Seri

[90 cont.]

361 population. There is an obvious separation there between the
563 Seri and the yori, or non-Seri, with manifest differences in cultural patterns.

The yori occupy an extensive area per person; their homes are quite distant from one another, and four families in conjunction occupy a belt of land of about 100 by 50 meters.

361 The Seri are grouped by families, inhabiting minute squares of from one and a half to two meters to a side. The yori
182 feeling of prestige, based on the territorial expanse of their prop-
361 erty, contrasts with the feeling of security based on personal
511 contact that dominates many aspects of Seri life; the small size of the Seri habitation indicates, not a low standard of living, but a distinct [91] concept of comfort, according to which the Seri, having all the desert to live in, like the yori, confine themselves to the limits that personal contact permits.

In January, 1952, there were 30 dwellings, with an aver-
592 age of 4.6 persons in each, those lodging four, five, and six persons frankly predominating. Each three or four more closely related families occupied contiguous homes, forming relatively separate conjunctions by themselves, which we might call
596 macrofamilies.

The family is the basic Seri institution, which is manifest in all aspects of life: it is the center of production, co-operation, the division of labor, education, diversion, government, etc.

582 Going beyond the family and macrofamily organization,
619 we have a tribal structure based on the generalized exchange (2)
621

2. Lévy Strauss, Les Structures élémentaires de la Parenté [Elementary Kinship Structures], Paris, 1949.

of members for concluding marriage, by which all the Seri are actually linked by consanguinity or affinity. One is almost able to include all the members of the tribe on a single genealogical chart, systematically excluding only some few outsiders who have penetrated the group.

582 This situation, which would make one think of a primitive

McGee (1898:214)

estimated that maritime resources provided two-thirds of the Seri diet. Kroeber (1931: 20), approximately 30 years later, estimated the proportion at about three-fifths. In the winter of 1960, 30 years after Kroeber's visit, the Seri were obtaining at least three-fifths of their food from the sea.

In pursuit of their main source of subsistence, the Seri travel up and down the narrow coastal band. In the winter of 1960 they were occupying one temporary camp toward the southern end of the band and a permanent camp at the northern extreme. Seri women and children gather mollusks; fishing is a male occupation. In addition to gathering and fishing for their own needs, the Seri dispose of a portion of their catch on the commercial market. This enterprise began about 1930, and was encouraged by the establishment, in 1958, of the Sociedad Cooperative de Produccion Pesquera Seri with the cooperation of the Mexican government.

The Pacific green turtle constitutes the largest single item in the Seri diet for at least six months of the year—from January to June—and it is also caught occasionally at other seasons. In 1896 McGee estimated that it provided 25 per cent of the total food supply. Emphasizing the intimate ecological relationship between the Seri and the turtle, McGee (1898: 186-187) wrote:

> . . . perhaps half of the aggregate life of the tribe is spent within easy reach of its [the turtle's] feeding and breeding grounds, and tribesman and turtle have entered into an inimical communality something like that of the Siouan Indian and buffalo in olden time. . . .

Kroeber (1931: 20) believed that McGee stressed the Seri-turtle relationship too strongly and overestimated its contribution to the diet. McGee (1898: 187), in support of the importance of the turtle to the Seri, points to the fact that the turtle carapace is used for, among other things, a house covering and buckler, a cradle, a coffin, and footgear. The carapace is currently used for supporting and roofing houses and as a starvation food. The contribution of the turtle to the diet varies from year to year, but observations made in 1960 suggest a range of from 15 to 20 per cent as a reasonable estimate.

Seri men fish for turtle from boats, which are manned by two or three men and are propelled by oars, sails, outboard engines, or any combination of the three. The boats operate either individually or in groups. The men fish by night or day, depending on the weather and sea conditions. When they fish at night, they use a kerosene lamp to attract turtles to the surface. The principal implement is the harpoon.

The harpoon tackle of the Seri is illustrated in Figure 1. It consists of a foreshaft (c-h), a mainshaft (j-k), and an extension cord (i). The component parts of the foreshaft are a projectile point (c), a gasket (d), a wrapping cord (f), a hafting base (g), and a lead cord (e and h). In preparation for turtle fishing, the hafting base (g) is plugged into the socket (j) on the main shaft (k), and the extension cord (i) is looped through the lead cord (h).

9:Malkin E-5 (1953-1955)1967 NU31 Seri NU31

I

INTRODUCTION

The territory discussed in this paper is somewhat larger than the historical area occupied by the Seris. While Seri settlements are limited today to a quite narrow range, the Tiburon Island and the coast of Sonora immediately adjacent to it, they are familiar with a far larger region, owing to their periodic trips, either on their own after fish, turtle and game or, occasionally, in the temporary employ of the Mexican fish-traders and even farmers. The further away from Tiburon perimeter, the lesser their familiarity with a locality.

The area is limited by Hermosillo in the east, Punta Penasco and Porto Libertad in the north, and Nogales in the south, and finally it includes also the coast of Baja California which the Seris sometimes visit. It also includes all of the islands within that area, Tiburon, Patos, Rasa, Angel de la Guarda, San Lorenzo and San Esteban.

With very minor variations this entire region belongs properly to the Sonoran desert. *Palo Verde, Palo Fierro, Pithaya, Mesquite, Cholla, Sahuaro,* prickly pear, elephant tree and creosote bush are the basic plants. Among the vertebrates, such forms as the Sonoran bighorn, deer, cougar, jumping rat, badger, coyote, skunk, rattlesnake, sidewinder and Gila Monster are most conspicuous and diagnostic. Among the birds are the roadrunner, the raven, as well as many pelagic or littoral birds, the pelican and cormorant among them.

The region is one of very low rainfall, limited to the hot summer months, in some places occuring only a few times in a year. Winters are chilly and dry with persistent winds and dust, with the temperature falling down, on rare occasion, to just above the freezing point. Summers are intensely hot, with daily temperatures usually over 100 and the water temperature of the sea along the shore not infrequently as much as 85 degrees. There are great differences between diurnal and nocturnal temperatures, very much influencing the desert life.

Within this region there are several different ecological zones or perhaps sub-zones, varying from the alkaline flats like Playa Noriega, and the alkali-and salt-permeated soils of Desemboque to the more bountiful slopes of the mountains and the irrigated mud-flats around Hermosillo.

For the sake of distinction, I have selected several of the typical localities or zones as a point of reference either because of their ecological distinctions or because of their signficance as a landmark, readily delineating a peculiar habitat. Personally I am familiar only with some of the

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9:Malkin E-5 (1953-1955)1962 NU31 Seri NU31

I

INTRODUCTION

121 localities, but I think it is advisable to include others, whose nature is not so different from the main places of Seris' habitations.

●361 I have selected then 25 localities and I shall give 13 their main characteristics below:

1. **Punta Peñasco** — a village along the upper shores of the Gulf of California, close to the U.S., [491] connected by a paved highway from Gila Bend. Typical Sonoran zone with extensive sand flats. Very rarely visited by the Indians.

2. **Porto Libertad** — rocky shores, located some 30 miles north of Desemboque. A Mexican village frequently visited by the Seris.

3. **Desemboque** — Seris' main settlement after 1940, just north of and around Punto Tepopa, only a few miles from Tiburon. A narrow strip of poor land, thoroughly permeated with alkali and salt. Vegetation is very sparse. The mesquite, elephant bush, creosote bush, *Cholla* and *Sahuaro* are the main trees. No *Palo Verde* or *Palo Fierro*. *Ocotillios*, *Sahuaros* and mesquite are stunted and scarce, only toward the mountains increasing in [172] frequency and size. Along the shores, sand dunes with kitchen middens, partly covered by vegetation. An arroyo nearby is empty except on a few occasions during the year when flash flood after rains rushes through. Rainfall very scarce. During the summer of 1953 I spent there, it rained very little—only twice and that was short and feeble. [312] Water is obtained from a well, near which there is a Mexican ranch where, owing to irrigation, some vegetables are grown and weeds are present such as *Datura*. The coast is largely rocky. Narrow beaches lack wide sand bars. Hence the fauna here is poor.

4. **Estero Sargente** — alkali flats and mud flats some 25 km. south of Desemboque along the coast. Vegetation very scarce. *Sahuaros* and *Ocotillios* and other desert trees grow some distance from the shore. Short grasses in some places clump the coastal dunes. Breeding and feeding place of many shore birds, especially of willets and egrets. On the alkali flat near the shore are many peculiar insects, not found in Desemboque, particularly tiger beetles and Oedemerids.

5. **Campo Vivora** — little more than half way down toward Desemboque from Estero Sargente, [103] also along the coast. So named after supposedly numerous rattlesnakes. Clumpy grasses. Favorite encampment of the Seris and others while fishing and hunting turtle. The only loggerhead turtle I have seen was right here.

[491] 6. **Porto Kino** — fishing village directly due east of Hermosillo, nowdays connected with Sonora's

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Bekalkin E-5 (1953-1955)1962 NU31 Seri NU31

361 capital by paved road. Formerly, in the twenties and early thirties, Seris' chief mainland settlement. Now with the influx of the Mexicans, the Seris deserted the place completely as a camp site, although they still visit it occasionally. Distinct in the extensive sand beaches and sand marine flats which harbor peculiar bird, fish and insect fauna.

7. **Guaymas**—southernmost point considered here and probably also of the Seris' historical extension. Nowadays very rarely visited by them and probably only while cruising with the Mexicans. Large settlement, many tourists. Backlands; rocky desert.

8. **Tepopa**—spectacular rocky head just south of Desemboque, opposite to Tiburon. Caves, usual mountainous vegetation, *Sahuaro*. Many Seri hunting encampments and one of the places where the Sonoran bighorn is still hunted.

9. **Coast of Baja California**—very rocky area across the bay—almost never visited by the Indians.

10. **Tiburon**—island in the Gulf of California separated from the mainland by a narrow channel called "Infernillo," only a mile wide. Rugged, mountainous. By **Tiburon** is meant an overall island area in distinction from **Tecomate** or the mountains.

11. **Tecomate**—a water-hole and Seri campsite on the northern shore of Tiburon. Today this is the only permanent site on the island where these Indians, actually only a few families among them, still go to live for part of the year.

12. **Mountains of Tiburon**—rugged interior of the island, reaching up to almost 4000 feet. Usual vegetation cover with *Sahuaro* and other typically Sonoran floral components, fauna much as on the mainland except lacking cougar, bighorn and some other larger forms. The interior does have some "tenajas," that is water-holes and there is said to be a rivulet up in the mountains.

13. **Infernillo**—narrow channel between Tiburon and the mainland, often called locally "canal." For the terrestrial fauna and for birds reference is made to the mainland shores of Infernillo. For the marine fauna is meant either the open water in this channel or to the littoral off the mainland. The opposite shores and littorals are covered as "Tiburon." Maximum depth is said to be up to 25 fathoms.

14. **Isla Patos**—small island north of Tiburon and directly due west of Estero Sargente and halfway between Tiburon and Punto Tepopa. Visited by the Indians only occasionally, mostly in connection with the duck hunt.

15. **Isla Raza**—a small island between Angel de la Guarda and San Lorenzo.

16. **San Esteban Island**—a round island between Tiburon and San Lorenzo, up to 1700 feet elevation. Visited occasionally during fishing or turtle hunt trips or in search of a chuckawalla.

[P. 2A]

13 17. **San Lorenzo Island** — a narrow long island along the coast of Baja, California, and opposite to Tiburon. Altitude up to 1200 feet. Fauna limited, owing to the distance from the mainland. Vegetation much as elsewhere but impoverished. Visited incidentally as is San Esteban.

18. **Angel de la Guarda** — large island along the coast of the peninsula, longer but narrower than [312] Tiburon, slightly lower at its highest point, pretty much waterless. Vegetation as elsewhere, fauna limited. Visited by the Seris very rarely.

19. **Desemboque (Mountains)** — high mountains immediately back of Desemboque, 5 miles away, rising perhaps to 1200 feet. Vegetation much richer than in Desemboque, with giant *Sahuaro* growing to considerable size. More moisture than immediately near the sea-shore. Full Sonoran fauna with cougar and bighorn. Frequently visited during hunts.

20. **Tepopa (Mountains)** — in distinction from Punto Tepopa as a whole, this refers only to the rugged head. The mountain reaching to over 1800 feet. Thus by Punto Tepopa are meant only the shores and the littoral.

21. **Buena Vista** — a ranch inland on the way to [312] Hermosillo, newly deserted. Water present in the large well and periodically in the dry river. Willows, large mesquite, Palo Verde, etc. Now only [361] incidentally visited by the Seris but formerly of some importance as a camp site.

22. **San Francisco de Costa Rica**—a ranch inland halfway between Kino and Hermosillo near the [361] main road, presently a large Mexican ranch. Formerly a frequent Seri campsite. The distinctive feature of this locality is extensive sandy areas with very peculiar fauna.

23. **Hermosillo**—capital of Sonora of some 40,000 people. Extensive agriculture, irrigation, river and water-dammed reservoir and cattle and cotton ranges. Once the Seris ranged almost as far as this [484] town but presently they come here only on special business, to the hospital or for a ride to town, with the Mexican truckers. Their observations in Hermosillo are only incidental.

[484] 24. **Nogales**—U.S.-Mexican frontier town. Seris come here very rarely and only certain individuals. Observations less than incidental.

25. **Campo Utah** — large track of irrigated flat lands given up to cotton, operated by the Utah Construction Company between San Francisco and Hermosillo. Somewhat off the main road. Selected as a distinct region owing to the irrigation and [484] cotton fields with their ecological peculiarities. [464] Seris visit this only in transit or on most unusual occasions when they work a few days for the Mexicans.

The Problem

12 The basic problem concerns the state of Seris' zoological knowledge, that is the general knowledge of the natural history of animals in its main outlines; of their ecology, habits, reproduc-

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II

[P6A]

OUTLINE OF SERI CULTURE

Territory

131 Historically the Seri territory at its greatest expansion extended from the coast of Mar del Cortez to Hermosillo and from Porto Libertad to Guayamas and included also the Tiburon Island. 101 Ethnically, the Seris represented a collection of [197] dialectically distinct tribes, the Guyma, Tepoca, etc., perpetually at war with each other, whose common characteristic was their culture, and who were framed in to the north by the Pima Alto and Papago, to the west by the now extinct Cochimi, to the east by the Opata and Pima Bajo and to the south by the Cahita, Mayo and the Yaqui.

648 But their area had fluctuated much. After the 131 bitter and disastrous wars against the Mexicans from the late 18th century through most of the 19th, the Seris lost out and were forced by the Mexican government to settle on Tiburon. This incarceration did not last long. McGee had already in 1894 found them on the mainland and Kroeber found them equally divided between Tibuson and Kino. In 1930 when he visited, evidently they lived largely in Kino Bay. As the Mexicans pressed on Kino moving in, in ever greater numbers, and as Japanese fisheries worked the Gulf out of Desemboque attracting the fish-loving Seris, their main settlement has moved once more. About 1940 most of the Seris moved into Desemboque and at the time of my visit, almost all of them lived [361] there while only two families made Tiburon their "permanent" camp. School and availability of the medical facilities as well as the location of the Mexican traders in Desemboque, part of whose scheme the Indians have become, attracted the Seris. Only occasionally today they roam inland to visit other areas, either owing to the hunting or fishing expeditions.

Numbers

161 Seri numbers fluctuated as much as their territory and had suffered immense diminution. I shall list the estimates below, indicating the source of the information:

	Authority		Source
1780	Velasco	2,000	McGee
c.1824	Troncoso	1,000 +	"
1826	Ratio (Tiburon only)	1,000-1,500	"
1826	Hardy	3,000-4,000	"
1841	de Mofras	1,500	"
1844		550	"
1846	Velasco	500	"
c.1855	Encinas	500-600	"
c.1865	"	250-300	"
1894	Mashem, native	250-350	"
1930	Thomson	175	Kroeber
1934	Mex. En. Cifras	160	Ethn. Synth. Mex.
1953	Smith, Jr.	248	MS. Univ. of Ariz.
1955	Malkin	236	Malkin

9:Malkin F-5 (1953-1955)1982 MU31 Seri MU31

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tant factors in their knowledge. At the one pole we have the kangaroo rat, an animal so abundant that it has been indicated for all 23 localities; at the other extreme is the jaguarundi, as already indicated, little known to them, for which no distributional data is available.

The chart shows at once that the informants thought certain animals completely absent from the islands in the Gulf. Thus the cougar, bighorn, deer, badger and cottontail were indicated as absent in the islands. This indeed is the case with most of these certainly, with the possible exception of the cottontail. Its presence or absence in the islands should be verified, especially in that the informants mention the jackrabbit as present in all three of the Tiburon localities although absent from the remaining islands. A number of other animals had been indicated as being absent from Tiburon. Here belong the peccary, porcupine and the sea lion. In the latter case, what the Seris must have in mind is the absence of the rookeries and "permanent settlements" of the sea lions. Individual specimens undoubtedly do show up on the Tiburon coast.

In several instances, the Seris indicated reasons for the presence or absence of a given animal in a locality, usually in the form of comments concerning the ecological features and preferences of the species. In several cases, it may be seen at once how the particular locality is related to the essential habitat features. The cougar and the bighorn are both found in the mountainous, craggy areas, hence the Seris cited Desemboque mountains and Buena Vista for the cougar, and the "big mountains" near Porto Kino, Punto Tepopa and Desemboque mountains for the bighorn. And likewise, all of the localities indicated for the sea lion are those that have rocky beaches.[1]

Local preferences within the sea were indicated also for all three of the marine *Cetacea*. This took the form of a blanket statement that they prefer deeper waters and for the grey whale also preference for more distant waters of the area, those surrounding the islands of San Lorenzo and Angel de la Guarda.

b) Seasonal

Although the mammals are less subject to the seasonal restrictions than other animals, the Seris have observed certain seasonality, at least for some of the species. Information is available for 12 species of mammals and in that number for six no differences in the seasonal occurance are known to the Seris, while preference for the cold or hot season has been indicated for three species each. Preference for the cold or hot season has been usually connected with the migratory habits. This has been indicated especially for the killer

[1] The coyotes, the informants thought, were more numerous on Tiburon and especially at Tecomate than on the mainland. This may be owing to the fact that these animals are intensively hunted by the Mexicans and the Americans on the mainland and near Desemboque because of the danger they represent to the domestic stock. As for Tecomate—there is a long standing Seri encampment there and a water hole—which two factors may attract the coyotes.

[361]
[312]

[P. 14-A]

123 the boat and took dinner. Afterward, we pulled out into the Gulf and skirted the coast, rowing for miles. We passed great red mountains with the sea beating against their rugged breasts, hollowing out deep caverns; then sandy bluffs with mountains receding, but the horizon was always notched with rugged, pinnacled desert ranges.

We landed for the night on a sandy point and made camp. After our supper two fires were built, Roberto's signal that he was on hand. [202] Also a white scarf was tied to a long pole as a signal of friendship. No answering signal appeared. Probably the people were on the opposite side of the Island.

At sunset the sea became calm as a pond and the mountains on Tiburon in the distance turned purple and lavender. The sea reflected all the sky and mountain colors like a mirror.

The next morning we got an early start and it required our united strength to push the boat down to the water as it was low tide. The beach was strewn with various shells and a lot of colored pumice stone which had drifted in from seventy-five miles north, where there are some pumice hills near the sea.

The nearest point of Tiburon was only one and a half miles distant, a short row across. The water was pure green, indicating a shallow sea. [361] We rounded the point and rowed into a bay and then to the head of the bay where there were a few huts called *Rancheria Tinajanita*, or Little Tanks. The water was so shallow in places we had to get out and push the boat a long way out and walk up a long muddy beach over shells and a sort of coral that bruised and cut our bare feet, so that we went as if walking on eggs.

342 The rancheria was built on the shore with no shade; each hut facing
361 the water. The huts were very crude---the frames of *carrizo* reed and ocotillo, covered with coarse brush and blankets of dried seaweed.
[35] Around the bottoms, or sides, of each hut were piled sea turtle shells three and a half feet high and two and a half feet wide. Over these were piled seaweed and brush, not fastened. Round about were turtle bones and shells, and sea shells, bones and anything that contained meat.

This was just a temporary camp of about eight huts.

123 We left this camp, raised the sail, which consisted of several
202 flour sacks sewed together, and lay in the bottom of the dug-out, while the one-eyed Mexican steered with a paddle. Before leaving, Ricardo left his sign---a sign agreed between him and the Seris. Since he and his family had been so kind to them, they would never harm him or kill his horses and cattle. He erected a stick with a rag to call attention, made a circle with his heel, and inside the circle made the tracks of his right bare foot and right hand.

123 At the bow we carried the white banner always to signify peace.
361 We crossed the bay to a sandy point and came upon another small

[text continues on p. 153]

123 rancheria of about ten or fifteen huts, half tumbled down, all facing
• 361 the sea and surrounded by turtle shells and deer bones, and sea shells. Things were dropped wherever they ate. This rancheria was deserted also.

We set sail again and landed on a sandy beach near another deserted rancheria called *Palo Fierro*. We hauled the boat way up and took out all our things and carried them up to the huts. In this place there were twenty-one huts---sometimes three built together. Many of them were in a good state of preservation. They were all in a long row with bleaching bones and turtle shells on all sides. From the inside of one hut I counted thirteen turtle shells around the base. There must have been about a hundred turtle shells here, and a few land tortoises.

123 There were two or three fragments of painted parts of a boat---
[648] probably remains of a boat belonging to seven fishermen who got drunk and landed here, and were all killed by the Seris two years ago. Six months ago a single Seri was captured by some Mexican fishermen and killed in reprisal.

As the wind increased it kicked up an ugly sea and we decided to camp over night. As we were reduced to about six gallons of water, Roberto suggested we take two empty five-gallon cans and go for water. I had offered to stay with the boat but was told the Seris would kill me if they found me alone.

[712] A Seri had told Roberto to follow a certain trail from the rancheria and go between the mountains and he would find a *pozo*, or well, not far away. Ricardo left his private sign and the five of us marched away, following a well-worn trail. For the full distance broken shards of ollas lined the trail at short distances, so we knew we were on
137 the right trail. Brush began at the sea shore and we passed various
123 kinds of desert vegetation---several kinds of cactus, especially the *sarbueso*. This starts with a single great trunk two or three feet in diameter, and then branches out like a vase, running up fifteen to twenty or more great columns like the *saguaro*. They were thirty or forty feet high. In some of these were piled a great accumulation of sticks and trash ten feet high or more, and on the top where the sea eagle makes its nest. There were a number of these.

Then we came to the *pitahalla*, *cholla*, *ocotillo*, and others, and the strange *terote* tree. This tree is the *Bursura Microphylla*, and has an odor like turpentine. It is a fat, dropsical tree like stuffed sausage, with crooked ungainly branches coming out at all angles. There are three varieties---the *terote colorado*, *blanco*, and *negro*, according to the color of the cut bark. Another strange tree was the *palo blanco*. Then there was the *palo verde*, *palo fierro* and *mesquite*. The *mesquite* was rare.

123 A number of signs were marked in the sand. We could not translate
[212] them. We walked single file, rifles in hand, and revolvers handy.

[text continues on p. 155]

123 handed to show their friendliness.

142 One was a young man with rather pleasant features, his braided
291 hair hanging below his shoulders. His name was Antonio Herrera. The
123 other was a wild-looking specimen called Ramon Blanco. His hair was a
[302] tangled mat with a short braid behind, suspicious black piercing eyes,
long sparse moustache and chin-beard hiding a broad cruel mouth. He
[411] wore the remnants of an old sweater, a short dirty kilt, or skirt,
nearly to his knees, a belt full of cartridges, mostly empty, and a
long knife in a rawhide scabbard.

123 The young man had been baptized and given a name by Roberto, who
[785] had acted as godfather or *patrona*, many years ago. He wore a hat,
[291] jacket, and pants of blue denim, and *guaraches*, or sandals of rawhide.

We shook hands all around and then they called and halloed in the brush and soon three women and a lot of children, wild and half-
[415] clothed, filed into camp. The women were tall, gaunt, unkempt, ragged
[482] and barefooted, paying us not the slightest notice. They were bearing
[433] on their heads large baskets filled with all their earthly possessions---cooking ollas, scraps of cloth, pieces of turtle meat, bone
[854] brads, hair brushes, and odds and ends. They carried, also, an infant
[231] or two wrapped in odd bits of rags. Several gaunt dogs followed in their wake.

342 In all, three families came trailing in, removed their household
equipment from their heads and resumed their interrupted and primitive
[512] housekeeping. Each family occupied its apartment in the row of brush shelters, separated from each other only by brush partitions with a total lack of privacy. These shelters, always open to the sea, serve as shade from the fierce rays of the sun, and also as windbreaks, but
[361] are no protection from infrequent rains. They are occupied only for a brief period and then their nomadic tenants move on to fresh *cahuama*, or sea turtle range.

123 Soon, a third man arrived while we were near the huts, Manuel
[142] Encina. He was a man of sixty-five, gray hair and mustache, seamed features, and not evil looking. He was out of breath. He had gone for water to the same water hole where we had been yesterday, struck our tracks, had left his water cans and hurried back to warn his people. He was greatly relieved to find friends.

Since he had gone for water, inquiry revealed there had been no water in camp for two days, and six adults and one girl of thirteen and six children were thirsty. We gladly gave them one of our five-
[225] gallon cans of water and they were very grateful. They had caught a
[262] sea turtle the day before and gave us some turtle steaks which looked like beef or mutton.

312 As the camp was without water and we were running short, the young
492 man and Encina offered to get some. Each took a *palanca*, or short
123 shoulder pole with knotched ends, fitted empty five-gallon cans in

000 wear ceremonial feathers as did our western Indians. I saw no skin or
164 cutaneous disease, or evidence of tuberculosis or of trachoma---the curse of our Indians.

142 One boy-child of five years was a handsome child---fat, round,
302 sturdy, with roving great black eyes, large thick lips, a picture of
[241] perfect health. He was almost naked. His hair was done in a pigtail
[657] with a red string braided into it. His face like all the others was dirty, but he waded into the shallow water with a short spear and I saw him catch two crabs with his little harpoon. The water did not bother his face.

415 They had no plates or eating tools, except large deep clam shells,
412 cast up by the sea, which served as cups and dippers. Their long, keen
264 belt knives were used for cutting, carving or skinning, and always the
[238] fingers for eating. They gathered in a circle around an olla of seeds of long grass growing on the sea bottom prepared by winnowing, parching and grinding, and then cooked with turtle oil. Each one dipped his or her fingers into the olla and conveyed them to the mouth without losing a drop, and licked them off with great relish.

231 The dogs eat with the family. There were six or seven half-starved
264 ones. If someone picked up a piece of turtle flipper the dog often took the first lick at it, bit off a piece or licked it before it reached the owner's mouth. The dogs were not punished. They were just slapped to keep them out of the pots.

123 We had a great time that evening in Seriland. The young man played
534 his violin. This consisted of a hollow box cut out of a *palo verde*
[824] tree, and a piece of pine about sixteen inches long, terminating in a
[288] hollow where a single peg was fitted. The one string was twisted deer
[237] sinew, and the bridge was a small round clam shell at the far end. The
[533] bow was a small bent stick and some black horsehair. On the handle was a wad of rosin fastened underneath. By fingering this string a few weak squeaky notes were made, and this was the classical music of the Seris.

Manuel Encina seized his gourd rattle and began chanting. Herrera tapped a tin can and I beat on an inverted basket and the orchestra
535 was in full swing. A young girl, Rosa, dragged out a turtle shell and
123 standing on it began to dance. This dance consisted of stepping up and down quickly with each foot alternately, and this stamping, barefooted, emitted a hollow sound. Every once in a while I let out an
[126] Indian yell which pleased the Seris very much. For two hours they had a real swell time. We took one flashlight of the proceeding.

[342] Each family was in their hut, which afforded very slight shelter
[362] as they were only partially roofed over and the sides were broken
[354] down in places. The huts were all adjoining and each had a little
[361] campfire, which did not give much illumination, so the dancing was in semi-darkness.

(text continues on p. 163)

123 the same as do children and dogs, even though it may be hauled for
[132] six or eight miles on mule-back.
[137]

With gifts and hand-shaking all around, we bade goodbye to Lupe and the children and started on our way.

After leaving San Carlos we travelled through a cholla and giant cactus country until we reached Roberto's ranch at Santa Cruz. We had picked up Pancho Oliverria at San Carlos.

Just before leaving the ranch several men lifted a poor woe-begone mare to her feet. She was so poor and weak she could not get up by herself, but once up she managed to stand and finally staggered out into the *mesquital*, the place of mesquite. One eye was missing and watery matter was oozing out and running down her cheek. A night or two before, a lion caught and destroyed her colt, and probably in an effort to protect it the mare came too near the scene and the lion tore out her eye with one sweep of its paw.

Midway to Santa Cruz we stopped a moment at Blevens ranch *Costa Rica*. Blevens is a large, florid white-haired American who has lived in this country for fifteen or twenty years and hasn't much use for the Seris as they have killed so much of his stock.

[24] At one time he noticed a dead cow which was all swelled up and badly spoiled. No white man could stand the smell. He told some Seris about it, and they flocked around it, and when they had finished all that was left were the hoofs and horns.

Nene's wife cooked dinner for us at their house which was composed of *carrizos* and mud roofed with earth, all supported by mesquite logs. Surrounding it was a hog tight mesquite fence, and in this corral was a fifty-foot deep well which furnished the water supply. Half a bull's hide laced on to an iron hoop and holding about fifteen or twenty gallons, was the water bucket. This was hauled up by a long rawhide rope passing through an over-head block drawn by a mule.

After leaving Santa Cruz with none added to our crew, we wended our way through a maze of mesquite, cottonwood and other timber, gradually working out of the timber to more open country where traveling was not so strenuous. The steering gear was worn so that the old truck would often head for a saguaro or mesquite and stop just short of being smashed.

At last we reached a region of flat baked lake-beds, covered in flood times. Sometimes we could travel fast at fifteen miles and then again we would go in the low where it was soft. About three miles from our destination we took off half our load and piled it to one side and jogged along through a wild desert country with no roads or trails, through chollas, desert brush and terote trees.

123 When we neared a hill of dark volcanic rock a number of Seri In-
312 dians darted out, and with their help we reached a camp near the coast
36 where Roberto had recently located a small well of sweet water.

123 Clustered near this well were brush windbreaks joined together, divided
[36] by brush partitions all open on one side. Here were gathered several
[312] Seri families. There was no such thing as privacy or seclusion.
[342]

As soon as we stopped and unloaded we were immediately surrounded by a curious, half-starved mob of forty men, women and children, about fifteen to twenty children. All dirty, all ragged, all hungry. Some of them I recognized: others were new to me.

While preparing and eating our supper this motley crowd formed a circle about us and hungrily watched every mouthful. We gave them a little food and an orange all around, and they finally left. By that time we had also finished our bread and coffee and followed to the brush shelters.

535 A dance was immediately started. A place was hollowed in the sand,
123 a few short planks placed over it, and the dance was on. Music was
[523] furnished by men tapping on an inverted basket and chanting. Only one man danced at a time. Sand was thrown over the planks and the Indian danced a shuffle, scraping his bare feet on the boards. He held a staff in his right hand and danced to a song called in Spanish *El*
[171] *Toro*. Later on other dancers performed, then gave us the *venado* (deer) dance, taught them by the Yaquis.

This dancer represents a timid deer, hopping up and down to the time of a rattle held in the right hand, and the chanting of the singers. The *venado* dancers stooped over frequently, turning first to one side and then the other to look behind. Manuel Encina was the *venado* and Chico Romero, a very large young Seri, acted the part of a coyote, crawling and jumping on all fours and barking and every once in a while biting the calf or thigh of the *venado*, then jumping back and barking. It was acted with great realism, and the onlookers, especially the children, enjoyed it immensely.

A wilder, more barbaric scene was probably seldom witnessed in America than this gathering of Seris on the shores of the Gulf of California, dancing the *venado*. The camp fire threw a flickering light over dark fierce faces with low foreheads and frowsy unkempt hair.
[302] One man, Luis Torres, the head "ship carpenter" with a moustache and chin beard, his hair low-down framing his dark face, looked like a savage from the wilds of New Guinea. Another, Santo Blanco, a secondary chief below Juan Tomas, has a straggling moustache curling over cruel projecting lips which rarely smile, while his fierce black eyes peering through his black thatch of hair, have a perpetual scowl. The monotonous sing-song chant accompanied by the soft roar of the surf added an indescribable eeriness and weirdness to the dark night.

123 We soon turned in as it was then eleven o'clock, and we all fell asleep lulled by the waves of the sea.

123 Then Chico Romero and his load of children and dogs arrived and
484 he unloaded his impedimenta on the beach, and soon the women came walking along the beach and joined the party. The boats carrying the heavy things and children; the women, with their babies and a few light things on their heads, walk along the beach when possible and follow the boats, which hug the shore to avoid the strong currents and tide. The boats are propelled by paddles mostly, though some of
501 the Indians use oars. The women are slightly built, slender and in-
142 clined to be gaunt, owing to the hard life and lack of food. Their cheek bones are quite prominent and their profiles present protruding lips.

422 Having no permanent homes, moving hither and thither for their
[364] various food supply, household things are not accumulated and life is reduced to its very simplest elements and absolute necessities.

Crude baskets made from shoots of the torote tree, vessels in which to cook, and some patched rags in place of Pelican skins to serve as blankets to the fortunate few, constitute the family pos-
231 sessions. Strange to relate, many of the women have an over-supply of
[853] milk; and according to Roberto have puppies nurse what the babies cannot take. One woman was known to nurse a baby pig on one side and a puppy on the other.

[264] Family dogs lick all cooking vessels which is unnecessary as they
[854] are thoroughly clean when the Seris are through with them, and also lick the infants clean after performing their natural functions, so they are quite indispensable. I saw a Seri girl place on the sand a small can of water for a dog and then saw her drink some of the remainder and pour the rest back in a five-gallon can. Dogs frequently swim across the Infernillo to join their masters.

732 Asked about cripples and incompetents, Roberto said they probably did not exist. The conditions of survival were too precarious to admit of anyone living who was unable, by physical disability, to hunt or fish. There are two or three men who are nearly blind or so. The wives of these men eke an uncertain living for them by the hardest
262 struggle. The sea turtle is the staple; one man and one good boat can
433 secure a living for five families. There are now nine boats, but one
501 boat to a family would practically free them from continual want.
262 With the exception of four bones in the flippers and the bones of the
237 head, all the sea turtle is used---the meat, blood, entrails, shell which furnishes food and oil, skin of flippers which furnishes sandals, sinew for strings. Nothing is wasted except contents of the entrails.

123 Again, we laid our blankets on the clean white sand of the shore and were lulled to rest by the murmuring sea.

123 Daylight found us up the next morning, and we breakfasted, rolled
484 up our blankets, pushed the boats into the sea and were off by the time the sun rose over the mountains and shone over a glassy sea. Two Seris towed their boat by a tump line, while a boy of twelve steered

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FIG. 1. Area of Present Seri Occupation

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One descendant of this band states that long ago his ancestors wandered north from the region of Guaymas. Eventually, they established land rights to the coastal area extending from Campo Ona on the south to Puerto Lobos on the north. Before long, however, they relinquished claim to the area between Campo Ona and Punta Tepopa.

It is to be understood, of course, that groups from this band, as well as groups from other bands, at times ranged far afield from their respective territories. Band I, for instance, had campsites as far north as the mouth of the Colorado River.

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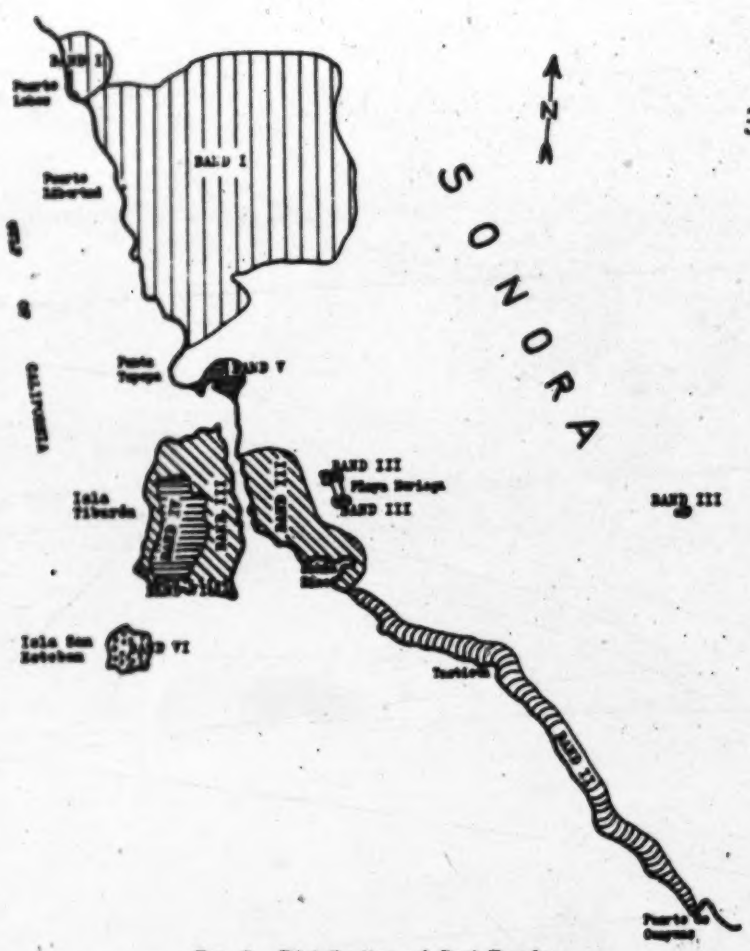

FIG. 2. Distribution of Seri Bands

DIALECTS

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The existence in former times of three distinct but mutually intelligible dialects seems evident.

Dialect 1 was spoken by Bands I, II, III, and IV. Any diversity of speech among these four bands seems to have been confined to word formation. The Seri language of today is derived largely from this dialect. [192]

Dialect 2 was spoken by Band V. This dialect is extinct and only scanty data on it can be gathered. From a number of expressions gathered, it appears that the dialect was characterized by extreme intonational contours. [194]

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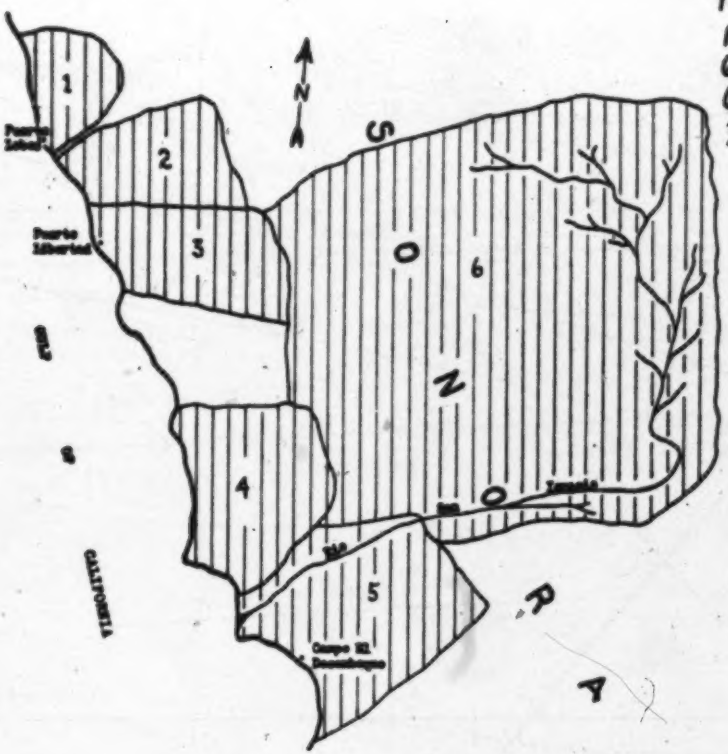

FIG. 3. Subdivisions of Band I

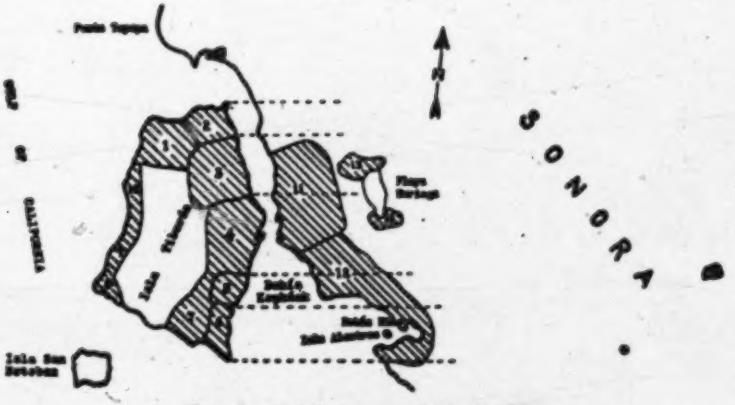

FIG. 4. Subdivisions of Band III

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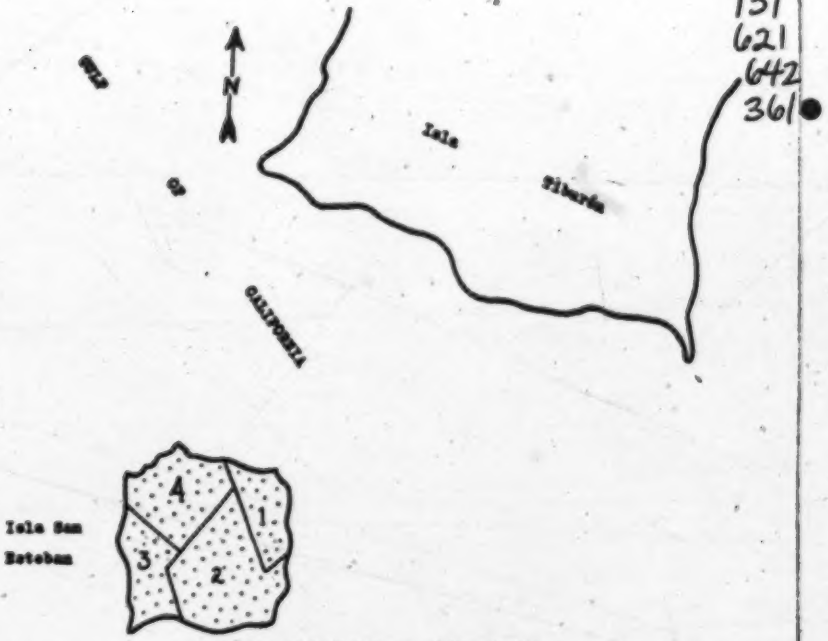

FIG. 5. Subdivisions of Band VI

BAND SOCIAL STRUCTURE

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The social structure of the bands can be properly understood only in relation to the social structure of their smaller units, the *i?iziitang*. The kin group which resided in and dominated each such subdivision constituted a clan.[5] This group conforms to Murdock's three major specifications for clan designation.[6]

Murdock's first specification states that a kin group, to constitute a clan, must be based explicitly on a unilinear rule of descent. The kin group of each Seri band subdivision was based on patrilineal descent. An individual was closely associated with the group of kinsmen of his subdivision, all of whom were related to him through males only. The father was the head of his household. For example, he assumed leadership in marriage negotiations. Upon his death, the eldest son took his place.

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The second specification states that such a kin group must have residential unity. Seri marriages were exogamous with respect to the subdivision,[7] and the rule of residence was patrilocal. The domicile was set up near the home of the groom's parents.

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578 642 621

Except for the occurrence of several battles, relations between Bands I and III were peaceful.

642 648

Relations with non-Seri groups were not always peaceful. For many years the members of Band I were on friendly terms with the Papago; they often camped together and even intermarried. Due to a misunderstanding,[10] fighting erupted between the two groups and many people were killed in the years which followed.

BAND II

[262] [721]

The external relations of Band II were decidedly turbulent. Although their primary base of operations was a coastal area, the people did not use the ocean as a source of food. They preferred beef and horse meat which was easily acquired by stealing animals from ranches. Here again the wrath of the ranchers and the government was incurred.

[582]

A small group of Yaqui eventually joined Band II and intermarried with them. The Seri claim that the Yaqui induced the warriors of this band to assault travelers on the road between Hermosillo and Guaymas. Coyote Iguana, who according to Seri tradition captured Lola Casanova, was of this band. This activity soon brought retribution from the government. Later, dissension arose between these Seri and the Yaqui.

The enmity and strife that occurred between Bands II and V were mentioned above.

BAND III

642 578 628 621

The history of the internal relations of this band on Tiburon Island seems to have been marked by periods of violence. Battles between subdivisions sometimes occurred; however, they were usually short-lived and soon forgotten. A major struggle once occurred when a shaman named *?apetla* "the invincible one" and warriors from subdivision 4 made repeated raids upon the neighboring subdivisions and killed many. Eventually, his enemies overcame their fear and destroyed the killer.

[721]

642 648 721

Although the inhabitants of Band III were hunters, gatherers, and fishermen, they began to rob cattle once they became established on the mainland. They too incurred the wrath of ranchers and the government.

BAND IV

642 621 628

Since the members of this band were, by choice, inhabiting an inland area of Tiburon Island, they lived in relative isolation as hunters and gatherers. Their primary contacts were with members of Band III with whom they intermarried.

[361] [582]

so named must be of the same sex as the first. The significance of land ownership needs further investigation.

Many of the Seri still prefer, when possible, to live in their chosen band area. Sometimes a person, when he is approaching death, will ask to be taken to his own i?iziiting, where he can die and be buried in the area of his choice.

NOTES

1. Due to printing limitations, stress on Seri words has been omitted, and several orthographic symbol changes have been made for this paper. The phonetic values of the symbols used are the following: p is voiceless labial stop; t is vl. dental stop; k is vl. velar stop; ? is glottal stop; f is vl. labial flat spirant; w is vl. labial grooved-rounded spirant; s is vl. alveolar spirant; z is vl. alveo-palatal spirant; l is vl. lateral spirant; h is vl. velar spirant; x is vl. back velar spirant; m is labial nasal; n is dental nasal; ng is velar nasal; y is palatal semivowel; i is a high close front vowel; e is a low close front vowel; a is a low open central vowel; o is a mid close back vowel.

2. These data were compiled during field trips to the Seri camps during the years 1956-61, the studies being carried out under the auspices of the Summer Institute of Linguistics. The principal informant was R. Herrera T. whose information was checked with and supplemented by nine of the older members of the tribe. I am indebted to my colleague, David Thomas, who read an earlier draft of this paper and made helpful suggestions.

3. 1) W. J. McGee, "The Seri Indians," *Bureau of American Ethnology, Annual Report*, No. 17, Part 1. Washington, 1898. 2) A. L. Kroeber, "The Seri," *Southwest Museum Papers*, No. 6. Los Angeles, 1931. 3) W. B. Griffen, "Notes on Seri Indian Culture, Sonora, Mexico," *Latin American Monograph Series*, No. 10, Gainesville, 1959.

4. It will be noted that between subdivision 3 and 4 on Fig. 3 there is an unnumbered area, the status of which is uncertain.

5. Kroeber states that McGee's concept of Seri maternal lineages crystallized into totemic clans with matron rule seem a fantasy. In Kroeber's opinion, "The Seri may never have had sibs or clans; but the fact that they appear to lack them now is no positive evidence that they were without them three centuries ago. Shifts of residence, contraction of territory, shrinkage of numbers, amalgamation of distinct bands, may well have obliterated much of such social fabric as they once possessed."

Griffen discusses the nature of the former Seri bands and states, "they may have been patrilineal and exogamous. The criteria . . . that Julian Steward has exposited for the formation of exogamous, patrilineal bands . . . are and presumably would have been met formerly in the Seri habitat." Griffen lists other aspects of this type of band which are also verified to some extent by his data. From reading his material, it is obvious that he suspects the existence of clans at some earlier period. He emphasizes the need for further investigation.

6. G. P. Murdock, *Social Structure*, Macmillan Co., New York, 1949.

7. Marriages were usually contracted within the band.

8. As Kroeber points out, their memory likely covers only the latter part of the period of Spanish contacts.

9. The Seri recall nothing of Seri-Pima contacts and little of Seri-Apache relations.

10. The story is related that one day some Seri entered a cave where they found several Papago jugs filled with seeds. Being hungry, the people ate the seeds and left some arrows as token payment. The Seri say that the Papago apparently believed the arrows were intended as an insult. Fighting broke out soon afterward.

11. The Seri concept of the band annihilations is seen to be in contradiction to McGee's statement (p. 132): "Concordantly with their primary characteristic, the Seri have avoided ethnic and demotic union beyond the narrow limits of their own kindred; and even of these they seem to have cast out parts, annihilating the Guayma and Upanguayma, displacing and nearly destroying the Tepoka, and outlawing individuals and (apparently) small groups."

000 wear ceremonial feathers as did our western Indians. I saw no skin or
164 cutaneous disease, or evidence of tuberculosis or of trachoma---the curse of our Indians.

142 One boy-child of five years was a handsome child---fat, round,
362 sturdy, with roving great black eyes, large thick lips, a picture of
[241] perfect health. He was almost naked. His hair was done in a pigtail
[857] with a red string braided into it. His face like all the others was dirty, but he waded into the shallow water with a short spear and I saw him catch two crabs with his little harpoon. The water did not bother his face.

415 They had no plates or eating tools, except large deep clam shells,
412 cast up by the sea, which served as cups and dippers. Their long, keen
264 belt knives were used for cutting, carving or skinning, and always the
[237] fingers for eating. They gathered in a circle around an olla of seeds of long grass growing on the sea bottom prepared by winnowing, parching and grinding, and then cooked with turtle oil. Each one dipped his or her fingers into the olla and conveyed them to the mouth without losing a drop, and licked them off with great relish.

231 The dogs eat with the family. There were six or seven half-starved
264 ones. If someone picked up a piece of turtle flipper the dog often took the first lick at it, bit off a piece or licked it before it reached the owner's mouth. The dogs were not punished. They were just slapped to keep them out of the pots.

123 We had a great time that evening in Seriland. The young man played
534 his violin. This consisted of a hollow box cut out of a *palo verde*
[824] tree, and a piece of pine about sixteen inches long; terminating in a
[283] hollow where a single peg was fitted. The one string was twisted deer
[237] sinew, and the bridge was a small round clam shell at the far end. The
[533] bow was a small bent stick and some black horsehair. On the handle was a wad of rosin fastened underneath. By fingering this string a few weak squeaky notes were made, and this was the classical music of the Seris.

Manuel Encina seized his gourd rattle and began chanting. Herrera tapped a tin can and I beat on an inverted basket and the orchestra
535 was in full swing. A young girl, Rosa, dragged out a turtle shell and
123 standing on it began to dance. This dance consisted of stepping up and down quickly with each foot alternately, and this stamping, barefooted, emitted a hollow sound. Every once in a while I let out an
[126] Indian yell which pleased the Seris very much. For two hours they had a real swell time. We took one flashlight of the proceeding.

[313] Each family was in their hut, which afforded very slight shelter
[362] as they were only partially roofed over and the sides were broken
[354] down in places. The huts were all adjoining and each had a little
[361] campfire, which did not give much illumination, so the dancing was in semi-darkness.

[text contineus on p. 163]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

akin in function even in the superficial view of the Caucasian, and are much more closely related in primitive thought—indeed the fire-drill is but a featherless and nockless arrow, with the foreshaft charred at its fire-giving tip; and all are closely linked in language and allied with other terms in such wise as practically to establish identity among them in the thinking of their lowly makers (though unfortunately the incomplete vocabularies extant are insufficient for full study of the linguistic homologies). Briefly the indications are that the harpoon was the primary device, and that its foreshaft was a tooth of an aquatic fish-eater like the seal, or perchance in some cases an os penis; that its lineal successor was a loose-head lance for use on sea and land, at first with the unaided hand and later with the atlatl, or throwing-stick (the lance being now extinct, though recorded by early visitors to Seriland); that the next artifact-generation in the direct line was represented by the arrow, foreshafted with hard wood or tooth, made light and graceful and loose-headed or not, according to needs, and by the substitution of bow for atlatl; and that a somewhat aberrant line was marked by the taming of fire, its reproduction by the modified arrow, and the differentiation of fire-stick from arrow and either atlatl or bow.

In tracing these stages in technologic growth, it is to be remembered that the Seri are so primitive as to betray some of the very beginnings of activital concepts; that to them zoic potencies are the paramount powers of the cosmos; that in their simple thought fire is a bestial rather than a physical phenomenon; that in their naive philosophy the production of devouring flame is of a kind with vital birth and a similitude of sexual reproduction; and that according to their notions the conquest of quarry, including fire, is made practicable only by aid of the mystical potencies of beasts and flames gained through invocatory use of symbols or actual organs.

In the Seri tongue the term "fire-drill" is *kaak*, an indefinite generic meaning "kind" or "strong kind", with an egocentric connotation ("Our-Strong-Kind"), as in the proper tribal designation *Kwa-kaak* or *Ka-kaak;* while the term for the nether fire-stick or hearth is either *maam* ("woman", or more properly "mother"), or else (and more commonly) *kaak-maam*, which may be rendered "Kind-Mother"—the "Kind", as among primitive folk generally, comprising both men and tutelary beasts, and in this case fire as the most mysterious of the beasts; there is thus a suggestive analogy between the designation for the fire-producing apparatus and that for the tribe itself. It should be noted that the zoic concept of fire is widespread among the more primitive peoples of various provinces, and sometimes persists in recognizable form in higher culture (witness the fire-breathing dragons of various mythologies, the "Red Flower" notion gathered in India by Kipling, etc); also that the ascription of sex to the fire-sticks is prevalent among North American tribes, and at once helps to interpret the development of the fire-drill, fire-syringe, and other primitive devices, such, for example, as

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

those so fully described by Hough,[1] and serves to explain the otherwise obscure genesis of the fire-sense, which must have accompanied and shaped that most significant of all steps in human progress, the conquest of fire.

The modern coordinate of the Seri arrow is the bow, made preferably from a straight and slender branch of the palo blanco. A typical specimen is illustrated in plate XXX; it is 4 feet 9½ inches long, with the outer face convex and the inner face flat; greatest width 1⅝ inches, narrowed to 1¼ inches at the hand-hold; thickness at the hand-hold 1 inch, thinning to five-eighths inch at 8 inches from this point; tapering gradually in both dimensions toward the extremities, which are rudely notched to receive the cord (of mesquite-root fiber). The specimen illustrated has been cracked and repaired in two places; in one place the repair was effected by a rough wrapping of sinew, and in the other by slipping over the wood a natural sheath of rawhide from the leg of a deer. The specimen is of added interest in that it combines bow and nether fire-stick ("Strong-Kind-Mother"), one of the friction holes being worn out to the notched margin, and the other remaining in usable condition, as shown in the enlarged marginal drawing.[2]

Compared with the delicately finished and graceful arrow, the typical bow is a rude and clumsy device; it displays little skill in the selection and shaping of material, and evidently involves little labor in manufacture—indeed, the indications are that more actual labor is spent in the construction of a single arrow than in the making of a bow, while the arrow-making is expert work, betokening craft of a high order, and the bow-making little more than simple handiwork of the lowest order. The comparison affords some indication of the genesis of Seri archery, and at the same time corroborates the independent suggestion that the arrow is of so much greater antiquity than the bow as to represent a distinct stage in cultural development—though the precise cultural significance of the bow is not easily ascertained.

Efforts were made to have different Seri warriors at Costa Rica in 1894 assume the normal archery attitude, with but moderate success, the best pose obtained (illustrated in plate XXVIII) being manifestly unnatural and a mere reflection of the attitude in the mind of the Caucasian poser; while the results of inquiries served only to indicate that the normal archery attitude was purposely avoided for reasons not ascertained. Fortunately another observer was more successful: in the course of the United States hydrographic surveys in 1873, Commander (now Admiral) Dewey received several visits from Seri warriors on board the *Narragansett*; and on the occasion of one of these visits, Mr Hector von Bayer, of the hydrographic party, caught a photograph of an archer in the act of drawing his bow. The negative was accident-

[1] Fire-making apparatus in the U. S. National Museum; Smithsonian Report for 1888, pt II, 1890, pp. 531-587, and elsewhere.

[2] Ordinarily the nether fire-stick is of soft and porous wood, between palm-wood and water-logged pine being preferred.

2: Kroeber E-5 (1930) 1931 NU31 Seri NU31

it was set up by an archer in front of himself, or carried for him by another man. At any rate it suggests open fighting besides raids and ambushes. 714

Pottery, which is thin, porous, and reddish-buff to gray, was not seen made. The clay is said to be tempered with jackrabbit or horse dung. The vessel is started, apparently by coiling, in a dish or receptacle. It is certainly built up by coiling, the sausages being somewhat less than the thickness of a finger. It dries fast, the bottom becoming somewhat hard as the top is being built. The coils are smoothed as they are added, with a stone inside, a shell to scrape the outside. A paddle is not used. The vessel is further smoothed with the stone and dried for a day. It is fired with wood, sufficient manure being unavailable on the island. 323 [372]

3:Davis & Dawson E-5 (1923-1940) 1945
MU31 Seri MU31

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Sea turtle was still the staple meat, and with better boats and improved tools and tackle borrowed from the Mexicans, the living was becoming considerably less harsh along the shores. They then had nine boats for some two hundred people. One good boat could secure a living for five families, and they had well improved this minimum standard of living.

[161]

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The origin of the use of fire among the Seri's is unknown, but they have their own story of it. One day Chico Romero, present chief of the Seris (Fig. 19), made a fire drill out of a piece of dry driftwood and showed how to make a fire by turning the stick between the hands. In three or four minutes the fine dust became a glowing punk which, with the aid of some dry grass and the wind, was quickly fanned into a flame. He was then induced to tell the legend. He looked about and pointed to a little green and blue-bodied fly and said: "The gods sent this fly down from the sky to show us how to make fire. Notice when it lands. Did you not see

[534]
[535]

FIG. 18. THE NATIVE DANCE
IS DONE ON TOP OF A TURTLE SHELL TO THE BEAT OF A BOW STRING BEING STRUCK WHILE THE BOW IS HELD AGAINST TWO INVERTED BASKETS OF SAND.

[p. 265 (B)]

it take its two hands, rub them over its head and then rub them together a few times? The Indians noticed this and in this way we were taught by this little fly how to make fire by rubbing a stick back and forth between our two hands."

In response to comments about the nocturnal howling of the coyote, Chico told another interesting tribal legend. "A long time ago all Seris were birds or animals. The badger had charge of the saints or gods, which were little images carried in a pouch and hung around his neck by black strings.

FIG. 19. CHICO ROMERO
WHO SUCCEEDED OLD JUAN TOMAS AS CHIEF OF SERIS.

Coyote got to quarreling with badger and, watching his chance, grabbed the bag, tore it loose and ran off with it, giving his derisive laugh as he ran, and ever since coyote has been laughing at badger and all others.

[p.266(A)]

285 [824] I watched a woman make a basket. She used young branches from the terote tree, I think *terote blanco*. The bark was peeled and shredded into two parts, the heart taken out and kept separate. The coils of the round part were put in a pot of hot water to soften, and the edge of the basket was soaked a little in hot water. The center of the coils or woof consisted of six or eight strips of heart while the outer sap wood was woven around in regular coil-weave fashion.

[237] [412] A brad of deer shin-bone sharpened on pumice to a needle point was used as a brad. With this brad she split the fiber, held one piece in her mouth, and stripped the back down. Then she punched a hole in the bone brad, inserted the sharp end of the fiber and pulled it almost through. She then repeated the operation, adding a strip of heart once in a while. These baskets are coarse and unattractive, but they are hard and tough and stand heavy use.

323 Cooking vessels consist of two or three cooking ollas that nest together to facilitate transportation. These are made of coarse clay, solely for utility without regard for beauty of shape, color or design. In burning these ollas they use the shell of the sea turtle. [237] The cells of the shell are filled with a fine oil and this burns the ollas. On most of the other places on the mainland, the Indians use [372] cow chips, or dried droppings to fire the clay.

263 484 123 We proposed to shift camp to Tinajanita, our first landing place, where Herrera was to meet us in two days with the Chief and some of his men. Since it was blowing, he said the men couldn't fish and they would be on land probably hunting, so he would be able to see them. [277] At this time they gathered *sescal* on an island off the west coast to make the liquor they used at fiestas, weddings and other celebrations.

Herrera left at five o'clock in the morning, with a swinging gait, for the opposite side of the Island. The distance around by boat would be fifty miles, and across, only about twenty or twenty-five---a full day's trip and hard, as mountains would have to be crossed and the rocks were sharp and the way difficult.

123 We had breakfast on rice and bread. Our rations are running low and we expect to move this morning. We made arrangements about the native boat and saw Blanco trot off with two five-gallon cans for water, a distance of ten miles. We went to the camp to get a few things---an old basket, a Pelican hide and other things, and then we asked the help of everybody to get the boat down to water---the tide was very low. The one man, the women and five of us were required to drag and push the boat to water.

We waved goodbye, loaded her up and then rowed against the tide and wind for miles, and finally landed in a lovely sheltered lagoon, built our fire and had lunch. A few crabs were speared, and late in the afternoon the wind shifted. We loaded the boat again and pushed off for Tinajanita, our first landing place. After rowing, we raised

[text continues on p.174]

five-gallon cans full. They were fastened one each end of a *palanca*, or shoulder pole, and thus brought to camp. If anyone thinks this is easy they should try it over rocky, uneven, sandy, stony ground, dodging thorny vegetation at every step. 123

The colors of the mountains were mostly red of volcanic character, with great streaks of yellow and pink, deeply cut with side canyons and sharp ridges, all similar to other desert ranges. [133]

The men caught a few crabs and gathered clams in the afternoon, which helped out our larder. One of them told about his wife being shot. He said they had a big fiesta and during the drunk, a Seri shot at his head. He happened to be stooping alongside his wife and the bullet buried itself in his wife's thigh. We could feel it through her clothes.

A good many years ago when stages ran between Nogales and Guaymas, the Seris held up the stage, killed the men and captured one Mexican girl. She was brought here and made the wife of one of the chiefs, Coyote Iguana, and she bore children. Some years later her brothers came here to induce her to return, but she refused, saying that she was ashamed to go back and she had children here. About fifteen years ago in a battle with the Papagos, two of her sons were killed. 648 727 563

The Papagos have taken toll of many Seris, these hunted Indians who are such fascinating and ingenious companions, whether they are harpooning turtle or packing water through the thorny wastes. 648

372 516 291

Seris making fire (with fire drill) - Island of Tiburon

123 relief and contentment rose, and everybody smiled. This concoction I placed on the fire while the Indian stirred with a long stick. It took half an hour to cook into a thick sticky paste, gummy white.

[415] Meanwhile, the women vanished and returned with various vessels: greasy baskets, a black chamber pot, frying pans, ollas, stew pots, shells, any old thing---even a cuspidor. When ready, the Indians dipped the sticky mess out with a cup into the various vessels and the women and children licked it up. Some of the children covered the back of a large clam shell with the paste and then licked it off, repeating this until it was gone. Most of the people hooked their fingers into it and licked them off time and again. Any drip on the outside was carefully licked off that four gallons of goo. I do not think one single drop was lost.

126 123 As one little girl was carrying away a clam shell of paste I secured her photograph. It was a sight not soon to be forgotten, to watch these little ones dip in their fingers, mostly two, sometimes three fingers and contentedly lick them off.

Wishing to secure a photo of the Indians in Pelican skin kilts, Roberto induced Chico Romero to strip and wrap a kilt of Pelican skins around his waist. He did this and Roberto secured a good photograph. For this service, Chico demanded three oranges which he gave to his children.

By coaxing and wheedling and joking, Roberto finally persuaded a young woman to put on the Pelican kilt, and she gradually pulled off her shirt, or waist, or whatever name it goes by, and laughingly permitted it. As her brown shoulders and breasts were exposed she covered them with her arms and hands while I took the photo. I gave her some blue powder to decorate herself and a little round mirror.

372 Chico Romero made a fire drill out of a piece of dry driftwood from a cottonwood tree, and then made a fire by turning the stick between his hands. After three or four minutes the fine dust became punk and turned into a live coal. This he carefully put in some dry grass and by holding it up in the wind it was fanned into a flame. The price of this was a red bandanna.

372 773 825 The legend of Fire was told to me later by the campfire. The Seris' god sent down a fly to Seriland to show the Indians how to make fire. The fly was pointed out to me one day. It was a trifle larger than a house fly with a body of shining green and blue.

"Now," they said to me, "notice when it lands. Did you not see it take its two hands, rub them over its head and then rub them together a few times?". . ."Each time it settles it rubs its hands together, and our Indians noticed this and in this way we were taught by this little fly how to make fire by rubbing a stick between our two hands, back and forth. One fly came to earth and found something dead and he rubbed a stick between his hands and made a smoke signal

372
373
826 so all the other flies could see and also come to this dead thing."

787 A few weeks ago, Antonio Herrera had a very vivid dream. He dreamed
[198] that he was hunting in the mountains for deer and came across a cave. (These volcanic mountains are pitted with caves.) He went into the cave and saw all kinds of things dear to the heart of a Seri---plenty of rifles, lots of cartridges, knives, *manta* (unbleached cotton), necklaces, red bandannas, blue overalls, *plata*, or silver, and many other things.

[198] When he awoke he sought his father Manuel Encinas, who is a medicine man and interpreter of dreams, to explain his dream to him. The price demanded by Manuel was six *tiras*---or 30-30 cartridges, a very high price, according to Seri standard. The explanation was this:

It was true that the cave was there and all the things in it just as seen and described by Antonio, but in order to find it he would have to fast nine days and go without water that length of time also, in the heat of summer. Then the way would appear to reach the cave. So far, Antonio has not attempted the fast.

281 I witnessed the operation of making a certain kind of pitch or
396 tar which the Seris use to make the seams in their canoes or boats tight. The women pound up the dried pulp next to the outside skin of a dead *pitahalla* cactus (organ cactus). This is very dry and brown in color and the pieces are pounded up to a dry powder with a wash or shore rock in a dried deer hide. This is placed in a *batella*, or flat basket, and manipulated so that the coarse pieces come to the top and are scraped off and thrown away. The fine powder is then put in a five gallon can and some porpoise or sea-lion oil or horse oil is poured on it and stirred into a thick gummy mass. When thoroughly mixed it is put over the fire, in an olla, to boil and continually stirred for an hour or two until it is the consistency and has the appearance of coal tar. While being worked it is kept heated and applied to seams inside and outside the boat. It hardens just like tar and answers the same purpose.

123 Since the corn, which had kept this band of Seris in food, disap-
225 peared two days before we came, and they had barely kept going on
[189] seeds and a few fish, and they all had decided to leave camp with us in the morning---the women walking and the men and some children in boats---it was necessary to supply them with some food to take them to the hunting grounds of the *cahuama*, or sea turtles, and land them
[242] on the Island. The *cahuama* would furnish them meat---their favorite and national food, and the shores would supply them with clams, oysters, crabs and other sea food.

123 So the whole band was called around our camp and each family was furnished with two cups of corn, two of beans, some green coffee and a cup of cube sugar. For the first time our camp was free of Indians, and we ate and went to bed in peace.

The amenities of civilization were laid aside and forgotten in

Class	Species Reported	Species Exploited	Percentages
Mammals	21	9	43
Birds	22	6	27
Reptiles and Amphibians	25	11	44
Fish	34	23	68
Molluscs	36	21	58
Crustaceans	10	2	20
Total:	160	72	45

These figures show clearly the dependence of the Seris on marine life for a major source of their diet. Today, pinta, boya, cabio and sardineta are their primary source of income with meat and sea-turtles ranking second in importance. Several species of clams, limpets and gastropods supplement this diet.

All other animals represent only incidental additions to the menu. During the last war, sharks and mantas were hunted extensively for their liver, then a source of vitamin D. But since the war, the demand for shark liver has declined and because of this, a considerable income for the Seris has been lost. Shark and manta fishing have been abandoned for these fish were taken only for the commercially profitable liver and not for their flesh.

Fishing and Hunting

Seri fishing techniques are simple. In the past they used double-pronged spears and for the larger fish, harpoons. Today the spears are employed chiefly in fishing while the harpoons are reserved exclusively for sea-turtles. Hook and line fishing was introduced after 1930, as Kroeber (1931) saw none during his visit to Kino in 1930, and it is now the standard method of fishing. An abortive and unsuccessful attempt was made several years ago with net fishing. Another change has occurred within the past fifty years. The old balsas have been replaced by flat-bottomed plank boats outfitted with five-horsepower motors or sails. These motors, incidentally, are leased from the Mexican fish traders because none of the Seris are rich enough to own one.

Bait is obtained by dynamiting schools of small fish in coastal waters or by collecting them at low tide in the tidal pools and from under rocks. Fishing usually begins at dawn and lasts until noon when, as a rule, all of the "pangas", as the boats are called, return to Desemboque. In stormy weather no fishing expeditions are made and when this occurs, starvation becomes a real menace. Harpooning of sea-turtles takes place far out in the Gulf. It is done only at night in exceptionally calm weather by the light of torches or Coleman lanterns.

Hunting as it is done today has changed from the time of McGee's visit in 1894-95. The bow and arrow has disappeared completely except for a crude and diminutive form used as a toy by small boys. Iron spears once used in shark and manta hunting are now carried primarily as a weapon against the numerous and much feared rattlesnakes. They are said to be used occasionally in the peccary hunt. Old .22s or 30/30 rifles are owned by several of the men, some of whom specialize in hunting.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

munalty something like that of Siouan Indian and buffalo in olden time, whereby both may benefit and whereby the more intelligent communal certainly profits greatly. The flesh of the turtle yields food; some of its bones yield implements; its carapace yields a house covering, a convenient substitute for umbrella or dog-tent, a temporary buckler, and an emergency tray or cistern, as well as a comfortable cradle at the beginning of life and the conventional coffin at its end; while the only native foot-gear known is a sandal made from the integument of a turtle-flipper.

FIG. 20—Turtle harpoon.

Doubtless the eggs and newly hatched young of the turtle are eaten, and analogy with other peoples indicates that the females are sometimes captured at the laying grounds or on their way back to water; but observation is limited to the taking of the adult animal at sea by means of a specialized harpoon. A typical specimen of this apparatus, as constructed since the introduction of flotsam iron, is illustrated in figure 20. It comprises a point 3 or 4 inches long, made from a nail or bit of stout wire, rudely sharpened by hammering the tip (cold) between cobbles, and dislodging the loosened scales and splinters by thrusts and twirlings in the ground; this is set firmly and cemented with mesquite gum into a foreshaft of hard wood, usually 4 or 5 inches long, notched to receive a cord and rounded at the proximal end; the rounded end of this foreshaft fits into a socket of the main shaft, which may be either a cane-stalk (as shown in the figure) or a section of mesquite root; while a stout cord is firmly knotted about the foreshaft and either attached to the distal portion of the main shaft or carried along it to the hand of the user. The main shaft is usually 10 or 12 feet long, with the harpoon socket in the larger end, and is manipulated by a fisherman sitting or standing on his balsa. On catching sight of a turtle lying in the water, he approaches stealthily, preferably from the rear yet in such wise as not to cast a frightening shadow, sets the foreshaft in place, guides the point close to the carapace, and then by a quick thrust drives the metal through the shell. The frictional resistance between the chitin and the metal holds the point in place, and although the foreshaft is jerked out at the first movement of the transfixed animal the cord prevents escape; and after partial tiring

8: Ascher E-5 (1960) 1962 NU31 Seri NU31

for the point may come from the transmission of an abandoned car or from flotsam. The wood for the hafting can be mesquite or ironwood, both indigenous in the area; waste from boat construction or other scraps of wood may also be used. Rubber for the gasket may be obtained from a worn automobile tire. The wrapping cord and lead cord are store bought, and mesquite gum is used to seal the hafting.

In manufacturing foreshafts Seri fishermen use three tools: a knife, a hacksaw blade, and a triangular file. The hacksaw blade is used to cut an appropriate length of metal for the point and to rough out the barb; the triangular file is employed to finish the point barb and stem; the tang of the file is used to puncture the hole in the gasket which is to receive the point. The shaping of the hafting and gasket, and the cutting and wrapping of the lead cords, are accomplished with a knife.

With regard to the method of manufacture, all fishermen report essentially the same procedure. They describe the pattern as a series of steps under two headings: (1) shaping and (2) assembling. Two individuals did not mention steps 1c and 2b, and the others considered these two steps to be optional.

1) Shaping
   a) Shaping the metal into a point
   b) Shaping the wood for hafting the point
      α) Shaping the general form
      β) Splitting the form lengthwise and grooving each half to receive the point (see section in Figure 1)
   c) Shaping the rubber for the gasket

2) Assembling
   a) Placing the mesquite gum in the grooved portions of each half of the hafting (see section in Figure 1)
   b) Placing the gasket on the point
   c) Inserting the point base into the hafting and reuniting the split hafting form
   d) Wrapping with the wrapping cord and with it interweaving the lead cord
   e) Refinishing the hafting base to fit the mainshaft socket

Four men were able to explain the foregoing procedure in detail and were in agreement in the following matters. The point is shaped before the hafting because its length determines the length of the latter, and because the diameter of the point base dictates the grooving of the haft. The gasket is shaped after the point and the hafting because the diameter of its hole is determined by that of the point base and its total diameter by that of the hafting. The mesquite gum then secures the point and seals the hafting. Interweaving the lead cord with the wrapping cord secures the former to the hafting.

The amount of time required to complete a foreshaft shows marked variation. This is not primarily a function of the working habits of the artisan. If all the materials are present, the time it takes to make a foreshaft ranges from four to eight hours, but if all the materials are not available, as much as a year may be required. There may, for example, be a considerable lapse of time between the shaping of a point and the shaping of a gasket when material for the

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The amenities of civilization were laid aside and forgotten in

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

The painted designs vary among different individuals, but are fairly persistent for each. The prevailing design at Costa Rica in 1893 was that of the aged matron known as Juana Maria (plate XVIII), with variations in detail such as that exhibited by her unmarried daughter Candelaria (the Seri belle shown in plate XXIV); next in frequency were the designs, in white and red, exhibited by the matrons portrayed in plates XX and XXII. Other designs observed are indicated in plate XXVI. The variations in individual designs are apparently due either to varying care in the application of the paint or to the degree of obliteration by wear—e. g., the withered Juana Maria sometimes put on her design askew and was negligent of details, while the blooming Candelaria greatly elaborated the details of the pattern and carefully perfected the symmetry of the whole when preparing for her full-dress sitting before the camera (plate XXIV), so that her design was then gorgeous by contrast with the nearly obliterated blur of a half-hour before. The designs are renewed every few days, especially for ceremonious occasions, and hence are practically permanent.

When grouped in relation to their wearers, the designs are found to exhibit family connection. Thus, Juana Maria's design is repeated, with greater elaboration of detail and with a pair of supplementary marks, in that of her daughter Candelaria; the winged symbol of the Seri matron portrayed in plate XX is repeated with minor variations in that of her daughter, the Seri maiden pictured in plate XXV; while the symbols of the mother and infant daughter depicted in plate XV are essentially alike. It is noticeable, too, that in the nearly spontaneous arrangement of individuals in the group shown in plate XIII there is a tendency toward subgrouping by symbols; and it was constantly observed that the family groups gathered about particular jacales (such as that shown in plate XIV) displayed corresponding designs, though there were frequent visitors from neighboring jacales bearing other designs. Briefly, all the observed facts, as well as the supplementary information gained by inquiry, indicate that the designs are hereditary in the female line, but are susceptible of slight modification both in elaborateness of detail and in the addition of minor supplementary features.

The principal apparatus and materials used in the face-painting are illustrated in plate XXVII. The chief pigments are ocher, gypsum, and the rare mineral dumortierite; the ocher yields various shades of red, ranging from pink to brown; the gypsum affords the white used in most of the designs; while the dumortierite is the source of the slightly varying tints of blue. So far as was observed, the pigments are not blended by mixing, though there is some blending due to overlapping in application. The ocher is commonly extracted and transported as lumps of ocherous clay or ocherous gypsum (plate XXVII, figures 1 and 5), though it is sometimes reduced to powder and transported in bits of skin or rag, or in cylinders of cane (plate XXVII, figures 3 and 4); and it is

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

prepared by trituration with a pebble or rubbing with the fingers, usually in a shell cup. Sometimes the shell used for the purpose is the valve of a *Cardium*, which serves indiscriminately as cup, spoon, skin-scraper, etc; but preference is apparently given to thick and strong shells, such as the wave-worn valve of *Chama* (?), shown in plate XXVII, figure 7, which are consecrated to the use and eventually buried with the user, together with a supply of the paint (like that illustrated in the cane cylinder—figure 4—which was a mortuary sacrifice). The gypsum is usually carried in natural slabs or other fragments, perhaps rounded by wear (plate XXVII, figures 6 and 8); it is prepared by wetting and rubbing two pieces together, the larger being reduced to metate shape by the operation. The dumortierite was observed only in the form of a pencil made by pulverizing the substance and mixing with sufficient clay to give consistency. The several pigments are applied wet by means of human-hair brushes kept for the purpose, the process occupying from half an hour to three or four hours for the more elaborate designs. So far as observed at Costa Rica in 1894, the paints were mixed in water only; but since painting outfits found on Tiburon island in 1895 were smeared with grease, it is probable that either water or fats may serve for menstrua, at the convenience of the artists. Commonly the process of painting is measurably cooperative. The matron usually depicts her device on the faces of her daughters up to the age of 12 or 15 years, when they learn to make the applications themselves; and frequently two or more women (usually those with similar devices) work together in preparing and applying the pigments, each laying the paint on her own face and apparently guiding her hand partly by the sense of feeling and partly by suggestions from her coworkers; but Candelaria and some other of the younger women at Costa Rica frequently worked alone, aided by a mirror in the form of a shallow bowl of water set in the shadow while the brilliant desert glare fell full on the face.

The mines yielding the pigments were not located. The geologic conditions are such that the ochers are undoubtedly abundant; but it is probable that the gypsum is uncommon and confined to a remote locality or two, and that the dumortierite is rare and scanty here as elsewhere. The care with which the paints are preserved, prepared, and applied, the fact that they are indispensable feminine appurtenances even on the longest journeys, and their sacred rôle in the mortuary customs, all combine to indicate that they are among the most highly prized possessions of the people and by far the most precious of their minerals.

The sematic functions of the designs are esoteric, yet an inkling of their meaning was obtained through Mashém, the interpreter at Costa Rica in 1894; from his expressions it appears that the designs are sacred insignia of totemic character, serving to denote the clans of which the tribe is composed. But three clans were identified, and

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

bolic weapon, the counterfeit cartridge, the imitation machete, or other charm against alien power; it is usually he who wears the white man's hat or random garment in lieu of the deer or lion mask of earlier days; and during recent years his most-prized fetish, and one which practically insures the support of his fellows, is a written certificate of his chiefship from Señor Encinas, or, still better, from El Gobernador at Hermosillo. Yet he is a throneless and even homeless potentate, sojourning, like the rest of his fellows, in such jacales as his two or three or four wives may erect, wandering with season and sisterly whim, chased often by rumors of invasion or by fearsome dreams, and restrained by convention even from chiding his own children in his wives' jacales save through the intercession of female relatives.

In 1894 the head chief was reported to be on Tiburon; the putative chief of the rancheria at Costa Rica was the taciturn giant known as El Mudo (plate XIX); while Mashém (or Juan Estorga) was the head of one of the Pelican clans.

643 [648]

ADOPTION

One of the more important factors in demotic development among primitive peoples (probably second only to interclan marriage in extending sympathy and unifying law) is adoption; and special efforts were made to obtain data relating to the subject. Direct inquiries were futile, the responses indicating that the entire subject is foreign to the thought of the tribe; but three sporadic and measurably incongruous examples of quasi adoption are worthy of record.

594 [124]

The most specific case is that of Lieutenant Hardy, who visited Isla Tiburon in 1826, and was fortunate in gaining the confidence of the tribe through successful medical treatment of the wife of the chief. On his second landing he was greeted with many expressions of gratitude, which were especially exuberant on the part of the daughter of the family (always a personage in Seri custom), who insisted on painting his face. He specifies:

597 648

> Not wishing to deny her the indulgence of this innocent frolic, I quietly suffered her to proceed. She mixed up part of a cake of blue color, which resembles ultramarine (and of which I have a specimen), in a small shell; in another, a white color, obtained by ground talc, and in a third was mixed a color obtained from the red flint-stone of the class which I before stated was to be found on Seal Island, and resembled cinnabar. With the assistance of a pointed stick the tender artist formed perpendicular narrow stripes down my cheeks and nose, at such distances apart as to admit of an equally narrow white line between them. With equal delicacy and skill the tops and bottoms of the white lines were finished off with a white spot. If the cartilage of my nose at the nostrils had been perforated so as to admit a small, round, white bone, five inches in length, tapering off at both ends and rigged something like a cross-jack yard, I might have been mistaken for a native of the island. As soon as the operation was finished, the whole party set up a roar of merry laughter, and called me "Hermano, Capitan Tiburon," being the very limited extent of their knowledge of Spanish.[1]

[386] [302]

[1] Travels, p. 286.

2: Kroeber E-5 (1930) 1931 NU31 Seri NU31

ages (pp. 164-167), and Hardy's story of his being painted is interpreted as ceremonial adoption (pp. 277-8). My conviction is that the Seri paint primarily for adornment, and that further significance is either secondary or absent. When I reached the island and about thirty people, including visitors from other settlements, were gathered to receive and inspect me, all the younger women and one or two adolescent boys were freshly and very neatly painted. After all, their ragged cast-off civilized garments were nothing to make a show with on a state occasion. In former times, the everyday-wear pelican robes would not have served much better. The ocher red, dumortierite blue, and gypsum white pigments however gave a chance for decoration and display. Three days later, when our party was an old story, some of the faces still carried paint, but it was worn, defaced, and bedraggled. It seems unlikely that people should greet strangers by decorating themselves with representations of lineage totems which they at the same time denied or tried to conceal from their knowledge. The construal of Hardy's painting as an adoption-rite rests on the same blood-kin interpretation. It was probably nothing more than an act of friendliness tinged with the simple humor of which the Seri have a strong sense.

Face painting in fact seems to be the chief if not only purely aesthetic expression of Seri culture, their mode of life and psycho-physiological habits being such as almost to prohibit any other form of art. In this painting, on the other hand, they have achieved a high degree of stylization and taste. The designs I saw were throughout in the manner illustrated by McGee in his plates 13-16, 18, 20, 22, 24-26.

Ethnographically, the interest of this style lies in its similarity to the river Yuman face paintings. The Seri first of all specialize on a horizontal bar across the nose and cheeks, immediately below the eyes; in addition to this, there may be vertical elements dependent over the cheeks. The design deliberately breaks across the natural lines of the face in such a way as to orient itself with reference to the eyes without touching them. Bordering or enclosing of the eyes is avoided; neither are planes like the cheeks, forehead, or chin felt as fields to be filled in with decoration. The fundamental plan attacks the face at once drastically and subtly. That the style has both feeling and rigor is shown by the fact that none of the endless variations of color and design detail depart much from the basic scheme. That this scheme is old is shown by Hardy's description of a century ago. It is a true art of high order within its narrow compass.

The Mohave paintings* are somewhat freer and more variable, but also less classical or chaste stylistically. The transverse element

* Kroeber, Handbook, BAE-B 78, figs. 60-62, 1925. With the Mohave, contrary to the Seri, the vertical elements predominate over the horizontal. The Gila Pima style (Russell, pl. 38), and the Havasupai (Spier, AMNH-AP 29:198, 1928), are also related.

3:Davis & Deacon E-5 (1923-1949) 1945
MU31 Seri MU31

[301]
[302]
[386]
[516]

FIG. 11. PAINTING THE FACE
USING A RED PIGMENT OBTAINED FROM THE TOBOTE.

223 lice-infested carcasses were then gathered
264 and brought to a central place among the stinking rocks where a gluttonous feast was held in the dark, the long ahungered tribesmen gorging themselves with the soft entrails and succulent parts, and carousing in the carnage until overcome by slumber.

281 The day following the slaughter, the
294 matrons collected the carcasses with least damaged plumage and carefully removed the skins, which were then gnawed and sucked clean of flesh and grease and dried in the sun (Fig. 8). From two or more of these skins they made a kilt or robe (Figs. 1, 2), the principal apparel, not so much for protection from cold as from the scratch and prick of the abounding spines and thorns of Seriland. The skins were sewed with sinew and often held in place on the body by a
283 cord made of human hair (Fig. 1). The
302 culture of their long, luxuriant hair, indeed, was an important matter. They brushed their hair regularly with a brush fashioned

[p. 200(A)]

2:Davis & Dawson E-5 (1922-1940) 1945
NU31 San NU31

222 forests of giant cacti (Fig. 9) provide during this season an unlimited supply of "pitahayas" toward which the tribespeople customarily moved to accomplish the annual harvest. The fruits were readily knocked down by means of long poles and, when ripe, the spines were easily brushed off, leaving a luscious pulp as big as a fig. During the height of the season all the clans withdrew from the coast and gave their undivided attention to the collection and consumption of the cactus fruit, gorging tremendous quantities for weeks until waning supply and cloying appetite drove them back to the more severe hunt for turtle and pelican.

252 262 514 Perhaps the only germ of thriftiness in the Seris is shown by a peculiar custom with respect to the pitahayas. The fruits, eaten in such enormous quantity, were imperfectly digested, the hard-coated seeds particularly passing through the body unchanged. Using [415] [251] large seashells, the feces containing these seeds were collected and preserved with some care. Thus, when the harvest of fresh fruits was over, there remained a hoard of these dry, nutritious discharges which were ground on the stone abst, winnowed in a shallow basket and made into a meal to be eaten, either dry, as a watery atole, or mixed with turtle grease to form a thick paste.

614 Although the Seri's omnipresent problems of food-getting and of personal subsistence have been of particular interest, the lost social customs of the tribe deserve a moment's attention. Before the death of all [161] but a few of the 2,000–3,000 Seris at the hands of invading Spaniard and Mexican, the tribe consisted of a number of conspicuous maternal clans, each of which was presided over by a zoic tutelary such as the Pelican, the Turtle, the Rattlesnake, or the Badger. The totemic symbols denoting the 302 various beast-gods and incidentally indicating the blood-carriers of clans dedicated to 386 them, consisted of elaborate designs painted 614 upon the face (Fig. 10). In accord with their savagery in which the social organization was based on blood kinship reckoned in the female line, under ordinary circumstances, the faces only of the females were painted. Colored minerals pounded to powder afforded the pigments for the paint-

[p. 201(A)]

[142]
[291]
[482]
[854]

[231]
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FIG. 12. SERI MOTHER AND BABE
SERI MOTHERS COMMONLY HAVE TOO MUCH MILK AND FREQUENTLY RELIEVE THEMSELVES BY SUCKLING AN ORPHANED PUPPY OR SOMETIMES EVEN A BABY PIG.

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ing, and were carried in cane tubes. The paints were carefully prepared, applied, and preserved, and, as indispensable feminine accompaniments even on the longest journeys, were among the most highly prized of the people's possessions. The importance of the face-painting custom, established in the

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old tribal life, remained strong even as the slaughter of the warring tribe progressed

[p. 201(B)]

12: Moser L-5 (no date) 1964
(ca. 1960) NU31 Seri NU31

SERI BLUE

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ABSTRACT

The blue which the Seri Indians of Sonora, Mexico, use in face painting is not the mineral dumortierite, as previously believed, but is a prepared pigment. This paper is a description of the process in which three elements are combined to produce this pigment.

McGee and Kroeber reported the mineral dumortierite as the source of the blue pigment used in Seri face painting (McGee 1898: 165-6; Kroeber 1931: 27). Coolidge described two blues, one a mixture of gypsum and a boiled root, the other a blue stone found on Tiburon Island (Coolidge 1939: 200). Xavier mentioned dumortierite and commercial bluing. She also referred to a third blue obtained from a plant on Tiburon (Xavier 1946). Present investigation has shown that as far as the Seri know, the only blues they have ever used are *ika?óil* "to cause to be blue" (commercial bluing) and the highly prized *?antezj kóil* "blue clay" of their own manufacture.[1]

The components and the method of manufacture of *?antezj kóil* are said to have been taught to the women long ago by *?ant i?akimxoj* "they who tell the things about the earth." The actual color transformation is veiled in mystery to the Seri who say that if the process of making the clay is observed by any girl who has not passed the menarche, the blue will not appear. Its appearance is not attributed to shaman power, however.

?antezj kóil has been in less demand during the last few decades since commercial bluing has been readily available. Nevertheless, *?antezj kóil* is the blue preferred by those women who continue to adorn their faces in the traditional manner.

The three ingredients used in making the blue clay are the root bark of *xkoktz (Franseria dumosa)*, *iki kóizj* "to grind with" (a mixed clay in which montmorillonitic layers predominate), and *mokni óoxW* "excrement (sap) of *mókni (Guaiacum coulteri)*." The Seri say that the *iki kóizj* and the *mókni* are found only on Tiburon Island. The root bark of *tinkl (Franseria ambrosioides* Cav.) or of *xneejan siiktoj (Stegnospermum halimifoliam)* can be used instead of *xkoktz*. *tinkl* gives a distinct aroma to the clay. The plants mentioned are fairly common along the Sonoran coast.*

*EDITOR'S NOTE: It is interesting to note that none of the ingredients is blue in its unaltered state.

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Recently I observed the manufacture of *?antezj kóil* in Desemboque, Sonora. Although the woman involved normally makes the clay in complete privacy, she agreed to let me watch. Seven young men and two young women were near a fire outside her hut as she seated herself on the ground behind a water drum. As she began to work she cautioned them not to watch.[3]

She commenced by scraping several roots of *xkoktz* to remove any dirt and then moistened them with water. Using a mano and metate, she split the bark and removed it. The rest of the root was discarded. She then pounded the bark into a pulp, moistening it at the same time with more water (Fig. 1). This pulp was put in a cup and set to one side.[3]

Next she ground several small chunks of *iki kóizj* into a fine powder. Then she placed a piece of hard *mokni óoxW*, the size of a marble, on the white powder. At this point she told her daughter, one of the two young women, to bring her a clean white rag and a blanket. After again warning the young people to stay away, she covered herself and her metate with the blanket, leaving only a small opening by her shoulder through which I could observe. The warning was heeded by all of the youths except the daughter who came over once to take a peek. The group remained interested, and several times someone asked, "Is it blue yet?"

Beneath the blanket, the woman ground the *mokni óoxW* into the *iki kóizj*, mixing the powders thoroughly. After scraping the mixture to one side of the metate, she wrapped the bark pulp in the white cloth and squeezed approximately ½ teaspoonful of liquid onto the center of the stone. Then she combined some of the powder with the liquid and ground the resultant paste for about ten minutes. As necessary, she added more powder or liquid to the mixture. Finally she daubed a streak of the clay onto the back of her hand, withdrew her hand into the sunlight, and remarked that it was beginning to turn blue. At that time it was a grayish-blue. She continued to work for several more minutes and then tested the color again. This time she seemed satisfied that it was the right shade. It was now a bright, or as she put it, a strong blue. This was the *?antezj kóil*, the prized blue pigment (Fig. 2).

The making of the *?antezj kóil* is followed immediately by the making of a second portion of clay, called *?a?óoskl*, which is a lighter shade of blue. Thus its name, the root meaning of which is "drab or grayish." *?a?óoskl* is considered to be inferior to the *?antezj kóil*. After the woman had scraped the finished *?antezj kóil* from the metate and mano and transferred it to a saucer, she added more ground *iki kóizj* to the small amount of remaining

12: Moser L-5 (no date) 1964
(ca. 1960) NU31 Seri NU31

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FIG. 1. Crushing the root bark of *zkoktz (Franseria dumosa)*, to a pulp. Note the pieces of root in the left foreground, the little pieces of *mókni ózxW* sap *(Guaiacum coulteri)* in the center foreground, and the chunks of mineral in the right foreground.

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FIG. 2. The first or brighter batch of blue pigment, *?antezj kóil*.

386 powder mixture and combined this with the blue clay remains on the metate. She then squeezed a few more drops of liquid from the cloth-covered bark pulp onto the powder and resumed the grinding and mixing. After working several minutes she scraped up the second batch of clay and placed it opposite the *?antezj kóil* on the saucer. Only then did she drop the blanket and display the results of her work. The pastes were soft and sticky, and the difference in the shades of blue was noticeable. She said that on the following day she would form the clay into the proper shapes.

The next day she kneaded and molded each of the two masses, which by that time had dried enough to be workable. She molded the *?antezj kóil* into two capsule-shaped pieces, each about an inch long and tapered at both ends. The *?a?óoskl* she molded into a disk about one-fourth inch thick and almost an inch in diameter (Fig. 3). The different shape permits it to be distinguished from the *?antezj kóil*. Although both blues are made at a single sitting, the process is spoken of only as "making *?antezj kóil*."[4]

FIG. 3. The two capsule shaped pellets are *?antezj kóil*. The disk-shaped pellet is *?a?óoskl*.

12: Moser L-5 (no date) 1964
(ca. 1960). NU31 Seri NU31

To use the clay as paint, a bit of water is placed on a stone and the clay is rubbed into it to make a paste. It is then applied to the face (Fig. 4). It spreads smoothly and adheres firmly to the skin. The blue was formerly used for decorating pottery, clay figurines, headdresses, fetishes, arrows, wrist guards, and cane gaming sticks, as well as for face painting. In curing the sick, the shaman sometimes used the blue for painting crosses on the patient's chest. Also, women made necklaces using beads formed from the blue clay.

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FIG. 4. Painting the face with the finished pigment.

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NOTES

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1. The phonetic values of the symbols used are the following: t is voiceless dental stop; k is vl. velar stop; ? is glottal stop; W is vl. labial grooved-rounded spirant; s is vl. alveolar spirant; z is vl. alveo-palatal spirant; l is vl. lateral spirant; j is vl. velar spirant; x is vl. back velar spirant; m is labial nasal; n is dental nasal; i is a high close front vowel; e is a low close front vowel; a is a low open central vowel; o is a mid close back vowel.

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2. The restriction as stated to me by various women pertains only to young girls below the age of menarche. Actually, however, none of the above-mentioned young men and women, most of them in their twenties, was allowed to observe.

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3. Plant specimens are deposited in the Herbarium of The University of Arizona.

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4. The blue "pencil" which McGee describes (McGee 1898: 166) and pictures (McGee 1898: Plate XXVII facing p. 170) is apparently the *?antezj kóil*.

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261 will exist on very small rations, bear burdens, and walk long dis-
262 tances. Their food is anything that walks, flies, crawls or swims,
[252] and they eat it raw with the same relish that we eat it cooked. There is but one thing they will not eat; they draw the line on the Gila monster. They are the most perfect type of human being adapted to desert conditions that exists today. Convey them blindfolded many miles into the heart of the desert, empty-handed, remove their blinders, and they will find both food and water where others would perish. The Papagos and Yaquis do almost as well."

302 We gave the women a small bag of flour and three or four cubes of
[123] sugar around, and the men three packets of tobacco each and two boxes of matches. Matches with them are very precious and are rarely used. Rather than use a match a woman came over to our fire and borrowed some coals to rebuild her fire. From this point the nearest matches are a good deal over one hundred and twenty miles distant, so they have to economize in every thing.

422 Each rag is valuable, and flour, sugar, coffee and rifle shells
[436] are absolutely priceless. While they know money, it has no value here.
[437] Only commodities go here. The most highly prized things are boards to
[389] make boats and rifle shells to get game and protect themselves. All empty shells are saved, the primer punched out, straightened, a match head put in, a little pinch of powder on top, the shell filled up, a long bullet inserted, the shell pinched tight, and a fresh set of ammunition is made.

142 The women and children certainly did look wild. Their hair was
291 frowsy and unkempt, their skirts and waists a patchwork of dirty rags
302 coming just below the knees; their features seamed and hard and cruel. Their complexion was very dark. They had no under garments. The children wore only a dirty shirt coming a little below their thighs, and even that is ragged. One or two of the women had a dirty bandanna over their heads. How I wished I could have seen them in their ancient, picturesque pelican-skin kilts!

302 I happened to witness the operation of a Seri beauty parlor. A
[824] mother brushed the hair of her thirteen-year-old daughter with a brush
[293] made from the fibrous roots of a certain grass tied together with
[515] sinew. During the operation if she came across a *piojo*, and she found several, she plucked him away from his feeding ground and dropped him in the fire.

The hair neatly brushed, the mother then mixed paint in a small vessel and with a tiny stick painted a bright blue design under the eyes and across the cheeks and nose, and then she added narrow white stripes, which, contrasting with the blue and the dark skin, produced a very striking effect. This paint is easily removed and the women often paint and remove three different face designs in one day.

304 I did not see tattoo work on either men or women, nor did they
301 wear ceremonial feathers as did our western Indians.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

especially as they are reflected in the primitive minds of the local tribe; and careful study of the habits and history of the Seri shows that the dangerous strait has been a potent factor in preserving tribal existence and perpetuating tribal integrity. Naturally the factor operates through navigation; for it is by means of this art that the tribesmen are able to avoid or to repel the rare invaders of either mainland or insular portions of their province, the overland pioneers from the east being stopped by the strait and the maritime explorers from south and west being unable to maintain themselves long about the stormy shores and never outfitted for pushing far toward the mainland retreats and strongholds; while by means of their light and simple craft the Seri were able to retreat or to advance across the strait as readily as over the adjacent lands to which they were wonted by the experience of generations. In their minds, indeed, El Infiernillo is the nucleus of their province. So the Seri were among the lowliest learners of that lesson of highest statecraft, that lands are not divided but united by intervening sea; and their ill-formulated and provincial notions are of much significance in their bearing on antochthonous habits and habitats.

The water craft of which the Seri make so good use is a balsa, made of three bundles of carrizal or cane lashed together alongside, measuring barely 4 feet abeam, 1½ feet in depth, and some 30 feet in length over all. A fine specimen (except for a slight injury at one end) is shown in plan and profile in plate XXXI. It was obtained near Boca Infierno in 1895, partly towed and partly paddled thence to Embarcadero Andrade, wagoned laboriously across Desierto Encinas and on to Hermosillo, conveyed in an iron-sheathed box on two gondolas of the narrow-gage Ferrocarril de Sonora to the international frontier, and finally freighted to the United States National Museum, where (in the Mall just outside the building) the photographs reproduced in the plate were taken.

The manufacture of the balsa has never been seen by Caucasian eyes, but the processes are safely inferred from the structure, whose testimony is corroborated in part by Mashém's imperfect descriptions. The first step is the gathering of the carrizal from one of the patches growing about the three or four permanent fresh waters of Seriland, the canes being carefully selected for straightness, symmetry, and uniformity in size; these are then denuded of leaves and tassels, tied in bundles of convenient size (one seen on Tiburon contained 40 or 50 canes), and carried to the shore. In actual construction the canes are laid butt to butt, but overlapping 2 or 3 feet, the overlap being shifted this way and that with successive additions, so that the aggregate length of overlapping in the bundle reaches 10 or 12 feet—i. e., the full length of the body of the finished craft. The growing bundle is wrapped from time to time with lashings of mesquite root or maguey fiber, and kept in cylindrical form by constant rolling and by means of the lashing; though the cord used for the purpose is so slender as to do little more than serve the purposes

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

of manufacture (only stray shreds of the interior cording could be found in an old and abandoned balsa on Punta Antigualla). As the bundle approaches the requisite size, the building process changes; the butts of the successively added stalks are thrust obliquely into the interstices extending beyond the butts of earlier-used canes, and the stems are slightly bent to bring them into parallelism with their fellows; and this interweaving process is continued with increasing care until, when the bundle is completed, there are no visible butts (all being pushed into the interior of the bundle), while the only visible tips are those projecting to form the tapering extremities. The finished bundle is then secured by a spiral winding of slender cord. Two other bundles are next made, the three being entirely similar, so far as is known; then the three are joined by a lashing of slender cord like that used for the separate bundles, which is twined alternately above and below the central bundle in such manner as to hold the three in an approximate plane save toward the extremities, where the lashing is much firmer and the tapering tips of the bundles are brought into a triangular position, i. e., the position of smallest compass. The cordage is of either mesquite root or maguey fiber, the former being the more common, so far as observed (doubtless by reason of the dearth of the latter plant); it is notably uniform in twist and size, though surprisingly slender for the purpose, barely three-sixteenths of an inch, or 5 mm., in diameter, and limited in quantity.[1] The only tools or implements used in the manufacture (and repair), so far as is known, are light wooden marlinspikes, two of which are illustrated in figure 26; these are used in working the cane butts into the bundles. In collecting the canes the tassels are broken off and the leaves stripped by the unaided hands, while the stalks are broken off usually below the secondary roots in the downward taper, and the rootlets and loose ends are removed either with the hands or by fire.

The finished balsa is notably light and buoyant. The Boca Infierno specimen was estimated to weigh about 250 pounds (113 kilograms) when thoroughly dry, and little more than 300 pounds (136 kilograms)

FIG. 26.—Seri marlinspikes.

[1] Only the finer cording shown in plate XXXI is original, the coarser ropes having been added to facilitate handling.

3:Davis & Dawson I-5 (1922-1960) 1945
NU31 5mi NU31

482 fashioned to fit the head (Fig. 7) and to aid in balancing the forty- to fifty-pound water-filled olla as it was carried over the rough and hilly trails from aguaje to jacal. (It is not certain whether the use of the shoulder pole, or palanca, was a part of original Seri culture, but in more recent times two water vessels were frequently carried, hung from either end of the notched pole.)

396 [462] While the tasks of supplying water and of manufacturing the vessels used in its transport were generally delegated to the women and children of the household, the building of the balsa was an undertaking that required the co-operation of the entire group. The carrizo canes were first gathered by the women and boys from the patches growing about the few permanent fresh waters of Seriland (Fig. 4). The leaves and tassels of the canes were removed by hand and the canes tied in bundles for carrying to the shore. There the men proceeded to lay, overlap, interlace and bind the canes into a larger and larger cylindrical bundle, tapering at

[p. 197(B)]

396 the extremities. Throughout the process the cord used for lashing was laboriously made
[283] by hand and mouth by the women who ob-
tained the fibrous raw material from mes-
[462] quite tree roots, from the yucca or the maguay. Three of the finished bundles were lashed together to form a watercraft some thirty feet in length and of four-foot beam. These large balsas were buoyant enough to carry several members of a family across El Infiernillo channel. One-man balsas were also made (Fig. 5) principally for use in turtle fishing.

225 Except during the egg-laying season
411 turtles had to be sought from the balsa. The Seris lacked tool sense in the extreme, but their clumsy brains had devised a harpoon for use against the turtle. The hard, penetrating point was commonly made of native ironwood, but may also have been the sharpened tooth of a sea lion or the shin bone of a deer. It was fitted and firmly cemented with mesquite gum to a short, hardwood foreshaft whose rounded end fitted into the

[p. 197(C)]
[text continues on p. 198(B)]

3:Davis & Downes E-6 (1922-1960) 1965
HU31 Sant HU32

105 178 and a veteran of nearly a century of warfare against the soldiers of Sonora. The turtle remained their most important source of food, and the pitahaya harvest the most enjoyed. The crafts of their old culture were largely gone, however. Hoop-iron had come in for many uses: harpoon points, scrapers, and knives. The bow and arrow had been almost entirely supplanted by rifles of which the tribe possessed more than thirty. The handmade olla was fast disappearing in favor of the five-gallon tin can, and water [482] carrying, now much done by the males, was accomplished by means of a palanca, borne on the heavily calloused shoulder, to which a can was suspended from each end.

It seemed that the balsa building art was 178 encountered barely as it passed into extinction, for the last balsa known to have been 396 made by the Seris was found in use near [126] Kino, in 1922. This rare prize was immediately bargained for and in exchange it was agreed that the tribesman should have lumber to build a boat large enough for all the people of his family. A few months later the finished craft, caulked with a "piteh" made

[p. 264 (A)]

178 of sea lion oil and powdered cactus skeleton,
● 396 was launched. It was the largest craft they had ever possessed and came to be called the "battleship," for its size.

After having established firm friendship
114 with the tribe in 1922, it was possible two years later to carry out an extensive plan to
221 learn the habits of the Seris by living among them, sharing their comradeship along with their privations. At this time they still had no homes that could even be called semi-permanent. Moving here and there in response to fluctuations of their precarious food supply, household things were not ac-

cumulated, and life continued to be reduced to its very simplest elements and absolute necessities. Baskets made of fiber from the torote tree, some tin cooking and water ves-
[415] sels (the handmade olla was seldom any longer made), some patched and filthy rags which served as blankets to the fortunate few, constituted the family possessions (Fig. 15). Starved, bony family dogs were abun-
231 dant, as always, every Indian having one or two (Fig. 16). Each day they could be seen gnawing on some old fish head long since

[p. 264 (B)]
[Text continues on p. 265(A)]

5:Dawson N-5 (1940) 1944 NU31 Seri NU31

DESERT
PLANT LIFE

SIXTEENTH YEAR NUMBER 9

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SOME ETHNOBOTANICAL NOTES ON THE SERI INDIANS

105 If the natural resources of a region may be said to reflect the degree of
121 cultural and social development of its aboriginal people, we may easily understand why the Seris of Sonora, now approaching extinction and with much modified habits and culture, are considered the most primitive and savage of American Indians. Certainly the arid coast of Sonora, destitute
[33] of water but for a few widely separated, stagnant holes, with a dry, rocky soil habitable only by the most frugal and thorny of desert vegetation, presents little in the way of resources to a native people. It was, indeed,
[262] only along the ocean shore that the Seris found animal food sufficient to sustain them, principally, the sea turtle and the pelican. This food source proved adequate to support a tribe of some 2000 in pre-Columbian times, but the limited habitat of the pelican and turtle brought about extreme isolation of the people. Thirty-mile-long Tiburon Island became their principal home, separated from the mainland by the narrow but tempestuous channel, El Infiernillo, across which they frequently voyaged in their buoyant balsas to search out vegetal supplements to their monotonous sea food diet. It is this use of vegetable materials, not only as food but in other phases of the domestic economy of these people in earlier times, with which these notes are particularly concerned.

225 Primary occupation of the Seris aside from their continual movement to and from the water holes was, necessarily, their search for food, for they cultivated nothing and conserved little. Fish were exceedingly abundant in the waters around their island, but their very limited tool sense, pro-
[227] viding them with almost no fishing devices, excluded much of this food from their diet. Clams and other shellfish were to be had, but it was the abundant green sea turtle, feeding upon luxuriant growths of marine grass, *Ruppia maritima*, in the shallow, sandy lagoons along El Infiernillo, that provided their meat staple. The turtles could be captured with ease during egg laying season as they crawled over the beach, but at other times they had to be
396 speared from a watercraft. No sizable timber grows in Seriland and before the advent of flotsam boards and hoop-iron it would have strained the

5:Dawson N-5 (1940) 1944 NU31 Seri NU31

ingenuity of a modern shipbuilder to have constructed a boat. These simple, desert people, however, through centuries of struggle for life in their desolate realm had learned to use every natural material available to them, however laborious the tasks and inefficient the products. The carrizal reed, *Phragmites communis*, grows about the few permanent water holes of Seriland, and from countless numbers of these slender, buoyant canes they built their watercraft. The reeds were stripped of leaves and gathered in long bundles, bound together and gradually augmented by more and more interlaced canes until a bundle 18 to 30 feet long and 1½ feet in diameter, tapering at both ends, was made. Three of these were then bound together with cords of fiber or human hair, making a maneuverable one or two man raft, easily transported to the shores.

The mesquite tree, *Prosopis juliflora*, provided fiber for cords. The flexible outer tissues of the roots were stripped off, soaked and progressively pounded, split and worked between hand and mouth until very slender, fibrous threads were obtained which were then twisted into cords. In some cases a coarse, rough fabric was woven from these fibers, but most garments were made of pelican skins. The strips of workable mesquite root or sometimes yucca fiber were also used in making doughnut-shaped head pads which aided in balancing the capacitous earthen water jars as they were carried on the heads of the women over rough and stony trails from water hole to camp site.

While occupying the turtle fishing camps on El Infiernillo during the good season, vegetable supplements to the fishy diet were few. Every nourishing seed or woody fruit yielded by the desert was carefully gathered; even the tiny seeds of the sea grass, *Ruppia*, were sorted from beach drift and made into meal. Never did the Seris learn to cultivate any crop or domesticate any animals other than the half wild coyote dogs that lived in mutual toleration with them. Even had they done so, their success in the barren, waterless land would have been small.

Sterile as is the Seri's hinterland, for a time each summer the thorny plants with which it is so profusely stocked ripen an abundant crop of fruit. The cacti in particular yield a wonderful harvest of luscious and succulent fruits, and toward this fortuitous supply the Seris were accustomed to move in June and July. The foothills of Sierra Seri on the mainland are adorned with great numbers of giant cacti, *Pachycereus Pringlei*, *Carnegiea gigantea* and *Lemaireocereus Thurberi* from which the luscious pitahayas were readily knocked down when ripe. The Indians wandered into the cactus forest and after a simple ritual marking the beginning of the feast, proceeded to gorge themselves for weeks on the succulent fruit until waning supply and cloying appetite drove them back to more severe food-getting activity by the sea. They did not customarily find it necessary to leave the cactus forest, however, as soon as the supply of fruits was no longer sufficient, for by the time the fruiting season was ended they had provided themselves with a second harvest. The pitahayas, gorged in such tremendous quantity throughout the season, were very imperfectly digested; the miriads of hard seeds, particularly, passed through the system unchanged and with the preservation of these in mind the Indians carefully collected with the aid of large sea shells all such seedy discharges and let them dry in the desert sun. Thus, as the supply of fresh fruit faded they proceeded to the use of this hoard

5:Dawson N-5 (1940) 1944 NU31 Seri NU31

252 of nutritious material which was ground to powder on their stone ahsts, winnowed in shallow baskets and made into a meal or paste.

764 824 The abundant cacti of many species served several other functions in the domestic economy of the Seris. The thorny cholla whose insipid fruits were not fit to eat and whose spines were a constant threat to the unprotected bodies of the Seris, found one use, nevertheless, in the burial procedure. After a body was partly covered with earth in the three foot deep grave, it was densely overlaid with chollas before leveling, to discourage the coyotes from digging for the body.

396 824 The dry skeletons of the giant cacti provided the long, cylindrical poles used in knocking off ripe pitahayas as well as in all other instances in which a straight, slender pole was needed. Since the advent of the open boat in modern times, the cactus skeleton has come in for a new use, for after trituration between stone ahst and hupf, it was found to yield a satisfactory caulking compound when mixed with sea-lion oil.

312 824 The barrel cacti, *Ferocactus Wislizenii* and *F. Coulteri*, though ordinarily abundant on the Sonoran desert are rare in Seriland and practically absent from Isla Tiburon where they may easily have been exterminated by the improvident Seris during their centuries of occupancy on account of their recognized value as water providers on the wastelands over which the Seris so frequently ventured.

342 [132] 824 These Indians found housing no problem, for, living under a climate in which frost is rare and rain infrequent, they found little need for shelters except for protection against the blazing desert sun. Camps that were occupied for more than a day or two, however, usually saw the appearance of a group of crude sun shelters. These were usually made of long, flexible ocotillo branches, *Fouquieria splendens*, stuck in the sand and fashioned into an arched framework over which a more or less complete covering of brush was piled. If, by the sea, a windbreak were desired, the brush top and siding were usually augmented by the addition of several empty turtle shells.

262 824 On the delta plain of the Rio Sonora, the mesquite, *Prosopis juliflora*, grows in remarkable luxuriance, these gnarled, spiny trees forming an almost continuous open forest 20-40 feet high. Its fruit, consisting of small, hard beans borne in slender, woody pods forms a concentrated, starchy food that the Seris found highly nutritious if not appetizing. In late summer when all fresh vegetable food had withered and disappeared, provided the turtle fisheries had not yet attracted them back to their island, they often spent [252] some weeks gathering the beans and grinding them into a meal which was eaten as a watery atole or as a paste mixed with sea-lion oil. The more straggly and thorny cat's claw mesquite, *Acacia Greggii*, and the ironwood, *Olneya tesota*, also yielded woody beans in limited quantity.

[218] In the deeper gorges of the mountains the Seris found *Guaiacum Coulteri* yielding a berry of medicinal properties and also *Jacquinia pungens* which produced a nut, edible when not quite ripe, and forming a favorite rattle-[534] bead when dry.

Along sandy washes, particularly on the lower flood plain of the llano grows a low, shrubby weed, *Hymenoclea monogyra*. Although during times of drought it shrinks to stunted tussocks, after periods of heavy rain its flourishing fens produce abundant seeds eaten both by the beasts of the plain and formerly by the Seris.

285 [191] Before the advent of the tin can and the cardboard carton, basketry was an important handicraft among these Indians.

[TEXT CONTINUES ON P. 138--ANALYST]

so all the other flies could see and also come to this dead thing."

A few weeks ago, Antonio Herrera had a very vivid dream. He dreamed that he was hunting in the mountains for deer and came across a cave. (These volcanic mountains are pitted with caves.) He went into the cave and saw all kinds of things dear to the heart of a Seri---plenty of rifles, lots of cartridges, knives, *manta* (unbleached cotton), necklaces, red bandannas, blue overalls, *plata*, or silver, and many other things.

When he awoke he sought his father Manuel Encinas, who is a medicine man and interpreter of dreams, to explain his dream to him. The price demanded by Manuel was six *tiras*---or 30-30 cartridges, a very high price, according to Seri standard. The explanation was this:

It was true that the cave was there and all the things in it just as seen and described by Antonio, but in order to find it he would have to fast nine days and go without water that length of time also, in the heat of summer. Then the way would appear to reach the cave. So far, Antonio has not attempted the fast.

I witnessed the operation of making a certain kind of pitch or tar which the Seris use to make the seams in their canoes or boats tight. The women pound up the dried pulp next to the outside skin of a dead *pitahalla* cactus (organ cactus). This is very dry and brown in color and the pieces are pounded up to a dry powder with a wash or shore rock in a dried deer hide. This is placed in a *batello*, or flat basket, and manipulated so that the coarse pieces come to the top and are scraped off and thrown away. The fine powder is then put in a five gallon can and some porpoise or sea-lion oil or horse oil is poured on it and stirred into a thick gummy mass. When thoroughly mixed it is put over the fire, in an olla, to boil and continually stirred for an hour or two until it is the consistency and has the appearance of coal tar. While being worked it is kept heated and applied to seams inside and outside the boat. It hardens just like tar and answers the same purpose.

Since the corn, which had kept this band of Seris in food, disappeared two days before we came, and they had barely kept going on seeds and a few fish, and they all had decided to leave camp with us in the morning---the women walking and the men and some children in boats---it was necessary to supply them with some food to take them to the hunting grounds of the *cahuama*, or sea turtles, and land them on the Island. The *cahuama* would furnish them meat---their favorite and national food, and the shores would supply them with clams, oysters, crabs and other sea food.

So the whole band was called around our camp and each family was furnished with two cups of corn, two of beans, some green coffee and a cup of cube sugar. For the first time our camp was free of Indians, and we ate and went to bed in peace.

The amenities of civilization were laid aside and forgotten in

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ripening); most of the larger muscles were already gnawed away, leaving loose ends of fiber and strings of tendon clinging to the bone, the condition being such that the remaining flesh might easily have been cut and scraped away by means of a knife; yet whenever a warrior or woman or youth hungered he or she took down the heavy joint, squatted or sat on the ground with back to one side of the doorway, held the mass at the height of the mouth, and gnawed, sucked, and swallowed, frequently tearing the tissue by twisting and backward jerks of the head, and not only masticating, but swallowing the free ends of tendons still attached to the bone. This process was varied only by seizing with the hands and tearing off a strip of flesh or skin already loosened by the teeth; and it was continued until the bones were practically clean, when they were wrenched apart by the stronger men in order that the cartilaginous cushions and epiphyses might be gnawed away. The only approach to cooking or carving was a parboiling of the foot, after the leg was wrenched off at the hock, until the hoof was sufficiently softened to be knocked off with the protolithic hupf[1] shown in plate XLIII, when half a dozen matrons and well-grown maidens gathered about to gnaw the gelatinous tissue (already softened by incipient decay as well as by the parboiling) investing the coffin-bone. The entire procedure in this as in many other cases proclaimed the absence of knife-sense. The Caucasian huntsman does not have to think of his knife when game is to be bled or skinned or dissected; his habit-trained hand knows where to find the implement, how to seize it, and in most cases how to wield it advantageously; but the Seri hand possesses no such cunning, and uses the knife only clumsily and at second thought, if at all. The Seri huntsman, on the other hand, does not have to think of nails and teeth, for they are trained and coordinated by hereditary habit to spontaneously act in unison and with the utmost possible or needful vigor; while the Caucasian at least has completely lost the claw-and-teeth instinct of offense and defense.

Conformably with their striking independence of knives, the Seri are conspicuously unskilful in all mechanical operations involving the use of tools. Their most elaborate manufacture is the balsa, made from reeds broken at the butts and with the leaves and tops removed by the hands or by fire, bound together with hand-made cords; next in elaborateness come the bow and arrow, normally made without cutting tools; then follows their fictile ware, which is made wholly by hand, without aid of the simple molds and paddles and other devices used by neighboring tribes; while their primitive fabrics were apparently of hand-extracted fibers, twisted and woven wholly by hand, with the aid of wood or bone perforators in sewing and possibly in weaving. Practically the Seri possess but a single tool, and this is applied to a peculiarly wide variety of purposes—it is the originally natural cobble used for crushing bones and severing tendons, for grinding seeds and

[1] Defined postea, p. 188.

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and the shell-strata are so like and so different from any other fictile ware as to be distinguished at a glance. Hence it would seem manifest that the Seri olla must constitute a normal nucleus for the Seri esthetic; yet even here the field is practically barren, as is shown by the study of a score of usable and mortuary specimens and of thousands of sherds. The most ornate specimen seen is that depicted in plate XXXII. Its form, like that of the baïsa, is a mechanical equation of forces and materials; its body-color is that of the clay, blotched and blackened irregularly by the smoke of the firing; and its decoration is limited to 17 faint lines or bands radiating downward from the ill-shaped neck. The radial bands were evidently drawn by a finger dipped in clayey water after the vessel was otherwise finished for the firing; they are irregular in placement, width, length, and direction; they generally run in pairs, two straight lines alternating with two zigzag lines, though the circuit is completed by two zigzags drawn wide apart and separated by a single straight line. The meaning of the device (if meaning there be) was not directly ascertained; but it is suggestive that its maker and owner was the mother of the youthful warrior from whom the rattlesnake necklace was obtained (her face-symbol is that shown in the lower left figure of plate XXVI), and that the vessel was surrendered more reluctantly than any other article obtained from the tribe.

Another utensil of some importance to the tribe is a basket of the type illustrated in figure 24. It is manufactured with much skill and is used for various domestic purposes, being practically water-tight and unbreakable, and materially lighter than even the unparalleledly light fictile ware of the Seri. In form and size and weave the half dozen examples seen correspond with widespread southwestern types; yet it is noteworthy that while otherwise similar baskets are habitually decorated by other basket-making tribes, the Seri specimens were absolutely devoid of decorative devices.

Practically the only remaining artifacts available for decoration are those connected with archery; and it suffices to say that while the bows are skilfully made and the arrows constructed with exceeding pains, not a single specimen seen showed the slightest trace of symbolism or of nonutilitarian motive.

Summarily, the Seri are characterized by extreme esthetic poverty. This has been noted by the early missionaries and by the few other travelers who have approached their haunts, as well as by the vaqueros on the Encinas and Serna and other ranchos bordering their range, who know them as "los pobrecitos". All observers have been struck with their destitution and squalor; yet when the impressions are particularized they are seen to denote absence of the poor luxuries, rather than the bare necessities, of primitive life. The people are pathetically poor in the industrial sense; their equipment in artifacts—implements, weapons, utensils, habitations, apparel—is meager almost, if not quite, beyond parallel in America; yet their esthetic equipment, practically

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munalty something like that of Siouan Indian and buffalo in olden time, whereby both may benefit and whereby the more intelligent communal certainly profits greatly. The flesh of the turtle yields food; some of its bones yield implements; its carapace yields a house covering, a convenient substitute for umbrella or dog-tent, a temporary buckler, and an emergency tray or cistern, as well as a comfortable cradle at the beginning of life and the conventional coffin at its end; while the only native foot-gear known is a sandal made from the integument of a turtle-flipper.

FIG. 20.—Turtle-harpoon.

Doubtless the eggs and newly hatched young of the turtle are eaten, and analogy with other peoples indicates that the females are sometimes captured at the laying grounds or on their way back to water; but observation is limited to the taking of the adult animal at sea by means of a specialized harpoon. A typical specimen of this apparatus, as constructed since the introduction of flotsam iron, is illustrated in figure 20. It comprises a point 3 or 4 inches long, made from a nail or bit of stout wire, rudely sharpened by hammering the tip (cold) between cobbles, and dislodging the loosened scales and splinters by thrusts and twirlings in the ground; this is set firmly and cemented with mesquite gum into a foreshaft of hard wood, usually 4 or 5 inches long, notched to receive a cord and rounded at the proximal end; the rounded end of this foreshaft fits into a socket of the main shaft, which may be either a cane-stalk (as shown in the figure) or a section of mesquite root; while a stout cord is firmly knotted about the foreshaft and either attached to the distal portion of the main shaft or carried along it to the hand of the user. The main shaft is usually 10 or 12 feet long, with the harpoon socket in the larger end, and is manipulated by a fisherman sitting or standing on his balsa. On catching sight of a turtle lying in the water, he approaches stealthily, preferably from the rear yet in such wise as not to cast a frightening shadow, sets the foreshaft in place, guides the point close to the carapace, and then by a quick thrust drives the metal through the shell. The frictional resistance between the chitin and the metal holds the point in place, and although the foreshaft is jerked out at the first movement of the transfixed animal the cord prevents escape; and after partial tiring

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the turtle is either drowned or driven ashore, or else lifted on the craft.[1] Immediately on landing the quarry, the plastron is broken loose by blows of the hapf[2] and torn off by vigorous wrenches of the warriors and their strong-taloned spouses in the impetuous fury of a fierce blood-craze like that of carnivorous beasts; the blood and entrails and all soft parts are at once devoured, and the firmer flesh follows at a rate depending on the antecedent hunger, both men and women crushing integument and tendon and bone with the hapf, tearing other tissues with teeth and nails, mouthing shreds from the shells, and gorging the whole ravenously if well ahungered, but stopping to singe and smoke or even half roast the larger pieces if nearer satiety. If the quarry is too large for immediate consumption and not too far from a rancheria the remnants (including head and flippers and shells) are hoisted to the top of the jacal immediately over the open end—the conventional Seri larder—to soften in the sun for hours or days; and on these tough and gamey tidbits the home-stayers, especially the youths, chew luxuriously whenever other occupations fail. In times of plenty, such sun-ripened fragments of reeking feasts are rather generally appropriated first to the children and afterward to the coyote-dogs; and it is a favorite pastime of the toddlers to gather about an inverted carapace on hands and knees, crowding their heads into its noisome depths, displacing the rare scavenger beetles and blowflies of this arid province, mumbling at the cartilaginous processes, and sucking and swallowing again and again the tendonous strings from the muscular attachments, until, overcome by fulness and rank effluvias, they fall asleep with their heads in the trough—to be stealthily nudged aside by the cringing curs attached to the rancheria. Com-

[1] A lively and explicit account of Seri turtle-fishing appears in Hardy's Travels in the Interior of Mexico, 1829, pp. 286-287: "Bruja's bay is of considerable extent, and there are from five to three fathoms water close to Arnold's island, in the neighborhood of which the Indians catch abundance of turtle in a singular manner. I have already described their canoes, which in Spanish are called 'balsas'. An Indian paddles himself from the shore on one of these by means of a long, elastic pole of about 12 or 14 feet in length, the wood of which is the root of a thorn [illegible], growing near the coast; and although the branches of this tree are extremely brittle, the underground roots are as pliable as whalebone and nearly as dark in color. At one end of this pole there is a hole an inch deep, into which is inserted another bit of wood, in shape like an acorn, having a square bit of iron 4 inches long fastened to it, the other end of the iron being pointed. Both the half and cup are first moistened and then tightly inserted one within the other. Fastened to the iron is a cord of very considerable length, which is brought up along the pole, and both are held in the left hand of the Indian. So securely is the nail thus fixed in the pole that although the latter is used as a paddle it does not fall out.

"A turtle in a very lethargic animal, and may frequently be surprised in its watery slumbers. The balsa is placed nearly perpendicularly over one of these unsuspecting sleepers, when the fisherman, softly sliding the pole through the water in the direction of the animal till within a foot or two of it, he suddenly plunges the iron into its back. No sooner does the creature feel itself wounded than it swims hastily forward and endeavors to liberate itself. The slightest motion of the turtle displaces the iron point from the long pole, which would otherwise be inevitably broken and the turtle would as certainly be lost; but in the manner here described it is held by the cord fastened on to the iron which has penetrated its back till, after it has endeavored its strength, it is hoisted on board the canoe by the fisherman, who proceeds to the shore in order to dispose of his prize."

[2] The universal stone implement of the Seri, improvised from a cobblestone and used in nearly every industrial occupation (see pestles, p. 235); the designation is ximetlc, or onomatopoetic, from the sound of the strokes, particularly on animal tissue.

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manly the carapace and the longer bones from the flippers of the larger specimens are preserved entire for other uses, and are cleaned only by teeth and talons and tongues, aided by time but not by fire; but the plastron, unless broken up and consumed immediately, is subjected to a cooking process in which it serves at once as skillet and cutlet—it is laid on the fire, flesh side up, and at intervals the shriveling tissues are clawed off and devoured, while at last the scorched or charred scutes themselves are carried away to be eaten at leisure.[1]

Perhaps the most significant fact connected with the Seri turtle-fishing is the excellent adaptation of means to ends. The graceful and effective balsa is in large measure an appurtenance of the industry; the harpoon is hardly heavier and is much simpler than a trout-fishing tackle, yet serves for the certain capture of a 200-pound turtle; and the art of fishing for a quarry so shy and elusive that Caucasians may spend weeks on the shores without seeing a specimen is reduced to a perfection even transcending that of such artifacts as the light harpoon and fragile olla. Hardly less significant is the nonuse of that nearly universal implement, the knife, in every stage of the taking and consumption of the characteristic tribal prey; for it may fairly be inferred that the comparative inutility of the knife in dissevering the hard and horny chelonian derm, and the comparative effectiveness of the shell-breaking and bone-crushing hapf, have reacted cumulatively on the instincts of the tribe to retard the adoption of cutting devices. Of much significance, too, is the limited cooking process; for the habitual consumption of raw flesh betokens a fireless ancestry at no remote stage, while the crude cooking of (and in) that portion of the shell not consecrated to other uses might well form the germ of broiling or boiling on the one hand and of culinary utensils on the other hand. On the whole, the Seri turtle industry indicates a delicate adjustment of both vital and activital processes to a distinctive environment, in which the abundant chelonian fauna ranks as a prime factor.

Analogy with other primitive peoples would indicate that the flesh of the turtle is probably tabu to the Turtle clan, that the consumption of the quarry is preceded by an oblation, and that there are seasonal or other ceremonial rites connected with turtle-fishing; but no information has been obtained on any of these points save a few vague and unwilling suggestions from Mashém tending to establish the analogy.

Flotsam and stolen metal have played a rôle in the industries of Seriland so long that it is difficult to learn much of the turtle fishing

[1] These details were furnished largely by Mashém and Señor Encinas, but were verified in essentials by personal observation of dietetic customs at Costa Rica in 1894, and they were corroborated by observations on both shores of El Infiernillo and Bahía Kunkaak in 1895. Especially significant were the remnants of a turtle feast on the southern beach of Punta Miguel interrupted by the approach of the exploring party. The indications were clear that the turtle had been landed and largely consumed before the fire was kindled, and that the cooking of the firmer portions had hardly been commenced before the camp was abandoned so hurriedly that not only the nearly eaten turtle and the glowing embers, but the harpoon (the specimen illustrated in figure 39), the still bloody and greasy hapf (that represented in plate LIV), and the fire-sticks were left behind. Grooved fragments of charred plastrums are common relics about hastily abandoned camps generally.

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during prenatal times; but an intimation from Mashém that the old men thought it much better to take the turtle with the teeth of an "animal that goes in the water", and the similarity in terms for "harpoon" (or arrow) and "teeth" both suggest that the aboriginal point may have been a sea-lion tooth, and that the foreshaft itself may have been a larger tooth of seal or cetacean. While the modern harpoon is shaped with the aid of metal (hoop-iron, etc.), the forms are quite evidently vestigial of knifeless manufacture, in which a naturally rounded or abraded or fire-shaped foreshaft was fitted into the natural socket afforded by a cane-stalk broken at its weakest point—i.e., just below the joint; and both function and socket arrangement (as well as the linguistic evidence) strongly suggest the cylindrical tooth as the germ of the apparatus.

It is probable that water-fowl, considered collectively, stand second in importance as Seri prey; and the foremost fowl is undoubtedly the pelican, which serves not only as a fruitful food-supply but as the chief source of apparel.

The principal haunt and only known breeding ground of the pelican in the Gulf of California is Isla Tasnne, an integral part of Seriland; and while the great birds are doubtless taken occasionally in Bahia Kunkaak, El Infiernillo, Bahia Tepoka, and other Seri waters, this island is the principal pelican hunting ground. According to Mashém's account, the chase of the pelican here is a well-organized collective process: at certain seasons, or at least at times deemed propitious by the shamans, pelican harvests are planned; and after some days of preparation a large party assemble at a certain convenient point (presumably Punta Antigualla) and await a still evening in the dark of the moon. When all conditions are favorable they set out for the island at late twilight, in order that it may be reached after dark; on approaching the shore the balsas are left in charge of the women, while the warriors and the larger boys, armed only with clubs, rush on the roosting fowls and slaughter them in great numbers—the favorite coup de grâce being a blow on the neck. The butchery is followed by a gluttonous feast, in which the half-famished families gorge the tenderer parts in the darkness, and noisily carouse in the carnage until overcome by slumber. Next day the matrons select the carcasses of least injured plumage and carefully remove the skins, the requisite incisions being made either with the edge of a shell-cup or with a sharp sliver of cane-stalk taken from an injured arrow or a broken balsa-cane. The feast holds for several days, or until the last bones are picked and the whole party sated, when the clans scatter at will, laden with skins and lethargic from the fortnight's food with which each maw is crammed.

Mashém's recital gave no indication as to whether the Pelican clan participate in the hunting orgies, though it clearly implies that the chase and feast are at least measurably ceremonial in character; and this implication was strengthened by the interest and comparative

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vivacity awakened in the Seri bystanders by their spokesman's frequent interlocutions with them during the recital. Unfortunately the account was not clear as to the seasons selected, though the expressions indicated that the feasts are fixed for times at which the young are fully fledged. It would seem inconceivable that the Seri, with their insatiate appetite for eggs and tender young, should consciously respect a breeding time or establish a closed season to perpetuate any game; yet it is probable that the pelican is somehow protected in such wise that it is not only not exterminated or exiled, but actually fostered and cultivated. It is certain that the mythical Ancient of Pelicans is the chief creative deity of Seri legend, and its living representative the chief tutelary of one of the clans; it is certain, too, that this fleshly fowl, sluggish and defenseless as it is on its sleeping grounds, would be the easiest source of Seri food if it were hunted indiscriminately; and it is no less certain that the omnivorous tribesmen would quickly extinguish the local stock if they were to make its kind, including eggs and young, their chief diet; yet it survives in literal thousands to patrol the waters of all Seriland in far-stretching files and vees seldom out of sight in suitable weather. On the whole, it would seem evident that an interadjustment has grown up between the tribesmen and their fish-eating tutelary during the centuries, whereby the fowl is protected, albeit subconsciously only, during the breeding seasons; and in view of other characteristics of the tribe it would seem equally evident that the protection is in some way effected by means of ceremonies and tabus. 223 [776]

Somewhat analogous, though apparently less ceremonial, expeditions are made to Isla Patos and other points in search of ducks, and to Isla San Esteban, and still more distant islands in search of eggs (preferably near the hatching point) and nestlings; while the abundant waterfowl of the region are sought in Rada Ballena and other sheltered bays, as well as in such landlocked lagoons as those of Punta Miguel and Punta Arena. This hunting involves the use of bows and arrows, though the archery of the tribe pertains rather to the chase of larger land game, and apparently attains its highest development in connection with warfare. No specialized fowling devices have been observed among the Seri; and their autonomous recitals, the facies of their artifacts, and the observed habits of the tribe (especially the youth) with respect to birds, all indicate that ordinary fowling holds a subordinate place in Seri craft—i. e., that it is a fortuitous and emergency avocation, rather than an organized art like turtle-fishing and water-carrying. Concordantly, culinary processes are not normally employed in connection with waterfowl, and the customary implements used for incising the skin and severing other tissues are the shell-cup, which is carried habitually for other purposes, the cane-splint, which appears to be improvised on occasion and never carried habitually, and the ubiquitous hupf. [222] [411] [412]

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ing and at the same time enrich the tribal larder with a game beneath the dignity of the warriors; while still smaller boys similarly chase the rabbit, which is commonly scorned by the striplings. The conventional hare-hunting party is three, and it is deemed disreputable to increase this number greatly. The youths spread at sight of the game and seek to surround it, taking ingenious and constant advantage of the habit of the hare to run obliquely or in zigzags to survey more readily the source of its fright; for some time they startle it but slightly by successive appearances at a distance, but gradually increase its harassment until it bounds hither and thither in terror, when they rapidly close in and seize it, the entire chase commonly lasting but a few minutes. The quarry is customarily taken alive to camp, where it is quickly rent to fragments and the entrails and flesh and most of the bones consumed; the skin usually passes into possession of a matron for use as infantile clothing or cradle bedding, while the ears are kept by the youth who first seized the game until his feat is eclipsed by some other event—unless chance hunger sooner tempts him to transmute his trophy into pottage.

While the collective, semiceremonial style of chase alone is thoroughly good form in Seri custom, it is often rendered impracticable by the scattering of the tribe in separate families or small bands, in which case the hare and its associates, like the larger carnivores customarily, are taken by strategy rather than by strength. This form of chase is largely individual; in it archery plays a leading rôle; and in it, too, ambuscade, stealthy lying in wait, and covert assault attain high development. It is closely analogous with the warfare typical of the tribe; and it is especially noteworthy as one of the most effective stimuli to intellectual activity, and hence to the development of invention—if the term may be applied to industrial products so lowly as those of the Seri.

The chief artifact produced by the strategic chase on land would seem to be the analogue of the harpoon used at sea, i. e., the arrow. This weapon is one of the three or four most highly differentiated and thoroughly perfected of the Seri artifacts, ranking with canteen-ollas and balsa, and perhaps outranking the turtle-harpoon. It is fabricated with great care and high skill, and with striking uniformity in details of material and construction. A typical example is 25 inches in length and consists of three pieces—point, foreshaft, and main shaft (feathered toward the nock). The foreshaft is 8½ inches long, of hard wood carefully ground by rubbing with quartzite or pumice into cylindrical form, about three-eighths of an inch in diameter at the larger end and tapering slightly toward the point; the larger end is extended by careful grinding into a tang which is fitted into the main shaft, the joint being neatly wrapped with sinew. This main shaft is a cane-stalk (*Phragmites communis*?) 15 or 16 inches long, carefully selected for size and well straightened and smoothed; it is feathered with three equidistantly-

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411 placed wing-feathers of hawk or falcon, neatly prepared by removing a thin strip of the rachis bearing the wider vexillum and attaching it by sinew wrappings at both ends, the feathers being about 5½ inches in length. The nock is a simple rounded notch, placed just below a joint and supported by the sinew ferrule; there is no foot-ping. The favorite point is a bit of flotsam hoop-iron, ground into elongate triangular shape with projecting barbs, and a short tang or shank fitted into a shallow notch in the foreshaft, cemented there with mesquite gum, and finally fixed firmly with sinew wrappings. A typical iron-point arrow, with bow and quiver, is depicted in plate XXX. Alternative points are of rudely chipped stone (two examples are illustrated in figure 37) somewhat clumsily attached to the foreshaft by mesquite gum and sinew wrapping; while the arrows used by boys and hunters of small game are usually pointless, the tip of the foreshaft being sharpened and hardened by slight charring. In some of the arrows, especially those designed for use in war, the foreshaft is notched, or else loosely attached to the main shaft, in order that it may be detached from the main shaft and remain in the body of enemy or prey. The foreshaft is commonly painted some bright color (red is prevalent), while the points and attachments of the "poisoned" specimens are smeared with some greasy substance.

The aboriginal Seri arrow has undoubtedly been modified during the centuries since the coming of Cortés and Mendoza with their metal-armed troopers; yet certain inferences as to the indigenous form of the weapon are easily drawn from its construction and the homologies of its parts.

The first feature of the artifact to attract attention is the relative clumsiness of attachment and frequent absence of points. The chipped-stone points are so rude as to be quite out of harmony with the otherwise delicately wrought and graceful arrow, while the attachment is strikingly rude; and it is still more noteworthy that the very name for stone arrowpoint was little understood at Costa Rica, and was obtained only after extended inquiry and repeated conferences among the older informants. Even the attachment of the effective points made from hoop-iron is bad constructionally; the sinew wrapping is carried around the entire blade in such manner as to sheathe the sharply ground edges and itself be cut on contact with firm tissue; and the fitting and wrapping are so rude as to be incongruous with the rest of the apparatus. On the whole the suggestion is strong that the arrowpoint is secultural—and this suggestion is further strengthened by the very existence of the practically functionless, and hence manifestly vestigial, hard-wood foreshaft. Turning to the structural homologies, the observer is at once struck with the parallelism running through the three most conspicuous compound artifacts found among the Seri, i. e., the harpoon, the fire-drill, and the arrow. All of these alike consist of two essential parts, main shaft and foreshaft; all are

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akin in function even in the superficial view of the Caucasian, and are much more closely related in primitive thought—indeed the fire-drill is but a featherless and neckless arrow, with the foreshaft charred at its fire-giving tip; and all are closely linked in language and allied with other terms in such wise as practically to establish identity among them in the thinking of their lowly makers (though unfortunately the incomplete vocabularies extant are insufficient for full study of the linguistic homologies). Briefly the indications are that the harpoon was the primary device, and that its foreshaft was a tooth of an aquatic fish-eater like the seal, or perchance in some cases an os penis; that its lineal successor was a loose-head lance for use on sea and land, at first with the unaided hand and later with the atlatl, or throwing-stick (the lance being now extinct, though recorded by early visitors to Seriland); that the next artifact-generation in the direct line was represented by the arrow, foreshafted with hard wood or tooth, made light and graceful and loose-headed or not, according to needs, and by the substitution of bow for atlatl; and that a somewhat aberrant line was marked by the taming of fire, its reproduction by the modified arrow, and the differentiation of fire-stick from arrow and either atlatl or bow.

In tracing these stages in technologic growth, it is to be remembered that the Seri are so primitive as to betray some of the very beginnings of activital concepts; that to them zoic potencies are the paramount powers of the cosmos; that in their simple thought fire is a bestial rather than a physical phenomenon; that in their naive philosophy the production of devouring flame is of a kind with vital birth and a similitude of sexual reproduction; and that according to their notions the conquest of quarry, including fire, is made practicable only by aid of the mystical potencies of beasts and flames gained through invocatory use of symbols or actual organs.

In the Seri tongue the term "fire-drill" is *kaak*, an indefinite generic meaning "kind" or "strong kind", with an egocentric connotation ("Our-Strong-Kind"), as in the proper tribal designation *Kwa-kaak* or *Kw-kaak;* while the term for the nether fire-stick or hearth is either moam ("woman", or more properly "mother"), or else (and more commonly) *kaak-moam*, which may be rendered "Kind-Mother"—the "Kind", as among primitive folk generally, comprising both men and tutelary beasts, and in this case fire as the most mysterious of the beasts; there is thus a suggestive analogy between the designation for the fire-producing apparatus and that for the tribe itself. It should be noted that the zoic concept of fire is widespread among the more primitive peoples of various provinces, and sometimes persists in recognizable form in higher culture (witness the fire-breathing dragons of various mythologies, the "Red Flower" notion gathered in India by Kipling, etc); also that the ascription of sex to the fire-sticks is prevalent among North American tribes, and at once helps to interpret the development of the fire-drill, fire-syringe, and other primitive devices, such, for example, as

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000 those so fully described by Hough,[1] and serves to explain the otherwise obscure genesis of the fire-sense, which must have accompanied and shaped that most significant of all steps in human progress, the conquest of fire.

411 The modern coordinate of the Seri arrow is the bow, made preferably from a straight and slender branch of the palo blanco. A typical specimen is illustrated in plate XXX; it is 4 feet 9½ inches long, with the outer face convex and the inner face flat; greatest width 1⅝ inches, narrowed to 1¼ inches at the hand-hold; thickness at the hand-hold 1 inch, thinning to five-eighths inch at 8 inches from this point; tapering gradually in both dimensions toward the extremities, which are rudely notched to receive the cord (of mesquite-root fiber). The specimen
[284] illustrated has been cracked and repaired in two places; in one place the repair was effected by a rough wrapping of sinew, and in the other by slipping over the wood a natural sheath of rawhide from the leg of a deer. The specimen is of added interest in that it combines bow
[372] and nether fire-stick ("Strong-Kind-Mother"), one of the friction holes being worn out to the notched margin, and the other remaining in usable condition, as shown in the enlarged marginal drawing.[2]

Compared with the delicately finished and graceful arrow, the typical bow is a rude and clumsy device; it displays little skill in the selection and shaping of material, and evidently involves little labor in manufacture—indeed, the indications are that more actual labor is spent in the construction of a single arrow than in the making of a bow, while the arrow-making is expert work, betokening craft of a high order, and the bow-making little more than simple handiwork of the
[174] lowest order. The comparison affords some indication of the genesis of Seri archery, and at the same time corroborates the independent suggestion that the arrow is of so much greater antiquity than the bow as to represent a distinct stage in cultural development—though the precise cultural significance of the bow is not easily ascertained.

Efforts were made to have different Seri warriors at Costa Rica in 1894
114 assume the normal archery attitude, with but moderate success, the
123 best pose obtained (illustrated in plate XXVIII) being manifestly unnat-
126 ural and a mere reflection of the attitude in the mind of the Caucasian poser; while the results of inquiries served only to indicate that the normal archery attitude was purposely avoided for reasons not ascertained. Fortunately another observer was more successful: in the course of the United States hydrographic surveys in 1873, Commander (now Admiral) Dewey received several visits from Seri warriors on
114 board the *Narragansett*; and on the occasion of one of these visits, Mr
126 Hector von Bayer, of the hydrographic party, caught a photograph of an archer in the act of drawing his bow. The negative was accident-

[1] Fire-making apparatus in the U. S. National Museum; Smithsonian Report for 1888, pt. II, 1890, pp. 531-545, and elsewhere.

[2] Ordinarily the nether fire-stick is of soft and porous wood, ñeuen palo verde and water-logged pine being preferred.

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SERI ARCHER AT REST

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

ally shattered, and no prints are known to have been made from it; but the fragments were carefully joined, and were kindly transferred to the Bureau by Mr Van Bayer in 1897, and from them plate XXIX was carefully drawn. The posture (partly concealed by the drapery) is extraordinary, being quite beyond the reach of the average human, and impossible of maintenance for any considerable interval even by the well-wonted Seri. The posture itself partly explains the difficulty of inducing the warriors at Costa Rica to assume it, since it is essentially a fleeting one, and indeed but a part of a continuous and stressful action—it is no less difficult to assume, or to catch in the camera, than the typical attitude of a baseball pitcher in action. The posture thus fortunately caught is quite in accord with the accounts of Seri archery from the esoteric side given by Mashém, and with the exoteric observations of Señor Encinas, Don Andrés, and others; for all accounts agree in indicating that the archer commonly rests inert and moveless as the watching feline up to a critical instant, then springs into movement as swiftly as the leaping jaguar, and hurls, rather than shoots, one, two, or three arrows before rushing in to the death or skulking to cover as the issue may require.

The Seri archery habit is in every way consistent with the general habits of the tribe, alike in the chase and in warfare, in which the tribesmen, actuated by the fierce blood-craze common to carnivores, either leap on their prey with purpling eyes and gnashing teeth, or beat quick and stealthy retreat; and it is especially significant in the light thrown on the bow as a device for swift and vigorous rather than accurate offense, an apparatus for lengthening the arm still more than does the harpoon, and at the same time strengthening and intensifying its stroke. The quick-changing attitudes of half hurling are equally suggestive of the use of the atlatl, and support Cushing's hypothesis[1] that the bow was derived from the corded throwing-stick. While the critical posture of Seri archery is unique in degree if not in kind in the western hemisphere, so far as is known, an approximation to it (illustrated in fig. 22) has been observed in Central Africa.[2] On the whole the Seri mode of using the bow, like its crude form and rude finish, indicates that it is a relatively new and ill-developed artifact, possibly accultural though more probably joined indigenously with the archaic arrow to beget a highly effective device for food-getting as well as for warfare; while the genetic stages are still displayed not only in the homologies between arrow and harpoon, but by the common functions of both arrow and bow with the fire-sticks.

Concordantly, as indicated by the use of the archery apparatus, the individual taking of large game is effected either by stealthy stalking or by patient ambuscade ended by a sudden rush; when, if the chase is successful, the quarry is rent and consumed as at the finish of the

[1] The Arrow; Proceedings Am. Ass. Adv. Sci., vol. XLIV, 1895, pp. 232-240.
[2] Glave's Journey to the Livingston Tree. The Century Magazine, vol. LI, 1895, p. 284.

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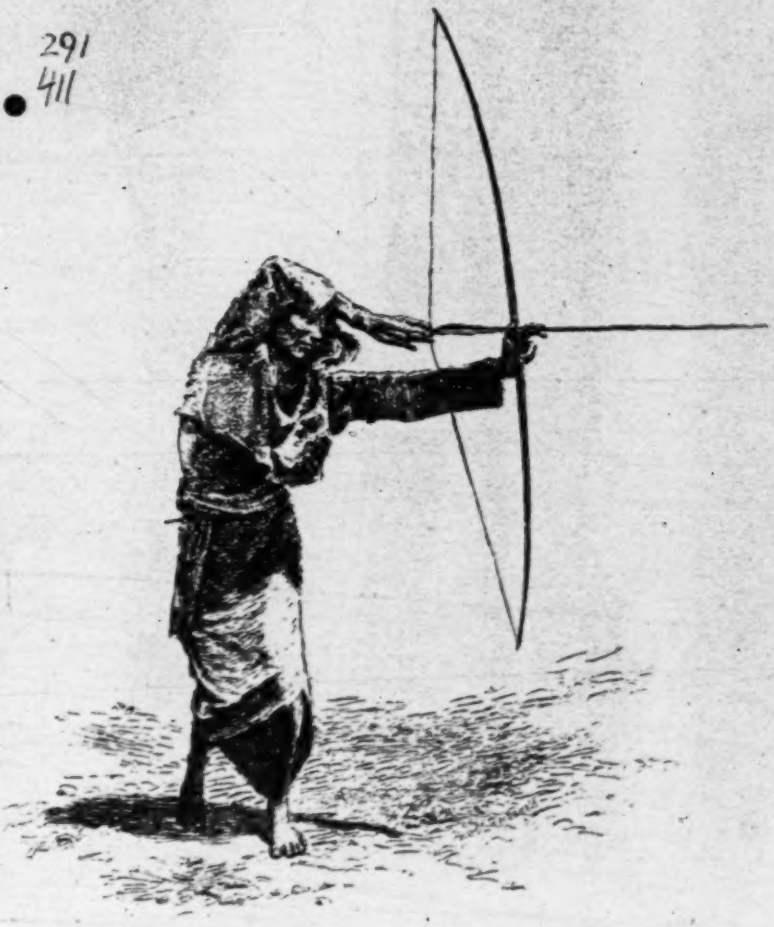

SERI ARCHER AT ATTENTION

[p. 202 A]

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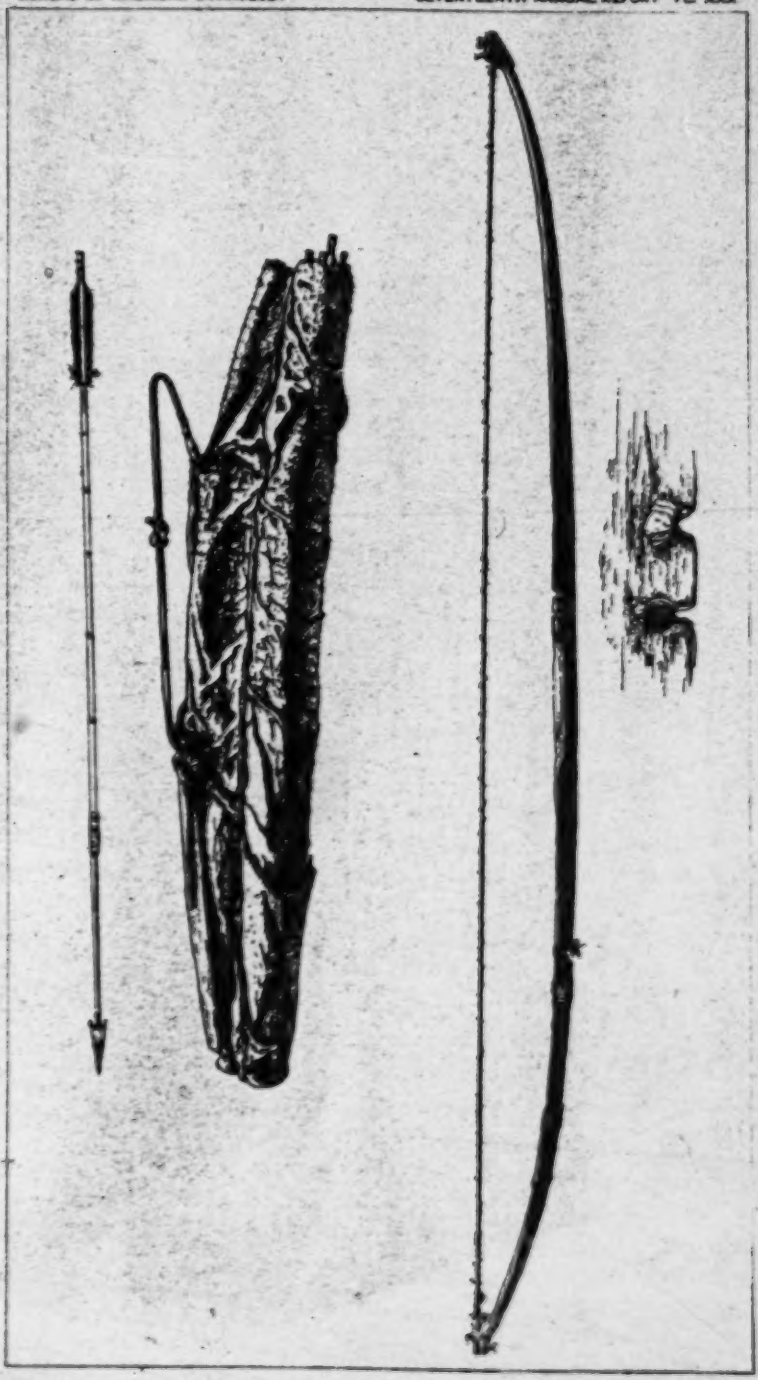

SERI BOW, ARROW, AND QUIVER

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

412 bles utilized in emergency, and commonly discarded after a single use, are too numerous and too various for convenient or useful grouping.

411 There is a distinctive type of Seri stone artifacts represented by a single category of objects, viz, chipped arrowpoints. Several of the literary descriptions of the folk—particularly those based on second-hand information and far-traveled rumor—credit the Seri with habitual use of stone-tipped arrows,[1] and it is the current fashion among both Mexican and Indian residents of Sonora to ascribe to the Seri any shapely arrowpoint picked up from plain or valley; yet the observations among the tribesmen and in their haunts disclose but slight basis for classing the Seri with the aboriginal arrow-makers of America.

[114]

Among the 60 Seri (including 17 or 18 warriors) at Costa Rica in 1894, three bows and four quivers of arrows were observed, besides a number of stray arrows, chiefly in the hands of striplings. The arrows seen numbered some 60 or 70, including perhaps 20 "poisoned" specimens; nearly half of them were tipped with hoop-iron, as illustrated in plate XXX, while about as many more were fitted only with the customary foreshafts (usually sharpened and hardened by charring), and the small remainder had evidently lost iron tips in use; there was not a single stone-tipped arrow in the rancheria. Moreover, when the usually incisive and confident Mashém was asked for the Seri term for stone arrowpoint he was taken aback, and was unable to answer until after lengthy conference with other members of the tribe—his manner and that of his mates clearly indicating ignorance of such a term rather than the desire to conceal information so frequently manifested in connection with esoteric matters; and the term finally obtained (*ahst-ahk*, connoting stone and arrow) is the same as that used to denote the arrowpoint of hoop-iron. The most reasonable inference from the various facts is that whatsoever might have been the customs of their ancestors, the modern Seri are not accustomed to stone arrow-making.

FIG. 37.—Seri arrowpoints.

172 411 The 1895 expedition was slightly more successful in the search for Seri arrows. About midway between the abandoned Rancho Libertad and Barranca Salina, an ancient Seri site was found to yield hundreds of typical potsherds, half a dozen shells such as those used for utensils, the fragments of a hupf evidently shattered by use as a fire-stone, and the small rudely chipped arrowpoint shown in figure 37*a*; and among the numerous relics found on a knoll overlooking Pozo Escalante (including two jacal frames, two or three graves, an abat, several shells

[1] The most specific reference is that of Hardy. "The men use bows and stone-pointed arrows, but whether they are poisoned, I do not know." Travels, p. 395.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

and discarded hupfa, a broken flutile figurine, etc), was the still ruder arrowpoint represented in figure 375 (both figures are natural size). The specimens are nearly identical in material—a jet-black slaty rock with a few lighter flecks interspersed, weathering gray on long exposure (as is shown by the partly natural surface of the larger point); similar rock abounds in several easterly spurs of Sierra Seri. The smaller specimen was evidently finished and used; its features indicate fairly skilful chipping, though its general form is crude—in addition to the asymmetric shouldering, the entire point is curved laterally in such manner as to interfere with accurate archery. The larger specimen is still more strongly curved laterally, and the chipping is childishly crude; while the rough surface, clumsy tang, and unfinished air indicate that it was never used even to the extent of shafting. It is possible that the specimens may have been imported by aliens, but the probabilities are strong that they were manufactured by the Seri. No other arrowpoints and no chips or spalls suggesting stone arrow-making were found in all Seriland, though the entire party of twelve were on constant lookout for them for a month. The natural inference from these facts is that the ancestral Seri, like their descendants, were not habitual stone arrow-makers.

There is a final category of Seri artifacts which would be classed as distinctive by Caucasians on the basis of material, though they are combined with the stone artifacts by the tribesmen; it comprises arrow-points of hoop-iron or other metal, harpoon-points of nails, spikes, or wire, awls of like materials, and other metallic adjuncts to ordinary implements. The use of iron is of course post-Columbian, and its ordinary sources are wreckage and strelage. The date of introduction is unknown, and probably goes back to the days of Cortés and Mendoza; certainly the value of metal was so well understood in 1709 that when Padre Salvatierra's bilander was beached in Seriland the tribesmen at once began to break her up for the nails (ante, page 67); yet the metal is wrought cold and only with hupf and abat like the local materials, and is habitually regarded and designated as a stone. By reason of the primitive methods of working, the metals are of course available only when in small pieces or slender shapes. There is a tradition among the vaqueros of the frontier that a quantity of hoop-iron designed for use in making casks was carried away from a rancheria in the vicinity of Bacuachito during a raid in the seventies, and that this stock has ever since served to supply the Seri with material for their arrowpoints; but it is probable that the chief supply is derived from the flotsam swept into the natural drift trap of Bahia Kunkaak by prevailing winds and tidal currents, and cast up on the long sandspit of Punta Tormenta after every storm. A surprising quantity and variety of wreckage was found on this point, and thence down the coast to Punta Narragansett, by the 1895 expedition: staves and heads of casks broken up after beaching, a telegraph pole crossbar which had evidently

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between those stages and that next higher in the series with unparalleled clearness; their craft also displays an aberrant (and hence presumptively aocultural) feature pertaining to the technolithic stage; and in so far as their craftsmen use the material typical of the age of metal they degrade it to the transitional substage between dominant zoomimicry and designless stone-using.

Viewed in the general light of their pacific industries, the Seri are, accordingly, among the most primitive of known tribes; their technic is in harmony with their esthetic, and also with their somatic and tribal characteristics, in attesting a lowly plane of development; while their industries, like their other demotic features, are essentially autochthonous.

WARFARE

Something is known of Seri warfare through the history of the centuries since 1540, and especially through the bloody episodes of the Encinas régime and the occasional outbreaks of the last decade or two. The available data clearly indicate that the warfare of the tribe complements their pacific industries in every essential respect.

As befits their primitive character, warfare has played an important rôle in the history of the folk, forming, indeed, one of the chief factors in determining the course of tribal development. There is no means of estimating the losses suffered and occasioned in warfare with the neighboring tribes during either prehistoric or historic times; but the indications are that they were much greater than the losses connected with Caucasian contact. Neither is it practicable to estimate reliably the fatalities attending the interminable conflicts with the Spanish invaders and their descendants, though it is safe to say that the Seri losses in strife against Spaniards and Mexicans aggregate many hundred, and that the correlative loss on the part of their enemies reaches several score, if not some hundred, lives. Few if any other aboriginal tribes of America have had so sanguinary a history as the Seri, and none other has at once so long and so bloody a record.

According to the consistent accounts of several survivors of conflict with the Seri, their chief weapons are arrows, stones, and clubs—though several survivors manifest greater fear of the throttling hands and rending teeth of the savage warriors than of all their artificial weapons combined. A striking feature of the recitals, indeed, is the rarity of reference to weapons; the ambushes or surrounds or chance meetings, with their disastrous or happy consequences, are commonly described with considerable detail; the carbines or rifles, the machetes and knives, or the deftly thrown riatas employed by the rancheros or vaqueros are mentioned with full appreciation of their serviceability; but the ordinary expressions concerning the despised yet dreaded Seri are precisely those employed in recounting conflicts with carnivorous beasts. When Andrés Noriega's kinswoman proudly related how he

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alone once overawed and routed an attacking party of 30 Seri warriors, she duly mentioned the carbine ready for use in his hands and the six-shooter and machete in his belt; but nothing was said of the Seri weapons. When a distinguished sportsman citizen of Caborca, the local authority on the Seri, sought to dissuade the 1895 expedition from visiting Tiburon, he was repetitively and cumulatively emphatic in his oracular forecast, "Ils vont vous tuer! *Ils vont vous tuer!!* ILS VONT VOUS TUER!!!"—yet he made but passing reference to "poisoned" arrows, and none to other weapons, in the general implication that invaders of the tribal territory were torn limb from limb and strewn over the rocks and deserts of Seriland. When Jesus Omada, of Bacuachito, boasted his Seri scars, he indeed emphasized the arrow-mark on his breast, but only as a prelude and foil to the far ghastlier record of his teeth-torn arm. When Robinson and his companion were butchered on Tiburon in 1894, the bloody work was effected chiefly by means of a borrowed Winchester; and neither the account of the survivors nor that of the actors made mention of native weapons—save the stones with which the second victim was finished according to the local version. In short, most of the casual expressions and fuller recitals alike indicate that while the Seri are famous fighters their weapons—except the much-dreaded "poisoned" arrows—are incidents rather than essentials to savage assaults, and that their prowess rests primarily on bodily the strength and swiftness.

The stones used in battle, as described by the survivors and as intimated by Mashém, are cobbles as large as a fist, i. e., hupfs of typical form and size. So far as is known they are never hurled, slung, nor projected in any other manner, nor are they hafted or attached to cords after widespread aboriginal customs; they are merely held in the hand, as in the slaughter of quarry. Hardy made note of a war-club—"They use likewise a sort of wooden mallet called Macána, for close quarters in war";[1] but nothing of the kind was found at Costa Rica in 1894, and no woodwork suggesting such use was found in the depths of Seriland in 1895.

The most conspicuous and doubtless the most effective war weapon is the arrow projected from the bow in the unusual if not unique fashion already noted (ante, p. 201). There is nothing to indicate that the Seri are especially effective archers; the facts (1) that a large part of the arrows are pointless, save for the hard-wood foreshafts; (2) that stone arrowpoints are not habitually used; and (3) that comparatively slight reference is made to the use of arrows in records and recitals of Seri battles, tend on the contrary to indicate inferior ability in archery. And in the course of the explorations by the 1895 expedition it was noted that the feral fowls and animals of Seriland—pelican, gull, snipe, curlew, cormorant, coyote, hare, burro, mountain sheep, peccary, etc—displayed little fear of human figures at distances exceeding 75 yards,

[1] Travels, p. 230.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

411 and seldom stirred until the stranger approached within 50 or 60 yards; whence it may be assumed that these distances fairly indicate the ordinary range of Seri arrows. The few accounts of conflicts in which arrows are mentioned prove, however, that those missiles are discharged with great rapidity and in considerable numbers during the brief interval to which the fighting is customarily limited.

278 411 The most notorious feature of the Seri warfare, and that of deepest interest to students, is the reputed use of poisoned arrows. The scattered literature of the tribe, from the days of Coronado onward, abounds in references to this custom; the Jesuit authorities give somewhat varied yet fairly consistent descriptions of the preparation and the effects of these arrows; Hardy added his testimony as to the character of the poison; General Stone gave directly corroborative evidence; haciendero Encinas gives witness to the effects of the envenomed missiles on his own stock; while Mashém recounted to the 1894 expedition the various uses of the "poisoned" arrows and highly extolled their potency, though he was noncommittal—save in casual allusions—as to the details of the poisoning. A part of the arrows acquired by this expedition and now preserved in the National Museum were professedly poisoned; they are easily distinguished by a thin varnish of gummy and greasy substance over the iron tips and wooden foreshafts, and especially about the attachments of mesquite gum and sinew. According to Mashém's asseverations, such arrows are habitually used in war save when the supply is exhausted by continued demand; they are also used occasionally in hunting, especially for deer and lions (i. e., the swiftest and fiercest game of the region); and the use of the poisoned missile does not destroy the meat of the animal, though the portion immediately about the wound is "thrown away". Two of the treated arrows brought back from Costa Rica were submitted to [126] Dr S. Weir Mitchell some months afterward for examination, and for identification of any poisonous matter found on them; but no poison was detected. On the whole, the data concerning the reputed arrow poisoning are less definite than might be desired; yet they are sufficient to suggest the nature of the custom with considerable clearness.

278 In any consideration of Seri customs it is to be realized that the folk are notably primitive in thought, and hence deeply steeped in that [811] overweening mysticism which dominates all lowly folk—that they still cling to zoomimic motives in their simple handicraft, and are still wholly within zoötheism in their lowly faith. In the light of this realization the numerous consistent records of the preparation of the poison are easily interpreted, and are found to be fully in accord with the prevailing motives of the tribe; and the interpretation serves to explain the somewhat discrepant accounts of the effects of the poison, effects ranging from nil to horrible sepsis. According to the more circumstantial recipes, the first constituent of the poison is a portion of lung, preferably human—a selection readily explained by pristine philosophy,

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is an infallible remedy. On the whole it seems probable that the yerba mala (*Sebastiana bilocularis?*), or yerba de flecha, or mago, or magot, yielded or formed the standard arrow-poison of the Opata and perhaps of other Indians, and that the ill-repute of the shrub survived and spread throughout Mexicanized Sonora in such frequent repetition and common belief as to affect the ideas of residents and travelers alike; but it seems equally probable that the magic-inspired brew of the Seri is entirely distinct.[1]

As suggested by widespread primitive customs, and as illustrated specifically by the arrow-charming, the warfare of the Seri is largely sortilegic, this feature being but an extension and magnification of a corresponding feature of their hunting customs. The economic object of the chase is, of course, the flesh of the quarry; but the hunt normally begins with invocatory or other fiducial ceremonies, culminates in a feast opened with oblations, and ends in the use of horns or hoofs, teeth or bones, mane or tail, as talisman-trophies—primarily pledges of fealty to the favorable potencies, only secondarily symbols of success. The observances illumine the ever-present esoteric object of the chase, which is to gain the favor or overcome the power of the beast-god represented by the animal hunted; in general, this is sought to be effected through mimetic movements, or symbolic objects, associated with that animal-kind, and the retained charm-trophy is valued as a symbol of the placation or outwitting of a particular deity. Similarly, the Seri warrior strives for the supposed deific symbols of the enemy—the scalp or headdress or arrow of the alien tribesman, the fire-breathing and echo-waking (as well as death-dealing) wand of the Caucasian; and the Papago arrows, Yaqui scalps, and white man's firearms are sought avidly, treasured as fetishes, and often carried conspicuously as badges of borrowed prowess.[2] So the Seri are never without alien insignia in the form of weapons. The day before the 1895 expedition entered their stronghold, a band of warriors and women were frightened from a freshly slaughtered cow by a party of vaqueros so suddenly that their arms were left behind—and these

[1] It should be noted that the actuality of the poisonous property ascribed to the yerba mala is in some degree questionable; the plant is the only one of southern Papaguería yielding suitable material for arrow-shafts, and it is possible (if not probable) that it was consecrated to this purpose by the aboriginal Opata and protected by taboo in such wise as to become a sacred and fearsome thing. It is accordingly by no means improbable that the reputed poisonous property is but the product of generations of association, and that the plant is really harmless—an inference supported by experiments on the part of the leader of the 1895 expedition, who swallowed the *juice of stem and leaves* in two or three minute but increasing doses without perceptible effect. On the other hand, it should be observed that the region is one abounding in toxic juices, and that this shrub is an luxuriant and so free from thorny armament and other protective devices of a mechanical sort as to raise the presumption that it must be protected against herbivorous animals, at least, by chemical constituents of some kind (*cf.* ante, p. 39).

[2] These motives on the part of the Seri were perpetuated by their tribal comrades: a Papago fetish in the form of an Apache arrowpoint, long worn by an aged warrior as a protection from Apache arrows, was among the spoil of the 1894 expedition; and a "poisoned" Seri arrowhead and forefinger, worn by a superannuated Papago "doctor" as a badge of invulnerability to similar missiles, was confidently shown to the 1895 expedition, but was held above price by its wearer—and this despite the fact that he had been christianized for decades, and retained no other pagan symbols.

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177 411 726 included a heavy Springfield "remodeled" rifle, lacking not only ammunition but breechblock and firing pin; while Don Andrés Noriega, of Costa Rica, and L. K. Thompson, of Hermosillo, described a rifle of modern make captured similarly two years before, which was in good working order and charged with a counterfeit cartridge ingeniously fashioned from raw buckskin in imitation of a center-fire brass shell and loaded with a polished stone bullet.[1] The finders opined that the rifles were carried to bluff the enemy, and even that the counterfeit cartridge was designed to do deadly execution; but it would better accord with Seri customs, and with the law of piratical acculturation which they typify,[2] to infer that the weapons were regarded rather as symbols of mystical potencies than as simple scarecrows. Of related import were two or three pseudomachetes made from rust-pitted cask hoops, reported by the majordomo and several vaqueros at Costa Rica; and of still greater significance was a machete picked up in a just-abandoned jacal by Don Ygnacio Lozania—veteran of the Andrade expedition and the Encinas conquest—which was laboriously rasped and scraped out of palobianco wood, colored in imitation of iron blade and mahogany handle by means of face-paints, and even furnished with "eyes" replacing the handle-rivets, in the form of embedded iron scales. Some of the Seri are familiar with the normal use of firearms, as was demonstrated by the Robinson and other episodes, and many of them modernly make some use of machetes or other knives, as shown by various rudely whittled wooden artifacts; yet the burden of proof indicates that the chief use of the Caucasian's weapons in the heat of actual warfare is shamanistic and symbolic. This interpretation is, in fact, practically established by the experience of the frontier; for the vaqueros and local soldiery have little fear of the ill-understood firearms and clumsily handled machetes occasionally seen in Seri hands, though they dread unspeakably the necromantic arrows and flesh-rending teeth with which the agile foes are credited.

174 324 The mystical potency ascribed to Caucasian firearms and cutlery by the zoomimic tribesmen is of interest as a reflection of motives and methods pervading the entire range of their activities; at the same time it suggests the genesis of the aberrant technolithic craft displayed in arrow-chipping. The information obtained from Mashém and his mates concerning chipped arrowpoints implied that the process was hieratic and little understood by the body of the tribe, its place in the tribal knowledge, indeed, being similar to that of the brewing of the arrow "poison", which is the special work of shamans; and this information, comporting as it does with the rarity of the chipped points and

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[1] The initiative skill of the Seri was illustrated at Costa Rica some years ago, when the petty accounts for labor, etc., were kept by means of tokens stamped from sheet brass. While a Seri rancheria was maintained near the rancho, the store-keeper detected a number of counterfeits of his tokens, so well executed as to pass readily over the counter in ordinary exchange—and after extended detective work the counterfeiting was traced to the rancheria.

[2] American Anthropologist, vol. xi, August, 1898, pp. 310-328.

2: Kroeber E-5 (1930) 1931 NU31 Seri NU31

sounds like an expectable enough mythic idea, but seems involved with McGee's dubious conceptions as to totemism, discussed below. 114 193

The two-pointed fish-spear, with serrated points 6 inches long and spreading 5°, seen by Hardy (McGee, p. 193), is interesting because seemingly unreported in or near the area. 114 227

"Fishing" with staked pelicans who are then fed by free birds, is authenticated by the statement of Venegas for lower California, (McGee, p. 193). [226 231]

No fish nets, hooks, or lines were seen by McGee among the abandoned effects on Tiburon (p. 194). This is in accord with my observation. The abundance of sharks may interfere with net or deep water fishing.

The bow (p. 200) is of *palo blanco;* the release (pls. 28, 29), Mediterranean; the archer's position (pl. 29), with elbow above head, suggests a quick downward shot at a target or game lying on the ground not far away. 114 411

Mesquite, according to McGee (p. 207), is ground on the metate. Sr. Thomson told me of its being pounded in a hole in the ground. The Seri gave me the name a'kata for what I understood to be this earth mortar. According to Sr. Thomson's description, the flour from the first beans cakes and lines the cavity firmly, so that the bulk of the material is secured quite cleanly. In general, mesquite is mortar-pounded rather than metate-ground by the tribes from whom we have records, as is expectable from the woody nature of the beans. 114 252

McGee (p. 207) noted the viznaga cactus, Echinocistus, as rare in the Seri habitat, presumably owing to its use for water by the natives. I made the same observation on the mainland, but Sr. Thomson stated that along the roads the plant is being gathered for candying. 114 137

The one basket described by McGee (p. 208, fig. 24) is bundle-coiled and plain. The only one I saw in use among the Seri was ornamented with a plain reddish band. Sr. Thomson presented me with two which bear patterns (fig. 13), and showed me a photograph of a collection made by Mr. Davis for the Museum of the American Indian, Heye Foundation, nearly all of which were decorated, some fairly elaborately. Several of these are shown by courtesy of that institution in figure 12. As McGee observes, there is obvious resemblance to Southwestern baskets; especially of the Papago, Pima, and Apache. Southern California basketry is less similar. That of Baja California is unknown from specimens, though the mention of water-tight vessels used for winnowing and parching suggests a coiled tray of Seri type. The surviving tribes of Sonora other than the Seri use few baskets distinguishable from those of the non-Indian population. 114 285 [171]

2: Kroeber E-5 (1930) 1931 NU31 Seri NU31

in a paddle blade being cut separately from the shaft, the inventive step from attaching one blade to attaching two blades would have been insignificant—in fact, would be an improvement or variation rather than an invention. The determining factor as to its adoption would probably be the type of navigation as set by water conditions. This is borne out by the distribution of the double paddle, which clings to areas of open salt-water navigation or large bays approximating open water conditions. On rivers and lakes the double paddle would rarely help and often be in the way. In this way the varying association with skin boat, wooden boat, and raft boat seems accounted for. Another factor must be size of the vessel navigated. A broad or high canoe would scarcely allow of alternate paddling on both sides. This may be the cause of the absence of the implement on the Northwest Coast. Whether the Arctic and the California-Seri occurrences are to be historically connected, must probably be left an open question for the present. An answer in favor of connection will evidently depend on the establishment of sufficient other connections to set up a favorable presumption. Until then, the considerations just mentioned make the possibility of independent origin equally plausible.

The single-bladed paddles seen by McGee (p. 219) and myself were two-piece and hafted with nails. McGee is more interested in balsa propulsion by recumbent women with hands, shells, or unhandled blades. That such crude devices were used along shore or in bays often enough to be mentioned, is wholly in line with the conspicuous Seri indifference, slovenliness, and lack of standards; but it is also obvious that real paddles being known and made, these would be the ones taken on open sea voyages of a dozen miles in a region of notably variable winds and currents. The Seri are never fools in practical matters within their compass; and they could not have acquired their indubitable navigating skill by letting their women do most of their paddling with bare hands. The one woman I saw aboard was carried as a passenger across the Infiernillo.

What is typical of Seri habits is that the harpoon shaft is also used for poling, and the harpoon cord as anchor rope, tow-line along shore, sheet rope, and for tying a blanket to a mast and pole to serve as sail; just as the bailer of a leaky skiff is an enamel-ware plate or pot employed at other times for food. The whole harpoon, including the rod-iron point, but dismounted, seems regularly to be taken along on a transport voyage.

The Seri houses I saw opposite Punta San Miguel were like those described by McGee (pp. 221-223): long, narrow, low, and open at least at one end; but they were unroofed. There was also one of double length, and another "joined obliquely"—that is, annexes occupied by younger kin and their families. The lengthwise double house was open through, though constricted at both ends and the

2: Kroeber E-5 (1930) 1931 NU31 Seri NU31

is what their "shirt" (McGee, pl. 29) probably was. The fabrics of McGee's Mexican informant may refer to gunny-sacks made over into improvised imitations of civilized garments; or to single-element carrying bags. It is entirely possible that contact with the cloth-weaving tribes of Sonora long ago induced the Seri to shrink from habitual complete nudity; but it is difficult to imagine them producing even a coarse wearable cloth. McGee's interpretation of the historic sequence of Seri garments is of course wholly speculative.

The cradle shown by McGee (p. 226, fig. 30) consists of a kite-shaped hoop with eight sticks tied across it and a lashing thong passed back and forth across it half-a-dozen times. Even allowing for some slip of the parts in transport to Washington, this specimen is quite typical in Seri disregard of evenness, neatness, order, or finish. The Yaqui cradle illustrated by Hrdlička[7] consists of eight or nine lengthwise sticks or canes twined close together. The Lower Californians used a basket or a turtleshell. The Gila Pima and river Yuman cradle is of "ladder" type, and therefore similar in structure to the Seri except that it lacks the point at the bottom and has the sides parallel; it also carries a hood of wickered or twilled splints. As regards basic structure, one form of Maidu cradle is most similar to the Seri; just as the plan of the Yaqui one reappears among Miwok, Yokuts, and Mono a little further south in California.[8] It appears from this irregular distribution that so simple an apparatus as the open or flat baby-carrier, which can be just as serviceable without a definite technique or style entering into it, is likely to vary locally without much significance, and that its forms will indicate historic connection only when they are parallel in a number of details. In these respects it resembles house types. In both these objects, new "inventions," certainly of detail elements and perhaps of basic structure, seem to be readily made and adopted.

McGee's finding (p. 247) that the Seri are "not habitual stone arrow-makers" has a parallel among the river Yumans, and, at least partially, among the remaining Sonoran tribes. His conclusion (p. 259) that the *yerba de la flecha* (magot, Sebastiana bilocularis?) was an Opata but probably not a Seri arrow poison, seems sound. The plant was shown me on the island, and the Seri knew it as venomous, but volunteered nothing as to using it on arrows.

That the question of Seri cannibalism must be left open, with a preponderance of evidence against the practice (p. 263), also seems a conservative judgment.

As to shields, McGee learned of loose pelican pelts and turtle-shells (p. 264), I of armor and a large upright shield of hide. Both accounts may be right, one referring to emergency pick-ups, the other ——— to prepared defence or attack.

[7] AA 6, pl. 9, 1904.
[8] BAE-B 78:585, fig. 48, pls. 38, 46.

396 the extremities. Throughout the process the
[283] cord used for lashing was laboriously made
by hand and mouth by the women who ob-
[462] tained the fibrous raw material from mes-
quite tree roots, from the yucca or the
maguay. Three of the finished bundles were
lashed together to form a watercraft some
thirty feet in length and of four-foot beam.
These large balsas were buoyant enough to
carry several members of a family across El
Infiernillo channel. One-man balsas were
also made (Fig. 5) principally for use in
turtle fishing.

225 Except during the egg-laying season
411 turtles had to be sought from the balsa. The
Seris lacked tool sense in the extreme, but
their clumsy brains had devised a harpoon
for use against the turtle. The hard, pene-
trating point was commonly made of native
ironwood, but may also have been the sharp-
ened tooth of a sea lion or the shin bone of
a deer. It was fitted and firmly cemented
with mesquite gum to a short, hardwood
foreshaft whose rounded end fitted into the

[p. 197(C)]
[text continues on p. 198(B)]

3:Davis & Dawson E-5 (1922-1940) 1945
NU31 Seri NU31

225
[411]

ten- to twelve-foot main shaft. A stout cord was knotted to the foreshaft and carried along the main shaft to the hand of the user. When, from the quietly floating balsa, a

[p. 198(B)]

Class	Species Reported	Species Exploited	Percentages
Mammals	21	9	43
Birds	28	6	21
Reptiles and Amphibians	25	11	44
Fish	36	23	64
Molluscs	36	21	58
Crustaceans	10	2	20
Total:	160	72	45

These figures show clearly the dependence of the Seris on marine life for a major source of their diet. Today, pinta, bays, cubera and sardineros are their primary source of income with mant and sea-turtles ranking second in importance. Several species of clams, limpets and gastropods supplement this diet.

All other animals represent only incidental additions to the menu. During the last war, sharks and mantas were hunted extensively for their liver, then a source of vitamin D. But since the war, the demand for shark liver has declined and because of this, a considerable income for the Seris has been lost. Shark and manta fishing have been abandoned for these fish were taken only for the commercially profitable liver and not for their flesh.

Fishing and Hunting

Seri fishing techniques are simple. In the past they used double-pronged spears and for the larger fish, harpoons. Today the spears are employed chiefly in fishing while the harpoons are reserved exclusively for sea-turtles. Hook and line fishing was introduced after 1930, as Kroeber (1931) saw none during his visit to Kino in 1930, and it is now the standard method of fishing. An abortive and unsuccessful attempt was made several years ago with net fishing. Another change has occurred within the past fifty years. The old balsas have been replaced by flat-bottomed plank boats outfitted with five-horsepower motors or sails. These motors, incidentally, are leased from the Mexican fish traders because none of the Seris are rich enough to own one.

Bait is obtained by dynamiting schools of small fish in coastal waters or by collecting them at low tide in the tidal pools and from under rocks. Fishing usually begins at dawn and lasts until noon when, as a rule, all of the "pangas", as the boats are called, return to Desemboque. In stormy weather no fishing expeditions are made and when this occurs, starvation becomes a real menace. Harpooning of sea-turtles takes place far out in the Gulf. It is done only at night in exceptionally calm weather by the light of torches or Coleman lanterns.

Hunting as it is done today has changed from the time of McGee's visit in 1894-95. The bow and arrow has disappeared completely except for a crude and diminutive form used as a toy by small boys. Iron spears once used in shark and manta hunting are now carried primarily as a weapon against the numerous and much feared rattlesnakes. They are said to be used occasionally in the peccary hunt. Old .22s or 30/30 rifles are owned by several of the men, some of whom specialize in hunting.

Game pursuit is usually done on foot, mostly in the winter and very little in the summer. The intense heat of the desert in the summer makes hunting unattractive. The most frequent trophies are the Sonoran bighorn, peccary, cottontail and jack-rabbits. Sometimes, semi-wild burros, running loose on the adjacent extensive Mexican "rancherias", are poached for meat. The peccary is the only animal hunted with the aid of dogs. Large rodents are dispatched by sling-shot, stick, stone, or shot with a .22 caliber rifle. Birds, such as sea-gulls, ducks and pelicans, are clubbed, stoned or shot with a small caliber rifle.

While fishing and hunting are primarily men's occupations, the gathering of the terrestrial and marine animals is almost exclusively women's work. Rattlesnakes and other reptiles are often killed and brought to the encampments by the women from their morning trek into the desert after firewood and fruit. Small fish and marine invertebrates in the tidal pools are collected by women, aided by children of both sexes.

Preparation of meat is quite simple. It is either boiled in hot water with salt added as the only seasoning or else roasted whole, if small enough, over an open fire with or without a grill. The use of spices such as tomato sauce, chili, peppers, and the like, depend upon the tastes of the individuals and also upon the availability of money.

In individual competence as hunters or fishermen the men show a great deal of variability. Some excel in fishing while others do so in hunting. Hand in hand with this, goes the degree of knowledge of the local natural history and, as expected, the best fishermen lead in the knowledge of fishes while the best hunters possess the most extensive knowledge of terrestrial animals and insects. It has also been observed that boys were far ahead of adults in their knowledge of inconspicuous or otherwise commercially unimportant creatures such as insects, obscure marine invertebrates and small fishes. Interest in the commercially or otherwise economically important forms of animals unquestionably becomes overwhelming in adult life while much of the natural history lore learned in youth is forgotten.

Food Preferences and Taboos

A number of animals were reported as being a part of their diet in the past but which were not used at the present time. Several species of shells collected from kitchen middens along the coast were thus identified. In some instances it has been denied that a certain animal was used for food; yet, later when such a beast was brought to the camp, it would be added to the menu. Undoubtedly, some of the species were held in low esteem as food and the Seris preferred not to admit eating them.

Large fishes, especially pinta and baya, sea-turtles, and the very large chuckawalla lizard, which is brought back from rare expeditions to San Esteban Island, are the preferred cuisine. Cochi fish, also called puercos, are disdained. Large catches of these were frequently brought in from the sea, only to be unceremoniously dumped on the beach and left to the dogs and the vultures. But when other fish were scarce, the puercos were eaten. Pelicans, once an

5:Dawson N-5 (1940) 1944 NU31 Seri NU31

an important handicraft among these Indians. They made a shallow, coil type basket such as is characteristic of many southwestern tribes. The Seri basket, however, was remarkable for its extreme lightness in proportion to capacity, a quality due to the spongy character of the coil made of a whisp of splints of the torote. Several torotes are found in the region, the commonest species being *Jatropha cardiophylla*. Also used were the torote amarillo, *Jatropha spatulata*, torote blanco, *Bursera microphylla*, and torote prieto, *Bursera laxiflora*. The woof consisted of splints of palo blanco, *Acacia Willardiana*, or of baraprieta, *Caesalpinia gracilis*, deftly interlaced by means of a bone awl to form a smooth, practically waterproof utensil.

In pre-Columbian times the Seris commonly sought wild game, mostly deer, without the aid of weapons, using only their tremendous physical endurance against their prey, chasing the animal until it was exhausted and could be thrown to the ground. With the introduction of iron, however, the development of the bow and arrow achieved prominence, for the shaping and fastening of points had long retarded the exploitation of these implements. Few straight stemmed or straight grained plants grow in Seriland suitable for making arrow shafts, but on the flanks of the deeper gorges of Sierra Seri and Sierra Kunkaak on Tiburon Island, the Indians found one leafy shrub that filled the need, *Sapium biloculare*. The juice of this plant is also said to have been used for arrow poison. The bow was preferably of palo blanco, wrapped and strung with mesquite fiber cord.

The modern Seri tribe consists of barely more than 100 souls, with early extinction threatening from imported diseases. Their natural habits are now vastly modified and they live a comparatively sedentary life near the village of Kino, scavengering for fish heads and other refuse discarded by the fishermen, now and then fishing for themselves when in need. Every year, however, they trek off to the cactus forest for the annual feast, and in late summer many may be seen camping among the mesquite groves near the Kino well where an abundance of both mesquite beans and water makes for easy living.

8: Ascher E-5 (1960) 1962 NU31 Seri NU31

McGee (1898:214)

262 estimated that maritime resources provided two-thirds of the Seri diet. Kroeber (1931: 20), approximately 30 years later, estimated the proportion at about three-fifths. In the winter of 1960, 30 years after Kroeber's visit, the Seri were obtaining at least three-fifths of their food from the sea.

226 In pursuit of their main source of subsistence, the Seri travel up [221] and down the narrow coastal band. In the winter of 1960 they were [361] occupying one temporary camp toward the southern end of the band [462] and a permanent camp at the northern extreme. Seri women and [857] children gather mollusks; fishing is a male occupation. In addition to gathering and fishing for their own needs, the Seri dispose of a 226 portion of their catch on the commercial market. This enterprise 439 began about 1930, and was encouraged by the establishment, in 1958, 474 of the Sociedad Cooperative de Produccion Pesquera Seri with the cooperation of the Mexican government.

The Pacific green turtle constitutes the largest single item in the 225 Seri diet for at least six months of the year—from January to June— 262 and it is also caught occasionally at other seasons. In 1896 McGee estimated that it provided 25 per cent of the total food supply. Emphasizing the intimate ecological relationship between the Seri and the turtle, McGee (1898: 186-187) wrote:

> ... perhaps half of the aggregate life of the tribe is spent within easy reach of its [the turtle's] feeding and breeding grounds, and tribesman and turtle have entered into an inimical communality something like that of the Siouan Indian and buffalo in olden time. ...

[114] Kroeber (1931: 20) believed that McGee stressed the Seri-turtle relationship too strongly and overestimated its contribution to the diet. 237 McGee (1898: 187), in support of the importance of the turtle to the Seri, points to the fact that the turtle carapace is used for, among other things, a house covering and buckler, a cradle, a coffin, and footgear. The carapace is currently used for supporting and roofing 262 houses and as a starvation food. The contribution of the turtle to the diet varies from year to year, but observations made in 1960 suggest a range of from 15 to 20 per cent as a reasonable estimate.

Seri men fish for turtle from boats, which are manned by two or 225 three men and are propelled by oars, sails, outboard engines, or any [501] combination of the three. The boats operate either individually or in groups. The men fish by night or day, depending on the weather and sea conditions. When they fish at night, they use a kerosene [416] lamp to attract turtles to the surface. The principal implement is the harpoon.

● 411 The harpoon tackle of the Seri is illustrated in Figure 1. It consists of a foreshaft (c-h), a mainshaft (j-k), and an extension cord (i). The component parts of the foreshaft are a projectile point (c), a gasket (d), a wrapping cord (f), a hafting base (g), and a lead cord (e and h). In preparation for turtle fishing, the hafting base (g) is plugged into the socket (j) on the main shaft (k), and the extension cord (i) is looped through the lead cord (h).

8: Ascher E-5 (1960) 1962 NU31 Seri NU31

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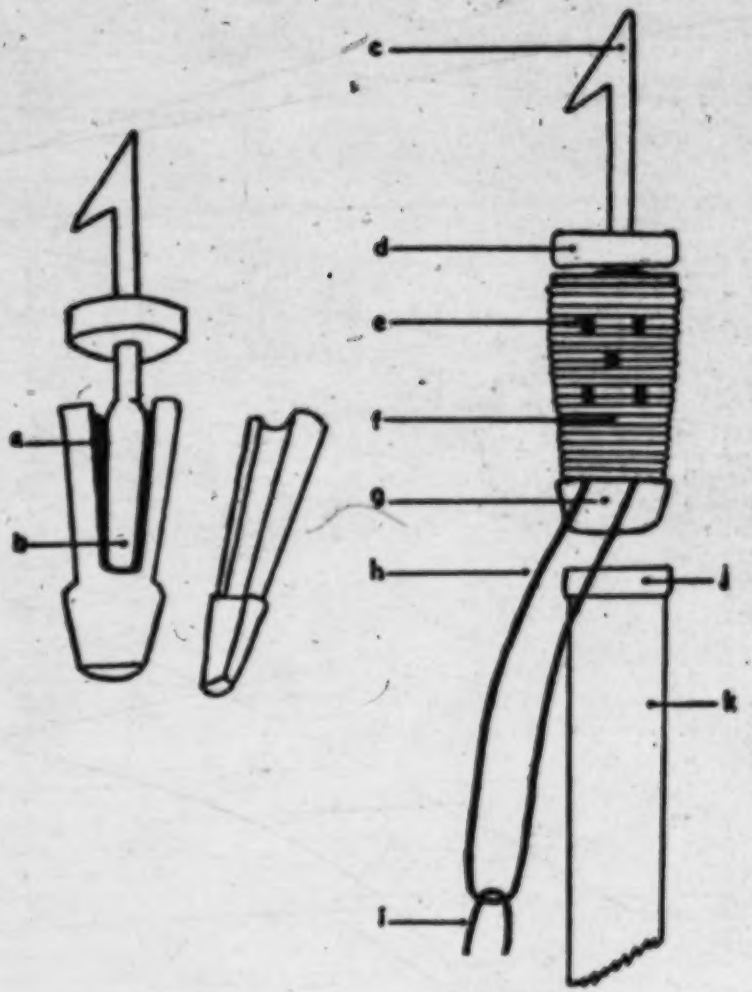
Figure 1: Reed Harpoon Toggle



a Mosquito gum sealing
b Point base
c Point barb
d Gasket
e Lead cord interwoven with wrapping cord
f Wrapping cord
g Hafting base
h Lead cord
i Extension cord
j Mainshaft socket
k Mainshaft

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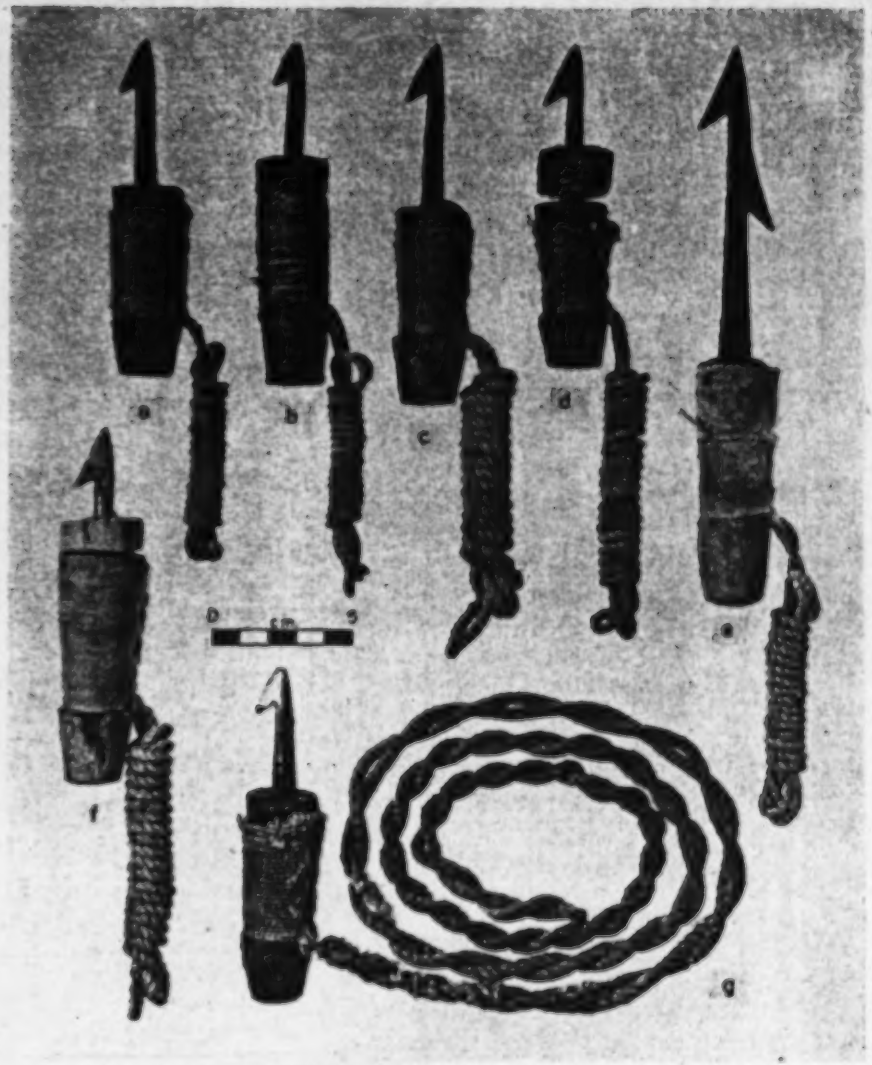

PLATE 1: FORESHAFTS MANUFACTURED BY SEVEN SERI FISHERMEN
(see Table 1 for specifications) A

[facing page 364]

A [Table 1 is on page 367, category 116: Analyst]

In fishing for turtle, one man stands at the bow of the boat, holding the mainshaft and extension cord in one hand. When he sights a turtle, he propels the mainshaft at the animal's carapace, retaining a firm grip on the mainshaft and the extension cord. If it is struck, the turtle lurches away, loosening the foreshaft and unplugging it from the mainshaft. Tired eventually by the tension applied by the fisherman on the extension cord, the turtle is finally stunned by a wooden club and lifted into the boat.

There is evidence that the turtle-fishing complex has considerable time depth and stability. The Seri were using similar apparatus and methods at least as early as 1825 (Hardy 1829: 296-297). At this time they employed balsa boats rather than wooden boats with outboard motors and torches of cactus fibers instead of kerosene lamps. The complex continued, apparently with little change, through 1896 (McGee 1898: 187-193). Wooden boats and kerosene lamps began to be adopted during the 1920s, and outboard motors were introduced in the 1940s.

During the entire period of 135 years (1825-1960), however, the harpoon tackle underwent only one important innovation. The gasket on the foreshaft was introduced by a Seri Indian about the year 1935. The addition of the gasket was related to, and coincided in time with, the first attempts of the Seri to supply turtles to the commercial market. When they caught turtles solely for their own use, they did not need to keep the animals alive for very long, but when they began to sell them it became important to preserve them alive until they reached the market. The gasket acts like the hilt on a sword, preventing the entrance of the foreshaft hafting into the turtle's body. Through its contact with the carapace, it restricts the rotation of the point within the animal's body and provides a seal which inhibits the loss of blood, and thus prevents early death. After the turtle is stunned with a club and lifted into the boat, the foreshaft is removed and the hole which it made is stuffed with a piece of cloth.

Seri men were shown a harpoon foreshaft from a museum archive and asked what it was for and whether they themselves made similar ones. If an informant acknowledged that he made them, he was asked, at the minimum, to detail the materials he used, the procedures he followed, and the approximate amount of time it would take him to produce one. Later he was requested to show the field worker examples of the foreshafts he had made. Of the approximately 40 adult Seri males, about 25 were available for questioning. Of these, approximately ten did not make foreshafts or had made them in the past but did so no longer; they were mainly older men and those engaged in the administration of the Sociedad Cooperative de Produccion Pesquera Seri. Five men either would not or could not volunteer information. Data were obtained from the remaining ten adult men and from one eight-year-old boy; they include 21 foreshafts made by these eleven people.

The materials from which a foreshaft can be shaped and assembled vary within what is available in the Seri environment. Iron

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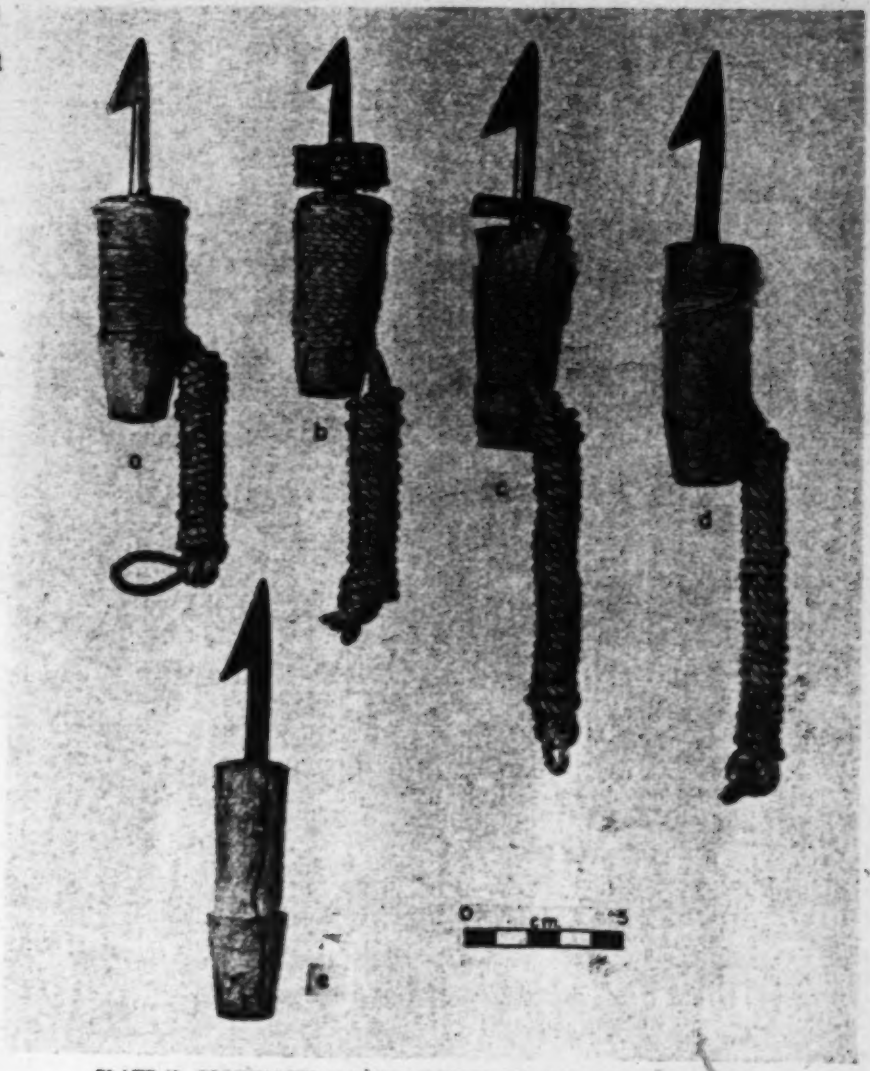

PLATE II: FORESHAFTS MANUFACTURED BY ONE SERI FISHERMAN, FRANCISCO BARNETT

(see Table 1 for specifications)

[Table 1 is on page 367, category 116.- Analyst]

[Facing page 365]

8: Ascher E-5 (1960) 1962 NU31 Seri NU31

for the point may come from the transmission of an abandoned car or from flotsam. The wood for the hafting can be mesquite or ironwood, both indigenous in the area; waste from boat construction or other scraps of wood may also be used. Rubber for the gasket may be obtained from a worn automobile tire. The wrapping cord and lead cord are store bought, and mesquite gum is used to seal the hafting.

In manufacturing foreshafts Seri fishermen use three tools: a knife, a hacksaw blade, and a triangular file. The hacksaw blade is used to cut an appropriate length of metal for the point and to rough out the barb; the triangular file is employed to finish the point barb and stem; the tang of the file is used to puncture the hole in the gasket which is to receive the point. The shaping of the hafting and gasket, and the cutting and wrapping of the lead cords, are accomplished with a knife.

With regard to the method of manufacture, all fishermen report essentially the same procedure. They describe the pattern as a series of steps under two headings: (1) shaping and (2) assembling. Two individuals did not mention steps 1c and 2b, and the others considered these two steps to be optional.

1) Shaping
   a) Shaping the metal into a point
   b) Shaping the wood for hafting the point
      α) Shaping the general form
      β) Splitting the form lengthwise and grooving each half to receive the point (see section in Figure 1)
   c) Shaping the rubber for the gasket

2) Assembling
   a) Placing the mesquite gum in the grooved portions of each half of the hafting (see section in Figure 1)
   b) Placing the gasket on the point
   c) Inserting the point base into the hafting and reuniting the split hafting form
   d) Wrapping with the wrapping cord and with it interweaving the lead cord
   e) Refinishing the hafting base to fit the mainshaft socket

Four men were able to explain the foregoing procedure in detail and were in agreement in the following matters. The point is shaped before the hafting because its length determines the length of the latter, and because the diameter of the point base dictates the grooving of the haft. The gasket is shaped after the point and the hafting because the diameter of its hole is determined by that of the point base and its total diameter by that of the hafting. The mesquite gum then secures the point and seals the hafting. Interweaving the lead cord with the wrapping cord secures the former to the hafting.

The amount of time required to complete a foreshaft shows marked variation. This is not primarily a function of the working habits of the artisan. If all the materials are present, the time it takes to make a foreshaft ranges from four to eight hours, but if all the materials are not available, as much as a year may be required. There may, for example, be a considerable lapse of time between the shaping of a point and the shaping of a gasket when material for the

8: Ascher E-5 (1960) 1962 NU31 Seri NU31

gasket is not available. If a Seri needs a foreshaft for immediate use he can dispense with the gasket, but all the other materials are necessary to make the tool functional. As a result, a Seri may have one or several foreshafts in the same or in different stages of manufacture (see Plate II),[2] and he may also have a number of shaped or unshaped points or pieces of metal but few finished foreshafts.

If an archeologist were to excavate the remains of contemporary Seri culture at some time in the future his observational field would be limited to the results of behavior. Under ideal conditions, the data available to him for reconstructing the turtle fishing complex might include foreshafts, the materials from which and implements with which they were manufactured, and turtle carapaces.

All 21 finished foreshafts (Plate I)[1] exhibit an obvious general similarity despite the fact that they range in age from one to eight years. Twenty of them have a single barbed point. Plate II[2] illustrates the general shape of the hafting, the place where the hafting has been split, a mesquite gum sealing, and a refinished hafting base—a combination of features that is exhibited in all 21 foreshafts. The manner in which the lead cord is interwoven with the extension cord is similar in all foreshafts except those in which either cord has been repaired. In nineteen cases (excluding one very long and one very short point), the length of the point beyond the hafting ranges from 4.4 to 6.1 cm. With three exceptions (one long and two short) the length of the hafting ranges from 5.8 to 7.8 cm. In all but two examples the hafting is longer than the point. The difference in length between the hafting and the point above the hafting varies within a range of 0.1 to 3 cm. Thus, with the exceptions noted, the maximal variation with respect to these measurements is small—1.7 cm. for the length of the point above the hafting, 2 cm. for the length of the hafting, and 3 cm. for the difference in length between the hafting and the point above the hafting (see Table 1).[3]

Examination of the three available sets of foreshafts produced by single individuals reveals a smaller range of variation within each set than within the entire collection. In four foreshafts of Juan Moreno the length of the point above the hafting ranges from 4.9 to 5.2 cm., and the length of the hafting from 6.1 to 6.7 cm. The sets produced by Francisco Barnett (see Plate II)[2] and by Miguel Barnett show a comparable restriction in the range of variation. A comparison of the three sets, however, shows that their measurements are similar enough to each other to provide little basis for distinction. The range in length of the haftings of Juan Moreno (6.1 to 6.7 cm.), for example, overlaps that of the haftings made by Francisco Barnett (6.4 to 7.7 cm.).

Variety in the 21 finished products taken as a group, other than that due to differential age and use, is most evident in one particular respect: eight of them lack a gasket. Each owner of foreshafts without gaskets was asked to explain this absence. Two could not or would not give an explanation; five replied that rubber was not available; and one man, Ignacio Molina, stated that he omitted a gasket be-

[1] [facing p. 364] [2] [facing p. 365] [3] [page 367]

8: Ascher E-5 (1960) 1962 NU31 Seri NU31

TABLE 1
Foreshaft Specifications

411 ●
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Manufacturer	Plate Reference	Approx. Age of Artifact	Length of Hafting (Centimeters)	Length of Point (Centimeters)
Ernesto Dias	Ia	2	6.5	5.3
José Estorga	Ib	6	6.5	5.6
Francisco Garcia	Ic	4	6.5	5.8
Alberto Morales	Id	5	5.8	5.7
Ignacio Molina	Ie	3	8.7	11.5
Louis Moreno	If	3	7.8	4.8
Ramon Perrales	Ig	3	7.0	4.4
Francisco Barnett	IIa	1	6.8	5.2
	IIb	2	6.4	5.3
	IIc	2	6.8	5.9
	IId	2	7.3	6.1
	IIe	–	7.7	5.8
Miguel Barnett		3	7.8	5.0
		3	6.0	4.9
		5	6.1	4.5
Ernesto Corrales		1	3.1	2.8
(8-year old boy)		1	3.0	4.2
Juan Moreno		7	6.5	5.0
		7	6.7	4.9
		8	6.7	5.2
		7	6.1	5.1

cause he did not believe it would help retard death. This man, interestingly enough, is the nephew of Alberto Molina, whom the Seri believe responsible for having introduced the gasket. The foreshaft produced by Ignacio (Plate Ie) is the most divergent one in the entire collection. It is, for example, the only one in which the point has two barbs and, except for those made by the eight-year-old boy, the only one in which the length of the point above the hafting exceeds that of the hafting. The finished products also show some variation in the source of the rubber used for the gasket and in the kind of wood used for the hafting. Six of the eight gaskets are shaped from an automobile tire, two from scraps of rubber of which the men did not recall the source. Three haftings (Plate Ia, d, g) are made of ironwood, all the others of mesquite, which is easier to obtain than suitable ironwood or nonindigenous woods.

[196]

Discussion

The foregoing example is designed as a paradigm to illustrate how observations on ongoing cultures might be adapted to the problems of archeological reconstruction. It is, of course, imperative to focus on behavior where matter is changed in some way, because it is only in altered matter that behavior is protracted through time. The example is deliberately selected to capitalize on an important area

121

262 178 I have no idea, of course, what the diet may have been in the past since only archaeology can suggest the answer. But I am sure that there has been much change in their diet since Kroeber saw them, not in the basic pattern but in the composition. With the introduction of hook and line [177] fishing, the percentages swung in favor of fish, [226] while decimation of the marine turtle cut down the importance of this animal. Simultaneously, 262 the Seris now have available manufactured or [177] imported Mexican food items: flour, sugar, rice, [439] potato (when no one is looking; potatoes are not supposed to be sold to them because they make *tepache* from them which makes them grossly ½ fish in cans, coffee and tea. Dependence on the products of the desert has dwindled. Rattlesnakes, desert turtles and chuckawalla still find their way to the Seri kitchen but not too frequently. Pelican and sea gull will be eaten only when rough times beset them but are disdainfully refused at other times. My own estimates, impressions not supported by any attempt to measure their diet, are as follows:

fish	50+%
turtle	8
Mexican import	20
desert plant	7
desert land animals incl. stock	5
shellfish	10
total marine origin	68+
total desert origin	12
imported origin	20

224 178 [685] Another important change in the pattern is the unquestionable decrease of hunting (other than marine animals) in Seri life, as of the domestic stock stealing, the place of which has been taken in a way by the dependence on manufactured foods and items. Hunting nowadays is done rarely and only few individuals will devote some months out of the year to it. Stealing of domestic stock [685] has ceased for practical purposes, since in the past it lead to virtual extermination of these Indians. Occasionally the Seri kill off a semi-wild burro, herds of which run about loose in the desert or they'll get leavings off one, hunted down by a Mexican trader or fishermen.

●411 224 [857] The Seris' basic tools of game procurement have changed. Bow and arrow were still much in evidence and in use in McGee's time but seem to have gone out soon after. Kroeber did not mention them and by now they are quite extinct, except as clumsy toys little boys use to play with. The throwing stick is still used on rabbits—any stick one can scrounge on a moment's notice will do for the purpose. If any traps or falls had been used we do not know of them. Accidental stones may be used much in the same way as throwing sticks. In general, various sorts of fire arms, mostly .22 and .38 [177] caliber are owned by a good many Seri men and have replaced other weapons in the terrestrial hunt.

226 411 177 More important are changes in the fishing procedures. Formerly spear and detachable harpoon were their only marine weapons. Even as late as 1930, during Kroeber's visit, the Seris made no use of hook and line. But now, hook and line of

[P. 7A]

[apparently a line of type has been omitted here-Analyst]

226 411 177 commercial origin are their main instruments of fishing. To this they added dynamite, sometimes with disastrous results to themselves, mostly as a way of securing bait. Single-pointed fish-spears which loomed so importantly in McGee's account have gone the way of the Dodo for its original purpose and transformed into iron bar lances, now used largely as weapons against rattlesnakes that men encounter in their desert roamings. However, in the forties, when the Seris spent a great deal of time getting sharks and huge rays, they killed them with these weapons.

226 411 What retain some importance are the harpoon and the two-pronged spear called "puiero." The two-pronged spear is one of their oldest weapons. The construction is much the same as when McGee visited them. The spear is used mainly to stab large-size fish, the giant *bais* or *mero* for example, after it has been brought up on the line. The harpoon is now exclusively a weapon for the turtle [225] hunt.

226 177 [157] An interesting fate met an effort to teach these Indians net fishing in 1947. They tried, ruined the nets and never took it up since. The instigators were Mexicans, the fish traders. I suspect that Seri individualism had a great deal to do with their lack of interest in net fishing which after all demands a certain amount of cooperation. With the hook and line fishing, men can have much more their own way.

501 177 648 An added "tool" of the Seris is the plank boat. The balsa which McGee still observed during his visit, had already vanished by the time Kroeber came to the Seriland and had been replaced by these boats. The boats are flat bottomed but good sized. The material was provided by the Mexican government. Boats are usually propelled by 5 hp. motors leased from the Mexicans (no Seri is rich enough to purchase [439] one) who also sell them gasoline and oil at exorbitant prices and in return buy Seris' catch of fish and sea turtle for low prices. At the time of my visits these amounted roughly to less than a peso [435] per kilo of the flayed, degutted and cleaned fish (less than 8 cents) with fluctuation up and down the scale depending on the kind of the fish, and to about 30-50 pesos for medium to large size "cahuama," the live marine turtle.

501 648 The Seri boats are also propelled by paddles and sail—this is always the case with the families who wish to stay away on Tiburon for some time. The Mexicans will not lease them their motors for such trips even if the Seri, some of them at least, have enough knowledge of the motors to repair minor stoppages—a demonstration of the fallacy [114] of McGee's idea that they are genetically unable to handle tools. In this respect, Kroeber's (1930: 25) estimate of them is closer to the truth.

462 Sexual division of labor in procuring food goes on, much the same as it had 70 and 30 years ago, with the sole exception of the imported goods. [439] Here purchases are made either by men or women or by children, depending on who at the time has the cash and what one wishes to buy.

Fishing is still done by men and so is hunting. Women still concentrate on gathering, whether of

9:Malkin E-5 (1953-1955)1962 NU31 Seri NU31

III

MAMMALS

262 water for a week until it escaped. There was
[231] no intent to do away with it and serve it up for dinner later on.

The 3 species reported as eaten in the past are kangaroo rat, sea lion and the ringtail cat or
[252] cácomistle. Of these the little rodent had been supposedly "boiled in hot water with salt" which
[261] method of preparation may indicate that it happens quite recently yet. It is quite possible that in times of famine this animal is still used. The sea
[432] lion has been reported as "eaten once a long time ago. All of it. But not now. Its hide was once sold also but now it isn't used at all." This conflicts
[114] with McGee's statement (McGee, 189:202) that there was a taboo on eating sea lions among the Seris and there is no way to reconcile the information.

[114] McGee's report may be as truthful as are the uncertain and hazy comments of the present day Indians.

224 On the other hand, the cougar belongs to a very dubious category, unless we can rely on Miguel Barnett's memory. All 4 of the younger informants emphatically deny that the cougar has ever been hunted for meat. But Miguel Barnett claimed that this has been done in the past, although he could not tell how long ago. Kroeber says nothing about this animal and this makes it difficult to date the events. At the time of Kroeber's visit, Miguel was at least 25 years old and the cougar could have been hunted either
[262] then or earlier. But today the Seris do not eat the flesh of the big cat and their abhorrence of it has been confirmed by the Mexicans to whom I talked about the subject, and who relish cougars' meat. This apparent distaste for the *el tigre's* flesh may
[178] well be a recent development quite unconnected with the lack of weapons. McGee (1894: *loc. cit.*) casually mentions that the Seris hunt both cougars
[411] and the jaguars but cites no evidence for it. Yet in his time Seris' almost only weapons were the
[177] bow and arrow and a lance which today has been replaced by firearms. I am unable to explain this contradictory behaviour.

262 Finally, there is the Ringtail cat or cácomistle. Although this beast has been reported as part of the diet, the information isn't too reliable. I had
[124] no way of checking whether this was the animal the Indians had in mind. Their description of it seemed to answer some other unspecified animal and their answers were confused. The fact is that the Ringtail cat does occur in the Seri territory and they are surely familiar with it.

Of the remaining 11 species none were ever mentioned by any of the informants as having been ever eaten. Their denial of eating the coyotes were most vehement. Coyote figures out probably

[P.98]

287 On the other hand, the hides of all of these three animals had been traded off to the Mexicans, [439] but this again was now discarded. This would [182] merely indicate the fluctuation of collapse of the demand from the outside rather than any intrinsic change in the Seri values.

Incidental use of the horns of the bighorn had been denied by all of the younger informants although admitted by Miguel Barnett. However, as I observed, the horns of this sheep are sometimes [415] used as drinking cups. Several of them were [181] lying around in the usual disorderly way of the Seris, now and then picked up for drinking and then again discarded. But the use of them struck me as most casual.

224 *Hunting:* Hunting takes a variety of forms and includes a variety of weapons, from .22 cali- ●411 ber and .30/.30 caliber rifles to spear, stone and throwing stick. Bighorn and deer are followed on foot but without dogs, probably because without dogs they may be easier to surprise. This hunt takes place in daytime. But the peccary is hunted with both the spear and the rifle and with a pack [231] of dogs, and only by the adult men. There is an [885] emphasis on the "adult," this surely owing to the certain amount of danger connected with the chase of the peccaries. The weapons of the chase dwindle to the throwing stick or a stone when it comes to the jackrabbit. Badgers, I was told, are also killed with the same weapons. But formerly, the informants said, bow and arrow was much instrumental in hunting the smaller beasts.

* 825 Other animals, according to the Seris, are not [224] hunted now, nor had they been in the past. Justification for this ranged from the usual "because it isn't done" to the more specific reasons. The skunk is "neither hunted nor eaten because it [225] stinks." The whale is considered "too big to kill" while the killer whale is "too fierce." The harmless *tonita* (dolphin)[1] was reported somewhat hazily as "sometimes killed" but the comments were inconclusive and were denied by other informants.

[224] Two other species had been reported as hunted in the past but not at the present time. The Ringtail cat was supposedly hunted with the slings while the sea lion was hunted down "with a rifle [225] or rock but not with the harpoon because of its great strength, it would break the harpoon." This, however, was "perhaps 25 years ago." Why the sea lion is no longer pursued is uncertain, unless there is again a lack of demand from the outside while the Serian economy is so much centered on fishing.

231 *Pets:* How many species of animals are kept as pets on and off is difficult to say. Like most hunting and gathering groups the Seris are fond of pets but their interest in them depends entirely on an accidental capture. Among the wild mammals of the region there are few that could be captured and tamed easily. The badger which I mentioned already was the only mammal I saw

[237] [1] I have seen bones of beached whales used for stools and [352] also the skull of the *tonita* used as a chair. But it must be remembered that these animals got stranded on the beach. They were not deliberately hunted down.

[P. 10 B]

1/2 [i.e - deer, bighorn and peccary - Analyst]

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262 pelicans are not; they are regarded as "bad food," unfit for eating. No further explanation has been offered here and it might be that the same sort of prejudice works here as in the case of the adult birds. Otherwise, reasons for rejecting eggs for food are probably a matter of mere customary attitude without any particular rationalization. In a few instances, the dove being one example, the eggs were said to have been rejected because they were "too small to bother."

237 291 Other economic uses made of the birds are extremely few. At one time, the pelican skins were used for clothing and, in fact, in McGee's time they represented, perhaps, the most important item of clothing for the Seris, having been worn in shape of wrap-around robes, usually covering the lower part of the body. Moreno reported these robes as still in use "30 years ago or more," in the early twenties, but in Kroeber's time these [177] robes were already discarded in favor of the European garment. The Seri, nevertheless, still preserve skins of these birds—the white pelican, [439] larger of the two, always had been favored here—and occasionally sell them to the visitors. Another 237 use made of the feather is in the arrows. The ● 411 cormorants, heron and the owls had been especially mentioned in this connection. But it is certain that they were not the only birds so exploited and also that this particular use went out of business along with the disappearance of the bow and arrow as the principal weapons. The use of feather for arrows may well continue into the present in a somewhat degraded form. The Seri boys play a [857] great deal with bows and arrows, shooting them at any moving available target. They'll pick up any available feathers.

Pets

231 Somewhat desultory use is made of birds as pets. During my visit I have seen doves and an egret kept in houses as pets by the adults and fed quite frequently. The number and variety of birds which may become pets in households may well * 825 be larger. Pelicans and sea-gulls are less fortun- 857 ate. They are often shot at and over-powered by the boys. But instead of taking them to the households, the boys stage games, shooting them at point blank from bows and arrows and pea- shooters. These somewhat bloody executions take place almost every day. The pattern is the same. Only the subject of the game changes, depending on the available species of bird or animal.

Hunting

223 It is hard to speak of hunting in connection with birds, because there is so little effort made to go out and get them. The main exception is the duck and this, as I already mentioned, is hunted on Isla Patos and clobbered at night with sticks and stones in great numbers. This is one of the few instances in which the Seris will go out of their way to get a bird. Sea-gulls and cormorants and, more rarely, pelicans are dispatched by pea- [411] shooter (stone), sticks, small clubs and, on occasion, with a shot from a .22 caliber rifle.

[P.18A]

262 them to their shelter and held them there for several days before they and their families finally ate them up. The turtles are also a well-liked item.

As already indicated in some instances there exists preference for a particular part of an animal. Of the Gila monster only the fat tail was said to have been eaten, and of both rattlers, the head and the tail are discarded on the grounds * [825] that they contain toxin. Finally the toad and the gecko and *Xantusia* are all rejected as completely venomous.

178 262 It is also evident that changes in the Seri taste have occured in the course of the past several decades. Some animals are on their way out as food, and here we have the Gila monster, the whipcoach, the red racer and smaller lizards. In several cases, and this includes the Gila monster, the responses indicated that the animal had been eaten in the past. I also observed that on the sly, the Seris would eat them when other food was in short order. But they are reluctant to admit this and often altogether denied it.

Hunting

224 [225] Most reptiles are captured by hand or else killed with a stick, stone or pea-shooter. Except for the turtles, the Seris will not make special expeditions. But it is certain that if they find themselves on any of the islands near the shores of Baja California they will go ashore deliberately in search of the chuckawalla.

225 The turtles are another matter. Here now, just as in the past, special expeditions are made in order to get them. These expeditions take place [501] nowadays in the usual flat-bottomed plank boats, either motor or oar propelled. The hunt takes place only during unusually quiet and dark nights, when the Gulf is smooth and calm and there is neither wind nor ripple. With the slightest disturbance, [354] turtle fishing is imposible. It is all done with the torch lights or Coleman lanterns. The principal • [411] and only weapon is the harpoon, identical with that described and illustrated by McGee. The turtles are then harpooned, dragged into the boat and either left alive, when the hunters have a sale of live ones in mind, or pounded to death with a [251] club or oar, quartered and then either consumed on the spot or else dried and salted.[10]

[224] [462] While the collecting of the smaller animals usually falls to the children or women, turtle hunting is men's job. Men, too, usually get the chuckawalla because they usually visit more distant islands.

Pets

231 None of the reptiles are pets in a real sense. Those few that might be kept are only held until the day when they are butchered and eaten. It is motivated more by the wish to preserve fresh food than by any affection for the animal. The turtles, the tortoises and the chuckawalla belong here. Occasionally a Seri boy will string a lizard, a *Scel-*

[10] The loggerhead is hunted in the daytime because, owing to its great strength, night hunt would be too dangerous. Two harpoons are always used on it, while for the smaller species, one harpoon usually suffices.

[P.23B]

226 177 and, from all accounts, also from the Japanese whose trawlers worked in the Gulf in the late 1930's. Today, hook and line fishing from plank boats almost completely replaces earlier methods, [411] the spear (pueiro) and the harpoon (barilla). [225] Harpooning is still done in hunting marine turtles while spears are occasionally used on larger groupers and also on sharks and mantas. Harpoons were also used in connection with the latter. But since World War II the shark fishing has declined, owing to the development of synthetic vitamins and abandonment of sharks and mantas' liver oil as a source of vitamins. In these operations, the Seris were for a while involved to a considerable extent. But now they have completely switched to commercial fishing which supplies not only food but also ready-made cash from [439] the Mexican traders, and with it the Seris can purchase luxuries of life in the Mexican *tienda*.

262 Altogether, out of 42 species listed here, the Seris reported taking for food 20 species which are as follows:

Malacosteuus zonifer
Firella simplicidens
Anisostremus davidsoni
Paralabrax maculofasciatus
Lythrulon flavigutlatus
Mugil sp.
Cynoscion parvipinnis
Anchovia macrolepidota
Bairdiella icistius
Stereolepis gigas
Mycteroperca jordani
Cynoscior macdonaldi
Epinephalus analogus
???? (Pescara)
Trachinotus paitensis
Verrugulus polylepsis
Gymnothorax castaneus
Hypsoblennis gentilis rickettsi
Abudefduf saxatilis

The most important of these are the groupers, the *baya, pinto, totuava* and *mero*—the latter a giant fish often in excess of 150 kg. and nearly three meters long. The most important of these is the *baya*, a medium size fish taken daily in vary- [226] ing amounts. I suspect that this fish accounts for more than half or maybe even 2 3 of the total Seri catch, weight-wise. Of others, none is of any importance except seasonally.

* 825 Another sort of use is made of the sharks and mantas in connection with the already mentioned exploitation for liver. Five species of sharks and the horned manta were listed by the Seris, with *chata, gato* and *composo* most frequent and perhaps most important.

Trading, as already mentioned, is of consider- able importance to the Seris. Some fish are eaten [439] only occasionally, but they may be traded off to the Mexicans.

262 Not all fish are eaten. In most cases no particular explanation had been offered for the rejection. But, in some, specific reasons were mentioned. The *Scorpaena sonorae* and *Cetengraulis mysticetus* are so rejected because they "are too bony to eat." *Gillichthys seta* are considered unfit to eat because of its tiny size while *Sphoeroides annulatus* is refused because of its supposed toxicity, of which more later. Finally, the sharks are not eat-

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VIII

CRUSTACEA

Scientific	Common Name
Cirripedia	Barnacle
Axius vivesi	Mud-shrimp
Leptodius occidentalis	
Microphyrus platicoma	
Speleophorus schmitti	
Petrolisthus armatus	
Callinectes arcuatus	
Glyptoxanthus meandricus	
Pilumnus townsendi	

All animals in this group are considered live animals—and not plants. This interestingly includes the barnacle. The only way one may account for this is probably the Seris' observation of the cracked barnacles and of the moving flesh inside. Barnacles growing on the marine turtles are also classed as animals, though of a different kind than the barnacles growing on rocks or on the mangroves. They are called *piojos de caàuama*, literally, turtle lice.

The Seris regard *Glyptoxanthus* and *Pilumnus* as the same kind of animal. *Pilumnus* is considered to be merely a large specimen and "maybe an adult," the other *Pilumnus* "is young." When questioned about the reason for the identity the informants pointed out the hairiness of both crabs.

On the other hand, although *Spelenophorus* and *Microphyrus* have the same Seri name, they are considered two different species.

Economy

Crustaceans play little role in the Seri diet. Very few are eaten at all and when they are, the amounts are insignificant and they are considered an inferior sort of food. The informants denied that they have eaten any of them in recent years, but allowed that two species, *Callinectes* and *Axius*, had been part of their diet in the past, although how long ago they didn't specify. There is no doubt, however, that in time of frequent sub-famines, the Indians resort to these lowly creatures.

In addition to this, *Microphyrus* had been mentioned as a fish bait. It is possible that in a pinch other forms are also so used. Finally, the most frequent function that the crustaceans play in the Seri life is as objects of play for the boys who spear them with the miniature two-pronged "pulleros."

Sexing

For three species of the crustaceans the Seris indicated distinction differences between the sexes. In the two crabs, *Callinectes* and *Leptodius*, the males have narrow center plate while the female's center plate is wide, which in fact is a well-known sex difference in crab. In *Glyptoxanthus* and *Lep-*

123 handed to show their friendliness.

142 One was a young man with rather pleasant features, his braided
291 hair hanging below his shoulders. His name was Antonio Herrera. The
123 other was a wild-looking specimen called Ramon Blanco. His hair was a
[302] tangled mat with a short braid behind, suspicious black piercing eyes,
long sparse moustache and chin-beard hiding a broad cruel mouth. He
[411] wore the remnants of an old sweater, a short dirty kilt, or skirt,
nearly to his knees, a belt full of cartridges, mostly empty, and a
long knife in a rawhide scabbard.

123 The young man had been baptized and given a name by Roberto, who
[795] had acted as godfather or *patrona*, many years ago. He wore a hat,
[291] jacket, and pants of blue denim, and *guaraches*, or sandals of rawhide.

We shook hands all around and then they called and halloed in the brush and soon three women and a lot of children, wild and half-
[415] clothed, filed into camp. The women were tall, gaunt, unkempt, ragged
[482] and barefooted, paying us not the slightest notice. They were bearing
[422] on their heads large baskets filled with all their earthly possess-
[854] sions---cooking ollas, scraps of cloth, pieces of turtle meat, bone
[231] brads, hair brushes, and odds and ends. They carried, also, an infant or two wrapped in odd bits of rags. Several gaunt dogs followed in their wake.

342 In all, three families came trailing in, removed their household
[592] equipment from their heads and resumed their interrupted and primitive housekeeping. Each family occupied its apartment in the row of brush shelters, separated from each other only by brush partitions with a total lack of privacy. These shelters, always open to the sea, serve as shade from the fierce rays of the sun, and also as windbreaks, but
[361] are no protection from infrequent rains. They are occupied only for a brief period and then their nomadic tenants move on to fresh *cahuana*, or sea turtle range.

123 Soon, a third man arrived while we were near the huts, Manuel
[42] Encina. He was a man of sixty-five, gray hair and mustache, seamed features, and not evil looking. He was out of breath. He had gone for water to the same water hole where we had been yesterday, struck our tracks, had left his water cans and hurried back to warn his people. He was greatly relieved to find friends.

Since he had gone for water, inquiry revealed there had been no water in camp for two days, and six adults and one girl of thirteen and six children were thirsty. We gladly gave them one of our five-
[225] gallon cans of water and they were very grateful. They had caught a
[262] sea turtle the day before and gave us some turtle steaks which looked like beef or mutton.

312 As the camp was without water and we were running short, the young
402 man and Encina offered to get some. Each took a *palanca*, or short
123 shoulder pole with knotched ends, fitted empty five-gallon cans in

10: Davis E-5 (1922-ca. 1939) 1965 NU31 Ser. NU31

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Poised for harpooning sea turtles off Tiburon Island - 1936

[302]
[142]
[136]

The catch

262 The Seris also eat the fruit of the *cholla* cactus, *pitahalla* and *sag-*
222 *uaro*, and probably many other plants in season, but they are wild to get flour. But the principal diet is *cahuama*, or sea turtle.

225 After a day or so with the Seris, their food supply became exhaust-
123 ed and they made arrangements to take our boat (all they had was a
[177] *balsa*) and get a sea turtle. So at four o'clock in the morning, with Roberto and Nene, his brother, and myself, they shoved off for the fishing ground. It took two hours of hard rowing to reach the Sonora
[33] side, as the tide was racing up the *Infernillo*. Most of the waters are shallow, with patches of dark and light sandy bottom, with seaweed or grass. On this green grass the turtle feeds; it is their alfalfa field, and it takes a keen-practised eye to see a turtle at the bottom and harpoon him before he escapes.

225 Once on the hunting ground, water, one of the Seris stood in the
[141] bow with a harpoon twenty feet long, a detachable barb on the end of it, and a heavy line attached. The Seri in the bow motioned with his hand this way or that, slow or fast, and watched the bottom. At last he plunged his spear and withdrew the pole. The turtle swam awhile
[141] until exhausted, and then he was drawn alongside, his head pounded with an ironwood club, and then he was turned on his back and drawn on board. This called for great skill in balancing the cranky, smooth-bottomed boat to keep it from shipping a wave.

225 When a Seri goes in his native *balsa*, which only holds one man, he
501 straddles the middle part on his knees, resting them on seaweed. The craft is light and is a good sea craft, but it is low in the water and the man is wet all the time. He uses a double-bladed paddle, and his harpoon rests against pegs set in the *carrizos*. A rock which serves to quiet the turtle, two pointed stakes and a heavy fish line complete the equipment. He has to paddle across to the other side in that cramped position, say eight or ten miles, very early in the morning, then watch his chance to harpoon. If successful he brings up the turtle, knocks him on the head with the rock, pulls him on the end of the craft by skillful manipulation, cut slots in the front flippers, put stakes through and into the *carriso*, pinning him firmly in place, then paddle back.

225 The wind came up strong when we started to return from our turtle
123 hunt and with wind and tide against us we rowed across the Island. Bob and his brother disembarked and took it afoot for camp, a distance of ten miles, reaching there at two p.m. The Seris made a tump line and towed the boat, one towing and two warping off-shore until we arrived at camp about four p.m.

When the bow was run up on the shore everybody came down, the women and children talking a steady stream in their strange jargon.
123 They soon jerked the heavy turtle out, dragged him up the beach on
262 his back, and began immediately to cut him up. Bob spoke for the breast, which is a white plate on the underside of the turtle with

[text continues on p. 168]

10: Davis E-5 (1922-ca.1939) 1965 NU31 Seri NU31

411
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516

Fastening feathers on arrows with stone held tight in his teeth.
1929

[283]

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Santo Blanco and Edward H. Davis - this hombre gambled away his only shirt - Seneca - 1939

854
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482
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Seri method of carrying infant

622 Thus passed a very striking character among the primitive races of Sonora, Mexico. He was brave and fearless in battle; crafty, cautious, and cunning in attack; cruel and merciless to his enemies. He was rarely caught off his guard, and always managed to extricate himself and his men from difficult situations. He was quick to think and act, and was wise with the wisdom learned at first hand on desert and sea from a rugged nature, reluctant to give up her secrets. He was a master hand at balsa building, a good hunter, fisherman, harpooner of cahuama (sea turtle), a good surfman, a good gambler, and an expert tracker. It was not unusual to possess two or three wives, but the old Chief, while married three times, had only one wife at a time. He was quite fond of the writer, and used to greet him with the true Mexican abrazo.

It was in 1922 that I first met the grim old warrior on the shores of Tiburon, whither I had gone on a quest for the Museum of the American Indian, Heye Foundation, New York.

He was very dark, of medium height, thick set, with a broad, deep chest, very muscular, with shaggy brows and deep set eyes which, even at that age, ninety years, burned like coals of fire, and were suspicious and wary. He wore a braided pigtail down his back which contained a few gray hairs. For clothing, he wore a ragged shirt and an old pair of overalls, with a short kilt hanging from a belt, through which stuck a long naked knife of hoop iron, ground on abrasive rocks and keen as a razor.

From infancy to the grave, the freedom of his feet was never hampered by shoes. Even at that advanced age, and until his last illness, he was perfectly able to care for himself, and follow his nomadic tribe on its devious trails along the coast and far in the interior. A walk of a hundred miles was not unusual. For ten rifle cartridges a Seri Indian once walked forty or fifty miles to deliver my message to Juan Tomas. From the time we first met, our friendship was never broken.

BAND V

642 These people were apparently hunters, gatherers, and fishermen. It is said that they speared fish from the shore since they did not use *balsas*. They too apparently raided the ranches. Their warring nature has already been discussed; it resulted in the acquisition of few friends. However, several marriages between members of this band and members of subdivision 2 of Band III are said to have occurred.

BAND VI

The members of Band VI lived on San Esteban Island and were the most primitive of the tribe. They lived in huts made of driftwood and in caves and made extensive use of the *balsa*. Although they did not have the bow and arrow, they did become expert in the use of the spear. The people depended mainly on a seafood, iguana, and maguey diet.

621 Perhaps it was due to the confined living space on the small island with the accompanying lack of fresh water that relations between the four subdivisions were precarious and fights broke out frequently. The Seri today stress the fact that the members of this band were impetuous and unpredictable.

642 Their relations with the other bands were generally good however. Seri from Band III were free to visit San Esteban where they were well treated.

The San Esteban people seldom traveled to the mainland, and, since they spoke no Spanish, it is probable that they made no peaceful contact with non-Seri groups.

642 COLLAPSE OF THE BAND SYSTEM

628 Internal strife in the Seri tribe was probably a major factor 578 in the establishment of the band system. External strife was a 648 major factor in its downfall.

Reference has been made to the plundering, killings and rustling of cattle to which certain of the bands were dedicated. The concern of the Sonora government was aroused, and steps were taken to crush the rebellious groups. According to the present-day Seri, military action by army units and rancher outfits against the various bands resulted in the near-destruction of the whole tribe.[11]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

481 Examples of Seri fleetness and endurance might be multiplied indefinitely, and many of still more striking character might be adduced; but these instances, all attested by several witnesses, all corroborated by independent facts, and all consistent with the observations of the 1894 expedition, seem fairly to represent one aspect of the pedestrian habit of the tribe.

●412 A trait of the Seri hardly less conspicuous than their pedestrian habit is habitual use of hands and teeth in lieu of the implements characteristic of even the lowly culture found among most primitive tribes. Perhaps the most nearly universal implement is the knife—at first of shell, tooth, bone, or wood, later of stone, and last of metal—and hardly a primitive tribe known from direct observation or from relics has been found independent of this most serviceable implement; yet the Seri may be described with reasonable accuracy as a knifeless folk. Awls and marlinspikes of bone and wood, shell cups, and pro-
[172] tolithic mullers or hammers are found in numbers in their hands, on their rancheria sites, and in their ancient shell accumulations, while rudely chipped stone arrowp ints are sparsely scattered over their range; yet not a single knife of stone or other wrought substance has
[439] been found in their territory or in their possession, save for an occasional metal knife obtained by theft or barter. And the habit of dispensing with this primary implement is attested both by everyday customs and by the traditions and chronicles concerning the tribe. Thus, various observers (notably Hardy) have recorded the features and uses of balsas, harpoons, ollas, etc, yet no records of cutting implements have been found; similarly the chronicles contain records of
[439] barter between the Seri and the Sonorenses through which the savages acquired aguardiente, mantas, garments, sugar, grain, etc, yet no record is known of the leading articles of exchange to practically all other tribes of the continent, viz, cutlery; and in like manner the local traditions recount the constant desire of the Seri for liquor and tobacco, saccharine and other food substances, clothing or material for making it, tin cups, lard-cans, and other metallic utensils, as well as nails for harpoons and hoop-iron for arrowpoints, in addition to firearms and ammunition; yet the recounters are significantly silent on the subject of knives.

Conformably, the 60 Seri gathered near Costa Rica in 1894 made it their business to pick up or beg all sorts of industrial products and materials, yet apparently did not possess so many as a dozen knives in the entire band; and while protolithic implements, ollas, shell cups, paint-stones, etc., were seen in constant use, none of the men, women, or children were observed to use knives for cutting meat or for
264 any other customary purpose. Among the supplies laid on top of the jacal shown in plate X, to keep them out of the way of the dogs, was a hind leg of a horse, from femur to hoof (some three days dead and still

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

ripening); most of the larger muscles were already gnawed away, leaving loose ends of fiber and strings of tendon clinging to the bone, the condition being such that the remaining flesh might easily have been cut and scraped away by means of a knife; yet whenever a warrior or woman or youth hungered he or she took down the heavy joint, squatted or sat on the ground with back to one side of the doorway, held the mass at the height of the mouth, and gnawed, sucked, and swallowed, frequently tearing the tissue by twisting and backward jerks of the head, and not only masticating, but swallowing the free ends of tendons still attached to the bone. This process was varied only by seizing with the hands and tearing off a strip of flesh or skin already loosened by the teeth; and it was continued until the bones were practically clean, when they were wrenched apart by the stronger men in order that the cartilaginous cushions and epiphyses might be gnawed away. The only approach to cooking or carving was a parboiling of the foot, after the leg was wrenched off at the hock, until the hoof was sufficiently softened to be knocked off with the protolithic hupf[1] shown in plate XLIII, when half a dozen matrons and well-grown maidens gathered about to gnaw the gelatinous tissue (already softened by incipient decay as well as by the parboiling) investing the coffin bone. The entire procedure in this as in many other cases proclaimed the absence of knife-sense. The Caucasian huntsman does not have to think of his knife when game is to be bled or skinned or dissected; his habit-trained hand knows where to find the implement, how to seize it, and in most cases how to wield it advantageously; but the Seri hand possesses no such cunning, and uses the knife only clumsily and at second thought, if at all. The Seri huntsman, on the other hand, does not have to think of nails and teeth, for they are trained and coordinated by hereditary habit to spontaneously act in unison and with the utmost possible or needful vigor; while the Caucasian at least has completely lost the claw-and-teeth instinct of offense and defense.

Conformably with their striking independence of knives, the Seri are conspicuously unskilful in all mechanical operations involving the use of tools. Their most elaborate manufacture is the balsa, made from reeds broken at the butts and with the leaves and tops removed by the hands or by fire, bound together with hand-made cords; next in elaborateness come the bow and arrow, normally made without cutting tools; then follows their fictile ware, which is made wholly by hand, without aid of the simple molds and paddles and other devices used by neighboring tribes; while their primitive fabrics were apparently of hand-extracted fibers, twisted and woven wholly by hand, with the aid of wood or bone perforators in sewing and possibly in weaving. Practically the Seri possess but a single tool, and this is applied to a peculiarly wide variety of purposes—it is the originally natural cobble used for crushing bones and severing tendons, for grinding seeds and

[1] Defined postea, p. 180.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

412 rubbing face-paint, for bruising woody tissue to aid in breaking okatilla poles for house-frames or mesquite roots for harpoons (both afterward finished by firing), and on occasion for weapons; and this many-functioned tool is initially but a wave-worn pebble, is artificially shaped only by the wear of use, and is incontinently discarded when sharp edges are produced by use or fortuitous fracture. The hupf is supplemented chiefly by the simple perforator of mandible or bone or fire-hardened wood; and these two primitive implements, together with molluscan shells in natural condition, apparently serve as the primary tools for all the mechanical operations of the tribe.

726 The dearth of tools and the absence not only of knives but of knife-sense among the Seri illumine those traditions of Seri fighting made tangible by the teeth-torn arm of Jesus Omada; for they explain the alleged recourse of the Seri warriors to nature's weapons, used in the centripetal fashion characteristic of nascent intelligence.

186 The Seri are distinguished by another trait hardly less striking than the pedestrian habit, and even more conspicuous than the tooth-and-nail habit with the correlative absence of tool-sense; the trait is not tangible enough for ready definition or description in terms (of course because so unusual as not to have bred words for its expression), but is akin to—or, more properly, an exceeding intensification of—race-pride in all its protean manifestations; it may be called *race-sense*. Like other primitive folk, the Seri are self-centered (or egocentric) in individual thought, i. e., they habitually think of the extraneous phenomena of their little universe with reference to self, as in the labyrinth of consanguineal relationship extending and ramifying from the speaker; furthermore, they typify primitive culture in their collective thinking, which is tribe-centered (or ethnocentric), i. e., they view extraneous things, especially those of animate nature, with reference to the tribe, like all those lowly folk who denote themselves by the most dignified terms in their vocabulary and designate aliens by opprobrious epithets; but the Seri outpass most, if not all, other tribes in dignifying themselves and derogating contemporary aliens. Concordantly with this habitual sentiment, they glory in their strength and swiftness, and are inordinately proud of their fine figures and excessively vain of their luxuriant locks—indeed, they seem to exalt their own bodies and their own kind well toward, if not beyond, the verge of inchoate deification. The obverse of the same sentiment appears in the hereditary hate and horror of aliens attested by their history, by their persistent blood-thirst, and by the rigorous marriage regulations adapted to the maintenance of tribal purity; for just as their highest virtue is the shedding of alien blood, so is their blackest crime the transmission of their own blood into alien channels. The potency of the sentiment is established by the unparalleled isolation of the tribe after centuries of contact with Caucasians, by their irreducible love of native soil, by their implacable animosity toward invaders, and by

[826]

186 609

[648]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

386 prepared by trituration with a pebble or rubbing with the fingers, usually in a shell cup. Sometimes the shell used for the purpose is the [412] valve of a *Cardium*, which serves indiscriminately as cup, spoon, skin-scraper, etc; but preference is apparently given to thick and strong shells, such as the wave-worn valve of *Chama* (?), shown in plate XXVII, figure 7, which are consecrated to the use and eventually buried [764] with the user, together with a supply of the paint (like that illustrated in the cane cylinder—figure 4—which was a mortuary sacrifice). The gypsum is usually carried in natural slabs or other fragments, perhaps rounded by wear (plate XXVII, figures 6 and 8); it is prepared by wetting and rubbing two pieces together, the larger being reduced to metate shape by the operation. The dumortierite was observed only in the form of a pencil made by pulverizing the substance and mixing with sufficient clay to give consistency. The several pigments are 302 applied wet by means of human-hair brushes kept for the purpose, the process occupying from half an hour to three or four hours for the more elaborate designs. So far as observed at Costa Rica in 1894, the paints were mixed in water only; but since painting outfits found on [386] Tiburon island in 1895 were smeared with grease, it is probable that either water or fats may serve for menstrua, at the convenience of the artists. Commonly the process of painting is measurably cooperative. The matron usually depicts her device on the faces of her daughters [593] up to the age of 12 or 15 years, when they learn to make the applications themselves; and frequently two or more women (usually those [476] with similar devices) work together in preparing and applying the pigments, each laying the paint on her own face and apparently guiding her hand partly by the sense of feeling and partly by suggestions from her coworkers; but Candelaria and some other of the younger women at Costa Rica frequently worked alone, aided by a mirror in the form of a shallow bowl of water set in the shadow while the brilliant desert glare fell full on the face.

317 The mines yielding the pigments were not located. The geologic conditions are such that the ochers are undoubtedly abundant; but it is probable that the gypsum is uncommon and confined to a remote locality or two, and that the dumortierite is rare and scanty here as elsewhere. The care with which the paints are preserved, prepared, and 386 applied, the fact that they are indispensable feminine appurtenances 435 even on the longest journeys, and their sacred rôle in the mortuary customs, all combine to indicate that they are among the most highly prized possessions of the people and by far the most precious of their minerals.

The sematic functions of the designs are esoteric, yet an inkling of 302 their meaning was obtained through Mashém, the interpreter at Costa 614 Rica in 1894; from his expressions it appears that the designs are sacred insignia of totemic character, serving to denote the clans of which the tribe is composed. But three clans were identified, and

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

225 the turtle is either drowned or driven ashore, or else lifted on the craft.[1] Immediately on landing the quarry, the plastron is broken loose by
264 blows of the hapf[2] and torn off by vigorous wrenches of the warriors and their strong-taloned spouses in the impetuous fury of a fierce blood-craze like that of carnivorous beasts; the blood and entrails and all soft parts are at once devoured, and the firmer flesh follows at a rate depending on the antecedent hunger, both men and women crushing integument and tendon and bone with the hapf, tearing other tissues with teeth and nails, mouthing shreds from the shell, and gorging the whole ravenously if well ahungered, but stopping to singe and smoke or even half roast the larger pieces if nearer satiety.
[251] If the quarry is too large for immediate consumption and not too far from a rancheria the remnants (including head and flippers and shells) are hoisted to the top of the jacal immediately over the open end—the conventional Seri larder—to soften in the sun for hours or days; and on these tough and gamey tidbits the home-stayers, especially the youths, chew luxuriously whenever other occupations fail. In times of plenty, such sun-ripened fragments of rusking feasts are rather generally appropriated first to the children and afterward to the coyote-dogs; and it is a favorite pastime of the toddlers to gather about an inverted carapace on hands and knees, crowding their heads into its noisome depths, displacing the rare scavenger beetles and blowflies of this arid province, mumbling at the cartilaginous processes, and sucking and swallowing again and again the tendonous strings from the muscular attachments, until, overcome by fulness and rank effluvia, they fall asleep with their heads in the trough—to be stealthily nudged aside by the cringing curs attached to the rancheria. Com-

[1] A lively and explicit account of Seri turtle-fishing appears in Hardy's Travels in the Interior of Mexico, 1825, pp. 396-397: "Bruja's bay is of considerable extent, and there are from five to three fathoms water close to Arenal's island, in the neighborhood of which the Indians catch abundance of turtle in a singular manner. I have already described their canoes, which in Spanish are called 'balsas'. An Indian paddles himself from the shore on one of these by means of a long, slender pole of about 12 or 14 feet in length, the wood of which is the root of a thorn (*Mimosa*) mesquite, growing near the coast; and although the branches of this tree are extremely brittle, the underground roots are as pliable as whalebone and nearly as dark in color. At one end of this pole there is a hole an inch deep, into which is inserted another bit of wood, in shape like an oar, having a square bit of iron 4 inches long fastened to it, the other end of the iron being pointed. Both the half and cup are first moistened and then tightly inserted one within the other. Fastened to the iron is a cord of very considerable length, which is brought up along the pole, and both are held in the left hand of the Indian. So securely is the nail thus fixed in the pole that although the latter is used as a paddle it does not fall out.

225 "A turtle is a very lethargic animal, and may frequently be surprised in its watery slumbers. The balsa is placed nearly perpendicularly over one of these unsuspecting sleepers, when the fisherman, softly sliding the pole through the water in the direction of the animal till within a foot or two of it, he suddenly plunges the iron into its back. So sooner does the creature feel itself wounded than it swims hastily forward and endeavors to liberate itself. The slightest motion of the turtle displaces the iron point from the long pole, which would otherwise be inevitably broken and the turtle would as certainly be lost; but in the manner here described it is held by the cord fastened on to the iron which has penetrated its back till, after it has sufficiently exhausted its strength, it is hauled on board the canoe by the fisherman, who proceeds to the shore in order to dispose of his prize."

[410] [2] The universal stone implement of the Seri, improvised from a cobblestone and used in nearly every industrial occupation (see index, p. 256); the designation is seriatic, or commonpoetic, from the sound of the stroke, particularly on animal tissues.

1: McGee F-5 (1894-1895)1898 NU31 Seri NU31

vivacity awakened in the Seri bystanders by their spokesman's frequent interlocutions with them during the recital. Unfortunately the account was not clear as to the seasons selected, though the expressions indicated that the feasts are fixed for times at which the young are fully fledged. It would seem inconceivable that the Seri, with their insatiate appetite for eggs and tender young, should consciously respect a breeding time or establish a closed season to perpetuate any game; yet it is probable that the pelican is somehow protected in such wise that it is not only not exterminated or exiled, but actually fostered and cultivated. It is certain that the mythical Ancient of Pelicans is the chief creative deity of Seri legend, and its living representative the chief tutelary of one of the clans; it is certain, too, that this doubly fowl, sluggish and defenseless as it is on its sleeping grounds, would be the easiest source of Seri food if it were hunted indiscriminately; and it is no less certain that the omnivorous tribesmen would quickly extinguish the local stock if they were to make its kind, including eggs and young, their chief diet; yet it survives in literal thousands to patrol the waters of all Seriland in far-stretching files and vees seldom out of sight in suitable weather. On the whole, it would seem evident that an interadjustment has grown up between the tribesmen and their fish-eating tutelary during the centuries, whereby the fowl is protected, albeit subconsciously only, during the breeding seasons; and in view of other characteristics of the tribe it would seem equally evident that the protection is in some way effected by means of ceremonies and tabus. 223 [776]

Somewhat analogous, though apparently less ceremonial, expeditions are made to Isla l'atos and other points in search of ducks, and to Isla San Esteban, and still more distant islands in search of eggs (preferably near the hatching point) and nestlings; while the abundant waterfowl of the region are sought in Rada Ballena and other sheltered bays, as well as in such landlocked lagoons as those of l'unta Miguel and Punta Arena. This hunting involves the use of bows and arrows, though the archery of the tribe pertains rather to the chase of larger land game, and apparently attains its highest development in connection with warfare. No specialized fowling devices have been observed among the Seri; and their autonomous recitals, the facies of their artifacts, and the observed habits of the tribe (especially the youth) with respect to birds, all indicate that ordinary fowling holds a subordinate place in Seri craft—i. e., that it is a fortuitous and emergency avocation, rather than an organized art like turtle-fishing and water-carrying. Concordantly, culinary processes are not normally employed in connection with waterfowl, and the customary implements used for incising the skin and severing other tissues are the shell-cup, which is carried habitually for other purposes, the cane-splint, which appears to be improvised on occasion and never carried habitually, and the ubiquitous hupf. [222] [411] [412]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

177 224 knives in severing the tough integuments and tendons of horses and kine, although the tendency has not yet resulted (as elsewhere noted, ante, pp. 152–154) in the development of a knife-sense; and although boys on the frontier play at roping dogs, no effort to use the riata or any form of rope is made in the actual chase. As naively explained by Mashém amid approving grunts from his clan-mates, they have no time for ropes or knives when hungry.

262 A quantitatively unimportant yet by no means negligible fraction of the normal diet of Seriland is vegetal; and while the sources of vegetal food are many and diverse, the chief constituent is a single product characteristic of American deserts, viz, the tuna, or prickly pear.

222 All of the cacti of the region yield tunas in considerable quantity. The pitahaya is perhaps the most abundant producer, and its name is often given to the fruit; the huge saguaro affords an enormous annual yield, and the still more gigantic saguesa is even more prolific, especially in its immense forests along the eastern base of Sierra Seri; the cina adds materially to the aggregate product, while the nopal, or common prickly pear, contributes a quota acquiring importance from the facility with which it may be harvested. The fruits of all these cacti are sometimes classed as sweet tunas, in contradistinction from the sour tunas yielded in great abundance by the cholla and consumed with avidity by stock, though seldom eaten by men. The edible tunas average about the size of lemons, and resemble figs save that their skin is beset with prickles. The portion eaten is a luscious pulp, filled with minute seeds like those of the fig save that they are too hard for mastication or digestion, its flavor ranging from the sickly sweet of the overcultivated fig to a pleasant acidity. While occasional tunas may be found at any time during the year, the normal harvest occurs about midsummer, or shortly before the July-August humid season, and lasts for several weeks. During the height of the season the clans withdraw from the coast and give undivided attention to the collection and consumption of the fruits, gorging them in such quantities that, according to the testimony of the vaqueros, they are fattened beyond recognition. Commonly the tunas are eaten just as they are gathered, and the families and larger bands move about from pitahaya to pitahaya and from valley to valley in a slovenly chase of this natural harvest, until waning supply and cloying appetite drive them back to the severer chase of turtle and pelican. The fruit is not cooked, and never preserved save in the noisome way of nature, and is rarely transported in quantities or over distances of industrial importance; yet the product may have some connection with the basketry of the tribe. The devices for collecting the fruits, especially from the lofty saguaro and saguesa, are mere improvisations of harpoon shafts, palobianco branches, or chance cane-stalks carried primarily for arrow-making or balsa construction.

[412]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

There is no such well-studied and semiceremonial apparatus for tuna gathering as, for example, the Papago device made from the ribs of the dead saguaro in accordance with traditional formula. 222 [412]

Perhaps second in importance among the vegetal constituents of Seri diet is the mesquite bean, which is gathered in random fashion whenever a well-loaded tree is found and other conditions favor. The woody beans and still woodier pods are roughly pulverized by pounding with the hupf on any convenient stone used as an ahst (metate or mortar), or, if suitable stones are not at hand, they are carried in baskets or improvised bags to the nearest shore or other place at which stones may be found. The half-ground grist is winnowed in the ordinary way of tossing in a basket; and the grinding and winnowing continue alternately until a fairly uniform bean meal is obtained. So far as was actually observed this is eaten raw, either dry in small pinches or, more commonly, stirred in water to form a thin atole; but expressions at Costa Rica indicated that the meal is sometimes stirred in boiling water or pot-liquor, and thus partially cooked, in times of rest and plenty. [262] 252

Other vegetal products used as food comprise a variety of seeds collected from sedges and grasses growing about the mud-flats of Laguna La Cruz and other portions of the province, as well as the seeds and nuts of the scant shrubbery of shores and mountains; while a local seaweed or kelp is eaten in small quantity, apparently as a condiment, and is sometimes carried on journeys even as far as Costa Rica, where specimens were obtained in 1894. 262

It is of interest to note that one of the most distinctive constituents of the Sonoran flora, and one intimately connected with human life in the great neighboring province of Papagueria, is of negligible rarity in Seriland; this is the visnaga (*Echinocactus*, probably of two or three species), the thorniest of the cacti and the only one containing consumable pulp and sap. This peculiar plant is of no small interest in itself as a striking example of the inverse relation between protective devices of chemical sort (culminating in acrid, offensive, or toxic juices) and the mechanical armaments so characteristic of desert plants;[1] it is of still deeper interest economically as the sole source of water over broad expanses of the desert, and one to which hundreds of pioneers and travelers have been indebted for their lives; and it is of interest, too, as a factor of Papago faith, in which the visnaga ranks among the richer guerdons of the rain gods. Throughout most of Papagueria this cactus is fairly abundant; usually there are several specimens to the square mile of suitable soil (it is not found in playas or on the ruggeder sierras), so that it is always within reach of the sagacious traveler; but it diminishes in abundance toward the borders of Seriland, and not more than a dozen examples were found in the portions of that province traversed by the 1895 expedition. Its rare occurrence, 137

[1] Cf. The Beginning of Agriculture, The American Anthropologist, vol. viii, Oct., 1895, pp. 350-376.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

of manufacture (only stray shreds of the interior cording could be found in an old and abandoned balsa on Punta Antigualla). As the bundle approaches the requisite size, the building process changes; the butts of the successively added stalks are thrust obliquely into the interstices extending beyond the butts of earlier-used canes, and the stems are slightly bent to bring them into parallelism with their fellows; and this interweaving process is continued with increasing care until, when the bundle is completed, there are no visible butts (all being pushed into the interior of the bundle), while the only visible tips are those projecting to form the tapering extremities. The finished bundle is then secured by a spiral winding of slender cord. Two other bundles are next made, the three being entirely similar, so far as is known; then the three are joined by a lashing of slender cord like that used for the separate bundles, which is twined alternately above and below the central bundle in such manner as to hold the three in an approximate plane save toward the extremities, where the lashing is much firmer and the tapering tips of the bundles are brought into a triangular position, i. e., the position of smallest compass. The cordage is of either mesquite root or maguey fiber, the former being the more common, so far as observed (doubtless by reason of the dearth of the latter plant); it is notably uniform in twist and size, though surprisingly slender for the purpose, barely three-sixteenths of an inch, or 5 mm., in diameter, and limited in quantity.[1] The only tools or implements used in the manufacture (and repair), so far as is known, are light wooden marlinspikes, two of which are illustrated in figure 28; these are used in working the cane-butts into the bundles. In collecting the canes the tassels are broken off and the leaves stripped by the unaided hands, while the stalks are broken off usually below the secondary roots in the downward taper, and the rootlets and loose ends are removed either with the hands or by fire.

The finished balsa is notably light and buoyant. The Boca Infierno specimen was estimated to weigh about 250 pounds (113 kilograms) when thoroughly dry, and little more than 300 pounds (126 kilograms)

FIG. 28—Seri marlinspikes.

[1] Only the finer cording shown in plate XXXI is original, the coarser ropes having been added to facilitate handling.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

291 [177] Of all the party at Costa Rica in 1894 subchief Mashém was the only one who wore Caucasian apparel with any air of comfort and fitness; yet even he, with hat and shirt, boots and breeches, and loose bandana about his neck in cowboy style (plate XVII), did not feel fully dressed without the slender hair-cord necklace of his kin in its wonted place. On the frontier improvised fig-leaves were sometimes put on the children of less than a dozen years (as illustrated by the standing infant shown in plate XIV, who was thus dressed hastily for her picture); and a common garb of the smaller children at Costa Rica, as they played about the rancheria or wandered in directions away from the white

[412] [854]

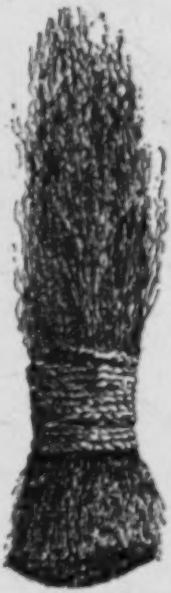

FIG. 29—Seri hairbrush.

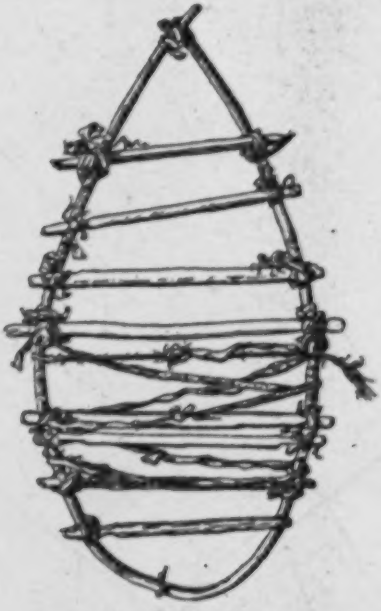

FIG. 30—Seri cradle.

man's rancho, was limited to a cincture of hair cord or snake skin, or perhaps of agave fiber, under which an improvised kilt might be tucked on the Caucasian's approach.

281 513 In addition to the individual apparel, each clan, or at least the elderwoman or her fraternal executive, accumulates some surplus material as opportunity offers, and this serves as family bedding until occasion arises for converting it to other uses. Of late the prevailing materials are pelican skins, lightly dressed and joined into robes by sinew stitching: deerskins, dried or partially dressed; cormorant skins, treated like those of the pelican; seal skins, usually fragmentary; peccary skins,

l: McGee E-5 (1894-1895)1898 NU31 Seri NU31

281 apparently dried without dressing, together with
513 skins of rabbits, mountain sheep, antelope, etc, usually tattered or torn into fragments. Commonly the hides and pelts are nearly or quite in natural condition, retaining the hair, fur, or feathers. The dressing is apparently limited to scratching and gnawing away superfluous flesh, followed by some rubbing and greasing; tanning is apparently unknown. By far the most abundant of the collective possessions are the pelican-skin robes, which form
[439] the sole article of recognized barter with aliens. The aggregate stock accumulated at any time is but meager, never too much to be borne on the heads and backs of the clan in case of unexpected decamping.

412 Aside from the painting paraphernalia, there is
302 but a single conspicuous toilet article; this is a hair-brush made of yucca fiber bound into cylindrical form, as illustrated in figure 29. This article is in frequent use; both women and men give much attention to brushing their own long and luxurious locks and cultivating the hair and scalps of their children, the process being regarded as not only directly useful but in some measure sacramental. Ordinarily the hair is parted in the middle and brushed straight, the tresses being permitted to wander at will and never braided or bound or restrained by fillets save in imitation of Caucasian customs on the frontier; though in certain ceremonies the pelage is gathered in a lofty knot on the top-head.[1]

854 The Seri cradle is merely a bow of paloblanco or other switch with rude cross-sticks lashed on, as shown in figure 30. On this is laid a small pelican-skin robe, with a quantity of pelican down for a diaper, and perhaps a few pelican feathers attached as plumes to wave over the occupant's face; though on the frontier these primitive devices are largely replaced by rags.

283 Among the important appurtenances of Seri life are the cords used for belts and necklaces, as well as for the attachment of ceremonial headdresses, for converting the kilts into bags, and for numberless minor purposes. The finest of these are made from human hair; and for this purpose the combings are carefully kept, twisted into strands, and wound on thorns or sticks in slender bobbins, such as that illustrated

FIG. 21.—Hair spindle.

[1] Cf. Hardy, Travels, p. 280.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

283 gualla by the 1895 expedition), and then hatcheled with the hupf or the edge of a shell; when the fibers are gathered in slender wisps or loosely wound coils, both of which were among the possessions of the Seri matrons at Costa Rica in 1894. So far as could be ascertained, the final processes parallel those of hair-cord making, i. e., the fibers are patiently sorted into strands, sized in the fingers and twisted by rolling on the thigh, the strands being subsequently combined in similar fashion.[1] Neither the weaving nor the woven fabrics of the Seri have ever been seen by technologic students so far as known, though the fabrics are shown in Von Bayer's photographs and have been described by various observers. According to Señor Encinas, they resemble coarse bagging, and are woven or netted quite plainly. The ordinary sewing material is sinew, used in connection with a bone awl (a good example of which is illustrated in figure 35), a fish

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412

[239]

FIG. 35.—Bone awl.

FIG. 36.—Wooden awls.

spine or bone, a cactus thorn, or either the mandible of a water-bird or a hard-wood skewer shaped after this natural needle (figure 36 *a* and *b*). Sometimes hair or vegetal fiber is substituted for the sinew; and for certain purposes an agave thorn, with the fibers naturally attached, serves for needle and thread.

[520]

[1] A rope-twisting device of the sort commonly employed by southwestern Indians was found in use by boys in a village in Costa Rica in 1894, and was included in the Seri collection; but the indications were that the device was a mere toy used, like the bow-and-arrow, chiefly by the old only in youthful sports.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

activities; i. e., in developed industries the tool is a primary factor, while in nascent industries it is but a collateral.

The tools of any primitive tribe may be defined as appliances used primarily in the production of implements and utensils, and incidentally in preparing food, making habitations, manufacturing apparel, building vehicles or vessels, etc—in short, the appliances used in producing devices for the maintenance of active life. The definition emphasizes both the dearth and the undifferentiated character of Seri tools; for the appliances used in the production of devices are exceedingly few, and are commonly employed also in food-getting or in other vital industries.

Perhaps the most conspicuous general fact in connection with Seri tools and their uses is the prevalence of natural objects employed either (1) in ways suggested by natural functions or (2) in ways determined by the convenience of users; the former grading into artificial devices shaped in similitude of natural objects and employed in ways suggested by natural functions.

Prominent among the natural objects employed in natural ways are mandibles of birds, used in piercing pelts and fabrics; fish spines and bones, also used as piercers; thorns of cacti and mimosas, used in similar ways; teeth and horns of game animals, used in rending their own tissues, and afterward in miscellaneous industrial processes; together with cane splints, used for incising. Frequently the employment of such objects is mere improvisation; yet, so far as could be ascertained through direct observation at Costa Rica, through Mashém's incomplete accounts, and through inquiries from residents on the frontier, even the improvisations are made in accordance with regular custom firmly fixed by associations—quite in the way, indeed, of primitive life generally, and of the physiologic and psychic processes from which primitive custom is so largely borrowed. With these objects may be grouped the turtle-shells and pelican-pelts used as shields against alien and animal enemies or as protectors against the elements; and the Seri sages would class with them the deer-head masks and deer-hoof rattles worn in the dance to at once symbolize and invoke strength and swiftness. One of the most striking among the artificial devices of symbolic motive is the piercer, or awl, of wood or bone, shaped in imitation of the avian mandible; yet still more significant in a vestigial way (provided the most probable inference as to genesis be valid) is the hard-wood foreshaft of arrow and harpoon, shaped and used in trenchant symbolism of the deadly tooth.

There are two conspicuous classes of natural objects employed in ways determined largely by the convenience of the users, viz, (*a*) marine shells and (*b*) beach pebbles.

The marine shells applied industrially comprise the prevailing local genera, *Cardium*, *Mactra*, *Arca*, *Chama*, and others. They are used ordinarily as drinking-cups, dishes, dippers, receptacles for fats and face-

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

237 412 [415] paints, and as small utensils generally; and they are used nearly as commonly for scraping skins, severing animal and plant tissues, digging graves and waterholes, propelling balsas, and especially for scraping reeds and sticks and okatilla stems in the manufacture of arrows, harpoons, bows, balsas, and jacal-frames—indeed, the seashell is the Seri familiar, the ever-present handmate and helper, the homologue of the Anglo-Saxon Jack with his hundred word-compounds, a half-personified reflex of habitual action and thought. Ordinarily—always, so far as is known—the shells are used in the natural state, i. e., either in the condition of capture and opening for the removal of the animal, or in the condition of finding on the beach. For certain purposes the fresh and sharp-edged shell is doubtless preferable, and for others the well-worn specimen (like the paint cup illustrated in plate XXVII) is chosen; but everything indicates that the need for smoothed shells is met by selecting wave-worn specimens, and nothing indicates that the value of the appliance is deemed to be enhanced by wear of use—in fact, the abundance of abandoned shells about the rancherias and camp sites, and over all Seriland for that matter, indicates that the objects are discarded as easily as they are found along the prolific shores.

412 Next to the shells, the most abundant industrial appliances of the Seri are beach pebbles or cobbles. They are used for crushing shell and bone, for rending the skins of larger animals, for severing tendons and splintering bones, as well as for grinding or crushing seeds, uprooting canes, chopping trees and branches, driving stakes, and for the multifarious minor purposes connected with the manufacture of arrows and balsas and jacales; they are also the favorite women's weapons in warfare and the chase, and are sometimes used in similar wise by the warriors. The material for these appliances paves half the shores of Seriland, and is available in shiploads; and its use not only illustrates Seri handicraft in several significant aspects, but illumines one of the more obscure stages in the technologic development of mankind.

The cobble-stone implements of the Seri range from pebbles to bowlders, and there is a corresponding range in function from light hand-implements at one end of the series to unwieldy anvils and metates at the other end. The intermediate sizes are not infrequently utilized, and are customarily used interchangeably, the smaller of any two used in conjunction serving as the hand implement and the larger as the anvil or metate; yet there is a fairly definite clustering of the objects about two types, a larger and more stationary class, and a smaller and more portable one.

192 412 The Seri designation for the larger stone implement is that applied to rock generally, viz, *ahst* (the vowel broad, as in "father"); and it seems probable that the term is onomatopoetic, or mimetic of the sound produced in the use of the implement as a metate, and that its application to rocks generally is secondary. The designation applied to the

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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DOMESTIC ANVIL, SIDE

THE HOLLENTED PRINTING CO. BOSTON

[p. 234A]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

412

DOMESTIC ANVIL, TOP

(p. 234 B)

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

412

DOMESTIC ANVIL, BOTTOM

THE HOLLISTON PRINTING CO., BOSTON

[1.234 c]

1: McGee F-5 (1894-1895)1898 NU31 Seri NU31

smaller implement is *hupf* or *hupf* (the initial sound explosive, combining the phonetic values of *h* and *k*; the vowel nearly as in "put", or like "oo" in "took"); the term is clearly an onomatope, imitating the sound of the blow delivered on flesh, on a mass of partially crushed mesquite beans, etc—indeed, both the word and the sound of the blow seem to connote food or eating, while regular pounding with the implement (either in ordinary use or by special design) is a gathering signal. So far as ascertained, the term is not extended to other objects save potential implements in the form of suitable pebbles; but it is significant that there is no distinction in speech—nor in thought, so far as could be ascertained—between the natural pebble and the wear-shaped implement.[1] The local terms ahst and hupf are explicit and specific, and without precise equivalents in other known tongues; moreover, the objects designated are too inchoate in development and hence too protean in function to be appropriately denoted by the designations of implements pertaining to more differentiated culture (mortar, metate, pestle, muller, mano, etc). Accordingly it seems desirable to retain the Seri designations.[2]

A typical specimen of intermediate size, used commonly as an ahst, but susceptible of employment as a hupf, is illustrated (natural size) in plates XXXV and XXXVI.[3] It is a hard, tough, hornblende granite or greenstone, with a few structure-lines brought out by weathering and wave-wearing. Its weight is 4 pounds 10 ounces (2.10 kilograms); its form and surface are entirely natural, save for slight battering shown on the two principal faces and still less conspicuous bruises along one edge (as imperfectly shown toward the left of plate XXXV). The specimen was found in a jacal (illustrated in plate VI) on Roda Ballena, within a few hours after abandonment, in the position in which it was hastily left by the last users; it was smeared with blood and fat (which still remain, as is shown in plate XXXV) and bits of flesh, and bore bloody finger prints of two sizes—those of a man and those of a woman or large child; beside it lay the hupf depicted in plate XLII. In its last use the unwieldly cobble served as an ahst, but the markings on the edge record use also as a hand implement.

A functionally similar implement is illustrated in plate XXXVII (on reduced scale; maximum length 8¼ inches = 210 cm.). It is of tough

[1] The failure to discriminate natural objects from artificialized implements produced from such objects by wear of use is a noteworthy trait of primitive folk. It is conspicuous among the more Indians of California, who fail to appreciate the manufacture of their own mills and who conceive that their hereditary mortars and stock pebble pestles, even when completely artificialized by a generation's use, are merely found and appropriated; and a similar state of mind prevails among the well-advanced Papago, who have no conception of making their well-finished mortars and pestles, or even the more inadequate occasionally surviving, but regard the implements as fruits of discovery or treasure-trove only.

[2] It should be noted that the terms used in the titles of the accompanying plates are not definitive, but merely descriptive.

[3] This, like the other illustrations of the native material (except plate LVI, which is a lithograph, partly process and partly hand-work), are photo-mechanical reproductions made directly from the objects; all are natural size unless otherwise specified.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

412 but slightly vesicular and pulverulent volcanic tuff, pinkish-buff in color, and weighs 4 pounds 1 ounce (1.84 kilograms). The form and surface are almost wholly natural, save for slight battering about the larger end and severer battering, with the dislodgment of a flake, about the thinner end; yet the faces are smeared with blood and grease and flecked with turtle debris, and bear a few marks of hupf blows, as is shown in the reproduction. This specimen was found at a temporary camp of a small party on Punta Miguel, where it had been used in breaking up a turtle—the camp having been abandoned so precipitately that a considerable part of the quarry, with this hupf, the adze illustrated in plate LIV, the turtle-harpoon shown in figure 20, the half-made fire, and the fire-sticks used in kindling it, were left behind. The specimen is a good example of the cobbles carried into portions of the territory lacking the material (the camp at which it was found was on the great sandspit forming the eastern barrier of Boca Infierno, several miles from the nearest pebbly shore); it is of less specific gravity than the average rocks of the region, and looks still lighter by reason of its color and texture. Similar cobbles abound along the eastern coast of Tiburon, being derived from the immense volcanic masses of Sierra Kankaak.

About the more permanent rancherias and on many abandoned sites lie adzes usually too heavy for convenient transportation. In the habitable jacales such stones form regular household appurtenances, without which the menage is deemed incomplete; though the implement is commonly kicked about at random, often buried in debris (perhaps to be completely lost, and brought to light only by geologic changes, as demonstrated by the shell-heap of Punta Antigualla), and pressed into service only in case of need. An exceptionally well-worn specimen of the kind is illustrated in plate XXXVIII (scale one half linear; maximum width measured on base, 9½ inches = 23.5 cm.). The material is a hard, ferruginous, almost jasper quartzite, somewhat obscurely laminated. It weighs 10 pounds 11 ounces (4.85 kilograms). It is a natural slab, evidently from a talus rather than the shore, its native locus being probably the western slope of Sierra Seri. The edges and apex are formed by natural fracture; the most-used face (that shown in the plate) is a natural structure plane; the obverse side is partly a similar plane, partly irregular; while the base is an irregular fracture, evidently due to accident after the specimen had been long in use, though the fracture occurred years or decades ago, as indicated by the weathering of the surfaces. The entire face of the slab is worn and more or less polished by use as a metate, the wear culminating toward the center of the base (evidently the center of the original slab), where the hollowing reaches some three-sixteenths of an inch (5 mm.); yet even in the depths of the incipient basin the polished surface is broken by irregular pitting of a sort indicating occasional use as an anvil. The edges are quite uneven, but the smoother portion of the obverse is

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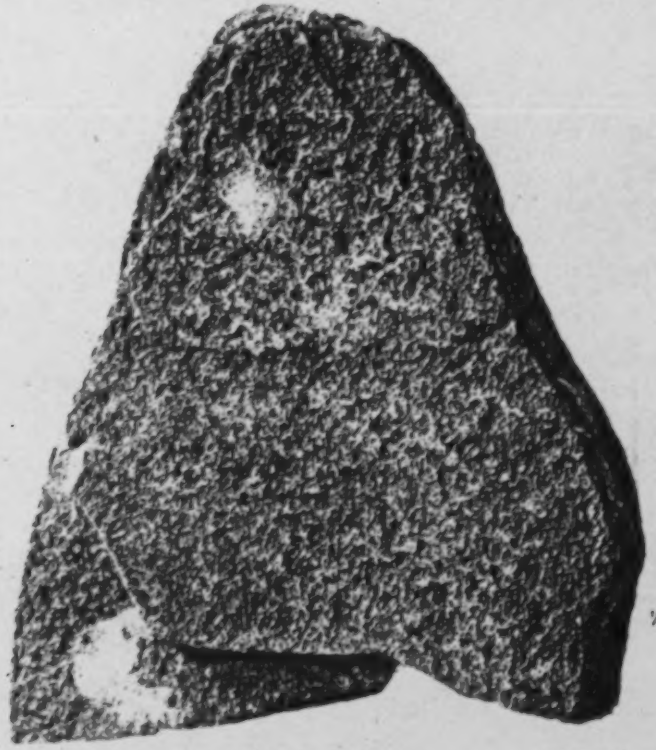
J: McGee E-5 (1894-1895)1898 NU31 Seri NU31

DOMESTIC ANVIL, REDUCED, TOP AND SIDE

(p. 336 A.)

412



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METATE (REDUCED), EDGE AND TOP

THE HELIOTYPE PRINTING CO., BOSTON

[Pl. 37c.8]

1: McGee E-5 (1894-1895)1896 NU31 Seri NU31

1: McGee Z-5 (1894-1895)1898 NU31 Seri NU31

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worn and polished like the face, though to a less degree. The specimen was found at a recently occupied jacal, midway between Punta Astiguallo and Punta Ygnacio; it lay in the position of use, though half concealed by a cholla thrown over it, with the hupf shown in plate LVI; it was soaked with fat and smeared with the debris and intestinal contents of a turtle, as partly shown in the illustration.

The largest ahst seen in Seriland is illustrated in plates XXXIX and XL, on a scale of one-third linear (its maximum length being 15½ inches = 395 cm.); it is a dark, fine-grained silicious schist or quartzite, quite obscurely laminated; it weighs 33 pounds 8 ounces (15.20 kilograms). It is a natural slab, probably washed from a talus and slightly wave-worn; it might have come originally from either the southwestern flanks of Sierra Seri or the more southerly half of Sierra Kunkaak—certainly hundreds of similar slabs strew the eastern shore of Bahia Kunkaak, while the western shore, especially about Punta Narragansett, would yield thousands. Its artificial features (aside from miscellaneous battering) are limited to grinding of the two faces defined by structure planes. The principal face is abraded into an oblong or spoon-shape basin, about 8 inches (20 cm.) long, 5 inches (16 cm.) broad, and fully three-fourths of an inch (2 cm.) deep, the basin penetrating two or three laminæ of the slab in such wise as to produce the annular markings faintly shown in plate XXXIX; the obverse is slightly rubbed and ground and somewhat battered, like the face of the preceding specimen; and both sides are flecked with a fine but dark flour-like substance (doubtless derived from grinding mesquite beans, etc) forced into the texture of the stone by the grinding process. The entire slab is greasy and blood-stained, while battered spots about the edges and angles of the principal face record considerable use as an anvil for breaking up quarry—indeed, shreds of turtle flesh and bits of intestinal debris still lodge in some of the interstices. The specimen was taken from the old rancheria at the base of Punta Tormenta, where it had apparently been in desultory use for generations.

A sort of connecting link between ahst and hupf is afforded by elongate beach pebbles, such as that illustrated in plate XLI, which lay beside the large ahst last described, and which bears a few inconspicuous marks of use in slight battering at both ends, with a few shreds of turtle flesh about the blunter extremity (at the right on the plate). The specimen is shown natural size; it is of pinkish-gray trachyte(?), and weighs 1 pound 12 ounces (0.79 kilograms). It is noteworthy chiefly as an illustration of the Seri mode of seizing and using hand-implements (a mode repeatedly observed at Costa Rica in 1894); the pebble comfortably fits the Caucasian hand, held hammerwise; it is intuitively grasped in this way, and when so seized and used with an outward swing forms an effective implement for bone-crushing, etc, the natural striking-point being near the free end; but the centripetally moving Seri invariably seizes the specimen in such manner that the

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

412 free end is directed inward, while the thumb laps over the grasped end, when the strokes are directed downward and inward, the striking-point being the extreme tip of the free end. A similar specimen is illustrated in plate XLII. It is of tough and homogeneous hornblende-granite, somewhat shorter and broader than its homologue, but of exactly the same weight; it, too, is battered at the ends, but is otherwise quite natural in form. It was collected at Rada Ballena in conjunction with the ahst illustrated in plate XXXV; and like that specimen it is soaked with blood and fat, and bore shreds of flesh when found. Both these elongate cobbles are of interest as representatives of a somewhat aberrant type; for the favorite form of hupf is shorter and thicker, as shown by the prevailing shapes, both in use and lying about the jacales—indeed, the elongate form is seldom used on the coast and never carried into the interior.

A typical hupf is illustrated in plate XLIII. The specimen is of fine-grained, dense, and massive quartzite, its homogeneity being interrupted only by a thin seam of infiltrated silica and by an obscure structure-plane brought out by weathering toward the thinner end. Its weight is 1 pound 14 ounces (0.85 kilogram). In general form and surface the specimen is an absolutely natural pebble, such as may be found in thousands along the shores of Seriland. Its artificial features are limited to slight battering about the edges, especially at the thinner end; partial polishing of the lateral edges by repeated handling (as imperfectly shown in the edge view); very perceptible polishing of both faces by use as a grinder; some fire-blackening on both sides; semisaturation with grease and blood; and the flecks of red face-paint shown in the reproduction. The specimen was obtained at Costa Rica after some days' observation of its use. The chief observed functions of this implement were as follows: (1) Skinning the leg of a partially consumed horse; this was done by means of centripetal (i. e., downward and inward) blows, so directed that the thinner end fell obliquely on the tissue, bruising and tearing it with considerable rapidity. (2) Severing tough tendons already sawed nearly through by rubbing over the edge of an ahst, the hupf in this case being in the hands of a coadjutor and used in rather random strokes whenever the tissue seemed particularly refractory. (3) Knocking off the parboiled hoof of a horse to give access to the coffinbone. (4) Crushing and splintering bones to facilitate sucking of the marrow. (5) Grinding mesquite beans; the process being begun by vertical blows with the end of the implement on a heap of the pods resting on an ahst, continued by blows with the side, and finished by kneading and rubbing motions similar to those of grinding on a metate. (6) Pounding shelled corn mixed with slack lime, in a ludicrously futile attempt to imitate Mexican cookery. (7) Chopping trees; in this case the implement was grasped in the centripetal manner and used in pounding and bruising the wood at the point of greatest bending under the pull of a coadjutor. (8) Cleaving and

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LONG-USED METATE (REDUCED). TOP

(p. 238 A)

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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LONG-USED METATE (REDUCED), BOTTOM

[p. 238 B]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

breaking wood for fuel. (9) Dethorning okatilla stems, by sweeping centripetal strokes delivered adzwise from top toward butt of a bunch of stems lying on the ground. (10) Severing a stout hair cord; in this use it was grasped between the knees of a matron squatting on the ground, while the cord was held in both hands and sawed to and fro over the use-roughened thinner end. (11) Supporting a kettle (shown in plate X) as one of the fire-stones used in frontier mimicry of the Papago custom. (12) Triturating face-paint by pounding and kneading; in one case the specimen served as a hand implement, while in another case it took the place of the ahst, the ocher lump itself being struck and rubbed against it. (13) Beating a troop of dogs from a pile of bedding in a jacal; in this use the implement was held in the customary manner and used in swift centripetal blows, the matron relying on her own swiftness and reach and not at all on projection to come within reach of her moving targets; the blows usually landed well astern, and were so vicious and vigorous as to have killed the agile brutes had they chanced to fall squarely—indeed, one blow temporarily paralyzed a large cur, which escaped only by running on its fore feet and dragging its hind quarters. In most of these uses the specimen was employed in conjunction with an improvised ahst in the form of a stone carried from the rancho. Several of the processes, notably those of tissue-tearing and dog-beating, were executed with a vigor and swiftness quite distinct from the sluggish lounging of the ordinary daytide and, indeed, partaking of the fierce exaltation normal to the Seri chase. When not in use the implement usually lay just within the open end of the owner's jacal, though it was often displaced and sometimes kicked about the patio for hours. It was one of perhaps a dozen similar implements brought across the desert from the coast by as many matrons. All were regarded as personal belongings pertaining to the custodians about as definitely as articles of apparel, though rather freely loaned, especially in the owner's clan. The specimen was purchased from the possessor, who parted from it rather reluctantly, though with the tacit approval of her clanswomen, at a rate implying considerable appreciation of real or supposed value. Three or four other matrons declined to barter their hupfs, either arbitrarily or on the plea that they were a long way from the source of supply.

A common variety of hupf is illustrated in plate XLIV. It is of pinkish, slaty tuff of rather low specific gravity, somewhat vesicular and pulverulent, though moderately hard and tough. It weighs 17 ounces (0.48 kilogram). In form and surface it is essentially a wave-worn pebble, doubtless derived originally from the volcanic deposits of Sierra Kunkaak. Its artificial markings are limited to slight battering about the edges, especially at the thinner end (as shown in the edge view); slight rubbing, striation, and semipolishing of the smoother face (shown in the plate); a few grease spots and a stain showing use in crushing sappy vegetal matter, also on this face; and an inconspicuous

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

412 fire-mark on the obverse. It was found in a recently abandoned jacal near Campo Navidad. It is one of the three tuff specimens among those collected, one of a dozen or two seen; perhaps 10 per cent of the implements observed in Seriland are of this material, and it is significant that this ratio is several times larger than the proportion of tuff pebbles to the entire paving of the beaches, so that the material seems to be a preferred one. The preference was indeed discovered at Costa Rica in 1894, where two or three of the more highly prized hupis were of this material, and where vague intimations were obtained that it is especially favored for meal-making, doubtless by reason of the association of color and texture—associations that mean much to the primitive mind, perhaps in suggesting that the grinding is easier when done by a soft implement. An economic reason for the preference is easily found in the lower specific gravity, and hence the greater portability of a hupf of ordinary size, of this material; but there is nothing to indicate that this economic factor is weighed or even appreciated by the Seri.

A typical pebble bearing slight marks of use is illustrated in plate XLV. It is of fine grained pinkish sandstone, probably tuffaceous, and is fairly hard and quite tough; it weighs 1 pound 9 ounces (0.71 kilogram). It is wholly natural in form and surface save for slight battering or pecking on the face illustrated, and for a few stains of grease and abundant marks of fire. It was found in a fire still burning (and abandoned within a half-hour, as indicated by other signs) two or three miles inland from Punta Granita on the Seri trail toward Aguaje Parilla, whither it had evidently been carried from the coast.

A fairly common material for both hupis and ahsts is highly vesicular basalt grading into pumice stone, the material corresponding fairly with a favorite metate material among the Mexicans. The rock was not certainly traced to its source, but seems to come from the northern part of Sierra Kunkaak. A typical hupf of this material is shown in plate XLVI; it weighs 1 pound 13 ounces (0.82 kilogram). It is wholly natural in every respect save for slight grinding and subpolishing, with some filling of interstices, on both faces. From the slight wear of this specimen, together with the absence of battering, and from similar features presented by others of the class, it may be inferred that implements of this material are habitually used only for grinding—for which purpose they are admirably adapted. The specimen emphasizes the importance of the hupf in Seri thought, for it was one of a small series of mortuary sacrifices from a tomb at Pozo Escalante (ante, p. 290).

Throughout the surveys of Seriland, constant search was made for cutting implements of stone; and the nearest approach to success was exemplified by the specimen illustrated in plate XLVII. It is of bluish-gray volcanic rock (not specifically identified) of close texture and decided toughness and hardness; it weighs 10 ounces (0.28 kilogram). In greater part its form and surface are natural, but a projecting por-

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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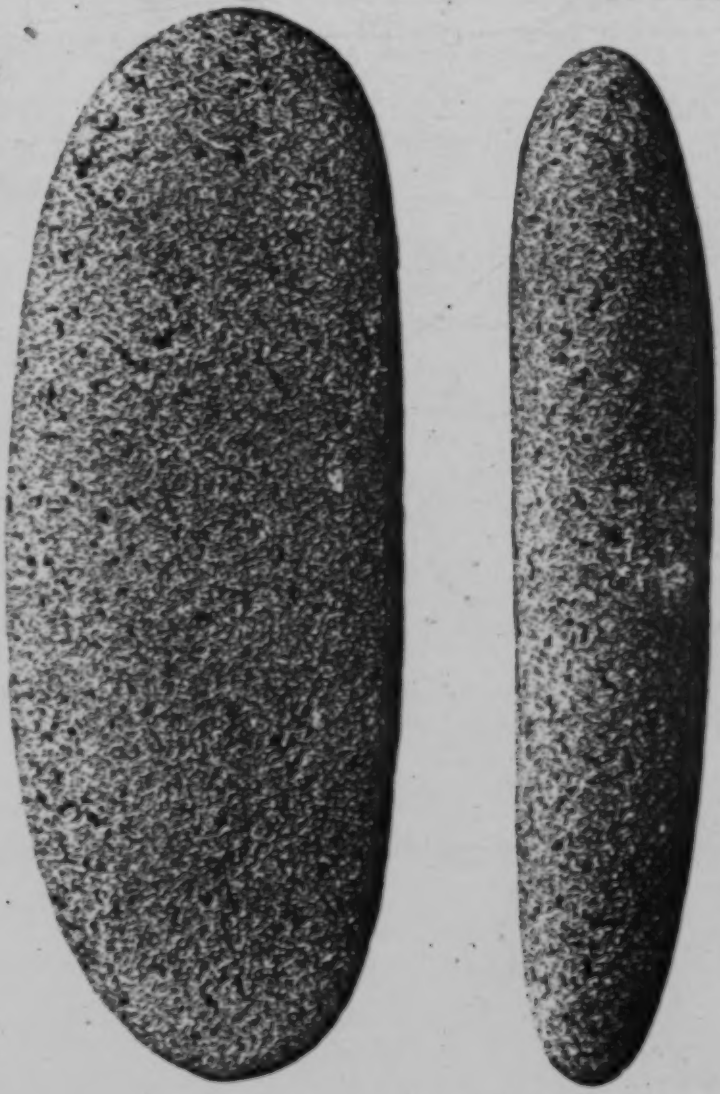

NATURAL PEBBLE BEARING SLIGHT MARKS OF USE

[p. 240A]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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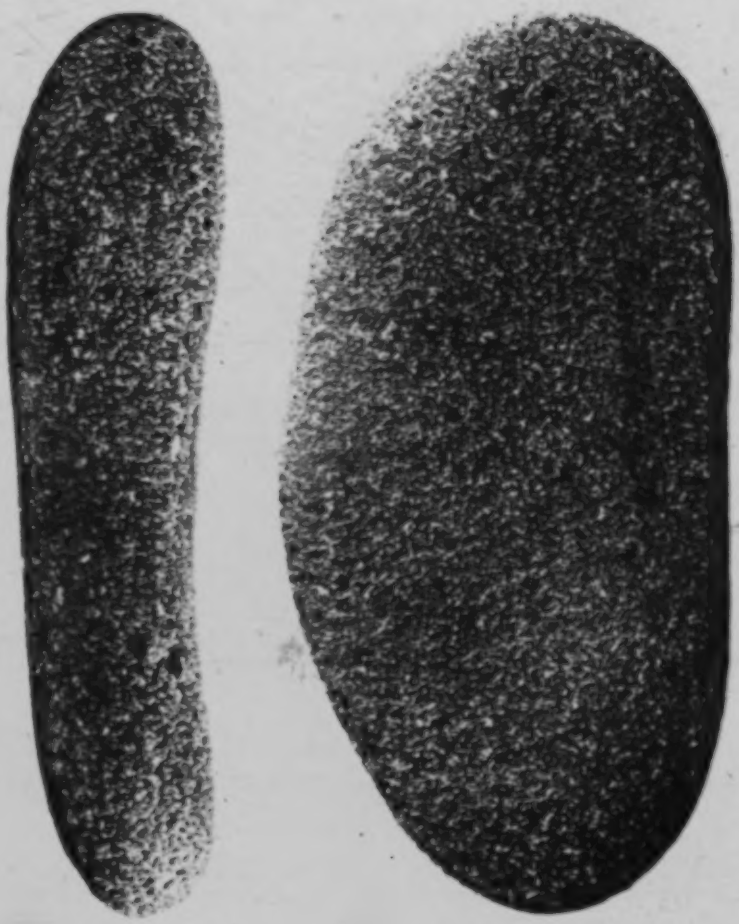

NATURAL PEBBLE USED AS BONE-CRUSHER

[p 240 B]

1:McCee E-5 (1894-1895)1896 NU31 Serial NU31

tion brought out by weathering on one side is split off, presumably by intention, and the fractured surface thus produced is partly smoothed by rubbing, probably in use, though possibly by design. The edges are more or less battered, especially at the ends, and several rude flakes have been knocked off, evidently at random and presumably in ordinary use as an adz. The smoother face is wholly natural. The specimen was picked up in a jacal at Rada Ballena, but bore no marks of recent use. 412

A tuff implement of suggestively ax-like form is shown in plate XLVIII; it is firmer and less pulverulent but more vesicular than most implements of its class; it weighs but 7 ounces (0.20 kilogram). The specimen was picked up in a ruinous jacal, which had evidently been occupied temporarily within a fortnight, on the summit of the great shell-mound forming Punta Antigualla. The somewhat indefinite texture and color render it difficult to distinguish between natural and artificial features; but careful examination indicates that it is wholly natural in form and in nine-tenths of the surface, and that the ax-like shape expresses nothing more than accidents of structure and wave-work. This interpretation is practically established by the slight battering along the edges and about the smaller end, as illustrated in the edge view; for this wear of use, which has produced a distinctive surface, is practically absent from the notches which give the ax-like effect. Besides the battering, the only artificial marks are ancient fire-stains on one of the faces. On the whole it is clear that the artificial appearance catching the eye at first glance is purely fortuitous, and that the specimen is but a natural pebble very slightly modified by ordinary use.

A suggestive specimen is illustrated in plate XLIX; it is of purplish-gray granitoid rock, of decided toughness and considerable hardness, and weighs 12¼ ounces (0.35 kilogram). The surface and general form indicate that it is a natural pebble entirely without marks of artificial use; but the regular curvature of the principal face (the shape is that of a segment of a cylinder rounded toward the ends) suggests artificial shaping, while it was found far in the interior, near Barranca Salina, whither it must have been carried from the coast. It may possibly be a fragment of a pestle subsequently wave-worn; but all the probabilities are that it is wholly natural, and that its suggestive features are fortuitous.

The constant search for chipped or flaked tools which was extended over nearly all Seriland seldom met the slightest reward; but the specimen shown in plate L was deemed of some interest in connection with the search. It is of hard and tough greenstone, showing obscure and irregular structure lines, though nearly homogeneous in texture; it weighs 10 ounces (0.28 kilogram). It is primarily a natural pebble with form and surface reflecting structure and texture in connection with wave-action. Its artificial features are limited to the usual slight battering of the smaller end, still less conspicuous battering or grind-

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

412 ing of the margin about the larger end, slight but suggestive chipping of the thinner edge, inconspicuous hand-wear and polish on the principal face, and a few obscure scratches or striæ on the same face, as illustrated in the plate. The position and character of the flake-fractures, which are fairly shown in the edge view, indicate that they were made while the pebble was in use as a bruising or cutting tool, a use at once suggested to the Caucasian mind by the form of the pebble; yet it is noteworthy that its thin edge displays less battering than either end of the object and no more than the opposite and thicker edge, while it is still more significant that the specimen was apparently discarded immediately on the modification of form by the spalling—a modification greatly increasing its efficiency, as all habitual users of chipped stone tools would realize. The specimen is one of a large number of examples showing that whenever a hupf is broken in use it is regarded as ruined, and is immediately thrown away. This particular specimen is archaic; it was found in the cliff-face of the great shell-heap at Punta Antigualla, embedded in a tiny stratum of ashes and charcoal (some of which still adheres, as shown in the black flecking at the outer end of the striæ), associated with scorched clam-shells, typical Seri potsherds, etc, some 40 feet beneath the surface.

While the great majority of the hupfs are mere pebbles bearing slight trace of artificial wear, as illustrated by the foregoing examples, others bear traces of use so extended as to more or less completely artificialize the surface. A typical long-used hupf is depicted in plates LI and LII. It is a tough and hard quartzite, dark gray or brown in color, massive and homogeneous in texture; it weighs 2 pounds 4 ounces (1.02 kilograms). In general form it is a typical wave-worn pebble of its material, and might be duplicated in thousands along the shores of Bahia Kunkaak and El Infiernillo; but fully a third of its surface has been more or less modified by use. The flatter face (plate LI) is smeared with blood, grease, and charcoal, which have been ground into the stone by friction of the hand of the user in such manner as to form a kind of skin or veneer; portions of the face bear a rubpolish, due probably to the hand-rubbing in use; near the center there is a rough pit about an eighth of an inch (3 mm.) deep, evidently produced by pecking or battering with metal, while three or four neighboring scratches penetrating the veneer appear to record ill-directed strokes of a rather sharp metal point. In the light of observed customs it may be inferred that this pitting was produced by use of the implement as an anvil or abat in sharpening a harpoon-point and fitting it into its foreshaft. The thinner edge (shown in plate LI; that toward the right in the face view on the same plate) displays considerable battering of the kind characteristic of Seri hupfs in general; it is smoked and fire-stained, as shown, while the lower rounded corner is worn away by battering to a depth of probably one-fourth inch (5 mm.). The obverse face reveals more clearly the battering about both corners and edges,

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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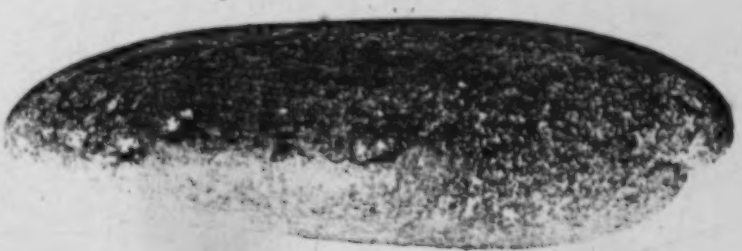
LITTLE-WORN PEBBLE USED FOR ALL DOMESTIC PURPOSES



(p. 242 A)

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McGee E-5 (1894-1895)1898 NU31 Seri NU31

NATURAL PEBBLE USED AS CRUSHER AND GRINDER

Cp.242 BJ

I: McGee Σ-S (1894-1895)1898 NU31 Sect NU31

including the dislodgment of a flake toward the narrower end; but its most conspicuous feature is a broad subpolished facet (rounding slightly toward the thinner edge) produced by grinding on a flat surface abet. This face, too, exhibits fire-staining, while the surface beyond the facet—and to a slight extent the facet itself—is veneered like the other face. There are a few scratches on this side also, as well as a slight pitting due to contact with metal. The thicker edge (plate LII) displays considerable battering, especially a recent pitting near the middle evidently due to use as an anvil held between the knees for sharpening a harpoon point by rude hammering. The specimen was one of a score of implements lying about the interior of the principal jacal in the great rancheria at the base of Punta Tormenta (illustrated in plate VII).

A related specimen, though of somewhat aberrant form, is illustrated in plate LIII. It is of peculiarly tough and quite hard greenstone and weighs 2 pounds 1 ounce (0.93 kilogram). Somewhat less than half of the surface is that of a wave-worn pebble; the remainder is either battered out of all semblance to wave-work, or thumb-worn by long-continued use. The object well illustrates the choice of the most prominently projecting portion of the hand-implement as the point of percussion, and consequently the concentrated wear on such portions whereby the object is gradually reduced to better-rounded and more symmetric form. This specimen displays some minor flaking, apparently connected with the battering and regarded by the user as subordinate to the general wear. It was found at Punta Tormenta, concealed in the wall of a jacal, as if preserved for special use.

One of the best-known examples of a use-perfected hupf is illustrated in plate LIV. It is of coarse-grained but massive and homogeneous granite, similar to that forming Punta Blanca, Punta Granita, and, indeed, much of the eastern coast of Bahia Kunkaak. It weighs 1 pound 10 ounces (0.74 kilogram). In general form it is just such a pebble as is produced from this material by wave-wear, and might be duplicated along the shores in numbers. The artificial surfaces comprise (1) both ends, which are battered in the usual manner; (2) both lateral edges, of which one is slightly battered and worn, while the other is somewhat battered and also notched, evidently by a chance blow and the dislodgment of a flake; (3) both faces, which are flattened by grinding, while one of them (that shown in the plate) is slightly pitted, evidently by metal-working; so that the natural surface is restricted to small areas about the corners. The implement was found at the camp site on Punta Miguel, already noted (page 189), whence a group of five Seri were frightened by the approach of the 1895 expedition; it was covered with blood and shreds of turtle flesh, and is still saturated with grease. Moreover, it is quite confidently identified (not only by form and material, but especially by the fortuitous notch) as a hupf seen repeatedly at Costa Rica in 1894; it was the property of a matron of the Pelican clan (whose portrait appears in plate XXII),

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

412 who was observed to use it for various industrial purposes, and who refused to part with it for any consideration.

A still more beautiful example of Seri stone art is depicted in plate LV. It is of the same homogeneous and coarse-grained granite as the last specimen, and closely approaches it in dimensions; it is slightly longer and broader, but somewhat thinner, and weighs 1 pound 11 ounces (0.77 kilogram); and, except for the absence of the accidental notch, its artificial features are still more closely similar. The ends are slightly battered, as illustrated in the end view at the right of the plate; the edges are similarly worn, but to a less extent; while both sides have been symmetrically faceted by use in grinding, the facets being straight in the longitudinal direction but slightly curved in the transverse direction, in the shape of the Mexican mano. The specimen displays well-marked color distinctions between the artificially worn and the natural surfaces, the former being gray and the latter weathered to yellowish or pinkish-brown; these colors show that something like two-thirds of the surface is artificial and the intervening third natural; and the natural portion corresponds in every respect, not only in form but in condition of surface, with the granite cobbles of Sorilaud's stormy shores. Unfortunately the color distinctions, with the limits of facetting and other artificial modifications, are obscure in the photomechanical reproduction; they are indicated more clearly in the outline drawing overshoot. The specimen is partially saturated with fat, and bears an ocher stain attesting use in the preparation of face-paint. It was found carefully wrapped in a parcel with the shell paint-cup illustrated in plate XXVII, a curlew mandible, two or three hawk feathers, and a tuft of pelican down (the whole evidently forming the fetish or medicine-bag of a shamanistic siderwoman), in an out-of-the-way nook in the wall of an abandoned jacal at Punta Narragansett.

A somewhat asymmetric though otherwise typical hupf is illustrated in natural colors in plate LVI. It is of andesite, and may have come originally either from the extensive volcanics of southern Sierra Seri or central Sierra Kaukaak; it weighs 1 pound 15 ounces (0.88 kilogram). The general form is that of a wave-worn cobble, and fully one-third of the surface retains the natural character save for slight smoothing through hand friction in use. The chief artificial modification is the facetting of both sides in nearly plain and approximately parallel faces, the maximum thickness of material removed from each side, estimated from the curvature of the adjacent natural surface, being perhaps three-sixteenths of an inch (5 millimeters); in addition, both ends are battered in the usual fashion, while the thinner and more projecting edge is battered still more extensively, in a way at once subserving convenient use and tending to increase the symmetry of form. One of the facets is quite smooth; the other (that on the right in the plate) is slightly pitted, as if by use in metal-working. The specimen is somewhat greasy—the normal condition of the hupf—and bears

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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NATURAL PEBBLE SLIGHTLY USED AS HAMMER AND ANVIL

[p. 244 A]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

conspicuous records of its latest uses; both faces (more especially the pitted one) are stained with sap from green vegetal substance (probably immature mesquite pods), while one face is brilliantly marked with ocher in such manner as to indicate that a lump of face-paint was partially pulverized by grinding on the slightly rough surface. It was found, together with the ahst illustrated in plate XXXVIII, in the rear of a recently occupied jacal midway between Punta Antigualla and Punta Ygnacio, cached beneath a thorny cholla cactus uprooted and dragged thither for the purpose. The trail and other signs indicated that the jacal had been occupied for a few days and up to within twenty-four hours by a family group of six or seven persons; that it was vacated suddenly at or about the time of arrival of the party of five whose trail was followed by the 1895 expedition from Punta Antigualla to Punta Miguel (where they were interrupted in the midst of a meal and frightened to Tiburon); and that the larger party fled toward the rocky fastnesses of southern Sierra Seri.

412

Of the foregoing hupfs several are aberrant, and serve merely to illustrate the prevailing directions of departure from the optimum form and size of implements. Six of the specimens may be deemed typical; they are as follows:

Plate No.	Locality	Material	Weight	Condition
			Lb. Oz.	
XLIII.....	Costa Rica	Quartzite .	1 14 (0.85 kg.).	Nearly natural.
XLIV	Campo Navidad	Tuff.....	1 1 (.48 kg.)	Four-fifths natural.
XLVI	Pozo Escalante.....	Vesicular lava.	1 13 (.82 kg.) ..	Nearly natural.
LIV	Punta Miguel	Granite ...	1 10 (.74 kg.) ..	One-fifth natural.
LV	Punta Narragansett	....do	1 11 (.77 kg.) ..	One-fourth natural.
LVI	South point Sierra Seri.	Andesite ..	1 15 (.88 kg.) ..	One-third natural.

From these specimens a type of Seri hand implement may easily be formulated: it is a wave-worn pebble or cobble of (1) granite, quartzite, or other tough and hard rock, (2) tuff, or other light and pulverulent rock, or (3) vesicular lava; it is of flattened ovoid form, or of biscuit shape; it weighs a trifle under 2 pounds (about 0.85 kilogram); originally the form and surface are wholly natural, but through the chance of use it is modified (*a*) by a battering of the ends and more projecting edges, and (*b*) by grinding and consequent truncation of the sides; though initially a natural pebble, chosen nearly at random from the beach, it eventually becomes personal property, acquires fetishistic import, and is buried with the owner at her death.

[422]
[764]

The ahsts and the heavier cobbles used alternatively as ahsts and hupfs are too fortuitous for reduction to type; while the protean peb-

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

412 bles utilized in emergency, and commonly discarded after a single use, are too numerous and too various for convenient or useful grouping.

411 There is a distinctive type of Seri stone artifacts represented by a single category of objects, viz, chipped arrowpoints. Several of the literary descriptions of the folk—particularly those based on second-
[114] hand information and far-traveled rumor—credit the Seri with habitual use of stone-tipped arrows,[1] and it is the current fashion among both Mexican and Indian residents of Sonora to ascribe to the Seri any shapely arrowpoint picked up from plain or valley; yet the observations among the tribesmen and in their haunts disclose but slight basis for classing the Seri with the aboriginal arrow-makers of America.

Among the 60 Seri (including 17 or 18 warriors) at Costa Rica in 1894, three bows and four quivers of arrows were observed, besides a number of stray arrows, chiefly in the hands of striplings. The arrows seen numbered some 60 or 70, including perhaps 20 "poisoned" specimens; nearly half of them were tipped with hoop-iron, as illustrated in plate XXX, while about as many more were fitted only with the customary foreshafts (usually sharpened and hardened by charring), and the small remainder had evidently lost iron tips in use; there was not a single stone-tipped arrow in the rancheria. Moreover, when the usually incisive and confident Mashém was asked for the Seri term for stone arrow-point he was taken aback, and was unable to answer until after lengthy conference with other members of the tribe—his manner and that of his mates clearly indicating ignorance of such a term rather than the desire to conceal information so frequently manifested in connection with esoteric matters; and the term finally obtained (*ahst-ákk*, connoting stone and arrow) is the same as that used to denote the arrowpoint of hoop-iron. The most reasonable inference from the various facts is that whatsoever might have been the customs of their ancestors, the modern Seri are not accustomed to stone arrow-making.

FIG. 37—Seri arrowpoints.

172 The 1895 expedition was slightly more successful in the search for
411 Seri arrows. About midway between the abandoned Rancho Libertad and Barranca Salina, an ancient Seri site was found to yield hundreds of typical potsherds, half a dozen shells such as those used for utensils, the fragments of a hupf evidently shattered by use as a fire-stone, and the small rudely chipped arrowpoint shown in figure 37*a*; and among the numerous relics found on a knoll overlooking Pozo Escalante (including two jacal frames, two or three graves, an abst, several shells

[1] The most specific reference is that of Hardy: "The men use bows and stone-pointed arrows; but whether they are poisoned, I do not know." Travels, p. 290.

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NATURAL PEBBLE SLIGHTLY USED AS GRINDER

THE HOLLISTON PRINTING CO., BOSTON

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

(p. 246 A)

1: McGee E-5 (1894-1895)1898 NU31 Ser1 NU31

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NATURAL PEBBLE SLIGHTLY USED AS DOMESTIC IMPLEMENT

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

177 502 brought in a cargo of large wire, and a piece of door-frame with heavy strap-iron hinges attached with screws, were among the troves of the tribesmen within a few weeks; and it was noted that while even the hinge screws and the tacks attaching tags to the cask-heads had been extracted by breaking up the wood, the roughly forged hinges of 2 by ¾-inch wrought iron had been abandoned after a tentative battering with cobbles, and lay among the refuse stones about the jacales.

412 A rough census of the stone implements of Seriland is not without interest, even though it be no more than an approximation. Some 30 or 35 habitable and recently inhabited jacales were visited, with about twice as many more in various stages of ruin, fully two-thirds of these being on the island; and at least an equal number of camps or other homeless sites were noted. About these 150 jacales and sites there were, say, 50 ahats, ranging from nearly natural bowlders to the comparatively well-wrought specimen illustrated in plate XXXIX, and an equal number of cobbles used interchangeably as ahats and hupfs; there were also 200 or 300 pebbles bearing traces of use as hupfs, of which about a third were worn so decidedly as to attest repeated if not regular use; while no flaked or spalled implements were observed save the two doubtful examples illustrated in plates XLVII and L, and only two chipped arrowpoints. It may be assumed that the sites visited and the artifacts observed comprise from a tenth to a fifth of those of all Seriland, in addition to, say, 75 finished hupfs habitually carried by Seri matrons in their wanderings; and it may be assumed also that 50 or 100 metallic harpoon-points and several hundred hoop-iron arrowpoints are habitually carried by the warriors and their spouses.

[324] The most impressive fact brought out by this census is the practical absence of stone artifacts wrought by flaking or chipping in accordance with preconceived design; excepting the exceedingly rare arrowpoints there are none of these. And the assemblage of wrought stones demonstrates not merely that the Seri are practically without flaked or chipped implements, but that they eschew and discard stones edged by fracture whether naturally or through accident of use.

Summarily, the Seri artifacts of inorganic material fall into three groups, viz: (I) The large and characteristic one comprising regularly-used hupfs and ahats, with their little-used and discarded representatives; (II) the small and aberrant group represented by chipped arrowpoints, and (III) the considerable group comprising the cold-wrought metal points for arrows and harpoons and awls—though it is to be remembered that the Seri themselves combine the second and third of these groups.

I. On reviewing the artifacts of the larger group it becomes clear (1) that they immediately reflect environment, in that they are characteristic natural objects of the territory; (2) that they come into use as implements through chance demands met by hasty selection from the

1: McGee E-5 (1894-1895)1898 NU31 Ser1 NU31

● 412

NATURAL PEBBLE SLIGHTLY WORN BY USE

THE HOLLISTER PRINTING CO., BOSTON

[p.248 A]

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1: McGee E-5 (1894-1895)1898 NU31 Serl NU31

[p. 248 B]

NATURAL PEBBLE CONSIDERABLY WORN IN USE AS GRINDER

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

abundant material; (3) that the great majority of the objects so employed are discarded after a use or two; (4) that when the object proves especially serviceable, and other conditions favor, it is retained to meet later needs; (5) that the retained objects are gradually modified in form and surface by repeated use; (6) that if the modification diminishes the serviceability of the object in the notion of the user (e. g., by such fracture as to produce sharp edges), it is discarded; (7) that if the modification enhances the serviceability of the specimen in the mind of the user it is the more sedulously preserved; and (8) that through the instinctive desire for perseveration, coupled with the thaumaturgic cast of primitive thinking, the object acquires at once an artificialized form and a fetichistic as well as a utilitarian function. The significant feature of the development is the total absence of foresight or design, save in so far as the concepts are fiducial rather than technical or directly industrial.

II. On reviewing the almost insignificantly small group of chipped stone artifacts, it seems clear that while the material is local the design is so incongruous with custom and characteristic thought as to raise the presumption that stone-chipping is an alien and imperfectly assimilated craft. The conspicuous and significant feature of the chipped stone artifact is the shapement in accordance with preconceived design.

III. On reviewing the arbitrarily separated group of metallic artifacts it is found clear (1) that the material is foreign; (2) that it is avidly sought and sedulously saved and utilized; (3) that it is wrought only by the crude methods used for fashioning the most primitive of implements and tools; and (4) that it is used chiefly as a substitute for organic substances employed in symbolic imitation of the natural organs and functions of animals. The significant features of the use of iron artifacts are (*a*) the absence of either alien or specialized designs, and (*b*) the mimicry of bestial characters as conceived in primitive philosophy.

Classed by material and motive jointly, the three groups are diverse in important respects: The first is local in material, local in motive; the second is local in material, foreign in design; the third is foreign in material, local in motive.

On recapitulating the several phases of Seri handicraft, the devices are found to fall into genetic classes of such sort as to illumine certain notable stages of primitive technic.

The initial class comprises teeth, beaks and mandibles, claws, hoofs, and horns, used in imitation or symbolic mimicry of either actual or imputed function of animals, chiefly those to which the organs pertain, together with vegetal spines and stalks or splints, used similarly under the zootheistic imputation of animal powers to plants; also carapaces and pelts, used as shields combining actual and symbolic protective functions. While this class of devices is well displayed by the Seri, it is by no means peculiar to them; clear vestiges of the devices have

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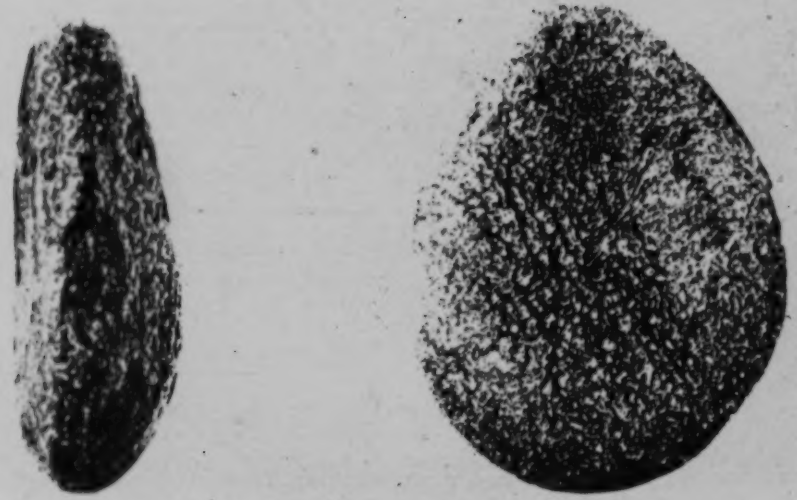

NATURAL PEBBLE CONSIDERABLY WORN AS CUTTER AND GRINDER

[FACING P. 251]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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NATURAL PEBBLE CONSIDERABLY USED AS HAMMER, GRINDER, AND ANVIL (TOP AND EDGE)

THE HELIOTYPE PRINTING CO., BOSTON

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

[Facing p. 252]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

NATURAL PEBBLE CONSIDERABLY USED AS HAMMER, GRINDER, AND ANVIL (BOTTOM AND EDGE)

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1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

Cp.2548

HAMMER AND GRINDER

THE HELIOTYPE PRINTING CO., BOSTON

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

IMPLEMENT SHAPED BY USE

THE HELIOTYPE PRINTING CO., BOSTON

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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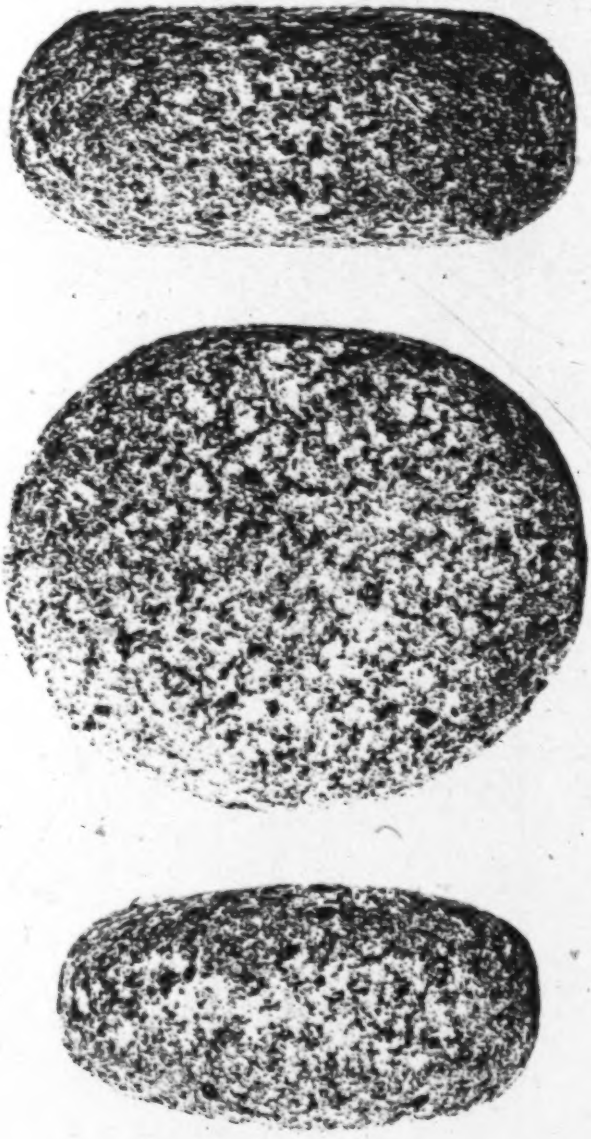

IMPLEMENT PERFECTED BY USE

THE NEW ERA PRINTING CO., BOSTON

THE BUREAU OF AMERICAN ETHNOLOGY

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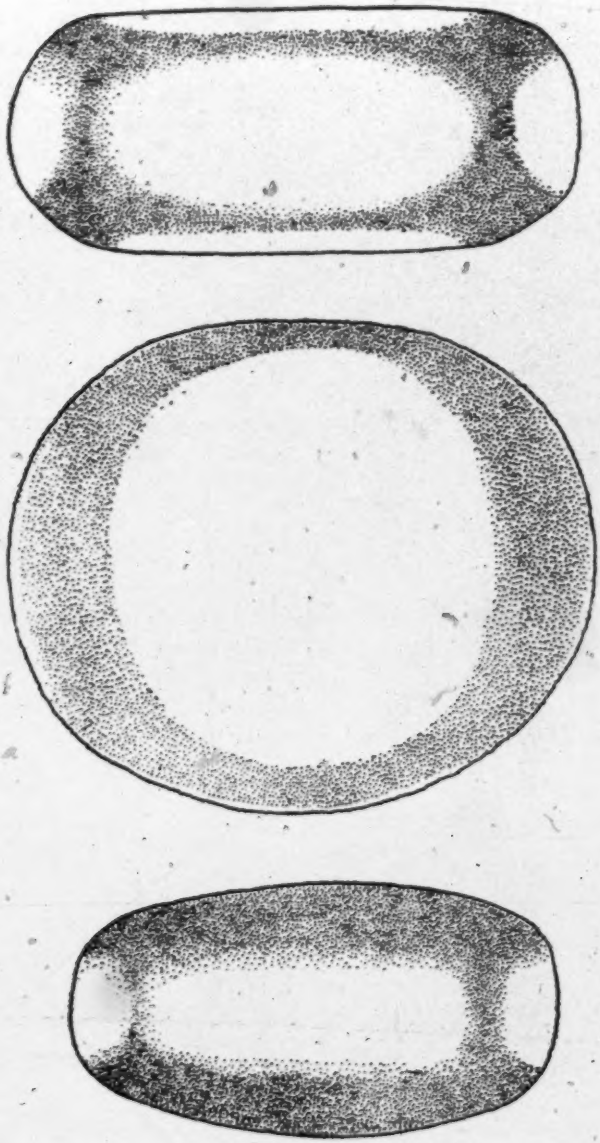
● 412



[p. 256 B]

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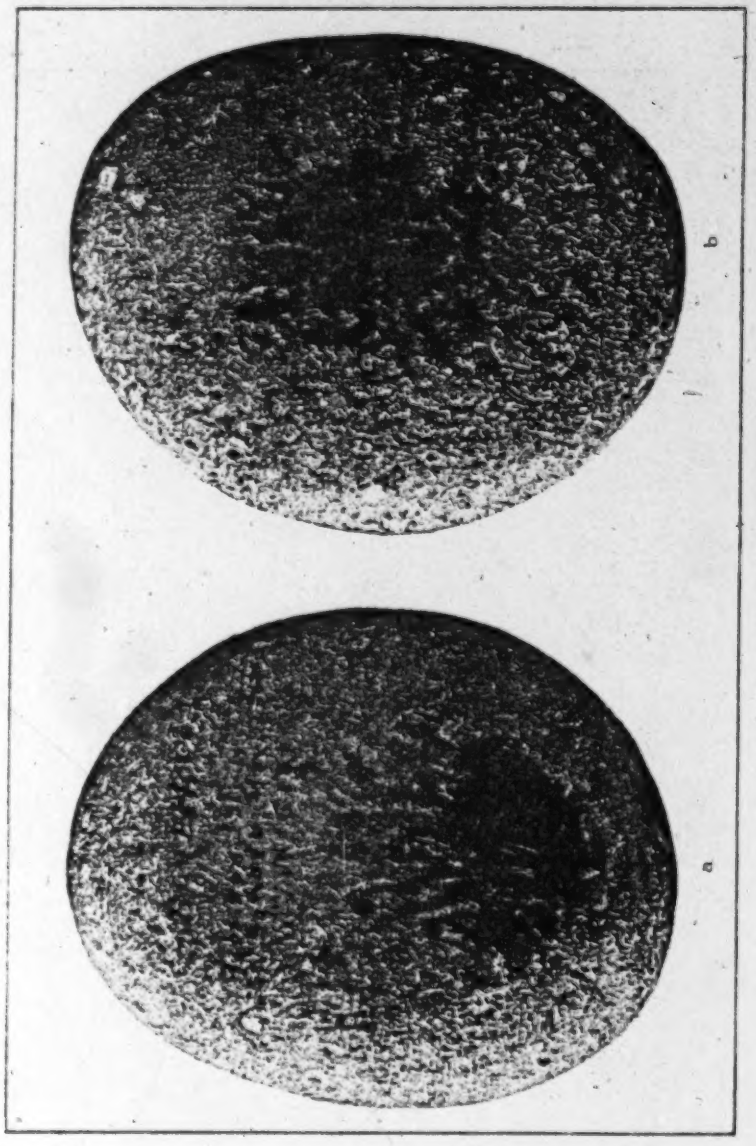

PERFECTED IMPLEMENT FOUND IN USE

[FACING P. 259]

773 Before this it was day all the time, but then it became night and coyote only laughs at night. The black strings still hang about badger's neck."

It is strange to find, too, that a flood legend is traditional among the Seris. Chico said: "In the times of the ancients a great flood came, the ocean rose up and all the country of the Seris was under water except the top of Cerro Alto. There a few Seris gathered and were saved. Everyone else was drowned. To this day the top of Cerro Alto is covered with brush which the flood did not submerge. All Seri children are taught this flood tradition, and they must learn it by heart so as to teach their children and their grandchildren."

764 The death of a tribesman gives no cause for ceremony among the Seris, although the [765] nearest relatives may customarily wail, sometimes for months, morning and evening. The disposal of the bodies of the dead, is, however, of considerable interest. A hole about three feet deep is dug by means of large [412] clam shells and a cave is excavated for the head such that the earth will not touch it. The deceased Indian is wrapped in his own blanket and laid in the grave with the head to the East, face up. The body is covered and the grave is partly filled with earth, then covered with a layer of the spiniest of chollas and thorny brush, further filled, leveled and covered with another layer of chollas to discourage the coyotes from digging up the body. When the Seris are on the move, how- [766] ever, and grave-digging is too great a task, a body may simply be lifted high to the fork of a giant cactus and left there.

583 Marriage among the Seris is not so much 585 a ceremony as it is the completion of a bargain. Under ordinary circumstances, when a man buys a woman he strikes a bargain with the bride's parents and makes a down payment. Only after completion of the bargain does the woman go to live with the man, but even then payments do not cease but continue intermittently through life. Chico Romero, although "married" for fifteen years, gave his wife's father some paint that he had received in payment for guiding and 425 packing. It is also considered natural to 858 buy and sell children. One Seri, Santo

[p. 266 (B)]
[Text continues on p. 267 (B)]

5:Dawson N-5 (1940) 1944 NU31 Seri NU31

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291
512
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Preparing a mesquite bean meal cake on the stone metate.

Seri women carrying firewood back to camp. Note the baskets and the head pads made of mesquite or torote.

8: Ascher E-5 (1960) 1962 NU31 Seri NU31

for the point may come from the transmission of an abandoned car or from flotsam. The wood for the hafting can be mesquite or ironwood, both indigenous in the area; waste from boat construction or other scraps of wood may also be used. Rubber for the gasket may be obtained from a worn automobile tire. The wrapping cord and lead cord are store bought, and mesquite gum is used to seal the hafting.

In manufacturing foreshafts Seri fishermen use three tools: a knife, a hacksaw blade, and a triangular file. The hacksaw blade is used to cut an appropriate length of metal for the point and to rough out the barb; the triangular file is employed to finish the point barb and stem; the tang of the file is used to puncture the hole in the gasket which is to receive the point. The shaping of the hafting and gasket, and the cutting and wrapping of the lead cords, are accomplished with a knife.

With regard to the method of manufacture, all fishermen report essentially the same procedure. They describe the pattern as a series of steps under two headings: (1) shaping and (2) assembling. Two individuals did not mention steps 1c and 2b, and the others considered these two steps to be optional.

1) Shaping
   a) Shaping the metal into a point
   b) Shaping the wood for hafting the point
      α) Shaping the general form
      β) Splitting the form lengthwise and grooving each half to receive the point (see section in Figure 1)
   c) Shaping the rubber for the gasket

2) Assembling
   a) Placing the mesquite gum in the grooved portions of each half of the hafting (see section in Figure 1)
   b) Placing the gasket on the point
   c) Inserting the point base into the hafting and reuniting the split hafting form
   d) Wrapping with the wrapping cord and with it interweaving the lead cord
   e) Refinishing the hafting base to fit the mainshaft socket

Four men were able to explain the foregoing procedure in detail and were in agreement in the following matters. The point is shaped before the hafting because its length determines the length of the latter, and because the diameter of the point base dictates the grooving of the haft. The gasket is shaped after the point and the hafting because the diameter of its hole is determined by that of the point base and its total diameter by that of the hafting. The mesquite gum then secures the point and seals the hafting. Interweaving the lead cord with the wrapping cord secures the former to the hafting.

The amount of time required to complete a foreshaft shows marked variation. This is not primarily a function of the working habits of the artisan. If all the materials are present, the time it takes to make a foreshaft ranges from four to eight hours, but if all the materials are not available, as much as a year may be required. There may, for example, be a considerable lapse of time between the shaping of a point and the shaping of a gasket when material for the

462 desert plants or littoral fishlets from tide-pools or of the shellfish. Both men and women will [224] bring in an occasional rattler, although women [857] are more likely to do this because they spend more time in the desert. Children of both sexes are [883] engaged in the female occupations here, but adolescent boys already join in their fathers' hunts on land or sea.

342 Housing has undergone some changes. In the 184 desert or on Tiburon the Indians construct the kind of shelter they did in the recorded past, an ocotillo frame, bent over in the middle and covered up with dried plant debris and twigs from the desert, or with the sail cloth. But in Desemboque they have more substantial houses—of wattle and adobe, with flat roofs, rectangular or square, often with corrugated tin or drift planks and other debris piled up on top, or along the walls.

178 In the remainder of their material culture, not much has been left from years past although one must remember that from the very beginning of recorded Serian history it has been of a most [291] meager sort. Pelican robes, which some Seris ap- [412] parently still wore in 1930 are gone for good. So are the stone tools. So is the pottery which had [323] probably disappeared in Kroeber's time. The hu- [301] man hair necklace with rattlesnake rattles is also a thing of the past. The rattlesnake skin belts [291] McGee (1898:170) described and figured are probably all gone. I havn't seen or heard of any.

412 But what remains much as they had been in 285 1894 are the bone-awls. These are made of burros' carpals and the blossoming of basketry, owing to

[P. 8A]

412 the stimulus of the tourist trade, has kept this
285 tool alive. Another survival from McGee's times
301 are *Olivella* shell necklaces.

Seri Antecedants and Relationship

174 For complete lack of archaeological information, little can be deduced about Seri antecedents. Speculations can be made only on the basis of similarities of their post-historic cultures with the cultures of the surrounding tribes.

171 Individual traits between the Seri and their
174 neighbors show discordant connections. Comparative data assembled by Kroeber, Beals and Driver & Massey suggest almost equal possibilities of derivation from the Cochimí, the Gila, Pima and the Yuman tribes but favor much less connections to the south. Much is made of the basketry. Archaeological basketry has been unearthed since the [172] work of Kroeber and Beals was published (Massey, MS.), but it is different from the Serian. Seri basketry shows closest relationship to Pima-Papago complex (Malkin, MS.). But part of this may be not only post-historic but certainly very recent and is hardly an argument in favor of the Pima-Papago connections.

Kroeber (1930:5) thought that on the face of it, the Seri showed greatest affinity to the Cochimí on the grounds of their general development of economy—the hunting and gathering subsistence. But he also pointed out that relationship with the Cochimí may rest ultimately on the linguistic analysis if the Cochimí language can still be recorded—which is most dubious.

[P. 8 B]

301 + 825 worn. I have observed women wearing necklaces of the former and women and very young boys of the latter. The olive shell, incidentally, is made into two sorts, the natural, unroasted shells which retain a greenish-purple, mottled color and the white. The white pallid color is achieved by roasting the shells over fire. The necklaces are mostly made up of either colored or white but occasionally they may be made of mixed shells and then they are usually alternately interlaced, now with one, now with another.

+ 825 b) *Utensils:* Two species had been reported used as occasional drinking or dipping cups and spoons. *Lavicardium elatum* and *Ficus ventricosus*. *Ficus* is presently discarded, but the *Lavicardium* is still occasionally used so. There is no doubt that the incidental use of these shells increases during longer fishing expeditions when the Seris are apt to lose some of their gear.

[412] [415]

[436] c) *Money:* Interestingly, the brown cowry was supposed to have been used as a means of exchange, as money—in the past. If this is so, then the selection of this shell for such purpose is not surprising considering its widespread use throughout the world.

[171]

439 + 825 d) *Trade:* Altogether 12 species had been reported as traded off either in the past or present. The trade importance of various species of shells varies with the demand of the market and sometimes may be only sporadic and short-lived. Only a few of the species had been indicated as having been of any trade importance in the past, and it may well be that the Seris did not register the species which may have been briefly sold to and outsiders during the short-lived fads of demand. It may be said in general that the trade importance of the shells increases and that greater variety of them are exploited now than formerly. This is surely owing to the increasing accessibility of the Seri country and the increasing tourism, not only visitors from Hermosillo, but also from such far flung places as Tucson, Phoenix and even Los Angeles.

[177]

In some instances, the Seris had no idea what the shells were sold for. The augur shell is on and off sold to some American traders who show up in Desemboque once in a while and for whom the Seri women accumulate these shells. But what uses were made of these, the Indians surely didn't know. Neither did they know what uses were made of the *Murex* shell and the *Turbo*, both of which were periodically sold in bulk to Hermosillo. On the other hand, they had some idea what uses were made of some other shells. *Pteria* and *Atrina* contain pearls and these are much desired. Especially the pearls of *Atrina* which are sold to the Mexicans or to the visitors for 25-50 pesos each and therefore have immense value, for the local market. The *Pteria* shells are said to be used for button making, and the Seris themselves claim that they make buttons of this shell. The most important of all, however, at least at the time of my visits in 1953 and 1955, was the olive shell. It was easily the most commonly and most numerously collected shell of all that the Seris ever collected. Owing to the scarcity of it in Desembo-

[435] [237] [226]

175 if they were as hungry then as they are today, they would not stop to
648 spike a man up preparatory to serving him. Their only tools then were
266 rocks to use as hammers and hoop iron for knives, and these are in
114 universal use today.

412 There is no doubt that the men were killed, but I think these mining men purposely exaggerated their findings, if any.

648 There is no doubt that the Seris were brave fighters, treacherous
721 murderers, sparing neither men, women or children on their raids,
727 killing ruthlessly. But there is one charge which cannot be brought against them, which cannot be said of many tribes north of the border. So far as I could find out, they never tortured nor scalped.

648 The Seris never took prisoners and they never inter-married with
721 other tribes, so their strain is pure.

727 There was one exception. Sixty or seventy years ago, the Seri
563 Chief Coyote Iguana and his band of warriors held up the stage between Hermosillo and Guaymas, and killed all except a handsome Spanish girl of the better class. This girl, Coyote Iguana made his wife and by her raised a family. One granddaughter still survived in 1924, and while more attractive than the general run of Seri, her complexion was fully as dark.

The Seris, Ishmaelites among the native tribes of Mexico---the most fascinating Indians in North America!

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123 *Reception Committee, Tiburon Island - 1935*
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On the twenty-fifth of April, nineteen twenty-two, I engaged the services of Roberto Thompson, who with his father and grandfather

[text continues on p. 149]

000 wear ceremonial feathers as did our western Indians. I saw no skin or
164 cutaneous disease, or evidence of tuberculosis or of trachoma---the curse of our Indians.

142. One boy-child of five years was a handsome child---fat, round,
302 sturdy, with roving great black eyes, large thick lips, a picture of
[241] perfect health. He was almost naked. His hair was done in a pigtail
[83] with a red string braided into it. His face like all the others was dirty, but he waded into the shallow water with a short spear and I saw him catch two crabs with his little harpoon. The water did not bother his face.

415 They had no plates or eating tools, except large deep clam shells,
412 cast up by the sea, which served as cups and dippers. Their long, keen
264 belt knives were used for cutting, carving or skinning, and always the
[237] fingers for eating. They gathered in a circle around an olla of seeds of long grass growing on the sea bottom prepared by winnowing, parching and grinding, and then cooked with turtle oil. Each one dipped his or her fingers into the olla and conveyed them to the mouth without losing a drop, and licked them off with great relish.

231 The dogs eat with the family. There were six or seven half-starved
264 ones. If someone picked up a piece of turtle flipper the dog often took the first lick at it, bit off a piece or licked it before it reached the owner's mouth. The dogs were not punished. They were just slapped to keep them out of the pots.

123 We had a great time that evening in Seriland. The young man played
534 his violin. This consisted of a hollow box cut out of a *palo verde*
[824] tree, and a piece of pine about sixteen inches long; terminating in a
[283] hollow where a single peg was fitted. The one string was twisted deer
[237] sinew, and the bridge was a small round clam shell at the far end. The
[533] bow was a small bent stick and some black horsehair. On the handle was a wad of rosin fastened underneath. By fingering this string a few weak squeaky notes were made, and this was the classical music of the Seris.

Manuel Encina seized his gourd rattle and began chanting. Herrera tapped a tin can and I beat on an inverted basket and the orchestra
535 was in full-swing. A young girl, Rosa, dragged out a turtle shell and
123 standing on it began to dance. This dance consisted of stepping up and down quickly with each foot alternately, and this stamping, barefooted, emitted a hollow sound. Every once in a while I let out an
[126] Indian yell which pleased the Seris very much. For two hours they had a real swell time. We took one flashlight of the proceeding.

[342] Each family was in their hut, which afforded very slight shelter
[362] as they were only partially roofed over and the sides were broken
[354] down in places. The huts were all adjoining and each had a little
[361] campfire, which did not give much illumination, so the dancing was in semi-darkness.

[text continues on p. 163]

285 [824] I watched a woman make a basket. She used young branches from the terote tree, I think *terote blanco*. The bark was peeled and shredded into two parts, the heart taken out and kept separate. The coils of the round part were put in a pot of hot water to soften, and the edge of the basket was soaked a little in hot water. The center of the coils or woof consisted of six or eight strips of heart while the outer sap wood was woven around in regular coil-weave fashion.

[287] [412] A brad of deer shin-bone sharpened on pumice to a needle point was used as a brad. With this brad she split the fiber, held one piece in her mouth, and stripped the back down. Then she punched a hole in the bone brad, inserted the sharp end of the fiber and pulled it almost through. She then repeated the operation, adding a strip of heart once in a while. These baskets are coarse and unattractive, but they are hard and tough and stand heavy use.

323 [237] [372] Cooking vessels consist of two or three cooking ollas that nest together to facilitate transportation. These are made of coarse clay, solely for utility without regard for beauty of shape, color or design. In burning these ollas they use the shell of the sea turtle. The cells of the shell are filled with a fine oil and this burns the ollas. On most of the other places on the mainland, the Indians use cow chips, or dried droppings to fire the clay.

283 484 123 [277] We proposed to shift camp to Tinajanita, our first landing place, where Herrera was to meet us in two days with the Chief and some of his men. Since it was blowing, he said the men couldn't fish and they would be on land probably hunting, so he would be able to see them. At this time they gathered *sescal* on an island off the west coast to make the liquor they used at fiestas, weddings and other celebrations.

Herrera left at five o'clock in the morning, with a swinging gait, for the opposite side of the Island. The distance around by boat would be fifty miles, and across, only about twenty or twenty-five---a full day's trip and hard, as mountains would have to be crossed and the rocks were sharp and the way difficult.

123 We had breakfast on rice and bread. Our rations are running low and we expect to move this morning. We made arrangements about the native boat and saw Blanco trot off with two five-gallon cans for water, a distance of ten miles. We went to the camp to get a few things---an old basket, a Pelican hide and other things, and then we asked the help of everybody to get the boat down to water---the tide was very low. The one man, the women and five of us were required to drag and push the boat to water.

We waved goodbye, loaded her up and then rowed against the tide and wind for miles, and finally landed in a lovely sheltered lagoon, built our fire and had lunch. A few crabs were speared, and late in the afternoon the wind shifted. We loaded the boat again and pushed off for Tinajanita, our first landing place. After rowing, we raised

[text continues on p.174]

386 Recently I observed the manufacture of *ʔantezj kóil* in Desemboque, Sonora. Although the woman involved normally makes [123] the clay in complete privacy, she agreed to let me watch. Seven young men and two young women were near a fire outside her [984] hut as she seated herself on the ground behind a water drum. As she began to work she cautioned them not to watch.[2]

[412] She commenced by scraping several roots of *ɨkoktz* to remove any dirt and then moistened them with water. Using a mano and metate, she split the bark and removed it. The rest of the root was discarded. She then pounded the bark into a pulp, moistening it at the same time with more water (Fig. 1). This pulp was put in a cup and set to one side.[3]

Next she ground several small chunks of *ɨki kóizj* into a fine powder. Then she placed a piece of hard *mokni óoxW*, the size of a marble, on the white powder. At this point she told her daughter, one of the two young women, to bring her a clean white [984] rag and a blanket. After again warning the young people to stay away, she covered herself and her metate with the blanket, leaving only a small opening by her shoulder through which I could observe. The warning was heeded by all of the youths except the daughter who came over once to take a peek. The group remained interested, and several times someone asked, "Is it blue yet?"

Beneath the blanket, the woman ground the *mokni óoxW* into the *ɨki kóizj*, mixing the powders thoroughly. After scraping the mixture to one side of the metate, she wrapped the bark pulp in the white cloth and squeezed approximately ½ teaspoonful of liquid onto the center of the stone. Then she combined some of the powder with the liquid and ground the resultant paste for about ten minutes. As necessary, she added more powder or liquid to the mixture. Finally she daubed a streak of the clay onto the back of her hand, withdrew her hand into the sunlight, and remarked that it was beginning to turn blue. At that time it was a grayish-blue. She continued to work for several more minutes and then tested the color again. This time she seemed satisfied that it was the right shade. It was now a bright, or as she put it, a strong blue. This was the *ʔantezj kóil*, the prized blue pigment (Fig. 2).

The making of the *ʔantezj kóil* is followed immediately by the making of a second portion of clay, called *ʔaʔóoskl*, which is a lighter shade of blue. Thus its name, the root meaning of which is "drab or grayish." *ʔaʔóoskl* is considered to be inferior to the *ʔantezj kóil*. After the woman had scraped the finished *ʔantezj kóil* from the metate and mano and transferred it to a saucer, she added more ground *ɨki kóizj* to the small amount of remaining

12: Moser L-5 (no date) 1964
(ca. 1960) NU31 Seri NU31

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FIG. 1. Crushing the root bark of *zkoktz (Fransería dumosa)*, to a pulp. Note the pieces of root in the left foreground, the little pieces of *mókni óoxW* sap *(Guaiacum coulteri)* in the center foreground, and the chunks of mineral in the right foreground.

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412

FIG. 2. The first or brighter batch of blue pigment, *?antezj kóil*.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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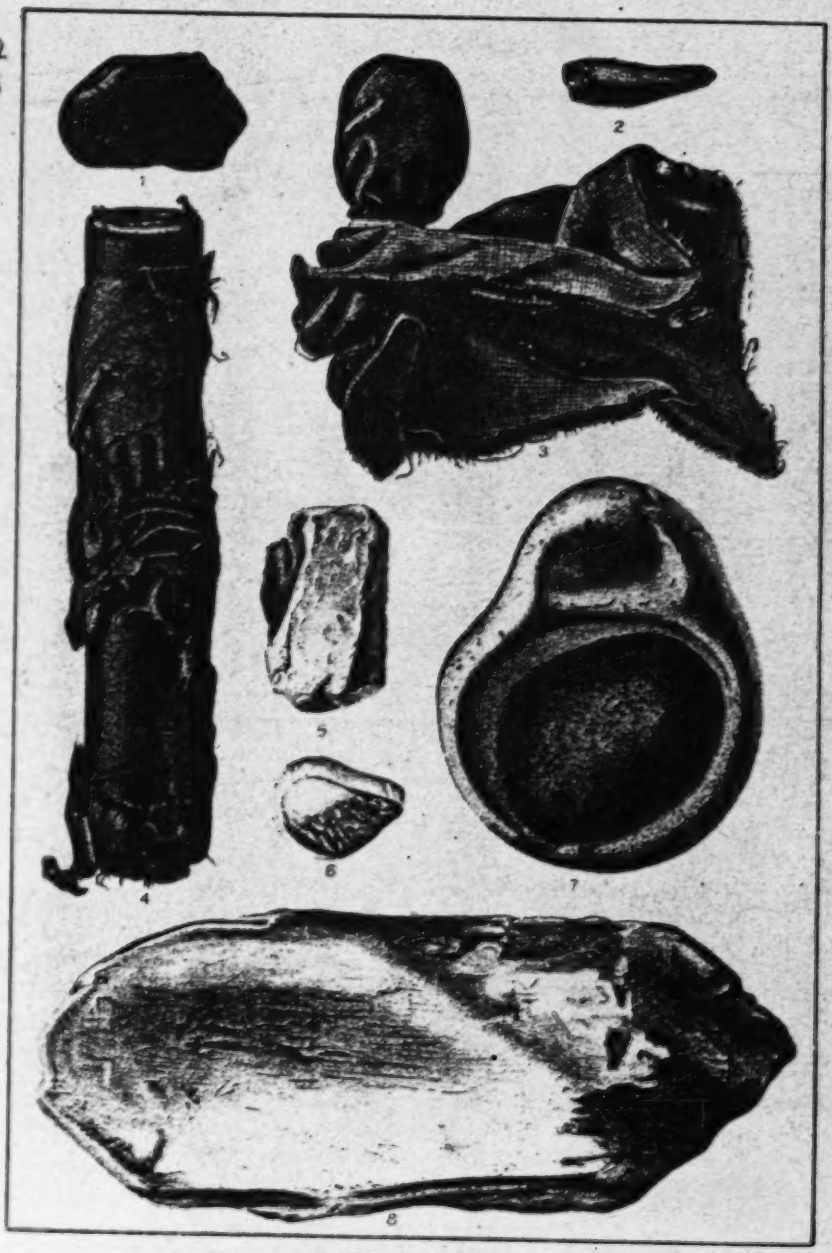

SERI FACE PAINTING PARAPHERNALIA

Cp. 170 A)

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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SEVENTEENTH ANNUAL REPORT PL. X

BUREAU OF AMERICAN ETHNOLOGY

TYPICAL SERI HOUSE ON THE FRONTIER

[FACING P. 117]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

The painted designs vary among different individuals, but are fairly persistent for each. The prevailing design at Costa Rica in 1893 was that of the aged matron known as Juana Maria (plate XVIII), with variations in detail such as that exhibited by her unmarried daughter Candelaria (the Seri belle shown in plate XXIV); next in frequency were the designs, in white and red, exhibited by the matrons portrayed in plates XX and XXII. Other designs observed are indicated in plate XXVI. The variations in individual designs are apparently due either to varying care in the application of the paint or to the degree of obliteration by wear—e. g., the withered Juana Maria sometimes put on her design askew and was negligent of details, while the blooming Candelaria greatly elaborated the details of the pattern and carefully perfected the symmetry of the whole when preparing for her full dress sitting before the camera (plate XXIV), so that her design was then gorgeous by contrast with the nearly obliterated blur of a half-hour before. The designs are renewed every few days, especially for ceremonious occasions, and hence are practically permanent. 302

When grouped in relation to their wearers, the designs are found to exhibit family connection. Thus, Juana Maria's design is repeated, with greater elaboration of detail and with a pair of supplementary marks, in that of her daughter Candelaria; the winged symbol of the Seri matron portrayed in plate XX is repeated with minor variations in that of her daughter, the Seri maiden pictured in plate XXV; while the symbols of the mother and infant daughter depicted in plate XV are essentially alike. It is noticeable, too, that in the nearly spontaneous arrangement of individuals in the group shown in plate XIII there is a tendency toward subgrouping by symbols; and it was constantly observed that the family groups gathered about particular jacales (such as that shown in plate XIV) displayed corresponding designs, though there were frequent visitors from neighboring jacales bearing other designs. Briefly, all the observed facts, as well as the supplementary information gained by inquiry, indicate that the designs are hereditary in the female line, but are susceptible of slight modification both in elaborateness of detail and in the addition of minor supplementary features. 302 424 593

The principal apparatus and materials used in the face-painting are illustrated in plate XXVII. The chief pigments are ocher, gypsum, and the rare mineral dumortierite; the ocher yields various shades of red, ranging from pink to brown; the gypsum affords the white used in most of the designs; while the dumortierite is the source of the slightly varying tints of blue. So far as was observed, the pigments are not blended by mixing, though there is some blending due to overlapping in application. The ocher is commonly extracted and transported as lumps of ocherous clay or ocherous gypsum (plate XXVII, figures 1 and 5), though it is sometimes reduced to powder and transported in bits of skin or rag, or in cylinders of cane (plate XXVII, figures 3 and 4); and it is 386 [317] [415]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

Naturally the conditions at Costa Rica were unfavorable to the study of native ideas concerning apparel. The women and some of the children were arrayed chiefly in cast-off habiliments of the rancheras or in nondescript rags, while the men either aped Mexican fashions, like Mashém, or shamefacedly sweltered under the unaccustomed burden of tatterdemalion gear; yet there was a meaningful absence of that desire for finery so prominent among primitive peoples—a fact quite as eloquent in itself as the absence of bracelets and bangles, tassels and trappings. It is probable that the shamans and mystery-hedged crones in the depths of Seriland enhance their influence by the aid of symbolic paraphernalia (indeed, some inkling of such customs is found in the meager records of earlier visitors);[1] yet the conspicuous feature of Seri costumery is the dearth of decorative devices.

FIG. 13.—Necklace of wooden beads.

The habitations of the tribe are the simplest of jacales—mere bowers, affording partial protection from sun and wind, but not designed to shed rain or bar cold. Half a dozen of these were examined at Costa Rica in 1894 and probably a hundred more, in various stages of habitability, in Seriland proper in 1895, yet not the slightest trace of decoration was observed—the structures are plainly and barrenly utilitarian in every feature. The same may be said of the balsas in which the Seri navigate their stormy waters; for the peculiarly graceful curves of the craft evidently stand for nothing more than the mechanical solution of a complex problem in balanced forces, wrought out through the experience of generations, while the simple reed bundles are absolutely devoid of paint, of superfluous cord, of fetishistic appendages or markings, of tritons, nereids, or other votive symbols at bow or stern, and of industrially superfluous features or attachments in general—indeed, the only appendages discovered were one or two simple wooden marlinspikes (shown in figure 26), thrust among the reeds to be at hand in case of need for repairs.

Among the utensils employed in the primitive householdry of the Seri the most conspicuous and at the same time the most essential is the olla, or water-jar. Its technical features are described elsewhere; but it may here be noted that the olla is the central artifact about which the very

[1] Hardy noted the use of "a small leathern bag, painted and otherwise ornamented", as a medicine rattle (Travels, p. 362), and also described a wind-symbol and an effigy used for thaumaturgic purposes (ibid., pp. 294, 295).

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

life of the tribe rotates: since the clans never reside and rarely camp nearer than 3 to 15 miles from the aguaje, a large part of the water consumed must be transported great distances in these vessels; since the region is one of extreme aridity, the lives of small parties often depend on the integrity of the olla and on the care with which the fragile vessel is protected from shock or overturning; and hence the utensil must occupy a large if not a dominant place in everyday thought—indeed, the fact that it does so is attested by constant custom and also by its employment as the most conspicuous among

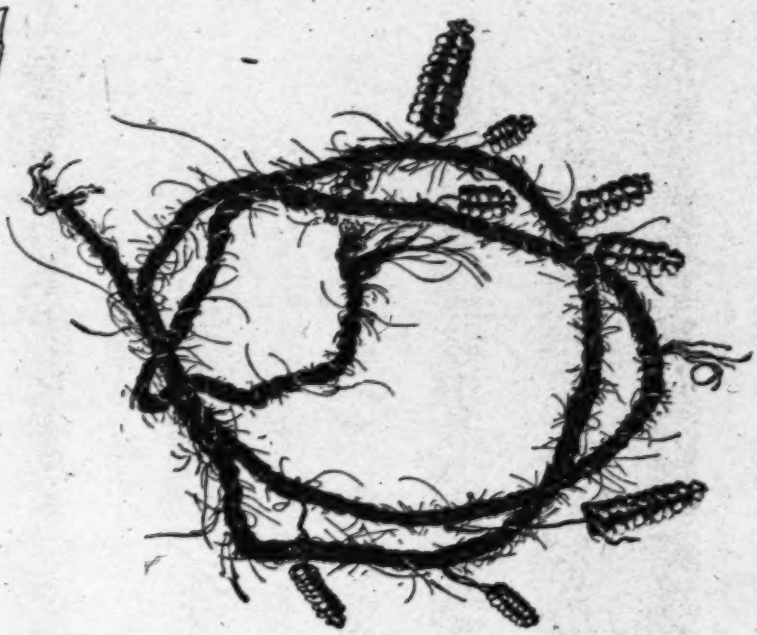

FIG. 14—Rattlesnake necklace.

the mortuary sacrifices. Thus, the relation of the Seri olla to its makers and users is parallel with that of the ever-present earthen pot to the Pueblo people, or that of the cooking basket to the acorn-eaters of California, save that its relative importance is enhanced by the fewness of activital lines and motives in Seri life. Moreover, this most characteristic utensil is established and hallowed in Seri thought by immemorial associations: its sherds are sown over the hundred thousand square miles of ancient "despoblado" from Tiburon to Caborca, Magdalena, Rio Opodepe, and Cerro Prieto, and are scattered through the 90 feet of shells forming Punta Antigualla (perhaps the oldest shell mound of America); and all the sherds from the range

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

and the shell-strata are so like and so different from any other fictile ware as to be distinguished at a glance. Hence it would seem manifest that the Seri olla must constitute a normal nucleus for the Seri esthetic; yet even here the field is practically barren, as is shown by the study of a score of usable and mortuary specimens and of thousands of sherds. The most ornate specimen seen is that depicted in plate XXXII. Its form, like that of the balsa, is a mechanical equation of forces and materials; its body-color is that of the clay, blotched and blackened irregularly by the smoke of the firing; and its decoration is limited to 17 faint lines or bands radiating downward from the ill-shaped neck. The radial bands were evidently drawn by a finger dipped in clayey water after the vessel was otherwise finished for the firing; they are irregular in placement, width, length, and direction; they generally run in pairs, two straight lines alternating with two zigzag lines, though the circuit is completed by two zigzags drawn wide apart and separated by a single straight line. The meaning of the device (if meaning there be) was not directly ascertained; but it is suggestive that its maker and owner was the mother of the youthful warrior from whom the rattlesnake necklace was obtained (her face-symbol is that shown in the lower left figure of plate XXVI), and that the vessel was surrendered more reluctantly than any other article obtained from the tribe.

Another utensil of some importance to the tribe is a basket of the type illustrated in figure 24. It is manufactured with much skill and is used for various domestic purposes, being practically water-tight and unbreakable, and materially lighter than even the unparalleledly light fictile ware of the Seri. In form and size and weave the half dozen examples seen correspond with widespread southwestern types; yet it is noteworthy that while otherwise similar baskets are habitually decorated by other basket-making tribes, the Seri specimens were absolutely devoid of decorative devices.

Practically the only remaining artifacts available for decoration are those connected with archery; and it suffices to say that while the bows are skilfully made and the arrows constructed with exceeding pains, not a single specimen seen showed the slightest trace of symbolism or of nonutilitarian motive.

Summarily, the Seri are characterized by extreme esthetic poverty. This has been noted by the early missionaries and by the few other travelers who have approached their haunts, as well as by the vaqueros on the Encinas and Serna and other ranchos bordering their range, who know them as "los pobrecitos". All observers have been struck with their destitution and squalor; yet when the impressions are particularized they are seen to denote absence of the poor luxuries, rather than the bare necessities, of primitive life. The people are pathetically poor in the industrial sense; their equipment in artifacts—implements, weapons, utensils, habitations, apparel—is meager almost, if not quite, beyond parallel in America; yet their esthetic equipment, practically

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

extensive rancherías near Punta Narragansett measure 10 miles by trail from the same aguaje; the half dozen jacales about Campo Navidad are separated by some 18 miles of stony and hilly pathway from the alternative watering places of Tinaja Anita and Arroyo Carrizal;[1] and the huts crowning the great shell-heap of Punta Antigualla—one of the most striking records of immemorial occupancy in America—are nearly or quite 10 miles by trail from Pozo Escalante, and still further from Aguaje Parilla, the nearest sources of potable water. These are but typical instances; and while there are ruined huts (evidently regarded as temporales) near the dead waters of Barranca Salina and Pozo Escalante, they tell the tribal policy of locating habitations in places surprisingly remote from running water. Like other desert folk, the Seri have learned to economize in water-carrying by swigging incredible quantities on their occasional visits to the aguajes; it is probable, too, that their systems are inured, somewhat as are those of the desert animals that survive deprivation of water for days or months, to prolonged abstinence from liquid food; yet it seems safe to assume that at least half of the water required in their vital economy (say 2 or 3 pounds apiece daily, on an average) is consumed after transportation over distances ordinarily ranging from 4 to 12 miles. Under these conditions the Seri have naturally produced a highly developed water industry; they are essentially and primarily water-carriers, and all their other industries are subordinated to this function.

Concordantly with their customs, the Seri have a highly differentiated aquarian device in the form of a distinctive type of olla, which is remarkable for the thinness and fragility of the ware, i. e., for largeness of capacity in proportion to weight. Representative specimens are illustrated in plates XXXII and XXXIII (the former painted, as already described). The dimensions of the two vessels are as follows: painted olla, height 34 cm. (13⅜ inches), mean diameter 32.5 cm. (12¾ inches); plain olla, height 32 cm. (12⅝ inches), mean diameter 32 cm. In both specimens the walls are slightly thickened at the brim, those of the painted vessel measuring about 4 mm. and those of the plain vessel about 4.5 to 5 mm. in thickness. Below the brim the walls are thinned to about 3 mm., as is shown in the fractured neck of the painted specimen. The capacity of these Seri vessels in proportion to their weight, compared with that of typical examples of ware produced by other desert peoples, is shown in the accompanying table.

Comparison of the mean ratios indicates that the Seri ware is almost exactly twice as economical as that of the Pueblos—i. e., that its capacity is twice as great in proportion to the weight of the vessel; and that

[1] The preciousness of water in this hard province was impressed in the 1895 expedition, during which the cost of the commodity, reckoned on the basis of the time and labor involved in obtaining it, was estimated at $10 or $12 per gallon, or about the wholesale price of the finest champagnes.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

even the ware of the wide-wandering Papago is more extravagant than that of the Seri in the ratio of 100 to 54. It is noteworthy, too, that the typical Seri ware is much more uniform than that of the other tribes; the various specimens seen in use at Costa Rica, and nearly entire in various parts of Seriland, were closely similar in form and nearly alike in dimensions; while the innumerable smaller fragments scattered over Seriland and the neighboring "despoblado" or buried amid the shells of Punta Antigualla correspond precisely in thickness, in curvature, in material, and in finish with the ware observed in use.

Neither the manufacture of the ware nor the sources of material have been observed by Cancasians. Examination of the specimens indicates that the material is a fine and somewhat micaceous clay, apparently an adobe derived from granitoid rocks; and such material might be

Ratio of capacity to weight among Indian ollas[1]

	Capacity	Weight	Ratio	Mean ratio
	Liters	*Kilograms*		
Seri:				
Plain	13.14	1.91	0.136	0.127
Painted	13.61	2.30	.147	
Papago:				
No. 1	17.03	4.08	.239	.233
No. 2	8.51	2.38	.279	
Sia	15.14	3.82	.252	.271
Zuñi	12.30	3.18	.259	
Acoma	13.61	4.31	.276	
Hopi	13.72	4.06	.295	

obtained in various parts of Seriland. The structure of the ware reveals no trace of coiling or other building process, nor does the texture clearly attest the beating process employed by the Papago potters; but there is a well-defined lamellar structure, and the surfaces (especially inner) are striated circumferentially or spirally in such manner as to suggest a process of rubbing under considerable pressure. All the specimens are so asymmetric as to indicate the absence of mechanical devices approaching the potter's wheel, while the necks are of such size as to admit the hand and forearm of an adult female but not of a warrior. Some suggestion of the manufacturing process is afforded by miniature fetishistic and mortuary specimens, such as those depicted in figures 17 and 18, and the larger specimens shown in figure 39, which were evidently shaped from lumps of suitable clay first hollowed and then gradually expanded by manipulation with the fingers, with little if any aid from implements of any sort. On putting the various indi-

[1] In this table the ratio is expressed by the weight in kilograms for each liter in capacity. The Papago and Pueblo specimens were selected from typical material in the National Museum and at random, save that in the Pueblo ollas choice was made of specimens corresponding approximately in size with those of the Seri.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

On putting the indi-

323 [462] cations together it would seem probable that the ware is made by the women, and that each piece is shaped from a lump of tempered and well-kneaded clay of suitable size, first hollowed and rudely shaped over one hand, and gradually expanded by spiral rubbing, kneading, and pressure between the hands of the maker. The burning is incomplete and variable, suggesting a little outdoor fire in a shallow pit adapted to a single vessel. The ware is without glaze or slip or other surficial treatment save that the lamellar texture is best developed toward the surfaces; hence it is so porous that the filled vessel is moist even in the sun.

482 [462] Ordinarily women are the water-bearers, each carrying an olla balanced on the head with the aid of a slightly elastic annular cushion, usually fashioned of yucca fiber (plate XXXII and figure 15), though in some cases two ollas are slung in nets at the ends of a yoke (figure 16) after the Chinese coolie fashion (this device being apparently accultural).

FIG. 15—Seri olla ring.

● 415 The function of the conventional Seri olla is exclusively that of a canteen or water-carrying vessel, and its form is suited to no other use; while its lines, like its thinness of wall, are adapted to the stresses of internal and external pressure in such wise as to give maximum strength with minimum weight. It is by reason of this remarkably delicate adaptation of materials to purposes that the plain olla figured in plate XXXIII, weighing an ounce or two more than 10 pounds in dry air, holds and safely carries three and one-third times its weight of water. When such ollas are broken, the larger pieces may be used as cups or

FIG. 16—Water-bearer's yoke.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

dishes, or even as kettles, in the rare culinary operations of the tribe (as shown in plate X); but the entire vessels appear to be religiously devoted to their primary purpose. 415

While some three-fourths of the observed fictile ware of the Seri and a still larger proportion of the scattered sherds represent conventional ollas, there are a few erratic forms. The most conspicuous of these is a smaller, thicker-walled, and larger-necked type, of which three or four examples were observed; two of these were in use (one is represented lying at the left of the jacal in plate X), and another was found cracked and abandoned on the desert east of Playa Noriega. The vessels of this type are used primarily as kettles and only incidentally as canteens. In both form and function they suggest accultural origin; but the ware is much like that of the conventional type. Another erratic type takes the form of a deep dish or shallow bowl, of rather thick walls and clumsy form, which may be accultural; a single example was observed in use (it is shown in plate XIV). There are also mortuary forms, including a miniature olla (figure 39) and bowl (figure 41), and such still smaller examples as those illustrated in figures 17 and 18. In addition to the utensils a few fictile figurines were found. Most of these were crude or distorted animal effigies, and one (broken) was a rudely shaped and strongly caricatured female figure some 2 inches high, with exaggerated breasts and pudenda. Analogy with neighboring tribes suggests that the very small vessels and the figurines are fetishistic appurtenances to the manufacture of the pottery; e. g., that the fetish is molded at the same time and from the same material as the olla, and is then burned with it, theoretically as an invocation against cracking or other injury, but practically as a "draw-piece" for testing the progress of the firing. 323 532 [171] [415]

FIG. 17.—Symbolic mortuary olla.

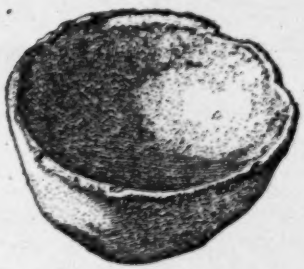

FIG. 18.—Symbolic mortuary dish.

By far the most numerous of the utensils connected with potable water are drinking-cups and small bowls or dishes; but these are merely molluscan shells of convenient size, picked up alongshore, used once or oftener, and either discarded or carried habitually without other treatment than the natural wear of use (an example is illustrated in figure 19). Larger bowls or trays are improvised from entire carapaces of the tortoise (probably *Gopherus agassizii*), which are carried considerable distances; and still larger emergency water-vessels consist of carapaces of the green turtle (*Chelonia agas-* 237 415

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

sizii), laid inverted in the jacales; these shells also being used in natural condition. No wrought shells, molluscan or chelonian, were observed in use or found either in the jacales or on the hundreds of abandoned sites; but the vicinage of the rancherias, the abandoned camps and house sites, and the more frequented paths are bestrewn with slightly worn shells, evidently used for a time and then lost or discarded. The relative abundance of the fictile ware and this natural shell ware in actual use is about 1:3; i. e., each adult female usually possesses a single olla of the conventional type, and there may be one or two extra ollas and two or three clay dishes in each band or clan, while each matron or marriageable maid is usually supplied with two to four shell-cups and each little girl with one or two; and there are twice as many carapace trays as clay dishes. The disproportion of

FIG. 13—Shell-cup.

pottery and shell about the abandoned sites is naturally much greater; for the former is the most highly prized industrial possession of the women, while the shells are easily gained and lightly lost.

With respect to solid food the Seri may be deemed omniverous though their adjustment to habitat is such that they are practically carniverous.

The most conspicuous single article in the dietary of the tribe is the local green turtle. This chelonian is remarkably abundant throughout Gulf of California; but its optimum habitat and breeding-place would appear to be El Infiernillo, whose sandy beaches are probably better adapted to egg laying and hatching than any other part of the coast. Here it has been followed by the Seri; perhaps half of the aggregate life of the tribe is spent within easy reach of its feeding and breeding grounds, and tribesman and turtle have entered into an inimical com-

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

137 chiefly in the form of wounded and dwarfed specimens, seems to indicate that its original range comprised all Seriland; while its dearth suggests destruction nearly to the verge of extinction by improvident generations better armed with their hupfs and harpoons and shell-cups than the subhuman beasts against whom the plant is so well protected.

285 415 Aside from the universally used hupf and ahst (which may be regarded as differentiated implements or tools), the only special device used in connection with vegetal food is the basket, or, rather, basketry tray (illustrated in figure 24). This ware is of the widespread coil type so characteristic of southwestern tribes. The coil is a wisp of stems and splints of a fibrous yet spongy shrub, apparently torote; and the woof consists of paloblanco (?) splints deftly intertwined by aid of an awl. The construction is fairly neat and remarkably uniform: the

FIG. 24—Seri basket.

coiled wisps vary somewhat in size, both intentionally and inadvertently, ranging from an average of three-eighths of an inch toward the bottoms of the larger specimens to half that diameter in the smaller specimens and toward the margins of the larger. The initial coil starts in an indefinite knot, rather than a button, at the center; and the spiral is continuous throughout, the final coil being quite deftly worked out to a single splint smoothly stitched to the next lower spiral with the woof splints. The ware is practically water-tight, remarkably strong and resilient, and quite durable in the dry climate of Seriland. Ordinarily the basket is abandoned when the bottom decays or breaks, but an ancient specimen obtained on Isla Tiburon was roughly rebottomed with a patch of sealskin attached by means of sinew. The baskets are notably uniform in shape, though the size varies from 8 or 9 inches to fully 17 inches in diameter.

The most striking feature of the Seri basketry, as of the pottery, is

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

extreme lightness in proportion to capacity, a quality due to the spongy character of the torote coil and to the thinness of the splints used in the woof. The inside dimensions, weight, and dry-measure capacity (filled to the level of the brim with rice) of two typical specimens approaching extremes in size are indicated in the accompanying table. As noted elsewhere, the ware is absolutely without decorative devices in weave, paint, or form; it is baldly utilitarian, a model of economy in material and in the balance between structure and function, approaching in this respect the thin-walled canteen-olla, the graceful balsa, and the light but effective harpoon. The structural correspondence of the ware to a widespread type and its limited use among the tribe suggest an accultural origin for the Seri basketry; but the delicate adjustment of means to ends in the manufacture and the strictly local character of the material quite as strongly suggest an indigenous development.

285 415 [531] [174]

Museum No.	Diameter	Depth	Weight	Capacity
174328....	38 cm.(15 in.)	9.5 cm.(3¾ in.)	482 g.(17 oz.)	6.25 l.(6.6 qt.)
174329a ..	23 cm.(9 in.)	5.0 cm.(2 in.)	142 g.(5 oz.)	1 l.(1.06 qt.)

It is impossible to portray justly the food habits of the Seri without some reference to a systematic scatophagy, which seems to possess fiducial as well as economic features. In its simplest aspect this custom is connected with the tuna harvests; the fruits are eaten in enormous quantity, and are imperfectly digested, the hard-coated seeds especially passing through the system unchanged; the feces containing these seeds are preserved with some care, and after the harvest is passed the hoard (desiccated, of course, in the dry climate) is ground between hupf and ahst, and winnowed in baskets precisely as are the mesquite beans; and the product is then eaten either dry or in the form of atole like the mesquite meal. In superficial view this food factor is the precise homologue of the "second harvest" of the California Indians as described by Clavigero, Burgert,[1] and others; but it gains importance, among

262 514 [251] [252] [171]

[1] An Account of the Aboriginal Inhabitants of the Californian Peninsula, as given by Jacob Burgert, a German Jesuit missionary. . . . Translated and arranged for the Smithsonian Institution by Charles Rau; Ann. Rep. Smithsonian Inst. for 1863, pp. 352-388. Burgert's account of foods (pp. 362-367) is so apposite as to be worthy of quotation nearly entire:

"Notwithstanding the barrenness of the country, a Californian hardly ever dies of hunger, except, perhaps now and then an individual that falls sick in the wilderness and at a great distance from the mission, for those who are in good health trouble themselves very little about such patients, even if these should happen to be their husbands, wives, or other relations; and a little child that has lost its mother or both parents is also occasionally in danger of starving to death, because in some instances no one will take charge of it, the father being sometimes inhuman enough to abandon his offspring to its fate.

"The food of the Californians, as will be seen, is certainly of a mean quality, yet it keeps them in a healthy condition, and they become strong and grow old in spite of their poor diet. The only period of the year during which the Californians can satisfy their appetite without restraint is the season of the pitahayas, which ripen in the middle of June and abound for more than eight weeks. The gathering of this fruit may be considered as the harvest of the native inhabitants. They can eat as much of it as they please, and with some this food agrees so well that they become corpulent during this period; and for this reason I was sometimes unable to recognize at first sight individuals, otherwise perfectly

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1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

was not detected until the opportunity for personal inquiry had gone by. About the rancherias on Isla Tiburon, and especially about the extensive house-group at the base of Punta Tormenta, there are burial places marked by cairns of cobbles, or by heaps of thorny brambles where cobbles are not accessible; and most of these cairns and bramble-piles are supplemented by hoards of desiccated feces carefully stored in shells, usually of *Area* (a typical specimen is illustrated in figure 25). The hoards range from 50 to 500 shells in quantity, and there were fully a score of them at Punta Tormenta alone. About the newer rancherias, as at Rada Ballena, where there are no cemeteries, the hoards are simply piled about small clumps of shrubbery. The meaning of the association of the dietetic residua and death in the Seri mind is not wholly clear; yet the connection between the "strong food" for the warpath and the

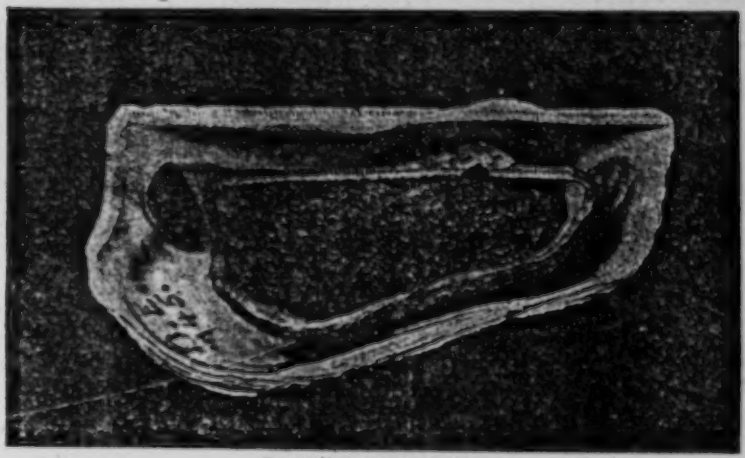

FIG. 25.—Scatophagic supplies.

mystical food for the manes in the long journey to the hereafter is close enough to give some inkling of the meaning.[1]

In recapitulating the food supplies of the Seri it is not without interest to estimate roughly the relative quantities of the several constituents consumed; and the proportions may be made the more readily comprehensible by expression in absolute terms. As a basis for the quantitative estimate, it may be assumed that the average Seri, living, as he does, a vigorous outdoor life, consuming, as he does, a diet of less average nutrition than the selected and cooked foods of higher culture, and attaining, as he does, an exceptional stature and strength, eats something more than the average ration; so that his ration of solid food may be lumped at 2.75 pounds (about 1,250 grams) daily, or 1,000

[1] Cf. Scatologic Rites of all Nations, by Captain John G. Bourke, 1891, especially chapter 14, pp. 429-468. The Seri custom, resting as it does, on an evident economic basis, tends to explain the scatophagy of the Hopi and other tribes described by Bourke.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

415

PAINTED OLLA, WITH OLLA RING

[p. 222 A]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

415

PLAIN OLLA

[p. 226A]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

activities; i. e., in developed industries the tool is a primary factor, while in nascent industries it is but a collateral.

The tools of any primitive tribe may be defined as appliances used primarily in the production of implements and utensils, and incidentally in preparing food, making habitations, manufacturing apparel, building vehicles or vessels, etc—in short, the appliances used in producing devices for the maintenance of active life. The definition emphasizes both the dearth and the undifferentiated character of Seri tools; for the appliances used in the production of devices are exceedingly few, and are commonly employed also in food-getting or in other vital industries.

Perhaps the most conspicuous general fact in connection with Seri tools and their uses is the prevalence of natural objects employed either (1) in ways suggested by natural functions or (2) in ways determined by the convenience of users; the former grading into artificial devices shaped in similitude of natural objects and employed in ways suggested by natural functions.

Prominent among the natural objects employed in natural ways are mandibles of birds, used in piercing pelts and fabrics; fish spines and bones, also used as piercers; thorns of cacti and mimosas, used in similar ways; teeth and horns of game animals, used in rending their own tissues, and afterward in miscellaneous industrial processes; together with cane splints, used for incising. Frequently the employment of such objects is mere improvisation; yet, so far as could be ascertained through direct observation at Costa Rica, through Mashém's incomplete accounts, and through inquiries from residents on the frontier, even the improvisations are made in accordance with regular custom firmly fixed by associations—quite in the way, indeed, of primitive life generally, and of the physiologic and psychic processes from which primitive custom is so largely borrowed. With these objects may be grouped the turtle-shells and pelican-pelts used as shields against alien and animal enemies or as protectors against the elements; and the Seri sages would class with them the deer-head masks and deer-hoof rattles worn in the dance to at once symbolize and invoke strength and swiftness. One of the most striking among the artificial devices of symbolic motive is the piercer, or awl, of wood or bone, shaped in imitation of the avian mandible; yet still more significant in a vestigial way (provided the most probable inference as to genesis be valid) is the hard-wood foreshaft of arrow and harpoon, shaped and used in trenchant symbolism of the deadly tooth.

There are two conspicuous classes of natural objects employed in ways determined largely by the convenience of the users, viz, (*a*) marine shells and (*b*) beach pebbles.

The marine shells applied industrially comprise the prevailing local genera, *Cardium*, *Mactra*, *Area*, *Chama*, and others. They are used ordinarily as drinking-cups, dishes, dippers, receptacles for fats and fare-

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

237 412 [415] paints, and as small utensils generally; and they are used nearly as commonly for scraping skins, severing animal and plant tissues, digging graves and waterholes, propelling balsas, and especially for scraping reeds and sticks and okatilla stems in the manufacture of arrows, harpoons, bows, balsas, and jacal-frames—indeed, the seashell is the Seri familiar, the ever-present handmate and helper, the homologue of the Anglo-Saxon Jack with his hundred word-compounds, a half-personified reflex of habitual action and thought. Ordinarily—always, so far as is known—the shells are used in the natural state, i. e., either in the condition of capture and opening for the removal of the animal, or in the condition of finding on the beach. For certain purposes the fresh and sharp-edged shell is doubtless preferable, and for others the well-worn specimen (like the paint cup illustrated in plate XXVII) is chosen; but everything indicates that the need for smoothed shells is met by selecting wave-worn specimens, and nothing indicates that the value of the appliance is deemed to be enhanced by wear of use—in fact, the abundance of abandoned shells about the rancherias and camp sites, and over all Seriland for that matter, indicates that the objects are discarded as easily as they are found along the prolific shores.

412 Next to the shells, the most abundant industrial appliances of the Seri are beach pebbles or cobbles. They are used for crushing shell and bone, for rending the skins of larger animals, for severing tendons and splintering bones, as well as for grinding or crushing seeds, uprooting canes, chopping trees and branches, driving stakes, and for the multifarious minor purposes connected with the manufacture of arrows and balsas and jacales; they are also the favorite women's weapons in warfare and the chase, and are sometimes used in similar wise by the warriors. The material for these appliances paves half the shores of Seriland, and is available in shiploads; and its use not only illustrates Seri handicraft in several significant aspects, but illumines one of the more obscure stages in the technologic development of mankind.

The cobble-stone implements of the Seri range from pebbles to bowlders, and there is a corresponding range in function from light hand-implements at one end of the series to unwieldy anvils and metates at the other end. The intermediate sizes are not infrequently utilized, and are customarily used interchangeably, the smaller of any two used in conjunction serving as the hand implement and the larger as the anvil or metate; yet there is a fairly definite clustering of the objects about two types, a larger and more stationary class, and a smaller and more portable one.

192 412 The Seri designation for the larger stone implement is that applied to rock generally, viz, *ahst* (the vowel broad, as in "father"); and it seems probable that the term is onomatopoetic, or mimetic of the sound produced in the use of the implement as a metate, and that its application to rocks generally is secondary. The designation applied to the

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

764 together by okatilla stems, the shocks being sometimes nearly as high and broad as the jacales. A few of the scatophagic shells were found about the bramble-marked graves at Pozo Escalante, and a single one at Barranca Salina. In general the association of cemeteries and ran-
[768] cherias, or of graves and jacales, indicates that habitations are usually abandoned for a time when a death occurs within or near them.

[415] The most conspicuous cairn seen in Seriland was well within Tiburon. It stands on the southern side of a little rock-butte about a mile and a half east-south-east of Tinaja Anita, south of the main arroyo, and near where the trail from the tinaja bifurcates toward Arroyo Carrizal and Punta Narragansett, respectively. It is shadowed by a notably large and widespreading paloverde, and is in the form of a cone estimated at 7 feet in height and 18 or 20 feet across the base. The materials, at least on the surface, are rounded pebbles and cobbles, possibly from the adjacent arroyos, though more probably from the beaches, of which the nearest is miles away. It was not determined to be mortuary.[1]

FIG. 30—Mortuary olla.

On the death of the matron, a grave is scooped out by means of shells

[126] [1] As an indication of the conditions for observation in Seriland, this cairn is fairly typical: it was seen but once (on December 25, 1895), and the observation was limited to a few minutes by the attendant circumstances. On the evening before the party landed at Campo Navidad, with the hope of working up the coast nearly or quite to Punta Tormenta on the following day; but before morning a dowdy gale was whitening the waters of Bahia Kunkaak so fiercely as to prohibit embarkation. Meantime the supply of water—that standard commodity of arid regions—was too nearly exhausted to permit inaction; so while Mr Johnson with three guards ascended the Sierra to establish a new topographic station, the leader of the party with the remaining seven men set out in search of water. The nearest known aguaje was that of Arroyo Carrizal; but under the hypothesis that some of the better-beaten trails turning northward might lead to nearer water, one of them was taken; and after turning back from half a dozen false scents, the principal trail was followed to the well-known Tinaja Anita, 15 miles by the trail from Campo Navidad; and here the party watered. It was on the return trip that the cairn was discovered; but the party were laden with filled canteens and canvas-pans and coffee-pots, the day was well spent, and the camp more than a dozen miles distant even over the air line traversing spall-sprinkled taluses and sharp-edged rocks; moreover, the men were naturally and necessarily heavily armed and on constant guard. Accordingly even the short stay and cursory notes involved an additional mile of darkness on a trail so rough as to cut through shoe-soles and sandals and catch scants of blood to tempt coyotes to the camp site. Thus it was that the cairn was not more critically examined and is not more fully described.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

property of the deceased. Finally the pelican-pelt bedding is folded over the body, and two turtle-shells are laid over all as a kind of coffin, when the grave is carefully filled, and the ground so smoothed as to leave no mark of the burial. During subsequent hours the stones for the cairn or the cholla-joints and other brambles for the brush-heap are piled over the spot, while the scatophagic shells are added at intervals apparently for weeks or months and perhaps for years after the burial.

FIG. 41—Food for the long journey.

The mortuary food is carefully selected for appropriate qualities (i. e., for "strength" in the notion of the mourners). It comprises portions of turtle-flippers, and, if practicable, a chunk of charred plastron—the food substance especially associated with long and hard journeys—with a few fresh mollusks, and, judging from a single good example as well as from analogy, one or two scatophagic shells. The remains of a funerary feast are illustrated in figures 41 and 42, the latter being the scatophagic receptacle utilized apparently in the absence of the customary Noah's ark. It may be significant that this shell is perforated at the apex, evidently by long wave-wear before utilization, and that the accompanying olla bears marks of having been broken, then repaired, and afterward perforated, as illustrated in the photo-mechanical reproduction (figure 39); for these features perhaps express that idea of "killing" mortuary sacrifices, ostensibly to fit them to the condition of the deceased, though really (in subconscious practicality) to protect the sepulcher from predation.[1]

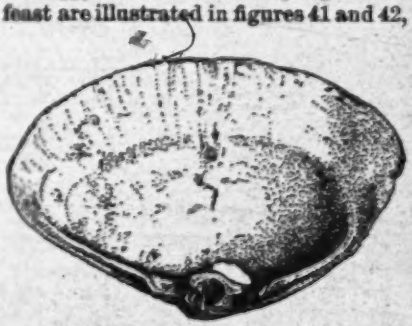

FIG. 42—Mortuary cup.

[1] "In all stages of development belief runs a close race against cupidity, and is sometimes distanced; so the sages learn that even a buried weapon may be a source of contention, which they thenceforward forestall by breaking or burning it." (Primitive Trephining in Peru; Sixteenth Ann. Rep., Bureau of American Ethnology, 1897, p. 22.)

2: Kroeber E-5 (1930)1931 NU31 Seri NU31

McGEE ON THE SERI

The pages that follow deal with McGee's well-known monograph on the Seri,[1] discussing first points on which his data are fuller or mine confirm or modify his, and then points on which I believe him to have been in error or to have misconstrued his observations. McGee spent little more time in actual contact with the Seri than I did.[2] His work impresses me as that of an extraordinarily good observer, keen in seeing significant evidence, but of uncontrolled imagination and unconscious of his preconceptions. It is only fair to state that where he founds an interpretation on slender or uncertain data, he generally indicates the fact to a careful reader.

Data and Discussion

The ratio of kilogram weight to liter capacity of water jars is given by McGee (p. 183) as follows: 2 Seri, .126-.147; 2 Papago, .239-.279; 4 modern Pueblo, .252-.295. There is no doubt that the Seri olla is unusually thin-walled. Sherds seen at a campsite near San Rafael, on the dry course of the Bacuachi, 20 or more miles from the coast, ran from 2 to 5.5 millimeters in thickness, averaging 3.8; their curvature was slight, indicating large vessels. McGee remarks (p. 184) that the purpose of nearly all Seri pottery is to hold or transport water, other uses being secondary, generally after breakage. My observations on the island confirm this.

Head loads are carried on a ring of "yucca" fiber (p. 184).

The carrying stick or yoke, with nets to hold ollas, is considered accultural by McGee (p. 184), although he mentions (p. 68) that Ugarte in 1721 saw the device in use by men, the women carrying single ollas, presumably on their heads. Nordenskiöld has recently shown the "coolie yoke" to be ancient in the area.[3] It is used today in Sinaloa and Sonora.

McGee (pp. 11, 191, 292) thought that he understood that the "Ancient of Pelicans" was the chief creative deity and brought up the islands and earth with the help of the Turtle or Shark. This

[1] W J McGee, The Seri Indians, BAE-R 17, part 1, pp. 1-128, 129*-344*, 1898. (In citations of the higher page numbers, the asterisk is omitted.)

[2] McGee (pp. 13, 98, 281) in 1894 spent "about a week" at Costa Rica west of Hermosillo where some 60 Seri were temporarily congregated, his principal informants being subchief Mashém who spoke Spanish, and Juana Maria. A Spanish-English interpreter is referred to. In 1896 the coast and Tiburon Island were visited, camps examined, but not a single Seri encountered. The vocabulary was obtained chiefly at Hermosillo from Kohuilo, an old Seri official interpreter who had left the island in childhood, never revisited it, considered himself an outlaw in Seri eyes, and had long had no dealings with them except under Mexican protection. I spent six days or parts of days with Seri, sleeping two nights on Punta San Miguel and three in the ranchería on the island opposite. Two Seri accompanied us back to Hermosillo to draw their government stipends, and were available for some supplementary questioning and revision of notes on the two following days.

[3] Comparative Ethnographical Studies, No. 9, 284, 1930.

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342
415

FIG. 4. DOMESTIC SCENE IN A SERI VILLAGE

[p. 197(A)]

222 forests of giant cacti (Fig. 9) provide during this season an unlimited supply of "pitahayas" toward which the tribespeople customarily moved to accomplish the annual harvest. The fruits were readily knocked down by means of long poles and, when ripe, the spines were easily brushed off, leaving a luscious pulp as big as a fig. During the height of the season all the clans withdrew from the coast and gave their undivided attention to the collection and consumption of the cactus fruit, gorging tremendous quantities for weeks until waning supply and cloying appetite drove them back to the more severe hunt for turtle and pelican.

252 Perhaps the only germ of thriftiness in the
262 Seris is shown by a peculiar custom with
514 respect to the pitahayas. The fruits, eaten in such enormous quantity, were imperfectly digested, the hard-coated seeds particularly passing through the body unchanged. Using
[415] large seashells, the feces containing these
[251] seeds were collected and preserved with some care. Thus, when the harvest of fresh fruits was over, there remained a hoard of these dry, nutritious discharges which were ground on the stone adst, winnowed in a shallow basket and made into a meal to be eaten, either dry, as a watery atole, or mixed with turtle grease to form a thick paste.

614 Although the Seri's omnipresent problems of food-getting and of personal subsistence have been of particular interest, the lost social customs of the tribe deserve a moment's attention. Before the death of all
[161] but a few of the 2,000–3,000 Seris at the hands of invading Spaniard and Mexican, the tribe consisted of a number of conspicuous maternal clans, each of which was presided over by a zoic tutelary such as the Pelican, the Turtle, the Rattlesnake, or the Badger. The totemic symbols denoting the
302 various beast-gods and incidentally indicat-
386 ing the blood-carriers of clans dedicated to
614 them, consisted of elaborate designs painted upon the face (Fig. 10). In accord with their savagery in which the social organization was based on blood kinship reckoned in the female line, under ordinary circumstances, the faces only of the females were painted. Colored minerals pounded to powder afforded the pigments for the paint-

[p. 201(A)]

3:Davis & Dawson E-5 (1922-1940) 1945
NU31 Seri NU31

their minds and to live among them without undue fear of losing his life. Through the kindness of Señor Thomson the senior author succeeded in making himself a friend of the Seri and, enlarging upon this friendship through long periods of living and traveling among them, has acquired an intimate knowledge of these strange people.

In 1922 the fishing industry of the Gulf of California was not yet well developed, and it was to be ten years before the village of Kino should appear on the maps of the Sonora coast. The Seris were still isolated in their desert domain and their numbers, then about 250, were maintaining themselves out of reach of the infectious diseases of the white man. The clan life had disappeared, and the people lived as a single tribe with their old chief, Juan Tomas, 90 years old at that time

FIG. 15. MOVING DAY AMONG THE SERIS
THESE BURDENS, BORNE FOR MANY MILES OVER ROCKS, THROUGH CACTUS AND DEEP SAND, CONTAIN UTENSILS FOR HOUSEKEEPING WHEREVER THE SERIS MAY STOP.

178 of sea lion oil and powdered cactus skeleton,
396 was launched. It was the largest craft they had ever possessed and came to be called the "battleship," for its size.

After having established firm friendship
114 with the tribe in 1922, it was possible two years later to carry out an extensive plan to
221 learn the habits of the Seris by living among them, sharing their comradeship along with their privations. At this time they still had no homes that could even be called semi-permanent. Moving here and there in response to fluctuations of their precarious food supply, household things were not accumulated, and life continued to be reduced to its very simplest elements and absolute necessities. Baskets made of fiber from the torote tree, some tin cooking and water vessels (the handmade olla was seldom any
● [415] longer made), some patched and filthy rags which served as blankets to the fortunate few, constituted the family possessions (Fig. 15). Starved, bony family dogs were abun-
231 dant, as always, every Indian having one or two (Fig. 16). Each day they could be seen gnawing on some old fish head long since

[p. 264 (B)]
[Text continues on p. 265(A)]

3:Davis & Dawson E-5 (1922-1940) 1945
NU31 Seri NU31

[342]
[415]
[732]

FIG. 17. SERI BLIND MAN
BEING LED BY A BOY. NOTE THE CRUDE SHELTER OF POLES AND BRUSH SERVING AS AN AIRY DWELLING.

231 destitute of nourishment, tough and strong as rawhide; but hope springs eternal in an Indian dog's stomach, and again and again he will search out and mouth the same old pelican bone or fish head, discouraged never. The dogs, beside keeping the camp clean, lick all the cooking utensils when they are not tended, and also are allowed to lick clean the infants after they have performed their natural defecations. A Seri girl was seen placing [312] a small can of water for a dog to drink from, afterward drinking some of the remainder herself and then pouring the rest back into the family five-gallon can.

732 Although the conditions of existence for
734 the Seris had from time immemorial been too precarious to permit of anyone living who was unable by physical disability to hunt or fish to get his meat, there were two or three men, blind or nearly so, whose wives got an uncertain living for them by the hardest struggle (Fig. 17). If a Seri, however, became ill of a disease which the tribe feared, he was often taken into the desert and left with a little food and water, either to get well and return or to perish.

[P. 265(A)]

5:Dawson N-5 (1940) 1944 NU31 Seri NU31

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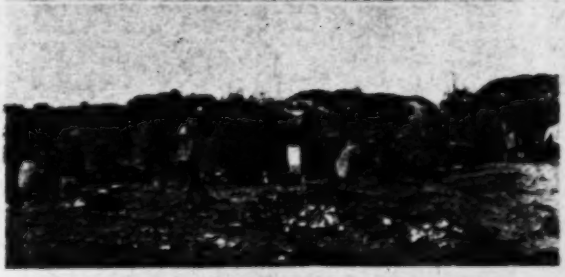
1. A basket of cactus meal.

342



2. A Seri village on Tiburon Island. Note the large shells of the sea turtle that serves as food.

285
S31
S46

3. Making the Seri basket. House is constructed of ocotillo branches and brush.

[p. 135]

237 On the other hand, the hides of all of these three animals had been traded off to the Mexicans, [439] but this again was now discarded. This would [182] merely indicate the fluctuation of collapse of the demand from the outside rather than any intrinsic change in the Seri values.

Incidental use of the horns of the bighorn had been denied by all of the younger informants although admitted by Miguel Barnett. However, as I observed, the horns of this sheep are sometimes [415] used as drinking cups. Several of them were [181] lying around in the usual disorderly way of the Seris, now and then picked up for drinking and then again discarded. But the use of them struck me as most casual.

224 411 *Hunting:* Hunting takes a variety of forms and includes a variety of weapons, from .22 caliber and .30/.30 caliber rifles to spear, stone and throwing stick. Bighorn and deer are followed on foot but without dogs, probably because without dogs they may be easier to surprise. This hunt takes place in daytime. But the peccary is hunted with both the spear and the rifle and with a pack [231] of dogs, and only by the adult men. There is an [885] emphasis on the "adult," this surely owing to the certain amount of danger connected with the chase of the peccaries. The weapons of the chase dwindle to the throwing stick or a stone when it comes to the jackrabbit. Badgers, I was told, are also killed with the same weapons. But formerly, the informants said, bow and arrow was much instrumental in hunting the smaller beasts.

* 825 Other animals, according to the Seris, are not [224] hunted now, nor had they been in the past. Justification for this ranged from the usual "because it isn't done" to the more specific reasons. The skunk is "neither hunted nor eaten because it [225] stinks." The whale is considered "too big to kill" while the killer whale is "too fierce." The harmless *tonita* (dolphin)[1] was reported somewhat hazily as "sometimes killed" but the comments were inconclusive and were denied by other informants.

[224] Two other species had been reported as hunted in the past but not at the present time. The Ringtail cat was supposedly hunted with the slings [225] while the sea lion was hunted down "with a rifle or rock but not with the harpoon because of its great strength, it would break the harpoon." This, however, was "perhaps 25 years ago." Why the sea lion is no longer pursued is uncertain, unless there is again a lack of demand from the outside while the Serian economy is so much centered on fishing.

231 *Pets:* How many species of animals are kept as pets on and off is difficult to say. Like most hunting and gathering groups the Seris are fond of pets but their interest in them depends entirely on an accidental capture. Among the wild mammals of the region there are few that could be captured and tamed easily. The badger which I mentioned already was the only mammal I saw

[237] [362] [1] I have seen bones of beached whales used for stools and also the skull of the *tonita* used as a chair. But it must be remembered that these animals got stranded on the beach. They were not deliberately hunted down.

[P. 10 B]

1/2 [i.e. - deer, bighorn and peccary - Analyst]

9:Malkin E-5 (1953-1955)1962 NUSI Seri NUSI

MOLLUSCA

VII

Species	Food		Decoration		Trade		Bait
	Prom.	Past	Prom.	Past	Prom.	Past	
Octopus bimaculatus	x	x					x
Codakia distinguenda		x					
Laviecardium elatum		x			x[1]		
Carditamera affinis	x	x					
Acmaea dalliana			x	x	x		
Crucibulum spinosum		x	x	x	x		
Chione undatella	x	x					
Chione californiensis	x	x					
Pteria peruviana	x	?	x	?	x		
Volsella capax	x	x					
Olivella dama			x	x	x		
Cypraea annettae				x[3]			
Tegula rugosa		x		x		x	
Conus regularis		x[3]		x	x	?	
Phyllonotus erythrostomus		x				x	
Turritella broderiana		x[3]			x	?	
Polinices reclusiana	x	x					
Chlamys subnudosa	x	?					
Atrina maura	x	?			x[4]		
Navicula pacifica		x					
Turbo fluctuosa	x	?			x		
Solenostira pallida			x	?	x		
Ceritium stercusmuscarum			x				
Trivia radiana			x				
Ficus ventricosus	x						
Nioche bistriunoca	x	x					

[1]Occasionally used as dip spoon

[2]Supposedly used in the past for money

[3]In the past "giants of 300-400 maybe years ago have eaten it."

[4]Only pearls

These figures show then 26 out of 37 species exploited economically in some way, that is 70%. These figures show increase over the figures I have published previously (1956) which were 21 out of 36 species and 58% respectively. The corrected figures are the result of brief additional field work in 1955.

Food

A good part of the molluscan forms are used as food. Altogether 19 species are listed as such, although out of these, only 11 were reported as being part of the diet today while the remainder only in the past. It is obvious that there has been progressive decrease in the Seris' dependence on the molluscan diet within the past few generations.

Four of the species reported as part of the Seri diet at various times had been collected from the kitchen-middens. There are: *Pteria peruviana*, *Chlamys subdudosa*, *Volsella capax*, and *Navicula pacifica*. Of these four, *Navicula* has been reported as eaten in the past "maybe 100 years ago, but not

301 worn. I have observed women wearing necklaces
+825 of the former and women and very young boys of the latter. The olive shell, incidentally, is made into two sorts, the natural, unroasted shells which retain a greenish-purple, mottled color and the white. The white pallid color is achieved by roasting the shells over fire. The necklaces are mostly made up of either colored or white but occasionally they may be made of mixed shells and then they are usually alternately interlaced, now with one, now with another.

+825 b) *Utensils:* Two species had been reported used as occasional drinking or dipping cups and spoons. *Lavicardium elatum* and *Ficus ventricosus*. *Ficus* is presently discarded, but the *Lavicardium* is still occasionally used so. There is no doubt that the incidental use of these shells increases during longer fishing expeditions when the Seris are apt to lose some of their gear.

[412] [415]

[436] c) *Money:* Interestingly, the brown cowry was supposed to have been used as a means of exchange, as money—in the past. If this is so, then the selection of this shell for such purpose is not surprising considering its widespread use throughout the world.

[171]

439 d) *Trade:* Altogether 12 species had been re-
+825 ported as traded off either in the past or present. The trade importance of various species of shells varies with the demand of the market and sometimes may be only sporadic and short-lived. Only a few of the species had been indicated as having been of any trade importance in the past, and it may well be that the Seris did not register the species which may have been briefly sold to and outsiders during the short-lived fads of demand. It may be said in general that the trade importance of the shells increases and that greater variety of them are exploited now than formerly. This is surely owing to the increasing accessibility of the Seri country and the increasing tourism, not only visitors from Hermosillo, but also from such far flung places as Tucson, Phoenix and even Los Angeles.

[177]

In some instances, the Seris had no idea what the shells were sold for. The augur shell is on and off sold to some American traders who show up in Desemboque once in a while and for whom the Seri women accumulate these shells. But what uses were made of these, the Indians surely didn't know. Neither did they know what uses were made of the *Murex* shell and the *Turbo*, both of which were periodically sold in bulk to Hermosillo. On the other hand, they had some idea what uses were made of some other shells. *Pteria* and *Atrina* contain pearls and these are much desired. Especially the pearls of *Atrina* which are sold to the Mexicans or to the visitors for 25-50 pesos each and therefore have immense value, for the local market. The *Pteria* shells are said to be used for button making, and the Seris themselves claim that they make buttons of this shell. The most important of all, however, at least at the time of my visits in 1953 and 1955, was the olive shell. It was easily the most commonly and most numerously collected shell of all that the Seris ever collected. Owing to the scarcity of it in Desembo-

[435] [237] [226]

que (as a result of the ecology of the coastal waters) it is gathered in huge quantities largely on the shores of Tiburon where it is said to occur in great numbers. This animal is gathered in large bulk in 5 gallon gasoline cans and then sold either as finished necklaces at the rate of five pesos each, or as bulk, by the liters, with 20 liters for each gasoline can. There is a steady market for these shells.

e) *Bait:* Only the octopus has been reported as used for fish bait for the *pinta*, *baya* and *pescara*, and I have seen it used in that manner. But it is certain that on occasion the Seri will use also for bait the flesh of some of the shelled smaller molluscs, especially when they wish to capture live fishlets for bait.

Hunting

Collecting of molluscs is almost invariably a job of adult women and of the children of both sexes who at low tides scavenge the exposed mud flats and gather or dig out various marine animals. Some are collected on the surface only. Among those that must be excavated are the octopus and *Nioche* which hide in burrows or mud, respectively. A large shell is usually used as a tool to pry the *Nioche* out.

Taxonomy

Molluscs on the whole are recognized as one group of animals. However, this does not include the octopus and the chitons which are considered as different sort of creatures. Some sort of feeble association between the *Pelecypods* and the *Gastropods* is recognized and various species of both are placed together. I noticed a tendency to consider some of the *Gastropods*, the limpets and *Crepidula* for example, as supposedly having two valves while in fact they are both univalves. The explanation offered for this was "it lost one side," meaning one valve.

Although *Chitons* spend most of their time motionless attached to rocks they are both considered animals. The motions of these animals may not have been observed by the adult, but the Indians, young boys especially, certainly noticed the changed positions after a period of time.

In some instances the Seris observed quite small differences between animals—recognizing them as different species. In the *Neritina* two different forms were correctly identified as representative of the same species, although they differed considerably in size and color. On the other hand *Columbella* and *Solenostira* had been given the same Seri name palémex[s] but were recognized as different kinds of animals.

Sexing

A distinct tendency to consider the molluscan males larger than the females emerges readily from the Seri answers. This can be shown in the table below:

[P. 40 A]

123 handed to show their friendliness.

142 291 123 [302] [411] One was a young man with rather pleasant features, his braided hair hanging below his shoulders. His name was Antonio Herrera. The other was a wild-looking specimen called Ramon Blanco. His hair was a tangled mat with a short braid behind, suspicious black piercing eyes, long sparse moustache and chin-beard hiding a broad cruel mouth. He wore the remnants of an old sweater, a short dirty kilt, or skirt, nearly to his knees, a belt full of cartridges, mostly empty, and a long knife in a rawhide scabbard.

123 [745] [291] The young man had been baptized and given a name by Roberto, who had acted as godfather or *patrona*, many years ago. He wore a hat, jacket, and pants of blue denim, and *guaraches*, or sandals of rawhide.

We shook hands all around and then they called and halloed in the brush and soon three women and a lot of children, wild and half-clothed, filed into camp. The women were tall, gaunt, unkempt, ragged and barefooted, paying us not the slightest notice. They were bearing on their heads large baskets filled with all their earthly possessions---cooking ollas, scraps of cloth, pieces of turtle meat, bone brads, hair brushes, and odds and ends. They carried, also, an infant or two wrapped in odd bits of rags. Several gaunt dogs followed in their wake.

342 [512] [361] In all, three families came trailing in, removed their household equipment from their heads and resumed their interrupted and primitive housekeeping. Each family occupied its apartment in the row of brush shelters, separated from each other only by brush partitions with a total lack of privacy. These shelters, always open to the sea, serve as shade from the fierce rays of the sun, and also as windbreaks, but are no protection from infrequent rains. They are occupied only for a brief period and then their nomadic tenants move on to fresh *cahuaas*, or sea turtle range.

123 [142] Soon, a third man arrived while we were near the huts, Manuel Encina. He was a man of sixty-five, gray hair and mustache, seamed features, and not evil looking. He was out of breath. He had gone for water to the same water hole where we had been yesterday, struck our tracks, had left his water cans and hurried back to warn his people. He was greatly relieved to find friends.

Since he had gone for water, inquiry revealed there had been no water in camp for two days, and six adults and one girl of thirteen and six children were thirsty. We gladly gave them one of our five-gallon cans of water and they were very grateful. They had caught a sea turtle the day before and gave us some turtle steaks which looked like beef or mutton.

312 402 123 As the camp was without water and we were running short, the young man and Encina offered to get some. Each took a *palanca*, or short shoulder pole with knotched ends, fitted empty five-gallon cans in

000 wear ceremonial feathers as did our western Indians. I saw no skin or
164 cutaneous disease, or evidence of tuberculosis or of trachoma---the curse of our Indians.

142 One boy-child of five years was a handsome child---fat, round,
302 sturdy, with roving great black eyes, large thick lips, a picture of
[28] perfect health. He was almost naked. His hair was done in a pigtail
[85] with a red string braided into it. His face like all the others was dirty, but he waded into the shallow water with a short spear and I saw him catch two crabs with his little harpoon. The water did not bother his face.

415 They had no plates or eating tools, except large deep clam shells,
412 cast up by the sea, which served as cups and dippers. Their long, keen
264 belt knives were used for cutting, carving or skinning, and always the
[25] fingers for eating. They gathered in a circle around an olla of seeds of long grass growing on the sea bottom prepared by winnowing, parching and grinding, and then cooked with turtle oil. Each one dipped his or her fingers into the olla and conveyed them to the mouth without losing a drop, and licked them off with great relish.

231 The dogs eat with the family. There were six or seven half-starved
264 ones. If someone picked up a piece of turtle flipper the dog often took the first lick at it, bit off a piece or licked it before it reached the owner's mouth. The dogs were not punished. They were just slapped to keep them out of the pots.

123 We had a great time that evening in Seriland. The young man played
534 his violin. This consisted of a hollow box cut out of a *palo verde*
[82] tree, and a piece of pine about sixteen inches long; terminating in a
[28] hollow where a single peg was fitted. The one string was twisted deer
[23] sinew, and the bridge was a small round clam shell at the far end. The
[53] bow was a small bent stick and some black horsehair. On the handle was a wad of rosin fastened underneath. By fingering this string a few weak squeaky notes were made, and this was the classical music of the Seris.

Manuel Encina seized his gourd rattle and began chanting. Herrera tapped a tin can and I beat on an inverted basket and the orchestra
535 was in full swing. A young girl, Rosa, dragged out a turtle shell and
123 standing on it began to dance. This dance consisted of stepping up and down quickly with each foot alternately, and this stamping, barefooted, emitted a hollow sound. Every once in a while I let out an
[12] Indian yell which pleased the Seris very much. For two hours they had a real swell time. We took one flashlight of the proceeding.

[34] Each family was in their hut, which afforded very slight shelter
[36] as they were only partially roofed over and the sides were broken
[35] down in places. The huts were all adjoining and each had a little
[36] campfire, which did not give much illumination, so the dancing was in semi-darkness.

[text continues on p. 163]

123 [282] It was a beautiful morning in early May, and the water was still as a pond, reflecting all the sunrise tints like a mirror. After a breakfast of clams and broth, bread and sand and bronco tea, we made a big smoke and were answered by a similar smoke two miles off, so we knew our friends were on the way.

123 482 [415] In one hour they began trailing in, the women each with a load on her head, walking graceful and erect. On one head was an inverted turtle shell containing nearly all the family belongings done up in rags. On the top was the most precious belonging of all---the rifle. The man carried two or three ollas and other things on a shoulder stick. Everything necessary for their home was carried on their heads.

123 Soon the Indian Blanco was seen paddling in his *balsa*; he also had a load and had paddled all the way from Ironwood camp against wind and sometimes tide. As they were all very thirsty we gave them water around. They immediately went to the shore as it was low tide, and began gathering small oysters from the rocks. Soon each woman returned with a half bushel of them on her head.

About three o'clock and for an hour or so thereafter, Antonio Herrera, the Chief's son Chico, the old Chief Juan Tomas, two other men and one woman, came drifting into camp with their dogs. Each one was loaded with things. They were a pretty wild looking bunch. There was very little food and little water for so many.

648 731 The Chief said that a day or two before, some of his men had a fight with some sailors (Mexicans) on the Island of San Estevan four or five miles off the south west corner of Tiburon. Nobody was killed, but the two boats, the wealth of the Island, had drifted away and were lost, leaving eight men marooned on the Island. They had gone there to gather *sescal* to make drink to celebrate a wedding to come off soon. Three men were five days without water. They sent up frantic smoke signals every day. At last they were seen, and help went for them in the only remaining boat on the Island. They were rescued.

648 484 123 The Chief and his men and women, with us, are going to Hermosillo ninety miles afoot with all their belongings to ask the Government for food and help.

142 [622] The Chief looks to be seventy years old, a grim dark-skinned individual with a thin fringe of hair on his upper lip, broad nose, wide nostrils, small black eyes. He is well-built and erect. None of these that I have seen so far have any fat. They are lean and sinewy. [302] [291] The young men are of large build, high cheek bones, some with hair on their lips, their long black hair braided; sometimes with a strand of red worsted. All were either barefooted or wore sandals. I saw one pair of sandals made out of turtle hide; another of burro hide.

648 123 When the Chief arrived, the sail of a vessel was seen over the beach. Bob recognized it as belonging to a launch of a Yaqui Indian

[text continues on p. 180]

123 was black. He then ground it in the frying pan by rolling it with a tin can. When made, the coffee was black and bitter, but they were used to it that way.

At three thirty in the morning we were up from our sand beds and drank coffee. At four we pushed off, towing our *balsa* on which we lashed our turtle shells, antlers and other things. Our boat rode the waves like a duck.

As we glided by the foot of some mountains we could hear the surf break sullenly. We had the sail up but soon had to resort to the oars as the slight wind died out. Day soon began to grow light. The sea was glassy, reflecting the rosy morning tinge. There was a swell on but the waves were smooth.

136 The cormorants, in threes and fives, began flying to their feeding grounds with swift wings and necks outstretched. Then a few Pelicans drifted idly by on lazy wings. A school of sardines fretted the water near us, chased by a hungry fish from its depths. A few porpoises rose and dived, rose and dived, rose and dived, time after time. At one time eight of them came within twenty feet of us and one dived right under our bow, bouncing the boat up and down.

133 Soon we were passing some red volcanic hills, with caves and blow
123 holes in the cliff and sea caves below, in which the sea roared. Giant cactus secured a precarious footing in the crannies of the cliffs. Then a long beach, then *Cerro Prieto*, another red cliff descending to the sea, penetrated with numerous caves and roosting places for cormorants.

123 As we neared Alcatraz *(Pelican)* Island, we saw a fishing boat in the distance. The wind had freshened and was ahead and the waves seemed almost to come in board, but the hollowed tree arose and rarely shipped any water. A boat put off from the fishing boat and was rowed to shore, and as we came up we hailed the crew and grounded our own boat. They had seen us from Alcatraz Hill, and seeing the balsa thought the Seri Indians had stolen a fishing boat and were towing their own boat. Each man had a belt of cartridges and if the Seris had been there instead of us they were going to kill them. Bob knew them from Guaymas.

We pushed off from shore again, and after rowing a half or three quarters of a mile further we beached our boats, cooked dinner and waited for our auto truck. Our provisions were almost gone. We had only enough for one meal left. No meat at all. Water was almost gone. None other for miles.

415 One of the cherished vessels used by the Seris is an agate chamber
264 pot. It is black from much use. When I saw it, it contained a green
262 slimy mess made from meal of seaweed seeds and the green fat or oil of the turtle. The Seris stick their fingers into the pot and then lick them off. If any is left the dog licks out the pot. No vessel is ever washed; it is licked clean.

000 ever washed; it is licked clean.

• 415 197 One time a bunch of Seris camped near a ranch and spied a white porcelain chamber pot sunning itself. They immediately secured it and began cooking in it, without washing it first. The rancher saw them and told them that it was dirty and told them not to cook in it. They said they would clean it up after they got through and leave it as it was before they finished with it. When they come to Hermosillo they get pots from heaps of city refuse and carry them back as prizes to the Island.

123 501 We made smokes to attract attention, but all to no purpose, until about three o'clock the car appeared. It could not come close to the beach as the sand was too soft, so we had to pack everything two hundred yards in soft sand. The *balsa* was very heavy and some distance away. It also had some things tied on it, so Bob pulled off his pants and we pushed it into the surf. Bob first stood up, but it rocked so he got on his knees and pushed out with a pole and got it headed to the rollers, after which it rode easier. He then lost his pole, and in struggling to recover it the *balsa* rolled over with him and dumped him in the surf, but he grabbed the side and rolled it right again. He could then touch bottom, so he came in through the surf with it and we dragged it up and unloaded three turtle shells and a few other things. There were four of us and we put oars under it and gradually lifted and carried it to the truck.

It must have weighed six hundred or seven hundred pounds, a good part of which was water. I must say I was glad to see it started on its long land-journey.

123 The Indian messenger had arrived with my note which brought the truck. Bob, Luis and the Mexican took the boat and tried to go into the place where they hid it, but it was low tide and the boat could not enter, so they beached it and walked to Agua Sarco where we had preceded them by two or three hours. We had, over the last of our grub, a little rice and beans. As many doves were flying about the water, I shot fifteen or twenty. One of my shots brought down seven doves.

439 123 Before night all the Seris were camped near us, and when Bob came, Louis had brought all our trade stuff, so I began bartering right away.

As all were hungry we gave each man and woman three cups of flour, and three pieces of *panoche*, cakes of coarse brown sugar. They were wild for this, so when they had finished they were well disposed.

On the Island I had been called a cheerful liar for promising things, but now it was different. Three new butcher knives, all bright and shiny, I traded for three rusty homemade affairs. Two were made of barrel hoops and one from the piece of a shovel. This was a way-up knife. For the violin I traded a harmonica, and for three carved

(text continues on p. 187)

439 little gods I traded some muslin, a harmonica and some *panoche*. For
123 native hair brushes, I traded three fine-tooth combs for catching *piojos*, or lice, easier. I gave each woman a little round mirror and they were greatly pleased.

To the old Chief I presented a good pocket knife and a mirror. For the bow I traded a spark lighter. By striking the edge of a small wheel with milled edge it strikes a spark from a small flint and lights a wick.

123 We asked for a dance, and the Seris, using the bow and striking
535 sticks for music, the slender girl jumped up and down on a flat piece
[534] of tin which served, instead, of a turtle shell and also served for
[252] baking flour cakes upon also. A while before, Louis had seen a woman
[415] wash her head and that of a child in the chamber pot, empty the water and then cook in it.

After the girl had danced a while on the tin, old Manual Encina pushed her away and hopped on himself and did the double-shuffle for half an hour, after which we left for our camp.

197 The language of the Seris is the most difficult and peculiar I
194 have ever heard. It is spoken deep in the throat with the mouth open and sounds like no other language I have ever heard except that there are some sounds like Papago.

439 Even before breakfast of the next day we were still trading with
123 the Indians, and in an hour or so I possessed nearly everything they had except their rags. They seemed happy and contented and postponed their trip to Hermosillo. I left some stuff with Louis Thomson to be traded later for bows and arrows, Pelican skin dresses and baby cradles.

We then arranged our loads, said *Adios* to the Seris, and left for Hermosillo, where we arrived without accident about six-thirty p.m. The sun was very hot and the road heavy and the sun glaring, and we were all very tired when we reached town. I stored my stuff with Mr. Marks at Hotel Cohen, and will crate it before leaving for Yaqui River.

123 Before leaving the Seri Chief I told him that whenever he saw
202 this sign---Circle Bar D and left hand below it, it was me---their friend, and not to shoot at me. He said he would tell all the Seris, and I left him my card with the same sign on it. When will I see him again!

10: Davis E-5 (1922-ca. 1939) 1965 NU31 Seri NU31

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Seri Indians at home

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415.

Seri Indians preparing their meal

123 relief and contentment rose, and everybody smiled. This concoction I placed on the fire while the Indian stirred with a long stick. It took half an hour to cook into a thick sticky paste, gummy white.

[915] Meanwhile, the women vanished and returned with various vessels: greasy baskets, a black chamber pot, frying pans, ollas, stew pots, shells, any old thing---even a cuspidor. When ready, the Indians dipped the sticky mess out with a cup into the various vessels and the women and children licked it up. Some of the children covered the back of a large clam shell with the paste and then licked it off, repeating this until it was gone. Most of the people hooked their fingers into it and licked them off time and again. Any drip on the outside was carefully licked off that four gallons of goo. I do not think one single drop was lost.

126 123 As one little girl was carrying away a clam shell of paste I secured her photograph. It was a sight not soon to be forgotten, to watch these little ones dip in their fingers, mostly two, sometimes three fingers and contentedly lick them off.

Wishing to secure a photo of the Indians in Pelican skin kilts, Roberto induced Chico Romero to strip and wrap a kilt of Pelican skins around his waist. He did this and Roberto secured a good photograph. For this service, Chico demanded three oranges which he gave to his children.

By coaxing and wheedling and joking, Roberto finally persuaded a young woman to put on the Pelican kilt, and she gradually pulled off her shirt, or waist, or whatever name it goes by, and laughingly permitted it. As her brown shoulders and breasts were exposed she covered them with her arms and hands while I took the photo. I gave her some blue powder to decorate herself and a little round mirror.

372 Chico Romero made a fire drill out of a piece of dry driftwood from a cottonwood tree, and then made a fire by turning the stick between his hands. After three or four minutes the fine dust became punk and turned into a live coal. This he carefully put in some dry grass and by holding it up in the wind it was fanned into a flame. The price of this was a red bandanna.

372 773 825 The legend of Fire was told to me later by the campfire. The Seris' god sent down a fly to Seriland to show the Indians how to make fire. The fly was pointed out to me one day. It was a trifle larger than a house fly with a body of shining green and blue.

"Now," they said to me, "notice when it lands. Did you not see it take its two hands, rub them over its head and then rub them together a few times?". . ."Each time it settles it rubs its hands together, and our Indians noticed this and in this way we were taught by this little fly how to make fire by rubbing a stick between our two hands, back and forth. One fly came to earth and found something dead and he rubbed a stick between his hands and made a smoke signal

12: Moser L-5 (no date) 1964
(ca. 1960) NU31 Seri NU31

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Fig. 1. Crushing the root bark of zkoktz (*Franseria dumosa*), to a pulp. Note the pieces of root in the left foreground, the little pieces of mókni ózxW sap (*Guaiacum coulteri*) in the center foreground, and the chunks of mineral in the right foreground.

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Fig. 2. The first or brighter batch of blue pigment, ?antezj kóll.

12: Moser L-5 (no date) 1964
(ca. 1960) NU31 Seri NU31

To use the clay as paint, a bit of water is placed on a stone and the clay is rubbed into it to make a paste. It is then applied to the face (Fig. 4). It spreads smoothly and adheres firmly to the skin. The blue was formerly used for decorating pottery, clay figurines, headdresses, fetishes, arrows, wrist guards, and cane gaming sticks, as well as for face painting. In curing the sick, the shaman sometimes used the blue for painting crosses on the patient's chest. Also, women made necklaces using beads formed from the blue clay.

FIG. 4. Painting the face with the finished pigment.

McGee (1898:214)

estimated that maritime resources provided two-thirds of the Seri diet. Kroeber (1931: 20), approximately 30 years later, estimated the proportion at about three-fifths. In the winter of 1960, 30 years after Kroeber's visit, the Seri were obtaining at least three-fifths of their food from the sea.

In pursuit of their main source of subsistence, the Seri travel up and down the narrow coastal band. In the winter of 1960 they were occupying one temporary camp toward the southern end of the band and a permanent camp at the northern extreme. Seri women and children gather mollusks; fishing is a male occupation. In addition to gathering and fishing for their own needs, the Seri dispose of a portion of their catch on the commercial market. This enterprise began about 1930, and was encouraged by the establishment, in 1958, of the Sociedad Cooperative de Produccion Pesquera Seri with the cooperation of the Mexican government.

The Pacific green turtle constitutes the largest single item in the Seri diet for at least six months of the year—from January to June—and it is also caught occasionally at other seasons. In 1896 McGee estimated that it provided 25 per cent of the total food supply. Emphasizing the intimate ecological relationship between the Seri and the turtle, McGee (1898: 186-187) wrote:

> ... perhaps half of the aggregate life of the tribe is spent within easy reach of its [the turtle's] feeding and breeding grounds, and tribesman and turtle have entered into an inimical communality something like that of the Siouan Indian and buffalo in olden time. ...

Kroeber (1931: 20) believed that McGee stressed the Seri-turtle relationship too strongly and overestimated its contribution to the diet. McGee (1898: 187), in support of the importance of the turtle to the Seri, points to the fact that the turtle carapace is used for, among other things, a house covering and buckler, a cradle, a coffin, and footgear. The carapace is currently used for supporting and roofing houses and as a starvation food. The contribution of the turtle to the diet varies from year to year, but observations made in 1960 suggest a range of from 15 to 20 per cent as a reasonable estimate.

Seri men fish for turtle from boats, which are manned by two or three men and are propelled by oars, sails, outboard engines, or any combination of the three. The boats operate either individually or in groups. The men fish by night or day, depending on the weather and sea conditions. When they fish at night, they use a kerosene lamp to attract turtles to the surface. The principal implement is the harpoon.

The harpoon tackle of the Seri is illustrated in Figure 1. It consists of a foreshaft (c-h), a mainshaft (j-k), and an extension cord (i). The component parts of the foreshaft are a projectile point (c), a gasket (d), a wrapping cord (f), a hafting base (g), and a lead cord (e and h). In preparation for turtle fishing, the hafting base (g) is plugged into the socket (j) on the main shaft (k), and the extension cord (i) is looped through the lead cord (h).

The Pelican Skin Robe

133

Toshne or Pelican Island - Kino Bay - 1936

It was the dark of the moon and a very black night, ideal for surprising the Pelicans asleep, roosting on the steep slope above the waters of the Sea of Cortez. The Pelican is a very wary bird and cannot be approached in the light of the moon. 123 223

At sundown we had climbed several hundred feet to the saddle between two peaks on the Island of Alcatraz in Kino Bay off the coast of Sonora. We rolled up in our blankets and hugged the great volcanic rocks at the crest, to be as inconspicuous as possible to the great birds circling the peaks to seek a roosting place on the west slope of the Island.

Santo Blanco had provided himself with a torch made from the slender rods of a dead *pitahalla* (organ) cactus which he had tied together in a long bundle. The four young Seris who joined him also had a torch and in addition, each had provided himself with a club. We took no fire arms. Senor Roberto Thomson, my companion, had arranged this trip with Santo Blanco, for my benefit. [416] • [124]

[text continues on p. 215]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

614 earlier paragraphs (pp. 164–169); these symbols evidently represent an
[302] exclusively maternal organization into clans consecrated to solo tutelaries. The tutelaries, or totems, together with the clan names and all personal designations connected with the totems, are highly esoteric, and were not ascertained save in the few cases mentioned above.[1]

It should be observed that the identification of kindred by the alien
593 observer is difficult and somewhat uncertain, since the relationships recognized in Seri socialry are not equivalent to those customary among Caucasians. It was found especially difficult to identify the husband
[582] of the jacal, partly because he is commonly incongruously younger (and hence relatively smaller) than the mistress, and partly because of the undignified position of outer guard into which he is forced by the tribal etiquette. Moreover, his connection with the house is veiled by the absence of authority over both children and domestic affairs, though he exercises such authority freely (within the customary limits) in the
[842] jacales of his female relatives. There is, indeed, some question as to the clear recognition of paternity; certainly the females have no term
601 for "my father", i. e., the term is the same as that for "my mother", *em*, though the males distinguish the maternal ancestor by a suffixed syllable (*e*="my father"; *e-ta* or *i'-tah*="my mother"), which seems to be a magnificative or an intensificative element. It is noteworthy that the kinship terminology is strikingly meager; also that while the records suggest various significant points, the material is hardly rich enough to warrant complete synthesis of the consanguineal system.

While the burden of the more permanent property pertains to the
● 421 women, there is a decided differentiation of labor with a concomitant vesting of certain property in the warriors—the distinctively masculine chattels comprising arrows, quivers, bows, turtle-harpoons, etc. There are indications that the balsas, too, are regarded as masculine property. The impermanent possessions—water, food, etc—seem to be the common property of men, women, and children, except in so far as the
[264] right is regulated by regimentation; for the privileges of eating and drinking are enjoyed in the order of seniority. In the reckoning of
554 seniority, the chief (who is comonly such in virtue of his position as
602 nominal elder brother of a prolific dame) ranks first, and is followed by other warriors in an order affected in an undetermined way by conjugal relations as well as by their prowess or sagacity (the equivalents of age in primitive philosophy) down to an undetermined point—apparently fixed by puberty; then comes the clanmother, followed by her daughters in the order of nominal age, which is affected by the status of spouses and the number of living offspring; finally come the children, practically in the order of their strength (which also is deemed an equivalent of age), though the girls—especially those

[121] [1]The chief object of the 1895 expedition was to pursue the inquiries concerning social organization, taboos, etc; but, as mentioned elsewhere, this object was defeated by the troublous history of the tribe during the earlier part of 1895, and the consequent revival and intensification of their animosity toward aliens.

I: McGee E-5 (1894-1895)1898 NU31 Ser1 NU31

breaking wood for fuel. (9) Dethorning okatilla stems, by sweeping centripetal strokes delivered adzwise from top toward butt of a bunch of stems lying on the ground. (10) Severing a stout hair cord; in this use it was grasped between the knees of a matron squatting on the ground, while the cord was held in both hands and sawed to and fro over the use-roughened thinner end. (11) Supporting a kettle (shown in plate X) as one of the fire-stones used in frontier mimicry of the Papago custom. (12) Triturating face-paint by pounding and kneading; in one case the specimen served as a hand implement, while in another case it took the place of the ahst, the ocher lump itself being struck and rubbed against it. (13) Beating a troop of dogs from a pile of bedding in a jacal; in this use the implement was held in the customary manner and used in swift centripetal blows, the matron relying on her own swiftness and reach and not at all on projection to come within reach of her moving targets; the blows usually landed well astern, and were so vicious and vigorous as to have killed the agile brutes had they chanced to fall squarely—indeed, one blow temporarily paralyzed a large cur, which escaped only by running on its fore feet and dragging its hind quarters. In most of these uses the specimen was employed in conjunction with an improvised ahst in the form of a stone carried from the rancho. Several of the processes, notably those of tissue-tearing and dog-beating, were executed with a vigor and swiftness quite distinct from the sluggish lounging of the ordinary daytide and, indeed, partaking of the fierce exaltation normal to the Seri chase. When not in use the implement usually lay just within the open end of the owner's jacal, though it was often displaced and sometimes kicked about the patio for hours. It was one of perhaps a dozen similar implements brought across the desert from the coast by as many matrons. All were regarded as personal belongings pertaining to the custodians about as definitely as articles of apparel; though rather freely loaned, especially in the owner's clan. The specimen was purchased from the possessor, who parted from it rather reluctantly, though with the tacit approval of her clanswomen, at a rate implying considerable appreciation of real or supposed value. Three or four other matrons declined to barter their hupfs, either arbitrarily or on the plea that they were a long way from the source of supply.

A common variety of hupf is illustrated in plate XLIV. It is of pipkish, slaty tuff of rather low specific gravity, somewhat vesicular and pulverulent, though moderately hard and tough. It weighs 17 ounces (0.48 kilogram). In form and surface it is essentially a wave-worn pebble, doubtless derived originally from the volcanic deposits of Sierra Kunkaak. Its artificial markings are limited to slight battering about the edges, especially at the thinner end (as shown in the edge view); slight rubbing, striation, and semipolishing of the smoother face (shown in the plate); a few grease spots and a stain showing use in crushing sappy vegetal matter, also on this face; and an inconspicuous

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

conspicuous records of its latest uses; both faces (more especially the pitted one) are stained with sap from green vegetal substance (probably immature mesquite pods), while one face is brilliantly marked with ocher in such manner as to indicate that a lump of face-paint was partially pulverized by grinding on the slightly rough surface. It was found, together with the ahst illustrated in plate XXXVIII, in the rear of a recently occupied jacal midway between Punta Antigualla and Punta Ygnacio, cached beneath a thorny cholla cactus uprooted and dragged thither for the purpose. The trail and other signs indicated that the jacal had been occupied for a few days and up to within twenty-four hours by a family group of six or seven persons; that it was vacated suddenly at or about the time of arrival of the party of five whose trail was followed by the 1895 expedition from Punta Antigualla to Punta Miguel (where they were interrupted in the midst of a meal and frightened to Tiburon); and that the larger party fled toward the rocky fastnesses of southern Sierra Seri.

412

Of the foregoing hupfs several are aberrant, and serve merely to illustrate the prevailing directions of departure from the optimum form and size of implements. Six of the specimens may be deemed typical; they are as follows:

Plate No.	Locality	Material	Weight	Condition
			LA. Oz.	
XLIII.....	Costa Rica.....	Quartzite .	1 14 (0.85 kg.).	Nearly natural.
XLIV.....	Campo Navidad....	Tuff.....	1 1 (.48 kg.) ...	Four-fifths natural.
XLVI.....	Pozo Escalante.....	Vesicular lava.	1 13 (.82 kg.) ..	Nearly natural.
LIV.....	Punta Miguel	Granite ...	1 10 (.74 kg.) ..	One-fifth natural.
LV.....	Punta Narraganseti	....do	1 11 (.77 kg.) ..	One-fourth natural.
LVI.....	South point Sierra Seri.	Andesite ..	1 15 (.88 kg.) ..	One-third natural.

From these specimens a type of Seri hand implement may easily be formulated: it is a wave-worn pebble or cobble of (1) granite, quartzite, or other tough and hard rock, (2) tuff, or other light and pulverulent rock, or (3) vesicular lava; it is of flattened ovoid form, or of biscuit shape; it weighs a trifle under 2 pounds (about 0.85 kilogram); originally the form and surface are wholly natural, but through the chance of use it is modified (*a*) by a battering of the ends and more projecting edges, and (*b*) by grinding and consequent truncation of the sides; though initially a natural pebble, chosen nearly at random from the beach, it eventually becomes personal property, acquires fetishistic import, and is buried with the owner at her death. [422] [764]

The ahsts and the heavier cobbles used alternatively as ahsts and hupfs are too fortuitous for reduction to type; while the protean peb-

2: Kroeber E-5 (1930) 1931 NU31 Seri NU31

in endearment when drunk. This may apply also to other siblings-in-law. 607

Younger siblings (? and other relatives) may say nothing obscene before the older, out of respect for them; but the older talk freely before the younger. This applies to both men and women. Otherwise there seems to be little prudery; the informant recited the names of the private parts before his wife and children, and she indifferently repeated them after him in confirmation. 593 834

There is no teknonymy. 551

The dead are buried. Cremation of the body seemed unknown to the informant. All property of the dead person is burned or destroyed. His balsa was burned; modern boats are not, because they "belong to the government," which furnishes the lumber. The house is abandoned and a new one built a short distance away. The name of the dead is not spoken. 76 [422]

Kinship

The Seri kinship system is distinguished by three general features: the large number of terms; the strong tendency to terms reciprocal in meaning; and the distinction made between older and younger siblings of nearer relatives if they are of the same sex. All of these are characteristic Yuman traits. 601

The number of terms obtained is 50; which number might have been increased if step-relatives, great-grandparents, great-uncle-aunts, siblings of siblings-in-law, spouses of uncles-aunts, and spouses had been inquired for. However, the informant seemed to feel that the list was exhausted with the set obtained; before that, he pursued the subject of his own accord. Fifty is an unusually large number of kinship names in any language; the more so, since there are no cousin terms. The 12 siblings-in-law terms—a quite extraordinary number—swell the total.

Conceptually reciprocal terms dominate the system except in the sibling class. The informant soon realized this principle. Some of the reciprocals are derivatives; others are not; self-reciprocals are lacking. This last fact helps increase the size of the system.

The distinction between older and younger siblings of the same (but not of the opposite) sex as nearer relatives is consistently carried out for uncles-aunts and spouses' siblings (or siblings' spouses).

ẽl	father	reciprocals	ihã'k (man's son), ẽq man's daughter)
e't·a	mother	rec. iq/t	(woman's child)
e'p·ẽc	father's father	rec. ik-e'pẽc	(man's son's child)
emẽc	father's mother	rec. eka'mak	(woman's son's chd.)
ẽ'ẽc	mother's father	rec. iqẽ'ei	(man's dtr.'s child)
ẽkt	mother's mother	rec. iqaq	(woman's dtr.'s chd.)

123 handed to show their friendliness.

142 One was a young man with rather pleasant features, his braided
291 hair hanging below his shoulders. His name was Antonio Herrera. The
123 other was a wild-looking specimen called Ramon Blanco. His hair was a
[302] tangled mat with a short braid behind, suspicious black piercing eyes,
long sparse moustache and chin-beard hiding a broad cruel mouth. He
[411] wore the remnants of an old sweater, a short dirty kilt, or skirt,
nearly to his knees, a belt full of cartridges, mostly empty, and a
long knife in a rawhide scabbard.

123 The young man had been baptized and given a name by Roberto, who
[745] had acted as godfather or *patrono*, many years ago. He wore a hat,
[291] jacket, and pants of blue denim, and *guaraches*, or sandals of rawhide.

We shook hands all around and then they called and halloed in the
brush and soon three women and a lot of children, wild and half-
[415] clothed, filed into camp. The women were tall, gaunt, unkempt, ragged
[482] and barefooted, paying us not the slightest notice. They were bearing
[422] on their heads large baskets filled with all their earthly posses-
[854] sions---cooking ollas, scraps of cloth, pieces of turtle meat, bone
[231] brads, hair brushes, and odds and ends. They carried, also, an infant
or two wrapped in odd bits of rags. Several gaunt dogs followed in
their wake.

342 In all, three families came trailing in, removed their household
equipment from their heads and resumed their interrupted and primitive
[572] housekeeping. Each family occupied its apartment in the row of brush
shelters, separated from each other only by brush partitions with a
total lack of privacy. These shelters, always open to the sea, serve
as shade from the fierce rays of the sun, and also as windbreaks, but
[361] are no protection from infrequent rains. They are occupied only for a
brief period and then their nomadic tenants move on to fresh *cahuana*,
or sea turtle range.

123 Soon, a third man arrived while we were near the huts, Manuel
[142] Encina. He was a man of sixty-five, gray hair and mustache, seamed
features, and not evil looking. He was out of breath. He had gone for
water to the same water hole where we had been yesterday, struck our
tracks, had left his water cans and hurried back to warn his people.
He was greatly relieved to find friends.

Since he had gone for water, inquiry revealed there had been no
water in camp for two days, and six adults and one girl of thirteen
and six children were thirsty. We gladly gave them one of our five-
[225] gallon cans of water and they were very grateful. They had caught a
[262] sea turtle the day before and gave us some turtle steaks which looked
like beef or mutton.

312 As the camp was without water and we were running short, the young
492 man and Encina offered to get some. Each took a *palanca*, or short
123 shoulder pole with knotched ends, fitted empty five-gallon cans in

261 will exist on very small rations, bear burdens, and walk long dis-
262 tances. Their food is anything that walks, flies, crawls or swims,
[252] and they eat it raw with the same relish that we eat it cooked. There is but one thing they will not eat; they draw the line on the Gila monster. They are the most perfect type of human being adapted to desert conditions that exists today. Convey them blindfolded many miles into the heart of the desert, empty-handed, remove their blinders, and they will find both food and water where others would perish. The Papagos and Yaquis do almost as well."

302 We gave the women a small bag of flour and three or four cubes of
[123] sugar around, and the men three packets of tobacco each and two boxes of matches. Matches with them are very precious and are rarely used. Rather than use a match a woman came over to our fire and borrowed some coals to rebuild her fire. From this point the nearest matches are a good deal over one hundred and twenty miles distant, so they have to economize in every thing.

422 Each rag is valuable, and flour, sugar, coffee and rifle shells
[436] are absolutely priceless. While they know money, it has no value here.
[437] Only commodities go here. The most highly prized things are boards to
[389] make boats and rifle shells to get game and protect themselves. All empty shells are saved, the primer punched out, straightened, a match head put in, a little pinch of powder on top, the shell filled up, a long bullet inserted, the shell pinched tight, and a fresh set of ammunition is made.

142 The women and children certainly did look wild. Their hair was
291 frowsy and unkempt, their skirts and waists a patchwork of dirty rags
302 coming just below the knees; their features seamed and hard and cruel. Their complexion was very dark. They had no under garments. The children wore only a dirty shirt coming a little below their thighs, and even that is ragged. One or two of the women had a dirty bandanna over their heads. How I wished I could have seen them in their ancient, picturesque pelican-skin kilts!

302 I happened to witness the operation of a Seri beauty parlor. A
[824] mother brushed the hair of her thirteen-year-old daughter with a brush
[283] made from the fibrous roots of a certain grass tied together with
[515] sinew. During the operation if she came across a *piojo*, and she found several, she plucked him away from his feeding ground and dropped him in the fire.

The hair neatly brushed, the mother then mixed paint in a small vessel and with a tiny stick painted a bright blue design under the eyes and across the cheeks and nose, and then she added narrow white stripes, which, contrasting with the blue and the dark skin, produced a very striking effect. This paint is easily removed and the women often paint and remove three different face designs in one day.

304 I did not see tattoo work on either men or women, nor did they
301 wear ceremonial feathers as did our western Indians.

123 Then Chico Romero and his load of children and dogs arrived and
484 he unloaded his impedimenta on the beach, and soon the women came walking along the beach and joined the party. The boats carrying the heavy things and children; the women, with their babies and a few light things on their heads, walk along the beach when possible and follow the boats, which hug the shore to avoid the strong currents and tide. The boats are propelled by paddles mostly, though some of
501 the Indians use oars. The women are slightly built, slender and in-
142 clined to be gaunt, owing to the hard life and lack of food. Their cheek bones are quite prominent and their profiles present protruding lips.

422 Having no permanent homes, moving hither and thither for their
[96] various food supply, household things are not accumulated and life is reduced to its very simplest elements and absolute necessities.

Crude baskets made from shoots of the torote tree, vessels in which to cook, and some patched rugs in place of Pelican skins to serve as blankets to the fortunate few, constitute the family pos-
231 sessions. Strange to relate, many of the women have an over-supply of
[858] milk, and according to Roberto have puppies nurse what the babies cannot take. One woman was known to nurse a baby pig on one side and a puppy on the other.

[284] Family dogs lick all cooking vessels which is unnecessary as they
[809] are thoroughly clean when the Seris are through with them, and also lick the infants clean after performing their natural functions, so they are quite indispensable. I saw a Seri girl place on the sand a small can of water for a dog and then saw her drink some of the remainder and pour the rest back in a five-gallon can. Dogs frequently swim across the Infernillo to join their masters.

732 Asked about cripples and incompetents, Roberto said they probably did not exist. The conditions of survival were too precarious to admit of anyone living who was unable, by physical disability, to hunt or fish. There are two or three men who are nearly blind or so. The wives of these men eke an uncertain living for them by the hardest
262 struggle. The sea turtle is the staple; one man and one good boat can
433 secure a living for five families. There are now nine boats, but one
501 boat to a family would practically free them from continual want.
262 With the exception of four bones in the flippers and the bones of the
237 head, all the sea turtle is used---the meat, blood, entrails, shell which furnishes food and oil, skin of flippers which furnishes sandals, sinew for strings. Nothing is wasted except contents of the entrails.

123 Again, we laid our blankets on the clean white sand of the shore and were lulled to rest by the murmuring sea.

123 Daylight found us up the next morning, and we breakfasted, rolled
484 up our blankets, pushed the boats into the sea and were off by the time the sun rose over the mountains and shone over a glassy sea. Two Seris towed their boat by a tump line, while a boy of twelve steered

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

mon convenience. Usually the several jacales are entirely separate; but at Punta Tormenta, Punta Narragansett, and still more notably at Bada Ballena, individual huts were found either extended to double length or joined obliquely in such wise as to show two fronts (as illustrated in plate VI). The conventional frameworks appear to be common tribal property, at least to the extent that an abandoned skeleton may be preempted by any comer; while the addition of walls and roof appears to afford a prescriptive proprietary right to the elderwoman and family by whom the work is done—though the right seems to hold only during occupancy, or until the temporary covering is dislodged.

The jacales are without semblance of furnishing, beyond an occasional ahat and a few loose pebbles used as hupfs; though the nooks behind the bows and tie-sticks sometimes serve as places of concealment for paint-cups, awls, hair bobbins, and other domestic trifles. There is no floor but earth, and this remains in natural condition, except for trampling and wearing into wallows, recalling those of fowls and swine, which afford a rough measure of the periods of occupancy; there is no fireplace—indeed, fires are rarely made in the jacales, nor for that matter frequently anywhere; and there are no fixed places for bedding, water ollas, or other portable possessions, none of which are left behind when the householders are abroad.

Little is known of the actual process of jacal building, especially in Seriland proper; but the observations of Señor Encinas and his vaqueros on the frontier corroborate Mashém's statements that the houses are built by (and belong to) the matrons; that several women customarily cooperate in the collection of the okatilla and erection of the framework; that the only tools used in the processes are hupfs and miscellaneous sticks; and that the placing and fitting of the beams and tie-sticks are accompanied by a chant, usually led by the eldest matron of the group. The same informants support the ready inference from the structure that the shrubbery and other material forming walls and roofs are gathered and placed from time to time by the women occupying the jacales.

The Seri building chant is suggestive. Neither Señor Encinas nor Mashém regarded it as religious or even ritualistic, but merely as a work-song designed (in the naive notion of the latter) to make the task lighter; and it seems probable that the local interpretation is correct. If so, the simple chant at once offers rational explanation for its own existence, and opens the way to explanation of the elaborate building rituals of more advanced tribes. The work-song is a common device in many lowly activities, ranging from those of children at play to those of sailors at the windlass, and undoubtedly serves a useful purpose in guiding, coordinating, and concentrating effort; to some extent the vocal accompaniment to the manual or bodily action apparently expresses that normal interrelation of functions manifested by second-

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

562 592 order, the matron's eldest brother coming first, the younger brothers next, and finally the husband, who squats in, or outside of, the open end of the bower. According to Mashém's iterated explanations, which were corroborated by several elderwomen (notably the clanmother [423] known to the Mexicans as Juana María) and verified by observation of the family movements, the house and its contents belong exclusively to the matron, though her brothers are entitled to places within it whenever they wish; while the husband has neither title nor fixed place, "because he belongs to another house"—though, as a matter of fact, he is frequently at or in the hut of his spouse, where he normally occupies the outermost place in the group and acts as a sort of outer guard or sentinel. Conformably to their proprietary position, the matrons have chief, if not sole, voice in extending and removing the rancheria; and such questions as that of the placement of a new jacal are discussed animatedly among them and finally decided by the dictum of the eldest in the group. The importance of the function thus exercised by the women has long been noted at Costa Rica and other points on the Seri frontier, for the rancherías are located and the initial jacal erected commonly by a solitary matron, sometimes by two or three aged dames; around this nucleus other matrons and their children gather in the course of a day or two; while it is usually three or four days, and sometimes a week, before the brothers and husbands skulk singly or in small bands into the new rancheria.

Quite similar is the regimentation of the family groups as indicated by the correlative privileges and duties as to placement, as well as the reciprocal rights of command and the requirements of obedience. Ordinarily (especially when the men are not about) the elderwoman of the jacal exercises unlimited privileges as to placement of both persons and property, locating the ahat, the bedding, the fire (if any), and other possessions at will, and assigning positions to the members of her family, the nubile girls receiving especial attention; she is also the arbiter of disputes, the distributor of food, etc; but in case of tumult, especially when children from other jacales are present, she may invoke the author- [614] ity of the clanmother, whose powers in the rancheria are analogous to those of the younger matrons in their own jacales. Even when the men are present they take little part in the regulation of personal conduct, but tacitly accept the decision of matron or clanmother; yet in emergencies any of the women are ready to appeal for aid in the execution of their will to a brother (preferably the elder brother) of the family, or, if need be great, to the brothers of the clanmother. So far as was observed, and so far as could be ascertained through informants, these appeals are always for executive and never for legislative or judicative cooperation; but various general facts indicate that in times of stress—in the heat of the chase, in the warpath-craze, etc—the men bestir themselves into the initiative, while the women drop into an 562 inferior legislative place. As an illustration of the ordination in some-

7: Marroquin E-5 (1955) 1957 NU3, Seri NU31

POPULATION ABLE TO WORK
(between 11 and 65 years)

Men, 74 or 69% of the masculine population. 464
Women, 76 or 70% of the feminine population. 162
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We can add that, at least as far as the male population is concerned, the figure of 69% with a potential work capacity is equivalent, in general terms, to the percentage of the population economically active, since one of the singular characteristics of the Seri population is the fact that they constitute a community fully occupied: all the men of working age have a place set aside in the fishing activities; this is an advantageous position for increasing economic development of the tribe. With relation to the women the situation is not the same, since the majority of girls of marriageable age carry on very few productive activities; it could be said that economic responsibility begins with matrimony. [226]

If it is true that all the Seri men are fishermen, it is also true that there is the beginning of some specialization of jobs, which are carried on complementing or as an accessory to the principal occupation. Thus we have among the men: 463 462 162

Carpenters, constructors of *piraguas* (a kind of canoe)	6
Medicine men	14
Farmers	2

And among the women:

Seamstresses	4
Farmers	1
Midwives	22

The relatively high number of medicine men and midwives should not be surprising; Seri popular medicine is very well known and depends principally on magical propitiation and since the magic powers are acquired in a variety of ways, including dreams, and the healing rites are, on the other hand, very simple, it is not strange that medicine men should abound. As for the midwives, it can be said that every woman who has undergone the experience of childbirth feels herself able to help at a birth; nevertheless, it is said that the more experienced women are those best able to take care of those giving birth. 755 756 844

Problems which should be attended to

In addition to the sanitary problem mentioned above, mention should also be made of the problem of agriculture, linked with the necessity for supplying food to an Indian population which since economically it depends principally on fishing, needs to complement its diet with agricultural products to achieve a better one. In close relation 185 [262] [241] [423]

7: Marroquin E-5 (1955) 1957 NU31 Seri NU31

with this problem is the lack of legal title to the lands which the Seris own in fact but which legally belong to the nation.

Insofar as the economic problem, it is necessary to better the fishing techniques, doing away with old process of obtaining the catch through dynamite explosions. Finally, as Dr. Marroquin says, the fact should be noted that the Seris on passing from the nomadic economy to exchange economy lack the necessary knowledge to achieve success in their operations within the national and international market.

It is thus necessary to take care of these and other problems, to save this Indian group from complete extinction, succeeding on the other hand in raising their living conditions, making of them citizens capable of contributing to the progress of the State of Sonora and the Republic of Mexico as a whole.

NEW DIRECTOR OF THE SUMMER INSTITUTE OF LINGUISTICS IN MEXICO

For the next two years the Director of the Summer Institute of Linguistics in Mexico will be Dr. Benjamin Elson. Dr. Elson first came to Mexico in 1942 and began linguistic field work among the Sierra Popoluca Indians of the State of Veracruz. Sierra Popoluca has been the principal object of his linguistic studies since that time, and various articles have resulted from these researches. He took his degree from Cornell University with the thesis "Sierra Popoluca Morphology". He has on other occasions served as Associate Director of the Institute in Mexico.

The Associate Director will be Mr. H. J. Klassen. Mr. Klassen has done linguistic field work on Lowland Mixteco in the State of Oaxaca. He has served as Interim Director of the Institute on previous occasions.

VII ROUND TABLE OF ANTHROPOLOGY HELD IN THE CITY OF OAXACA FROM SEPTEMBER 1ST. TO 7TH.

During the month of September, the VII Round Table of Anthropology, dedicated to the study of the Indian cultures of Oaxaca, was held in the city of Oaxaca, capital of the state of the same name. Since at the present time there exists in this state a large proportion of Indians, and since during its pre-Hispanic past such important cultures as the Zapotec and Mixtec flourished there, the interest of this Round Table is evident.

Lack of space makes it impossible to present here a complete report of this anthropological meeting; therefore, we will limit our coverage to a summary of the most important points, taken from the Report of the recording secretary, Prof. Wigberto Jiménez Moreno. This report was made available to us through the kindness of Mrs. Carmen Cook de Leonard, Vice-President of the Center of Anthropological Investigations of Mexico. The complete version in English may be seen in the *Boletín* of the Center of Anthropological Investigations (Nº 4, Oct., 1957, pp. 43-49).

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BANDS I, III, AND IV

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Through the years, then, these military encounters, along with smallpox and measles epidemics, were responsible for reducing the Seri tribe to a small remnant. The band and clan systems lost their functional relevance as the people continued to live together for mutual protection. Shortly after the turn of the century, the expeditions and raids had practically ceased.

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SIGNIFICANCE OF BANDS TODAY

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Although the substance of the band system is no longer a reality, the concept of land ownership still remains. A young Seri of today may choose to be associated with either the i?iziiting of his father or that of his mother. He is said to inherit part ownership of the area. It is recalled by one informant that in former times ownership of a mountain was especially important. Sometimes ownership of a mountain was included as part payment for a bride. Thus a person might 'own' a mountain in a subdivision other than his own.

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A custom exists even today whereby a person names his dog after a mountain or other geographical point located in his subdivision. Although the person may re-use the name, each dog so named must be of the same sex as the first.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

The painted designs vary among different individuals, but are fairly persistent for each. The prevailing design at Costa Rica in 1895 was that of the aged matron known as Juana María (plate XVIII), with variations in detail such as that exhibited by her unmarried daughter Candelaria (the Seri belle shown in plate XXIV); next in frequency were the designs, in white and red, exhibited by the matrons portrayed in plates XX and XXII. Other designs observed are indicated in plate XXVI. The variations in individual designs are apparently due either to varying care in the application of the paint or to the degree of obliteration by wear—e. g., the withered Juana María sometimes put on her design askew and was negligent of details, while the blooming Candelaria greatly elaborated the details of the pattern and carefully perfected the symmetry of the whole when preparing for her full-dress sitting before the camera (plate XXIV), so that her design was then gorgeous by contrast with the nearly obliterated blur of a half-hour before. The designs are renewed every few days, especially for ceremonious occasions, and hence are practically permanent.

When grouped in relation to their wearers, the designs are found to exhibit family connection. Thus, Juana María's design is repeated, with greater elaboration of detail and with a pair of supplementary marks, in that of her daughter Candelaria; the winged symbol of the Seri matron portrayed in plate XX is repeated with minor variations in that of her daughter, the Seri maiden pictured in plate XXV; while the symbols of the mother and infant daughter depicted in plate XV are essentially alike. It is noticeable, too, that in the nearly spontaneous arrangement of individuals in the group shown in plate XIII there is a tendency toward subgrouping by symbols; and it was constantly observed that the family groups gathered about particular jacales (such as that shown in plate XIV) displayed corresponding designs, though there were frequent visitors from neighboring jacales bearing other designs. Briefly, all the observed facts, as well as the supplementary information gained by inquiry, indicate that the designs are hereditary in the female line, but are susceptible of slight modification both in elaborateness of detail and in the addition of minor supplementary features.

The principal apparatus and materials used in the face-painting are illustrated in plate XXVII. The chief pigments are ocher, gypsum, and the rare mineral dumortierite; the ocher yields various shades of red, ranging from pink to brown; the gypsum affords the white used in most of the designs; while the dumortierite is the source of the slightly varying tints of blue. So far as was observed, the pigments are not blended by mixing, though there is some blending due to overlapping in application. The ocher is commonly extracted and transported as lumps of ocherous clay or ocherous gypsum (plate XXVII, figures 1 and 5), though it is sometimes reduced to powder and transported in bits of skin or rag, or in cylinders of cane (plate XXVII, figures 3 and 4); and it is

773 Before this it was day all the time, but then it became night and coyote only laughs at night. The black strings still hang about badger's neck."

It is strange to find, too, that a flood legend is traditional among the Seris. Chico said: "In the times of the ancients a great flood came, the ocean rose up and all the country of the Seris was under water except the top of Cerro Alto. There a few Seris gathered and were saved. Everyone else was drowned. To this day the top of Cerro Alto is covered with brush which the flood did not submerge. All Seri children are taught this flood tradition, and they must learn it by heart so as to teach their children and their grandchildren."

764 The death of a tribesman gives no cause for ceremony among the Seris, although the nearest relatives may customarily wail, sometimes for months, morning and evening. [765] The disposal of the bodies of the dead, is, however, of considerable interest. A hole about three feet deep is dug by means of large [412] clam shells and a cave is excavated for the head such that the earth will not touch it. The deceased Indian is wrapped in his own blanket and laid in the grave with the head to the East, face up. The body is covered and the grave is partly filled with earth, then covered with a layer of the spiniest of chollas and thorny brush, further filled, leveled and covered with another layer of chollas to discourage the coyotes from digging up the body. When the Seris are on the move, however, [766] and grave-digging is too great a task, a body may simply be lifted high to the fork of a giant cactus and left there.

583 Marriage among the Seris is not so much a ceremony as it is the completion of a bar-585 gain. Under ordinary circumstances, when a man buys a woman he strikes a bargain with the bride's parents and makes a down payment. Only after completion of the bargain does the woman go to live with the man, but even then payments do not cease but continue intermittently through life. Chico Romero, although "married" for fifteen years, gave his wife's father some paint that he had received in payment for guiding and 425 packing. It is also considered natural to 858 buy and sell children. One Seri, Santo

[p. 266 (B)]

[Text continues on p. 267 (B)]

3:Davis & Dawson E-5 (1922-1940) 1945
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425 Blanco, whose son was only sixteen years
458 old, bought outright for him a little girl of
six years.

When contracts for fish were secured by
621 the Mexicans from American markets in

[p.267(B)]

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FIG. 1. Area of Present Seri Occupation

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One descendant of this band states that long ago his ancestors wandered north from the region of Guaymas. Eventually, they established land rights to the coastal area extending from Campo Ona on the south to Puerto Lobos on the north. Before long, however, they relinquished claim to the area between Campo Ona and Punta Tepopa.

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It is to be understood, of course, that groups from this band, as well as groups from other bands, at times ranged far afield from their respective territories. Band I, for instance, had campsites as far north as the mouth of the Colorado River.

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621 Little information could be elicited about subdivisions 7, 8, 9, and 10. The reason for this might be that Band VI was slow in
[167] abandoning those coastal areas (if it actually did inhabit them)
[628] as it was being displaced by Bands III and IV.

621 The Seri say that long ago several men, called *?ant i?akimhoh* "they who explain the land," came to Tiburon Island and told the
642 people along the eastern shore that they owned also a corre-
173 sponding strip of land on the mainland. Thus the inhabitants of
425 subdivisions 2, 3, 4, 5, and 6 laid claim to the coastal areas directly
167 across the channel from them as shown by the dotted lines on Fig. 4. They assumed that their new territories extended inland
[822] to include as much terrain as they chose to claim. At first the people went to their mainland areas primarily to gather cactus fruit. Eventually some of them remained on the mainland and established subdivisions 11 and 12. This establishment superseded the claims of the five Tiburon Island subdivisions to their main-
[101] land territories. Although the mainland subdivisions 11 and 12 formed, in some respects, a separate band in their own right, they retained their name, *ta?eowkw kongkaak* "the people of Tiburon Island." Eventually this group returned to Tiburon.

621 Of subdivisions 13 and 14 which are shown on Fig. 4, very
642 little is known. The people of subdivision 13 inhabited an area
131 encompassing the northern end of the dry lake, La Playa Noriega
[829] (San Bartolo). Some of the Seri believe that these people were
[172] giants. Although in this area I have found clay figurines and other
[173] artifacts common to abandoned camps elsewhere, the Seri do not know the names of the camps of this subdivision. Subdivision 14 occupied the area surrounding the southern end of the same dry lake.

Subdivision 15 occupied the general area which is now Villa de Seris, a settlement on the southern edge of Hermosillo. As
[167] Hermosillo grew, it became increasingly difficult for these Seri to maintain their customary way of life, and they eventually returned to Tiburon Island.

642 BAND VI
621 Band VI became divided into four subdivisions, the names of
101 which are:

xnitom	"_____"
pahii	"flint"
kofte oki tfa	"large iguana peninsula"
koiih	"tubular"

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BAND V

It was stated above that this band fought with Band II and then with Band I. Since Band V was likely killing cattle, they also may have been harassed by soldiers. Eventually Band V abandoned its territory near Punta Tepopa and headed south along the coast to a camp near present-day Bahia Kino. From this camp the entire group disappeared and was never seen again by members of the other bands. The Seri of today believe that Band V either traveled inland or was destroyed by a non-Seri force.

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BAND II

These people were rustlers and marauders. Government intervention in the situation was inevitable. The Seri recount the following final encounter between this group and the government forces.

The entire remaining membership of Band II was hiding out in a nearly inaccessible swamp thicket at Bahia Kino. Knowing that an armed force of soldiers and ranchers was searching for them, the people left their camp to seek safety elsewhere. Almost immediately they were attacked by the superior armed force which proceeded to wipe out the whole group. A youth who had avoided capture is said to have reported the affair to the Seri on Tiburon Island. This event may have occurred during the Encinas Wars fought from 1855 to 1865.

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BAND VI

The members of this band on San Esteban Island were little interested in the mainland and did not participate in the raids on man and livestock there. Nevertheless, they were to share in the severe punishment meted out to the bands guilty of multitudinous depredations.

Sometime after the massacre of Band II, a ship arrived at San Esteban, and many of the people were induced to go aboard. The rest of the inhabitants followed the ship to a camp on the eastern side of Tiburon Island where they were to receive gifts. As the people congregated, they were herded into a stone corral. Apparently, some of the San Esteban men were killed at this time. The rest of them, along with the women and children, were taken to Santa Rosa point on the mainland. Here, the Seri say, more of the men were killed. The remaining men were strung together by wire and led away, never to return.

The San Esteban women and children, along with some Tiburon Island women and children (of Band III), were taken in

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the vessel to Guaymas. With the aid of a group of Yaqui, some of these women were said to have been permitted to go to Hermosillo and eventually to return to their home on Tiburon. Others of their group are said to have remained near Guaymas. The women who returned to Tiburon reported that the San Esteban women and children were put aboard another ship which sailed southward.

BANDS I, III, AND IV

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A custom exists even today whereby a person names his dog after a mountain or other geographical point located in his subdivision. Although the person may re-use the name, each dog so named must be of the same sex as the first.

9:Malkin E-5 (1953-1955)1962 NU31 Seri NU31

III

MAMMALS

262 water for a week until it escaped. There was
[231] no intent to do away with it and serve it up for dinner later on.

The 3 species reported as eaten in the past are kangaroo rat, sea lion and the ringtail cat or
[252] cácomistle. Of these the little rodent had been supposedly "boiled in hot water with salt" which
[261] method of preparation may indicate that it happens quite recently yet. It is quite possible that in times of famine this animal is still used. The sea
[432] lion has been reported as "eaten once a long time ago. All of it. But not now. Its hide was once sold
[114] also but now it isn't used at all." This conflicts with McGee's statement (McGee, 189:202) that there was a taboo on eating sea lions among the Seris and there is no way to reconcile the information.

[114] McGee's report may be as truthful as are the uncertain and hazy comments of the present day Indians.

224 On the other hand, the cougar belongs to a very dubious category, unless we can rely on Miguel Barnett's memory. All 4 of the younger informants emphatically deny that the cougar has ever been hunted for meat. But Miguel Barnett claimed that this has been done in the past, although he could not tell how long ago. Kroeber says nothing about this animal and this makes it difficult to date the events. At the time of Kroeber's visit, Miguel was at least 25 years old and the cougar could have been hunted either
[262] then or earlier. But today the Seris do not eat the flesh of the big cat and their abhorrence of it has been confirmed by the Mexicans to whom I talked about the subject, and who relish cougars' meat. This apparent distaste for the *el tigre's* flesh may
[178] well be a recent development quite unconnected with the lack of weapons. McGee (1894: *loc. cit.*) casually mentions that the Seris hunt both cougars and the jaguars but cites no evidence for it. Yet
[411] in his time Seris' almost only weapons were the
[177] bow and arrow and a lance which today has been replaced by firearms. I am unable to explain this contradictory behaviour.

262 Finally, there is the Ringtail cat or cácomistle. Although this beast has been reported as part of the diet, the information isn't too reliable. I had
[124] no way of checking whether this was the animal the Indians had in mind. Their description of it seemed to answer some other unspecified animal and their answers were confused. The fact is that the Ringtail cat does occur in the Seri territory and they are surely familiar with it.

Of the remaining 11 species none were ever mentioned by any of the informants as having been ever eaten. Their denial of eating the coyotes were most vehement. Coyote figures out probably

[P.98]

9:Malkin E-5 (1953-1956)1962 NU31 Seri NU31

II

OUTLINE OF SERI CULTURE

At the moment their number should have increased again, after a disastrous epidemic in the spring of 1955.

Biological Background

The Seris are somewhat atypical among the peoples of the general area in that they represent a very slender, sinewy, tall type. This is true of both men and women. This physical type in general is apt to be associated with the desert habitat and the Seris answer the requirements very well. As shall be seen, their economy also represents characteristic adaptation to the desert conditions of pre-agricultural people.

Economy

The Seris readily fell into the category of the pre-agricultural hunters and gatherers with one variant, dependence on the produce of the sea, whether marine turtles, fish or littoral invertebrates.

Here the Seri provide another exception for the region. They are the only group that never had any agriculture. McGee has pointed out their lack of agricultural sense and this has also been mentioned by Kroeber and by incidental Mexican visitors. Of late years, some efforts have been made by the Mexican government and the American Friends' Service Committee to persuade them toward agriculture, but to no avail. The Seris occasionally hire out to the surrounding Mexican or American rancher-farmers but grow restless after a few days of cotton picking and retire, with their advanced pay lost to the employer. On the other hand, efforts to teach them related practices, well digging for example, also failed to interest them. To this day they remain much in the original pattern of economy.

McGee (1898:214) who had a chance to observe them from the first hand and who also had access to valuable information from the outsiders gives the following figures for their diet:

land game, large and small (incl. stolen stock)	21%
waterfowl and eggs, incl. pelican	13
sea-turtles	25
fish	15
shellfish	10
cactus fruit	9
other plants	6
miscellaneous	2

total animal 84% marine 65%

Kroeber (1930:20) questions these figures and thinks that shellfish represents greater percentage than McGee indicated. He also thinks the use of turtles had been exaggerated. He figures the dependence on the animal diet as 75% and on marine 60% but he suspects that these figures are too high for a band with ready access to countless cacti and mesquite.

[P.6B]

123 484 Then Chico Romero and his load of children and dogs arrived and he unloaded his impedimenta on the beach, and soon the women came walking along the beach and joined the party. The boats carrying the heavy things and children; the women, with their babies and a few light things on their heads, walk along the beach when possible and follow the boats, which hug the shore to avoid the strong currents and tide. The boats are propelled by paddles mostly, though some of the Indians use oars. The women are slightly built, slender and inclined to be gaunt, owing to the hard life and lack of food. Their cheek bones are quite prominent and their profiles present protruding lips.

422 [364] Having no permanent homes, moving hither and thither for their various food supply, household things are not accumulated and life is reduced to its very simplest elements and absolute necessities.

Crude baskets made from shoots of the terote tree, vessels in which to cook, and some patched rugs in place of Pelican skins to serve as blankets to the fortunate few, constitute the family possessions. Strange to relate, many of the women have an over-supply of milk, and according to Roberto have puppies nurse what the babies cannot take. One woman was known to nurse a baby pig on one side and a puppy on the other.

231 [853]

[264] [864] Family dogs lick all cooking vessels which is unnecessary as they are thoroughly clean when the Seris are through with them, and also lick the infants clean after performing their natural functions, so they are quite indispensable. I saw a Seri girl place on the sand a small can of water for a dog and then saw her drink some of the remainder and pour the rest back in a five-gallon can. Dogs frequently swim across the Infernillo to join their masters.

732 Asked about cripples and incompetents, Roberto said they probably did not exist. The conditions of survival were too precarious to admit of anyone living who was unable, by physical disability, to hunt or fish. There are two or three men who are nearly blind or so. The wives of these men eke an uncertain living for them by the hardest struggle. The sea turtle is the staple; one man and one good boat can secure a living for five families. There are now nine boats, but one boat to a family would practically free them from continual want. With the exception of four bones in the flippers and the bones of the head, all the sea turtle is used---the meat, blood, entrails, shell which furnishes food and oil, skin of flippers which furnishes sandals, sinew for strings. Nothing is wasted except contents of the entrails.

262 483 501 262 237

123 Again, we laid our blankets on the clean white sand of the shore and were lulled to rest by the murmuring sea.

123 484 Daylight found us up the next morning, and we breakfasted, rolled up our blankets, pushed the boats into the sea and were off by the time the sun rose over the mountains and shone over a glassy sea. Two Seris towed their boat by a tump line, while a boy of twelve steered

SERI ETHNOZOOLOGY: A PRELIMINARY REPORT[1]

Sonya Malkin

121 In this paper I shall attempt to summarize briefly some of the possibilities inherent in ethnozoological studies. Ethnozoologies, published so far, have either stressed only the economic or medicinal uses of animals or have just included them as part and parcel of mythology and religion. The emphasis here, on the other hand, is primarily on the aboriginal knowledge of natural history and naturalistic concepts about animals. A comparison with the actual situation in nature will be frequently made in order to test the acuteness of the native observation.

This account is part of a wider comparative study in ethnozoology of several aboriginal groups. Additional field work has recently been completed among two other tribes, the Cora in Nayarit, Mexico, and the Sumu in northern Nicaragua.

Ethnozoological studies of such scope require much more extensive background in natural history than anthropologists or even zoologists today are likely to have. One has to deal with very diverse groups of animals and I have found my own knowledge of the subject repeatedly inadequate on many occasions. It is hoped that a study of this sort will attract individuals who will cover more satisfactorily the entire range of the animal kingdom.

Economic Uses

825 Almost all major classes of animals, with the exception of the insects, 162 are used for food. Only a very limited number of species serve other purposes 439 such as trade with the Mexicans. Among these are various species of large fishes, sea-turtles and a number of shells. Bone are used for the basic non-dietary products such as utensils, clothing, and other items of the material culture, for these are purchased ready-made in the local Mexican "tienda" (small general store).

925 As a major source of income for their livelihood the Seris depend mainly 926 upon a few commercially significant species of large fish and sea-turtles. Yet they do exploit a wide range of the animal environment as a source of additional food. Of the total number of species of animals[2] upon which information has been available, 165 were reported as economically exploited. The table below gives the breakdown of the major groups.

Class	Species Reported	Species Exploited	Percentages
Mammals	21	3	15
Birds	28	6	21
Reptiles and Amphibians	25	11	44
Fish	45	23	51
Molluscs	36	21	58
Crustaceans	10	2	20
Total:	160	72	45

These figures show clearly the dependence of the Seris on marine life for a major source of their diet. Today, pinta, bays, cubera and sardineras are their primary source of income with meat and sea-turtles ranking second in importance. Several species of clams, limpets and gastropods supplement this diet.

All other animals represent only incidental additions to the menu. During the last war, sharks and mantas were hunted extensively for their liver, then a source of vitamin D. But since the war, the demand for shark liver has declined and because of this, a considerable income for the Seris has been lost. Shark and manta fishing have been abandoned for these fish were taken only for the commercially profitable liver and not for their flesh.

Fishing and Hunting

Seri fishing techniques are simple. In the past they used double-pronged spears and for the larger fish, harpoons. Today the spears are employed chiefly in fishing while the harpoons are reserved exclusively for sea-turtles. Hook and line fishing was introduced after 1930, as Kroeber (1931) saw none during his visit to Kino in 1930, and it is now the standard method of fishing. An abortive and unsuccessful attempt was made several years ago with net fishing. Another change has occurred within the past fifty years. The old balsas have been replaced by flat-bottomed plank boats outfitted with five-horsepower motors or sails. These motors, incidentally, are leased from the Mexican fish traders because none of the Seris are rich enough to own one.

Bait is obtained by dynamiting schools of small fish in coastal waters or by collecting them at low tide in the tidal pools and from under rocks. Fishing usually begins at dawn and lasts until noon when, as a rule, all of the "pangas", as the boats are called, return to Desemboque. In stormy weather no fishing expeditions are made and when this occurs, starvation becomes a real menace. Harpooning of sea-turtles takes place far out in the Gulf. It is done only at night in exceptionally calm weather by the light of torches or Coleman lanterns.

Hunting as it is done today has changed from the time of McGee's visit in 1894-95. The bow and arrow has disappeared completely except for a crude and diminutive form used as a toy by small boys. Iron spears once used in shark and manta hunting are now carried primarily as a weapon against the numerous and much feared rattlesnakes. They are said to be used occasionally in the peccary hunt. Old .22s or 30/30 rifles are owned by several of the men, some of whom specialize in hunting.

464 Last year the Seris and their families worked on the ranches
431 gathering corn and beans and made three thousand *pesos*, and then they
484 came to town to spend it. They go back and forth much more than they used to.

123 We ate supper with Mrs. Thomson and then we went to the Plaza to watch the carnival. Much confetti and *cascaroni* was thrown on boys and girls, and the square was thronged by a mass of weaving people, while the military band played seductive Mexican pieces.

The next morning after breakfast we started shopping and kept at it all day, purchasing things to trade with the Indians and groceries for them and ourselves.

While at one of the stores six or eight Yaqui Indians, from their town about one hundred and thirty miles distant, came to buy things for the Easter period. This is the one big fiesta of the year for them. The women were bare-footed and the men wore rawhide sandals. One Yaqui soldier came with them, and he wore three belts of ammunition. They were very dark, with short hair. Rather gaunt, fierce, striking faces.

We walked into a cigarette factory and saw them manufacture cigarettes by machinery. Four machines were running, turning out one hundred and sixty each per minute. Altogether, twenty-three thousand packets of fourteen each every eight hours. These packets are usually tied together in the shape of a solid wheel, one hundred packets each called a *ruedo*, or wheel.

After dinner we went to Roberto's house and they told us there that the Indian boy Pascual had gone out alone and was lost. The Captain left to hunt for him and later brought him in, and then he went out to hunt for us. We finally saw him on a side street and sent him home to his dinner.

Last night, Roberto said they slept up till midnight, then waked up, opened the bride's bundle, and gloated over the bright colors. Later on they opened it twice again. Then they sang and talked for a while before going to sleep again.

On the following day it was nearly three in the afternoon before we got the car repaired and all supplies on board, including our blankets and grips and lumber for a Seri *balsa*, or boat. This was a heavy load for the Ford truck besides five men, which included the two Indians. Every item had to be considered---food for ourselves and the Indians, all the trade things, lumber for a boat and tools to make it, gas, oil, cans for water and many other things.

We soon left the city behind and rattled through the outskirts of poor adobe or stick mud houses, many half in ruins but still sheltering some family.

After about fifteen or twenty miles we arrived at one of Rafael Ysabel's ranches, *Europa*, where Senor Feliz is the foreman or *Mayor*

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

prepared by trituration with a pebble or rubbing with the fingers, usually in a shell cup. Sometimes the shell used for the purpose is the valve of a *Cardium*, which serves indiscriminately as cup, spoon, skin-scraper, etc; but preference is apparently given to thick and strong shells, such as the wave-worn valve of *Chama* (?), shown in plate XXVII, figure 7, which are consecrated to the use and eventually buried with the user, together with a supply of the paint (like that illustrated in the cane cylinder—figure 4—which was a mortuary sacrifice). The gypsum is usually carried in natural slabs or other fragments, perhaps rounded by wear (plate XXVII, figures 6 and 8); it is prepared by wetting and rubbing two pieces together, the larger being reduced to metate shape by the operation. The dumortierite was observed only in the form of a pencil made by pulverizing the substance and mixing with sufficient clay to give consistency. The several pigments are applied wet by means of human-hair brushes kept for the purpose, the process occupying from half an hour to three or four hours for the more elaborate designs. So far as observed at Costa Rica in 1894, the paints were mixed in water only; but since painting outfits found on Tiburon island in 1895 were smeared with grease, it is probable that either water or fats may serve for menstrua, at the convenience of the artists. Commonly the process of painting is measurably cooperative. The matron usually depicts her device on the faces of her daughters up to the age of 12 or 15 years, when they learn to make the applications themselves; and frequently two or more women (usually those with similar devices) work together in preparing and applying the pigments, each laying the paint on her own face and apparently guiding her hand partly by the sense of feeling and partly by suggestions from her coworkers; but Candelaria and some other of the younger women at Costa Rica frequently worked alone, aided by a mirror in the form of a shallow bowl of water set in the shadow while the brilliant desert glare fell full on the face.

The mines yielding the pigments were not located. The geologic conditions are such that the ochers are undoubtedly abundant; but it is probable that the gypsum is uncommon and confined to a remote locality or two, and that the dumortierite is rare and scanty here as elsewhere. The care with which the paints are preserved, prepared, and applied, the fact that they are indispensable feminine appurtenances even on the longest journeys, and their sacred rôle in the mortuary customs, all combine to indicate that they are among the most highly prized possessions of the people and by far the most precious of their minerals.

The somatic functions of the designs are esoteric, yet an inkling of their meaning was obtained through Mashém, the interpreter at Costa Rica in 1894; from his expressions it appears that the designs are sacred insignia of totemic character, serving to denote the clans of which the tribe is composed. But three clans were identified, and

226 411 1771 commercial origin are their main instruments of fishing. To this they added dynamite, sometimes with disastrous results to themselves, mostly as a way of securing bait. Single-pointed fish-spears which loomed so importantly in McGee's account have gone the way of the Dodo for its original purpose and transformed into iron bar lances, now used largely as weapons against rattlesnakes that men encounter in their desert roamings. However, in the forties, when the Seris spent a great deal of time getting sharks and huge rays, they killed them with these weapons.

226 411 What retain some importance are the harpoon and the two-pronged spear called "puiero." The two-pronged spear is one of their oldest weapons. The construction is much the same as when McGee visited them. The spear is used mainly to stab large-size fish, the giant *bais* or *mero* for example, after it has been brought up on the line. The [225] harpoon is now exclusively a weapon for the turtle hunt.

226 177 [157] An interesting fate met an effort to teach these Indians net fishing in 1947. They tried, ruined the nets and never took it up since. The instigators were Mexicans, the fish traders. I suspect that Seri individualism had a great deal to do with their lack of interest in net fishing which after all demands a certain amount of cooperation. With the hook and line fishing, men can have much more their own way.

501 177 648 An added "tool" of the Seris is the plank boat. The balsa which McGee still observed during his visit, had already vanished by the time Kroeber came to the Seriland and had been replaced by these boats. The boats are flat bottomed but good sized. The material was provided by the Mexican government. Boats are usually propelled by 5 hp. motors leased from the Mexicans (no Seri is rich enough to purchase [439] one) who also sell them gasoline and oil at exorbitant prices and in return buy Seris' catch of fish and sea turtle for low prices. At the time of my visits these amounted roughly to less than a peso [435] per kilo of the flayed, degutted and cleaned fish (less than 8 cents) with fluctuation up and down the scale depending on the kind of the fish, and to about 30-50 pesos for medium to large size "cahuama," the live marine turtle.

501 648 The Seri boats are also propelled by paddles and sail—this is always the case with the families who wish to stay away on Tiburon for some time. The Mexicans will not lease them their motors for such trips even if the Seri, some of them at least, have enough knowledge of the motors to repair minor stoppages—a demonstration of the fallacy [114] of McGee's idea that they are genetically unable to handle tools. In this respect, Kroeber's (1930: 25) estimate of them is closer to the truth.

462 Sexual division of labor in procuring food goes on, much the same as it had 70 and 30 years ago, with the sole exception of the imported goods. [439] Here purchases are made either by men or women or by children, depending on who at the time has the cash and what one wishes to buy.

Fishing is still done by men and so is hunting. Women still concentrate on gathering, whether of

301 + 825 worn. I have observed women wearing necklaces of the former and women and very young boys of the latter. The olive shell, incidentally, is made into two sorts, the natural, unroasted shells which retain a greenish-purple, mottled color and the white. The white pallid color is achieved by roasting the shells over fire. The necklaces are mostly made up of either colored or white but occasionally they may be made of mixed shells and then they are usually alternately interlaced, now with one, now with another.

+ 825 b) *Utensils:* Two species had been reported used as occasional drinking or dipping cups and spoons. *Lavicardium elatum* and *Ficus ventricosus*. *Ficus* is presently discarded, but the *Lavicardium* is still occasionally used so. There is no doubt that the incidental use of these shells increases during longer fishing expeditions when the Seris are apt to lose some of their gear. [412] [415]

[436] c) *Money:* Interestingly, the brown cowry was supposed to have been used as a means of exchange, as money—in the past. If this is so, then the selection of this shell for such purpose is not surprising considering its widespread use throughout the world. [171]

439 + 825 d) *Trade:* Altogether 12 species had been reported as traded off either in the past or present. The trade importance of various species of shells varies with the demand of the market and sometimes may be only sporadic and short-lived. Only a few of the species had been indicated as having been of any trade importance in the past, and it may well be that the Seris did not register the species which may have been briefly sold to and outsiders during the short-lived fads of demand. It may be said in general that the trade importance of the shells increases and that greater variety of them are exploited now than formerly. This is surely owing to the increasing accessibility of the Seri country and the increasing tourism, not only visitors from Hermosillo, but also from such far flung places as Tucson, Phoenix and even Los Angeles. [177]

In some instances, the Seris had no idea what the shells were sold for. The augur shell is on and off sold to some American traders who show up in Desemboque once in a while and for whom the Seri women accumulate these shells. But what uses were made of these, the Indians surely didn't know. Neither did they know what uses were made of the *Murex* shell and the *Turbo*, both of which were periodically sold in bulk to Hermosillo. On the other hand, they had some idea what uses were made of some other shells. *Pteria* and *Atrina* contain pearls and these are much desired. Especially the pearls of *Atrina* which are sold to the Mexicans or to the visitors for 25-50 pesos each and therefore have immense value, for the local market. The *Pteria* shells are said to be used for button making, and the Seris themselves claim that they make buttons of this shell. The most important of all, however, at least at the time of my visits in 1953 and 1955, was the olive shell. It was easily the most commonly and most numerously collected shell of all that the Seris ever collected. Owing to the scarcity of it in Desembo- [435] [237] [226]

que (as a result of the ecology of the coastal waters) it is gathered in huge quantities largely on the shores of Tiburon where it is said to occur in great numbers. This animal is gathered in large bulk in 5 gallon gasoline cans and then sold either as finished necklaces at the rate of five pesos each, or as bulk, by the liters, with 20 liters for each gasoline can. There is a steady market for these shells.

e) *Bait:* Only the octopus has been reported as used for fish bait for the *pinta*, *baya* and *pescara*, and I have seen it used in that manner. But it is certain that on occasion the Seri will use also for bait the flesh of some of the shelled smaller molluscs, especially when they wish to capture live fishlets for bait.

Hunting

Collecting of molluscs is almost invariably a job of adult women and of the children of both sexes who at low tides scavenge the exposed mud flats and gather or dig out various marine animals. Some are collected on the surface only. Among those that must be excavated are the octopus and *Nioche* which hide in burrows or mud, respectively. A large shell is usually used as a tool to pry the *Nioche* out.

Taxonomy

Molluscs on the whole are recognized as one group of animals. However, this does not include the octopus and the chitons which are considered as different sort of creatures. Some sort of feeble association between the *Pelecypods* and the *Gastropods* is recognized and various species of both are placed together. I noticed a tendency to consider some of the *Gastropods*, the limpets and *Crepidula* for example, as supposedly having two valves while in fact they are both univalves. The explanation offered for this was "it lost one side," meaning one valve.

Although *Chitons* spend most of their time motionless attached to rocks they are both considered animals. The motions of these animals may not have been observed by the adult, but the Indians, young boys especially, certainly noticed the changed positions after a period of time.

In some instances the Seris observed quite small differences between animals—recognizing them as different species. In the *Neritina* two different forms were correctly identified as representative of the same species, although they differed considerably in size and color. On the other hand *Columbella* and *Solenostira* had been given the same Seri name palémex[x] but were recognized as different kinds of animals.

Sexing

A distinct tendency to consider the molluscan males larger than the females emerges readily from the Seri answers. This can be shown in the table below:

[P. 40 A]

Malkin E-5 (1953-1956)1962 MU31 Seri MU31

MOLLUSCA

VII

USES

Species	Food		Decoration		Trade		Bait
	Pres.	Past	Pres.	Past	Pres.	Past	
Octopus bimaculatus	x	x				x	x
Codakia distinguenda		x					
Laevicardium elatum		x			x[1]		
Carditamera affinis	x	x					
Aemaea dalliana			x	x	x		
Crucibulum spinosum		x	x	x	x		
Chione undatella	x	x					
Chione californiensis	x	x					
Pteria peruviana	x	?	x	?	x		
Volsella capax	x	x					
Olivella dama			x	x	x		
Cyprea annettae				x[2]			
Tegula rugosa		x		x		x	
Conus regularis		x[3]		x	x	?	
Phyllonotus erythrostomus		x				x	
Turritella brodeiſiana		x[3]			x	?	
Polinices reclusiana	x	x					
Chlamys subdudosa	x	?					
Atrina maura	x	?			x[4]		
Navicula pacifica		x					
Turbo fluctuosa	x	?			x		
Solenostira pallida			x	?	x		
Ceritium stercusmuscorum			x				
Trivia radiana			x				
Ficus ventricosus	x						
Nioche bistrianoca	x	x					

[1]Occasionally used as dip spoon
[2]Supposedly used in the past for money
[3]In the past "giants of 300-400 maybe years ago have eaten it."
[4]Only pearls

These figures show then 26 out of 37 species exploited economically in some way, that is 70%. These figures show increase over the figures I have published previously (1956) which were 21 out of 36 species and 58% respectively. The corrected figures are the result of brief additional field work in 1955.

Food

A good part of the molluscan forms are used as food. Altogether 19 species are listed as such, although out of these, only 11 were reported as being part of the diet today while the remainder only in the past. It is obvious that there has been progressive decrease in the Seris' dependence on the molluscan diet within the past few generations.

Four of the species reported as part of the Seri diet at various times had been collected from the kitchen-middens. There are: *Pteria peruviana*, *Chlamys subdudosa*, *Volsella capax*, and *Navicula pacifica*. Of these four, *Navicula* has been reported as eaten in the past "maybe 100 years ago, but not

9:Malkin E-5 (1953-1955)1962 NU31 Seri NU31

301 worn. I have observed women wearing necklaces
+825 of the former and women and very young boys of the latter. The olive shell, incidentally, is made into two sorts, the natural, unroasted shells which retain a greenish-purple, mottled color and the white. The white pallid color is achieved by roasting the shells over fire. The necklaces are mostly made up of either colored or white but occasionally they may be made of mixed shells and then they are usually alternately interlaced, now with one, now with another.

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439 d) *Trade:* Altogether 12 species had been re-
+825 ported as traded off either in the past or present. The trade importance of various species of shells varies with the demand of the market and sometimes may be only sporadic and short-lived. Only a few of the species had been indicated as having been of any trade importance in the past, and it may well be that the Seris did not register the species which may have been briefly sold to and outsiders during the short-lived fads of demand. It may be said in general that the trade importance of the shells increases and that greater variety of them are exploited now than formerly. This is surely owing to the increasing accessibility of the Seri country and the increasing tourism, not only visitors from Hermosillo, but also from such far flung places as Tucson, Phoenix and even Los Angeles.

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In some instances, the Seris had no idea what the shells were sold for. The augur shell is on and off sold to some American traders who show up in Desemboque once in a while and for whom the Seri women accumulate these shells. But what uses were made of these, the Indians surely didn't know. Neither did they know what uses were made of the *Murex* shell and the *Turbo*, both of which were periodically sold in bulk to Hermosillo. On the other hand, they had some idea what uses were made of some other shells. *Pteria* and *Atrina* contain pearls and these are much desired. Especially the pearls of *Atrina* which are sold to the Mexicans or to the visitors for 25-50 pesos each and therefore have immense value, for the local market. The *Pteria* shells are said to be used for button making, and the Seris themselves claim that they make buttons of this shell. The most important of all, however, at least at the time of my visits in 1953 and 1955, was the olive shell. It was easily the most commonly and most numerously collected shell of all that the Seris ever collected. Owing to the scarcity of it in Desembo-

[435] [237] [226]

261 will exist on very small rations, bear burdens, and walk long dis-
262 tances. Their food is anything that walks, flies, crawls or swims,
[252] and they eat it raw with the same relish that we eat it cooked. There is but one thing they will not eat; they draw the line on the Gila monster. They are the most perfect type of human being adapted to desert conditions that exists today. Convey them blindfolded many miles into the heart of the desert, empty-handed, remove their blinders, and they will find both food and water where others would perish. The Papagos and Yaquis do almost as well."

302 We gave the women a small bag of flour and three or four cubes of
[123] sugar around, and the men three packets of tobacco each and two boxes of matches. Matches with them are very precious and are rarely used. Rather than use a match a woman came over to our fire and borrowed some coals to rebuild her fire. From this point the nearest matches are a good deal over one hundred and twenty miles distant, so they have to economize in every thing.

422 Each rag is valuable, and flour, sugar, coffee and rifle shells
• [434] are absolutely priceless. While they know money, it has no value here.
[437] Only commodities go here. The most highly prized things are boards to
[389] make boats and rifle shells to get game and protect themselves. All empty shells are saved, the primer punched out, straightened, a match head put in, a little pinch of powder on top, the shell filled up, a long bullet inserted, the shell pinched tight, and a fresh set of ammunition is made.

142 The women and children certainly did look wild. Their hair was
291 frowsy and unkempt, their skirts and waists a patchwork of dirty rags
302 coming just below the knees; their features seamed and hard and cruel. Their complexion was very dark. They had no under garments. The children wore only a dirty shirt coming a little below their thighs, and even that is ragged. One or two of the women had a dirty bandanna over their heads. How I wished I could have seen them in their ancient, picturesque pelican-skin kilts!

302 I happened to witness the operation of a Seri beauty parlor. A
[029] mother brushed the hair of her thirteen-year-old daughter with a brush
[293] made from the fibrous roots of a certain grass tied together with
[515] sinew. During the operation if she came across a *piojo*, and she found several, she plucked him away from his feeding ground and dropped him in the fire.

The hair neatly brushed, the mother then mixed paint in a small vessel and with a tiny stick painted a bright blue design under the eyes and across the cheeks and nose, and then she added narrow white stripes, which, contrasting with the blue and the dark skin, produced a very striking effect. This paint is easily removed and the women often paint and remove three different face designs in one day.

304 I did not see tattoo work on either men or women, nor did they
301 wear ceremonial feathers as did our western Indians.

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[293] made from the fibrous roots of a certain grass tied together with
[515] sinew. During the operation if she came across a *piojo*, and she found several, she plucked him away from his feeding ground and dropped him in the fire..

The hair neatly brushed, the mother then mixed paint in a small vessel and with a tiny stick painted a bright blue design under the eyes and across the cheeks and nose, and then she added narrow white stripes, which, contrasting with the blue and the dark skin, produced a very striking effect. This paint is easily removed and the women often paint and remove three different face designs in one day.

304 I did not see tattoo work on either men or women, nor did they
301 wear ceremonial feathers as did our western Indians.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

even during this halcyon term no Seri save Kolusio and the Altar outlaw ever learned to live in a house; none but these and Mashém wore hats habitually; and, despite the fact that they often witnessed and sometimes playfully or perforce participated in the processes, no Seri ever really encompassed the idea of house-building or even of making adobe. Though surrounded by horses when near the rancho, they never learned to ride nor to use the animals otherwise than for immediate slaughter and consumption; though in frequent sight of skilful ropers, they never fully grasped the idea of the riata, preferring to seize their prey with hands and teeth; though familiar with the agricultural operations of the rancho, they never turned a sod nor planted a seed on their own account; though in frequent sight of cooking, they seldom began and never finished the process with their own food; though acquainted with firearms, they continued to regard them as thaumaturgic devices, and chose the bow and arrow for actual use; though submitting to apparel on the frontier, they commonly cast away the incumbrances on returning to their lairs; and no Mexican or other Caucasian ever saw within their esoteric life—their names remained unrevealed, their hair remained sacred, their mourning for the dead was unheard save at a distance, and no alien, even unto today, has ever seen the birth of their babes, the christening of their children, the burial of their dead, or the ceremonies of their shrines. The Seri and the whites were, indeed, mutually tolerant; but, so far as concerns mutual sympathy, the toleration was almost precisely on a par with that between the ranchero and the vulture-flock that scavengers his corrals—and when depredation began the toleration was of a piece with that between householders and their unwillingly domiciled rodents. It is not too much to say that the interracial mistrust and hatred of the Western Hemisphere culminates on the borders of Seriland; though the antipathy is commonly regarded by the alien tribesmen and the Mexicans as other than racial, since the Seri are felt to be hardly human—a feeling fully shared by the Seri, who undoubtedly deem themselves more closely akin to their deified bestial tutelaries than to the hated humans haunting their borders.

Even during the Encinas régime the Seri came in occasional contact with aliens on other parts of the frontier: on Hacienda Serna, the somewhat remoter borderland outpost on the north, the relations between the landholders and the Seri were analogous to those on the Encinas plains, though less acute in the ratio of relative distance. Occasionally small parties of warriors journeyed to Guaymas[1] on balsas or on foot to barter pelican-skin robes for Caucasian commodities, chiefly aguardiente and manta; still more rarely similar pilgrimages were made to the outskirts of Hermosillo; a few marauding raids were made to the ranchos lying near Cieneguilla and Caborca; and a num-

[1] The accompanying plate XII is reproduced from a photograph of a small group of Seri traders taken near Guaymas, probably during the eighties. It was kindly furnished by F. A. Ober, who purchased it in Guaymas.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

481 Examples of Seri fleetness and endurance might be multiplied indefinitely, and many of still more striking character might be adduced; but these instances, all attested by several witnesses, all corroborated by independent facts, and all consistent with the observations of the 1894 expedition, seem fairly to represent one aspect of the pedestrian habit of the tribe.

412 A trait of the Seri hardly less conspicuous than their pedestrian habit is habitual use of hands and teeth in lieu of the implements characteristic of even the lowly culture found among most primitive tribes. Perhaps the most nearly universal implement is the knife—at first of shell, tooth, bone, or wood, later of stone, and last of metal—and hardly a primitive tribe known from direct observation or from relics has been found independent of this most serviceable implement; yet the Seri may be described with reasonable accuracy as a knifeless folk. Awls and marlinspikes of bone and wood, shell cups, and protolithic mullers or hammers are found in numbers in their hands, on their rancheria sites, and in their ancient shell accumulations, while rudely chipped stone arrowp ints are sparsely scattered over their range; yet not a single knife of stone or other wrought substance has been found in their territory or in their possession, save for an occasional metal knife obtained by theft or barter. And the habit of dispensing with this primary implement is attested both by everyday customs and by the traditions and chronicles concerning the tribe. Thus, various observers (notably Hardy) have recorded the features and uses of balsas, harpoons, ollas, etc, yet no records of cutting implements have been found; similarly the chronicles contain records of barter between the Seri and the Sonoreuse through which the savages acquired aguardiente, manta, garments, sugar, grain, etc, yet no record is known of the leading articles of exchange to practically all other tribes of the continent, viz, cutlery; and in like manner the local traditions recount the constant desire of the Seri for liquor and tobacco, saccharine and other food substances, clothing or material for making it, tin cups, lard-cans, and other metallic utensils, as well as nails for harpoons and hoop-iron for arrowpoints, in addition to firearms and ammunition; yet the recounters are significantly silent on the subject of knives.

[172] [439] [439]

Conformably, the 60 Seri gathered near Costa Rica in 1894 made it their business to pick up or beg all sorts of industrial products and materials, yet apparently did not possess so many as a dozen knives in the entire band; and while protolithic implements, ollas, shell cups, paint-stones, etc., were seen in constant use, none of the men, women, or children were observed to use knives for cutting meat or for any other customary purpose. Among the supplies laid on top of the 264 jacal shown in plate X, to keep them out of the way of the dogs, was a hind leg of a horse, from femur to hoof (some three days dead and still

McGee E-5 (1894-1895)1898 NU31 Seri NU31

281 apparently dried without dressing, together with
513 skins of rabbits, mountain sheep, antelope, etc, usually tattered or torn into fragments. Commonly the hides and pelts are nearly or quite in natural condition, retaining the hair, fur, or feathers. The dressing is apparently limited to scratching and gnawing away superfluous flesh, followed by some rubbing and greasing; tanning is apparently unknown. By far the most abundant of the collective possessions are the pelican-skin robes, which form
[439] the sole article of recognized barter with aliens. The aggregate stock accumulated at any time is but meager, never too much to be borne on the heads and backs of the clan in case of unexpected decamping.

412 Aside from the painting paraphernalia, there is
302 but a single conspicuous toilet article; this is a hair-brush made of yucca fiber bound into cylindrical form, as illustrated in figure 29. This article is in frequent use; both women and men give much attention to brushing their own long and luxurious locks and cultivating the hair and scalps of their children, the process being regarded as not only directly useful but in some measure sacramental. Ordinarily the hair is parted in the middle and brushed straight, the tresses being permitted to wander at will and never braided or bound or restrained by fillets save in imitation of Caucasian customs on the frontier; though in certain ceremonies the pelage is gathered in a lofty knot on the top-head.[1]

854 The Seri cradle is merely a bow of paloblanco or other switch with rude cross-sticks lashed on, as shown in figure 30. On this is laid a small pelican-skin robe, with a quantity of pelican down for a diaper, and perhaps a few pelican feathers attached as plumes to wave over the occupant's face; though on the frontier these primitive devices are largely replaced by rags.

283 Among the important appurtenances of Seri life are the cords used for belts and necklaces, as well as for the attachment of ceremonial headdresses, for converting the kilts into bags, and for numberless minor purposes. The finest of these are made from human hair; and for this purpose the combings are carefully kept, twisted into strands, and wound on thorns or sticks in slender bobbins, such as that illustrated

FIG. 31.—Hair spindle.

[1] Cf. Keely, Proceedings, p. 230.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

177 411 726 included a heavy Springfield "remodeled" rifle, lacking not only ammunition but breechblock and firing pin; while Don Andrés Noriega, of Costa Rica, and L. K. Thompson, of Hermosillo, described a rifle of modern make captured similarly two years before, which was in good working order and charged with a counterfeit cartridge ingeniously fashioned from raw buckskin in imitation of a center-fire brass shell and loaded with a polished stone bullet.[1] The finders opined that the rifles were carried to bluff the enemy, and even that the counterfeit cartridge was designed to do deadly execution; but it would better accord with Seri customs, and with the law of piratical acculturation which they typify,[2] to infer that the weapons were regarded rather as symbols of mystical potencies than as simple scarecrows. Of related import were two or three pseudomachetes made from rust-pitted cask hoops, reported by the majordomo and several vaqueros at Costa Rica; and of still greater significance was a machete picked up in a just-abandoned jacal by Don Ygnacio Lozania—veteran of the Andrade expedition and the Encinas conquest—which was laboriously rasped and scraped out of paloblanco wood, colored in imitation of iron blade and mahogany handle by means of face-paints, and even furnished with "eyes" replacing the handle-rivets, in the form of embedded iron scales. Some of the Seri are familiar with the normal use of firearms, as was demonstrated by the Robinson and other episodes, and many of them modernly make some use of machetes or other knives, as shown by various rudely whittled wooden artifacts; yet the burden of proof indicates that the chief use of the Caucasian's weapons in the heat of actual warfare is shamanistic and symbolic. This interpretation is, in fact, practically established by the experience of the frontier; for the vaqueros and local soldiery have little fear of the ill-understood firearms and clumsily handled machetes occasionally seen in Seri hands, though they dread unspeakably the necromantic arrows and flesh-rending teeth with which the agile foes are credited.

174 324 The mystical potency ascribed to Caucasian firearms and cutlery by the zoomimic tribesmen is of interest as a reflection of motives and methods pervading the entire range of their activities; at the same time it suggests the genesis of the aberrant technolithic craft displayed in arrow-chipping. The information obtained from Mashém and his mates concerning chipped arrowpoints implied that the process was hieratic and little understood by the body of the tribe, its place in the tribal knowledge, indeed, being similar to that of the brewing of the arrow "poison", which is the special work of shamans; and this information, comporting as it does with the rarity of the chipped points and

[439]

[1] The imitative skill of the Seri was illustrated at Costa Rica some years ago, when the petty accounts for labor, etc, were kept by means of tokens stamped from sheet brass. While a Seri rancheria was maintained near the ranche, the storekeeper detected a number of counterfeits of his tokens, so well executed as to pass readily over the counter in ordinary exchange—and after extended detective work the counterfeiting was traced to the rancheria.

[2] American Anthropologist, vol. xi, August, 1898, pp. 345-348.

2: Kroeber E-5 (1930)1931 NU31 Seri NU31

middle. Two imperfect wind-breaks of brush, less than a quarter of a circumference in curvature, stood near the camp..

On the subject of textiles and textile clothing (pp. 171, 225-232), McGee is necessarily vague on account of lack of specimens. He says that native kilts, from waist to knee, were either of birdskin or "a rectangle of coarse textile fabric," "woven probably on some primitive device"; that it is practically certain that a long-sleeved, short-bodied shirt or wammus is "of local aboriginal design" and was "made primitively of haircloth or native textiles"; that the probable genetic series of Seri garments was: 1, the pelican-skin robe used as a kilt, 2, the textile shirt, 3, the textile kilt; and that Seri fabrics, according to a Mexican informant, "resemble coarse bagging, and are woven or netted quite plainly."

Human hair cord could be netted, or twined in double weft into basket-like bags or mats; it could hardly be woven into cloth without a loom. The same holds of *ixtle*, agave fiber. Bast of willow, cottonwood, beanstalk, such as was spun and twined, and perhaps woven on a limited scale, by the Colorado river Yuman tribes, was not available to the Seri, though they may have had nearly equally soft substitutes, even in their desert. Cotton they did not have. *Ixtle* is a strong, harsh fiber, excellent for cordage, nets, open-mesh bags, and the like, and still largely used in Mexico for such purposes. It would also serve well for fringe-aprons, for which the Lower Californians used it. A fabric from it would be rough and stiff, giving little warmth, not very satisfactory for a kilt, and quite unserviceable for a fitted garment like a sleeved shirt. Cotton was the prevailing garment material found along the coast by the first Spaniards, north up to the Cahita (Ka'ita, namely Tehueco, Mayo, Yaqui); here *ixtle* became more prevalent though cotton persisted; but the type of garment is not clear.

As to looms, *ixtle* is today woven into carrying bags on a heddled belt-loom by the Nahua-speaking Indians of Sinaloa. The Mayo weave woolen girdles on a similar loom. They also weave woolen blankets on a demountable horizontal loom, the warp passing continuously around the two heavy yarn beams. It is not clear whether this is a hybrid Spanish or a purely native apparatus. The Opata and Pima Bajo loom is not known. The American Pima weave cotton both on a belt-loom and on a staked horizontal loom, but with warps in a single plane.[8] It is difficult to imagine these looms existing among the Seri, except the first mentioned; and this would not yield them much in the way of garments. There is no reason why they should have worn more than the Lower Californian women's fringe-aprons, *supplemented perhaps by* birdskin blankets and loin covers. They no doubt secured occasional garments from neighboring tribes, as they gladly but irregularly wear those of whites today; and this

[8] Russell, BAE-R, 26:143-153, 1908.

2: Kroeber E-5 (1930) 1931 NU31 Seri NU31

is what their "shirt" (McGee, pl. 29) probably was. The fabrics of McGee's Mexican informant may refer to gunny-sacks made over into improvised imitations of civilized garments; or to single-element carrying bags. It is entirely possible that contact with the cloth-weaving tribes of Sonora long ago induced the Seri to shrink from habitual complete nudity; but it is difficult to imagine them producing even a coarse wearable cloth. McGee's interpretation of the historic sequence of Seri garments is of course wholly speculative.

The cradle shown by McGee (p. 226, fig. 30) consists of a kite-shaped hoop with eight sticks tied across it and a lashing thong passed back and forth across it half-a-dozen times. Even allowing for some slip of the parts in transport to Washington, this specimen is quite typical in Seri disregard of evenness, neatness, order, or finish. The Yaqui cradle illustrated by Hrdlička[1] consists of eight or nine lengthwise sticks or canes twined close together. The Lower Californians used a basket or a turtleshell. The Gila Pima and river Yuman cradle is of "ladder" type, and therefore similar in structure to the Seri except that it lacks the point at the bottom and has the sides parallel; it also carries a hood of wickered or twilled splints. As regards basic structure, one form of Maidu cradle is most similar to the Seri; just as the plan of the Yaqui one reappears among Miwok, Yokuts, and Mono a little further south in California.[2] It appears from this irregular distribution that so simple an apparatus as the open or flat baby-carrier, which can be just as serviceable without a definite technique or style entering into it, is likely to vary locally without much significance, and that its forms will indicate historic connection only when they are parallel in a number of details. In these respects it resembles house types. In both these objects, new "inventions," certainly of detail elements and perhaps of basic structure, seem to be readily made and adopted.

McGee's finding (p. 247) that the Seri are "not habitual stone arrow-makers" has a parallel among the river Yumans, and, at least partially, among the remaining Sonoran tribes. His conclusion (p. 259) that the *yerba de la flecha* (magot, Sebastiano bilocularis?) was an Opata but probably not a Seri arrow poison, seems sound. The plant was shown me on the island, and the Seri knew it as venomous, but volunteered nothing as to using it on arrows.

That the question of Seri cannibalism must be left open, with a preponderance of evidence against the practice (p. 263), also seems a conservative judgment.

As to shields, McGee learned of loose pelican pelts and turtle-shells (p. 264), I of armor and a large upright shield of hide. Both accounts may *be right, one referring to emergency pick-ups, the other* ——— to prepared defence or attack.

[1] AA 6, pl. 9, 1904.

[2] BAE-B 78:238, fig. 48, pls. 38, 48.

S.Davis & Dawson F-5 (1922-1940) 1945
MU31 Seri MU31

621 are four or five hundred people there, more during the peak of the season, and some fifty or more wattle and daub shacks arranged without plan or order, facing at every angle, but all near the beach on which the fishing boats land and are pulled up on shore. Refrigerated trucks carry fifteen to twenty-five tons of fish away daily during the height of the season, mostly the huge endemic totuava (Fig. 21). These great fish are dragged from the boats and lined up on the shore, where the heads are chopped off and the entrails are pulled out and left to be carried away by the tides or consumed by hundreds of [131] scavenger gulls of the beach. A quarter mile north of Kino is the present-day Seri village where nearly all the Seris now live semi-permanently because of the easy money and [439] living. They have their own boats, fish a [262] little for profit, and also bake the discarded fish heads for food. The Seri dwellings are 342 now scarcely inferior to many of the wattle and daub shacks of the Mexicans. Indeed, [439] many of the Mexican shacks are built by Seris in exchange for manta cloth or food.

[p. 268(B)]

4:Malkin E-5 (1953-1955) 1956 NU31 Seri NU31

SERI ETHNOECOLOGY: A PRELIMINARY REPORT[1]

Sonya Malkin

121 In this paper I shall attempt to summarize briefly some of the possibilities inherent in ethnoecological studies. Ethnozoologies, published so far, have either stressed only the economic or medicinal uses of animals or have just included them as part and parcel of mythology and religion. The emphasis here, on the other hand, is primarily on the aboriginal knowledge of natural history and naturalistic concepts about animals. A comparison with the actual situation in nature will be frequently made in order to test the acuteness of the native observation.

This account is part of a wider comparative study in ethnozoology of several aboriginal groups. Additional field work has recently been completed among two other tribes, the Cora in Nayarit, Mexico, and the Sumu in northern Nicaragua.

Ethnozoological studies of such scope require much more extensive background in natural history than anthropologists or even zoologists today are likely to have. One has to deal with very diverse groups of animals and I have found my own knowledge of the subject repeatedly inadequate on many occasions. It is hoped that a study of this sort will attract individuals who will cover more satisfactorily the entire range of the animal kingdom.

Economic Uses

825 262 439 Almost all major classes of animals, with the exception of the insects, are used for food. Only a very limited number of species serve other purposes such as trade with the Mexicans. Among these are various species of large fishes, sea-turtles and a number of shells. None are used for the basic non-dietary products such as utensils, clothing, and other items of the material culture, for these are purchased ready-made in the local Mexican "tiendas" (small general store).

925 [439] As a major source of income for their livelihood the Seris depend mainly upon a few commercially significant species of large fish and sea-turtles. Yet they do exploit a wide range of the animal environment as a source of additional food. Of the total number of species of animals[2] upon which information has been available, 65% were reported as economically exploited. The table below gives the breakdown of the major groups.

[p. 73]

Class	Species Reported	Species Exploited	Percentages
Mammals	21	2	
Birds	24	6	
Reptiles and Amphibians	25	11	
Fish	44	23	
Molluscs	36	21	
Crustaceans	10	2	
Total:	160	72	45

These figures show clearly the dependence of the Seris on marine life for a major source of their diet. Today, pinta, boya, cabon and sardineta are their primary source of income with meat and sea-turtles ranking second in importance. Several species of clams, limpets and gastropods supplement this diet.

All other animals represent only incidental additions to the menu. During the last war, sharks and mantas were hunted extensively for their liver, then a source of vitamin D. But since the war, the demand for shark liver has declined and because of this, a considerable income for the Seris has been lost. Shark and manta fishing have been abandoned for these fish were taken only for the commercially profitable liver and not for their flesh.

Fishing and Hunting

Seri fishing techniques are simple. In the past they used double-pronged spears and for the larger fish, harpoons. Today the spears are employed chiefly in fishing while the harpoons are reserved exclusively for sea-turtles. Hook and line fishing was introduced after 1930, as Kroeber (1931) saw none during his visit to Kino in 1930, and it is now the standard method of fishing. An abortive and unsuccessful attempt was made several years ago with net fishing. Another change has occurred within the past fifty years. The old balsas have been replaced by flat-bottomed plank boats outfitted with five-horsepower motors or sails. These motors, incidentally, are leased from the Mexican fish traders because none of the Seris are rich enough to own one.

Bait is obtained by dynamiting schools of small fish in coastal waters or by collecting them at low tide in the tidal pools and from under rocks. Fishing usually begins at dawn and lasts until noon when, as a rule, all of the "pangas", as the boats are called, return to Desemboque. In stormy weather no fishing expeditions are made and when this occurs, starvation becomes a real menace. Harpooning of sea-turtles takes place far out in the Gulf. It is done only at night in exceptionally calm weather by the light of torches or Coleman lanterns.

Hunting as it is done today has changed from the time of McGee's visit in 1894-95. The bow and arrow has disappeared completely except for a crude and diminutive form used as a toy by small boys. Iron spears once used in shark and manta hunting are now carried primarily as a weapon against the numerous and much feared rattlesnakes. They are said to be used occasionally in the peccary hunt. Old .22s or 30/30 rifles are owned by several of the men, some of whom specialize in hunting.

[89 cont.]

000 abundant flying and, especially, marine fauna.

For a modern technology, their region has great resources,
511 but for the culture of the Seri it is frankly inhospitable. The standard of living is exceedingly low, as is proclaimed by natives and foreigners and as is demonstrated by the illnesses and hunger that weaken the population.

[90] The Seri truly form part of our Western society, in
226 so far as they catch fish, with fishhooks and motorboats, to sell
●439 in the markets of Hermosillo, Nogales, and Tucson, and they
[177] obtain payments in national specie and coin. The part that
182 they form, however, has its own internal structure, which regulates the relations with the environment and among its mem-
[161] bers, even though a group of 218 persons, which suffers severe alterations in percentages from disasters like the sinking of a boat or strokes of good luck like the establishment of a prosperous fishing camp, is almost insignificant for the nation.

Most probably they have never been much more numerous, and they must not have had great cohesion in the past, a situation explicable in view of their nomadic gathering economy.
621 Toward the close of the 18th century they were divided into bands, of which it is known that the most important were the Guaymas, Upanguaymas, Tepocas, Tiburones, and Salineros.
[648] They banded together at various times in order to defend themselves and to attack the nuclei of Mexicans of the zone, achieving combined action, but without effective political unity.

619 At present they seem to form a single group without marked subdivisions, although they recognize affiliations like that of "Tiburones," "half-Papago," etc., which appear to have little real classificatory significance.

184 There is great uniformity: they speak a single language
619 incomprehensible to the rest of humanity; they have a relatively uniform culture, and there is tribal unification for matters involving sexual exchange.

361 The most obvious relations are spatial; they have important settlements that sprung up around the fishing establishments and are more or less permanently occupied. Of these, "El Desemboque," close to the mouth of a river from which they have been displaced, is the most important, with 80 per cent of the Seri

[92 cont.]

156 They are principally the result of influences that act dur-
854 ing the first years of life: constant contact of the skin with that
155 of adults; immobilization of the extremities by cloth wrappings; provision of a permanent support in the form of a cradle to which the child is fastened; constant attention to his alimentary needs, and continuous supervision of his actions.

155 "Give me bread," "give me coffee," "you have food, I
156 am hungry," "why do you keep food?" "that's the way things are," etc., are very common expressions that manifest the Seri personality.

000 On the other hand, from the practical point of view (2),

226
● 439 3. For the present fishing promoters, the Seri personality is a serious obstacle: because of the wealth of marine fauna, the competent Seri obtain a good catch in a few hours, and their earnings permit them to live several days, which would be multiplied if the yori would not resort to the sale
[276] of marijuana at excessive prices to obligate them to work.

it has to be greatly altered, above all in so far as it influences the personality, in order to raise the Seri standard of living, changing their habits, ideas, and values.

7: Marroquin E-5 (1955) 1957 NU31 Seri NU31

with this problem is the lack of legal title to the lands which the Seris own in fact but which legally belong to the nation.

Insofar as the economic problem, it is necessary to better the fishing techniques, doing away with old process of obtaining the catch through dynamite explosions. Finally, as Dr. Marroquin says, the fact should be noted that the Seris on passing from the nomadic economy to exchange economy lack the necessary knowledge to achieve success in their operations within the national and international market.

It is thus necessary to take care of these and other problems, to save this Indian group from complete extinction, succeeding on the other hand in raising their living conditions, making of them citizens capable of contributing to the progress of the State of Sonora and the Republic of Mexico as a whole.

NEW DIRECTOR OF THE SUMMER INSTITUTE OF LINGUISTICS IN MEXICO

For the next two years the Director of the Summer Institute of Linguistics in Mexico will be Dr. Benjamin Elson. Dr. Elson first came to Mexico in 1942 and began linguistic field work among the Sierra Popoluca Indians of the State of Veracruz. Sierra Popoluca has been the principal object of his linguistic studies since that time, and various articles have resulted from these researches. He took his degree from Cornell University with the thesis "Sierra Popoluca Morphology". He has on other occasions served as Associate Director of the Institute in Mexico.

The Associate Director will be Mr. H. J. Klassen. Mr. Klassen has done linguistic field work on Lowland Mixteco in the State of Oaxaca. He has served as Interim Director of the Institute on previous occasions.

VII ROUND TABLE OF ANTHROPOLOGY HELD IN THE CITY OF OAXACA FROM SEPTEMBER 1ST. TO 7TH.

During the month of September, the VII Round Table of Anthropology, dedicated to the study of the Indian cultures of Oaxaca, was held in the city of Oaxaca, capital of the state of the same name. Since at the present time there exists in this state a large proportion of Indians, and since during its pre-Hispanic past such important cultures as the Zapotec and Mixtec flourished there, the interest of this Round Table is evident.

Lack of space makes it impossible to present here a complete report of this anthropological meeting; therefore, we will limit our coverage to a summary of the most important points, taken from the Report of the recording secretary, Prof. Wigberto Jiménez Moreno. This report was made available to us through the kindness of Mrs. Carmen Cook de Leonard, Vice-President of the Center of Anthropological Investigations of Mexico. The complete version in English may be seen in the *Boletín* of the Center of Anthropological Investigations (Nº 1, Oct., 1957, pp. 43-49).

8: Ascher E-5 (1960) 1962 NU31 Seri NU31

McGee (1898:214)

estimated that maritime resources provided two-thirds of the Seri diet. Kroeber (1931: 20), approximately 30 years later, estimated the proportion at about three-fifths. In the winter of 1960, 30 years after Kroeber's visit, the Seri were obtaining at least three-fifths of their food from the sea.

In pursuit of their main source of subsistence, the Seri travel up and down the narrow coastal band. In the winter of 1960 they were occupying one temporary camp toward the southern end of the band and a permanent camp at the northern extreme. Seri women and children gather mollusks; fishing is a male occupation. In addition to gathering and fishing for their own needs, the Seri dispose of a portion of their catch on the commercial market. This enterprise began about 1930, and was encouraged by the establishment, in 1958, of the Sociedad Cooperative de Produccion Pesquera Seri with the cooperation of the Mexican government.

The Pacific green turtle constitutes the largest single item in the Seri diet for at least six months of the year—from January to June—and it is also caught occasionally at other seasons. In 1896 McGee estimated that it provided 25 per cent of the total food supply. Emphasizing the intimate ecological relationship between the Seri and the turtle, McGee (1898: 186-187) wrote:

> ... perhaps half of the aggregate life of the tribe is spent within easy reach of its [the turtle's] feeding and breeding grounds, and tribesman and turtle have entered into an inimical communality something like that of the Siouan Indian and buffalo in olden time. ...

Kroeber (1931: 20) believed that McGee stressed the Seri-turtle relationship too strongly and overestimated its contribution to the diet. McGee (1898: 187), in support of the importance of the turtle to the Seri, points to the fact that the turtle carapace is used for, among other things, a house covering and buckler, a cradle, a coffin, and footgear. The carapace is currently used for supporting and roofing houses and as a starvation food. The contribution of the turtle to the diet varies from year to year, but observations made in 1960 suggest a range of from 15 to 20 per cent as a reasonable estimate.

Seri men fish for turtle from boats, which are manned by two or three men and are propelled by oars, sails, outboard engines, or any combination of the three. The boats operate either individually or in groups. The men fish by night or day, depending on the weather and sea conditions. When they fish at night, they use a kerosene lamp to attract turtles to the surface. The principal implement is the harpoon.

The harpoon tackle of the Seri is illustrated in Figure 1. It consists of a foreshaft (c-h), a mainshaft (j-k), and an extension cord (i). The component parts of the foreshaft are a projectile point (c), a gasket (d), a wrapping cord (f), a hafting base (g), and a lead cord (e and h). In preparation for turtle fishing, the hafting base (g) is plugged into the socket (j) on the main shaft (k), and the extension cord (i) is looped through the lead cord (h).

225 In fishing for turtle, one man stands at the bow of the boat, holding the mainshaft and extension cord in one hand. When he sights a turtle, he propels the mainshaft at the animal's carapace, retaining a firm grip on the mainshaft and the extension cord. If it is struck, the turtle lurches away, loosening the foreshaft and unplugging it from the mainshaft. Tired eventually by the tension [411] applied by the fisherman on the extension cord, the turtle is finally stunned by a wooden club and lifted into the boat.

225 There is evidence that the turtle-fishing complex has consider-175 able time depth and stability. The Seri were using similar apparatus and methods at least as early as 1825 (Hardy 1829: 296-297). At [501] this time they employed balsa boats rather than wooden boats with outboard motors and torches of cactus fibers instead of kerosene lamps. The complex continued, apparently with little change, through 1896 (McGee 1898: 187-193). Wooden boats and kerosene [177] lamps began to be adopted during the 1920s, and outboard motors were introduced in the 1940s.

411 During the entire period of 135 years (1825-1960), however, the harpoon tackle underwent only one important innovation. The 225 gasket on the foreshaft was introduced by a Seri Indian about the 176 year 1935. The addition of the gasket was related to, and coincided ●[439] in time with, the first attempts of the Seri to supply turtles to the commercial market. When they caught turtles solely for their own use, they did not need to keep the animals alive for very long, but when they began to sell them it became important to preserve them alive until they reached the market. The gasket acts like the hilt on a sword, preventing the entrance of the foreshaft hafting into the turtle's body. Through its contact with the carapace, it restricts the rotation of the point within the animal's body and provides a seal which inhibits the loss of blood, and thus prevents early death. After the turtle is stunned with a club and lifted into the boat, the foreshaft is removed and the hole which it made is stuffed with a piece of cloth.

124 Seri men were shown a harpoon foreshaft from a museum archive and asked what it was for and whether they themselves made similar 411 ones. If an informant acknowledged that he made them, he was asked, at the minimum, to detail the materials he used, the procedures he followed, and the approximate amount of time it would take him to produce one. Later he was requested to show the field worker examples of the foreshafts he had made. Of the approximately 40 adult Seri males, about 25 were available for questioning. Of these, approximately ten did not make foreshafts or had made them in the [474] past but did so no longer; they were mainly older men and those [887] engaged in the administration of the Sociedad Cooperative de Producción Pesquera Seri. Five men either would not or could not volunteer information. Data were obtained from the remaining ten adult men and from one eight-year-old boy; they include 21 foreshafts made by these eleven people.

411 The materials from which a foreshaft can be shaped and as-325 sembled vary within what is available in the Seri environment. Iron

262 178 I have no idea, of course, what the diet may have been in the past since only archaeology can suggest the answer. But I am sure that there has been much change in their diet since Kroeber saw them, not in the basic pattern but in the composition. With the introduction of hook and line [177] fishing, the percentages swung in favor of fish, [226] while decimation of the marine turtle cut down the importance of this animal. Simultaneously, 262 the Seris now have available manufactured or [177] imported Mexican food items: flour, sugar, rice, [439] potato (when no one is looking; potatoes are not supposed to be sold to them because they make *tepache* from them which makes them grossly fish in cans, coffee and tea. Dependence on the products of the desert has dwindled. Rattlesnakes, desert turtles and chuckawalla still find their way to the Seri kitchen but not too frequently. Pelican and sea gull will be eaten only when rough times beset them but are disdainfully refused at other times. My own estimates, impressions not supported by any attempt to measure their diet, are as follows:

fish	50+%
turtle	8-
Mexican import	20
desert plant	7
desert land animals incl. stock	5
shellfish	10
total marine origin	68+
total desert origin	12
imported origin	20

224 178 [685] Another important change in the pattern is the unquestionable decrease of hunting (other than marine animals) in Seri life, as of the domestic stock stealing, the place of which has been taken in a way by the dependence on manufactured foods and items. Hunting nowadays is done rarely and only few individuals will devote some months out of the year to it. Stealing of domestic stock [685] has ceased for practical purposes, since in the past it lead to virtual extermination of these Indians. Occasionally the Seri kill off a semi-wild burro, herds of which run about loose in the desert or they'll get leavings off one, hunted down by a Mexican trader or fishermen.

411 224 [857] The Seris' basic tools of game procurement have changed. Bow and arrow were still much in evidence and in use in McGee's time but seem to have gone out soon after. Kroeber did not mention them and by now they are quite extinct, except as clumsy toys little boys use to play with. The throwing stick is still used on rabbits—any stick one can scrounge on a moment's notice will do for the purpose. If any traps or falls had been used we do not know of them. Accidental stones may be used much in the same way as throwing sticks. In general, various sorts of fire arms, mostly .22 and .38 [177] caliber are owned by a good many Seri men and have replaced other weapons in the terrestrial hunt.

226 411 177 More important are changes in the fishing procedures. Formerly spear and detachable harpoon were their only marine weapons. Even as late as 1930, during Kroeber's visit, the Seris made no use of hook and line. But now, hook and line of

[P. 7A]

[apparently a line of type has been omitted here-Analyst]

226 411 177 commercial origin are their main instruments of fishing. To this they added dynamite, sometimes with disastrous results to themselves, mostly as a way of securing bait. Single-pointed fish-spears which loomed so importantly in McGee's account have gone the way of the Dodo for its original purpose and transformed into iron bar lances, now used largely as weapons against rattlesnakes that men encounter in their desert roamings. However, in the forties, when the Seris spent a great deal of time getting sharks and huge rays, they killed them with these weapons.

226 411 What retain some importance are the harpoon and the two-pronged spear called "puiero." The two-pronged spear is one of their oldest weapons. The construction is much the same as when McGee visited them. The spear is used mainly to stab large-size fish, the giant *bais* or *mero* for example, after it has been brought up on the line. The [225] harpoon is now exclusively a weapon for the turtle hunt.

226 177 [157] An interesting fate met an effort to teach these Indians net fishing in 1947. They tried, ruined the nets and never took it up since. The instigators were Mexicans, the fish traders. I suspect that Seri individualism had a great deal to do with their lack of interest in net fishing which after all demands a certain amount of cooperation. With the hook and line fishing, men can have much more their own way.

501 177 648 An added "tool" of the Seris is the plank boat. The balsa which McGee still observed during his visit, had already vanished by the time Kroeber came to the Seriland and had been replaced by these boats. The boats are flat bottomed but good sized. The material was provided by the Mexican government. Boats are usually propelled by 5 hp. motors leased from the Mexicans (no Seri is rich enough to purchase [439] one) who also sell them gasoline and oil at exorbitant prices and in return buy Seris' catch of fish and sea turtle for low prices. At the time of my visits these amounted roughly to less than a peso [435] per kilo of the flayed, degutted and cleaned fish (less than 8 cents) with fluctuation up and down the scale depending on the kind of the fish, and to about 30-50 pesos for medium to large size "cahuama," the live marine turtle.

501 648 The Seri boats are also propelled by paddles and sail—this is always the case with the families who wish to stay away on Tiburon for some time. The Mexicans will not lease them their motors for such trips even if the Seri, some of them at least, have enough knowledge of the motors to repair minor stoppages—a demonstration of the fallacy [114] of McGee's idea that they are genetically unable to handle tools. In this respect, Kroeber's (1930: 25) estimate of them is closer to the truth.

462 Sexual division of labor in procuring food goes on, much the same as it had 70 and 30 years ago, with the sole exception of the imported goods. [439] Here purchases are made either by men or women or by children, depending on who at the time has the cash and what one wishes to buy.

Fishing is still done by men and so is hunting. Women still concentrate on gathering, whether of

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237 On the other hand, the hides of all of these three animals had been traded off to the Mexicans, [439] but this again was now discarded. This would [182] merely indicate the fluctuation of collapse of the demand from the outside rather than any intrinsic change in the Seri values.

Incidental use of the horns of the bighorn had been denied by all of the younger informants although admitted by Miguel Barnett. However, as I observed, the horns of this sheep are sometimes [415] used as drinking cups. Several of them were [181] lying around in the usual disorderly way of the Seris, now and then picked up for drinking and then again discarded. But the use of them struck me as most casual.

224 *Hunting:* Hunting takes a variety of forms 411 and includes a variety of weapons, from .22 caliber and .30 .30 caliber rifles to spear, stone and throwing stick. Bighorn and deer are followed on foot but without dogs, probably because without dogs they may be easier to surprise. This hunt takes place in daytime. But the peccary is hunted [231] with both the spear and the rifle and with a pack [885] of dogs, and only by the adult men. There is an emphasis on the "adult," this surely owing to the certain amount of danger connected with the chase of the peccaries. The weapons of the chase dwindle to the throwing stick or a stone when it comes to the jackrabbit. Badgers, I was told, are also killed with the same weapons. But formerly, the informants said, bow and arrow was much instrumental in hunting the smaller beasts.

* 825 Other animals, according to the Seris, are not [224] hunted now, nor had they been in the past. Justification for this ranged from the usual "because it isn't done" to the more specific reasons. The skunk is "neither hunted nor eaten because it [225] stinks." The whale is considered "too big to kill" while the killer whale is "too fierce." The harmless *tonita* (dolphin)' was reported somewhat hazily as "sometimes killed" but the comments were inconclusive and were denied by other informants.

[224] Two other species had been reported as hunted in the past but not at the present time. The Ringtail cat was supposedly hunted with the slings [225] while the sea lion was hunted down "with a rifle or rock but not with the harpoon because of its great strength, it would break the harpoon." This, however, was "perhaps 25 years ago." Why the sea lion is no longer pursued is uncertain, unless there is again a lack of demand from the outside while the Serian economy is so much centered on fishing.

231 *Pets:* How many species of animals are kept as pets on and off is difficult to say. Like most hunting and gathering groups the Seris are fond of pets but their interest in them depends entirely on an accidental capture. Among the wild mammals of the region there are few that could be captured and tamed easily. The badger which I mentioned already was the only mammal I saw

[237] [352] 'I have seen bones of beached whales used for stools and also the skull of the *tonita* used as a chair. But it must be remembered that these animals got stranded on the beach. They were not deliberately hunted down.

[P. 10 B]

½ [Lie - deer, bighorn and peccary - Analyst]

262 pelicans are not; they are regarded as "bad food," unfit for eating. No further explanation has been offered here and it might be that the same sort of prejudice works here as in the case of the adult birds. Otherwise, reasons for rejecting eggs for food are probably a matter of mere customary attitude without any particular rationalization. In a few instances, the dove being one example, the eggs were said to have been rejected because they were "too small to bother."

237 Other economic uses made of the birds are ex-
291 tremely few. At one time, the pelican skins were used for clothing and, in fact, in McGee's time they represented, perhaps, the most important item of clothing for the Seris, having been worn in shape of wrap-around robes, usually covering the lower part of the body. Moreno reported these robes as still in use "30 years ago or more," in the early twenties, but in Kroeber's time these
[177] robes were already discarded in favor of the European garment. The Seri, nevertheless, still pre-
• [439] serve skins of these birds—the white pelican, larger of the two, always had been favored here—and occasionally sell them to the visitors. Another
237 use made of the feather is in the arrows. The
411 cormorants, heron and the owls had been especially mentioned in this connection. But it is certain that they were not the only birds so exploited and also that this particular use went out of business along with the disappearance of the bow and arrow as the principal weapons. The use of feather for arrows may well continue into the present in a somewhat degraded form. The Seri boys play a
[857] great deal with bows and arrows, shooting them at any moving available target. They'll pick up any available feathers.

Pets

231 Somewhat desultory use is made of birds as pets. During my visit I have seen doves and an egret kept in houses as pets by the adults and fed quite frequently. The number and variety of birds which may become pets in households may well
* 825 be larger. Pelicans and sea-gulls are less fortun-
857 ate. They are often shot at and over-powered by the boys. But instead of taking them to the households, the boys stage games, shooting them at point blank from bows and arrows and pea- shooters. These somewhat bloody executions take place almost every day. The pattern is the same. Only the subject of the game changes, depending on the available species of bird or animal.

Hunting

223 It is hard to speak of hunting in connection with birds, because there is so little effort made to go out and get them. The main exception is the duck and this, as I already mentioned, is hunted on Isla Patos and clobbered at night with sticks and stones in great numbers. This is one of the few instances in which the Seris will go out of their way to get a bird. Sea-gulls and cormorants and, more rarely, pelicans are dispatched by pea-
[411] shooter (stone), sticks, small clubs and, on occasion, with a shot from a .22 caliber rifle.

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262 tions to San Esteban or San Lorenzo. The turtles now are as much a food as a "cash crop." While [225] the Seris are camped at Desemboque, most of the turtle catch is sold alive to the Mexican fish trad- [439] ers who are headquartered in Nogales and Hermosillo and take the catch along with the fishes to the markets in these towns and sometimes even as far as Phoenix and Tucson.

Of the remainder, the most frequent items that show up on the Seri table are probably the rattlesnakes and the desert tortoises. The rattlers are eaten with relish—only the heads and the tails are discarded as poisonous. The larger chuckawalla is considered a particular delicacy but is rarely caught because it lives in a somewhat distant region. The remainder of the animals listed as "eaten" are collected only incidentially.

It is probable that very few species are really left alone and not taken as food at various times, especially when famine distress overruns the camp. As far as I could determine, only three species are rejected as altogether unfit to eat: the gecko, the night lizard and the toad. All three are believed to be highly toxic "in flesh and blood" although real harm could be caused only by the toad. Besides, the two lizards are really tiny creatures and would make little difference when a survival is at stake.

825 Few reptilians are ever used as anything but food. The sea turtles in a way are at certain times, [439] that is, when they are sold for hard cash to the Mexican traders, whether live or sliced and salted. 237 The only other creature I ever heard about as being used for anything at all was the coral snake. At least one informant suggested that in the past its hide has been used for hat decoration. But coral snakes are scarce and this again could be only incidental. It may be that the rattlesnake hide, especially of the large specimens of the western [439] diamondback, is sold occasionally to a passing visitor but this again is a rare occurance.

Food Preparation

252 Food preparation of the majority of animals in this group is no different than of most other ani- [263] mals. They are simply skinned, tossed into a pot of boiling water and cooked, occasionally with salt as the only ingredient. Larger individuals, notably turtles, will be quartered and then boiled or roasted on a grill. The chuckawalla and the desert tortoise are said to be fried, but whether this is the usual procedure I can't say, because only a few of them had been brought into camp in my presence. The tail of the Gila monster supposedly had been fried in oil "in the past."

Food Preferences and Taboos

262 It is obvious that some creatures in this group are considered better food than others. The chuckawalla is especially favored. When several were brought in from San Esteban, I couldn't persuade the owners to part with them, although I offered a huge price (for local conditions). The captors took

*Another use in the past—snake-skin belt worn. It is illustrated by McGee (1898.170, Fig. 7).

[291]

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*825 innumerable times at close quarters. The only exception was the loggerhead turtle. The size of this giant reptile had been given at the maximum as five meters and it is a gross exaggeration. But here again the factor of frequency of sightings enters into the picture. As pointed out earlier, this turtle became quite scarce in the upper part of the Gulf, so much so that it became a legend among the Seri.

Less astute are they in the estimates of the hypothetical weight of an animal and where detailed responses were given, it was almost invariably for a well-known and economically important species. In fact, I can find answers only for the marine turtles (all three), the tortoise and the chuckawalla. These five are the largest reptiles in the Seri environment. Chuckawalla's weight had been given with only slight exaggeration but, for some reason, all three species of marine turtles were subject of exaggeration and the giant loggerhead more so than the two smaller fellows. This is more surprising considering that the Seri do weigh these animals while selling them to the Mexican traders. [439]

Development

The Seri consider the majority of the reptiles oviparous. But there are exceptions. The sidewinder, the toad and the horned toad, they think, are viviparous. This, of course, is true of the sidewinder which carries well developed young before birth. But it is not of the other two. Why the numerous *Phrynosoma* should be considered viviparous is not clear. It is true that some of the species of horned toads give birth to live progeny. But the species in question happens to be oviparous. As for the toad, here the Seris say "it has no eggs and young are born alive." They must proceed from an argument that they've never seen toads' eggs, which is easy to understand. Open permanent waters are almost non-existent in their country and the toads' eggs, inconspicuous as they are, may remain unnoticed. Since no eggs were seen, the logical conclusion for them is to believe that the animal must be born alive.

Outside these four there are four other questionable species. For the Gila monster and the spotted race runner, the informants couldn't tell whether the animal came out of eggs or was born alive, and for the leopard lizard and the fence lizard, there were conflicting reports. The data suggests that the dubious cases are usually small or little known and rare lizards. The exception is the *Phrynosoma*. But *Phrynosoma* is somewhat atypical in this context. The Seris believe that it does not represent the final stage of an animal but that it does develop into some other kind of creature, though I had been unable to find out just what it was. It was also indicated that *Phrynosoma* is not a lizard but a creature of its own kind.

For the majority of species the numbers of delivered eggs had been given as 1-6 with 4-6 being the most frequent figure which actually does correspond to the natural situation. But some species are considered to be more prolific. The tor-

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226 177 [411] [225] and, from all accounts, also from the Japanese whose trawlers worked in the Gulf in the late 1930's. Today, hook and line fishing from plank boats almost completely replaces earlier methods, the spear (gueiro) and the harpoon (barilla). Harpooning is still done in hunting marine turtles while spears are occasionally used on larger groupers and also on sharks and mantas. Harpoons were also used in connection with the latter. But since World War II the shark fishing has declined, owing to the development of synthetic vitamins and abandonment of sharks and mantas' liver oil as a source of vitamins. In these operations, the Seris were for a while involved to a considerable extent. But now they have completely switched to commercial fishing which supplies not only food but also ready-made cash from [439] the Mexican traders, and with it the Seris can purchase luxuries of life in the Mexican *tienda*.

262 Altogether, out of 42 species listed here, the Seris reported taking for food 20 species which are as follows:

Malacoctenus zonifer
Firella simplicidens
Anisotremus davidsoni
Paralabrax maculofasciatus
Lythrulon flaviguttatus
Mugil sp.
Cynoscion parvipinnis
Anchovia macrolepidota
Bairdiella icistius
Stereolepis gigas
Mycteroperca jordani
Cynoscior macdonaldi
Epinephelus analogus
???? (Pescara)
Trachinotus paitensis
Verrunculus polylepsis
Gymnothorax castaneus
Hypsoblennis gentilis ricketti
Abudefduf saxatilis

The most important of these are the groupers, the *baya, pinto, totuava* and *mero*—the latter a giant fish often in excess of 150 kg. and nearly three meters long. The most important of these is the *baya*, a medium size fish taken daily in varying amounts. I suspect that this fish accounts for [226] more than half or maybe even 2/3 of the total Seri catch, weight-wise. Of others, none is of any importance except seasonally.

* 825 Another sort of use is made of the sharks and mantas in connection with the already mentioned exploitation for liver. Five species of sharks and the horned manta were listed by the Seris, with *chata, gato* and *composo* most frequent and perhaps most important.

Trading, as already mentioned, is of considerable importance to the Seris. Some fish are eaten only occasionally, but they may be traded off to [439] the Mexicans.

262 Not all fish are eaten. In most cases no particular explanation had been offered for the rejection. But, in some, specific reasons were mentioned. The *Scorpaena sonorae* and *Cetengraulis mysticetus* are so rejected because they "are too bony to eat." *Gillichthys seta* are considered unfit to eat because of its tiny size while *Sphoeroides annulatus* is refused because of its supposed toxicity, of which more later. Finally, the sharks are not eat-

262 en simply because their flesh is disliked and unfit for human consumption. But it may also well be that some of them, especially of the giant variety, are not eaten simply because they are far too large to tackle and the Seris fear hunting them.

The Seris indicated also in some cases that larger specimens of fishes are eaten when they reach the size which would justify the effort. This is true of *Malacoctenus zonifer* which they indicated is "eaten when large," that is when at least 10 cm. long.

[226] Although only sometimes did the Seris specifically indicate that certain fishes are used for bait, it is very likely that almost all small or lesser fishes are so used.

262 178 In some cases the Indians indicated changes in preference for given fishes, with the time. For unexplained reason *Gymnothorax castaneus*, the morene, has been claimed to have been eaten in the past but not for the last 11 years. It isn't clear why the figure of 11 had been used and why suddenly in the early 40's they should stop eating it while the Mexican drool over it. But it may be also that here we have merely personal preference of the informants, as so often happens. As for the *pescara* it was formerly taken for food but now it is merely sold to the Mexicans. This practice is increasing also to include the immense *mero*, even larger than the *pescara*. The fish is mainly sold but rarely eaten by the Seris themselves.

[439]

Food Preparation and Preferences

252 Food preparation is simple and in the main differs not at all from the preparation of other animal diet. The fish are either boiled whole or in part or else are roasted over slow fire on a grill. The entrails are usually discarded, but otherwise the beasts are eaten entire, eyes, brains and the rest, while the tiny fishlets are eaten complete with the scales and guts.

262 As for the preferences, as expected, there are some fishes that the Seri like better than others. The *bana* in the first place and the *pinto* in the second lead the list. The Seri prefer them to all others and consider them a real delicacy. On the other hand, there are some fishes that they'll eat only under protest, meaning when times are hard. *Girella simplicidens* is one such creature. The *Puercos* or *Cochi* is another. I have seen boat loads of puercos brought in with the other fish and unceremoniously dumped out on the beach to the dogs. Literally! The Seris took to this fish only when fishing was poor during the wintry days when they were held ashore by the weather. Even then, they tried to eat the despised creatures on the sly, avoiding being seen doing this, and when I or the Mexicans picked up fresh fish from the beach to take home they laughed saying that we acted as a *cochi* (pig) would!

[231]

[183]

Other Economic Uses

* 825 237 322 One use made of fish concerns two species of sharks, the *chato* and *camposo*. Here, the informants claimed, the oil from their liver had been used in earlier times for polishing wood. This is

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quite possible but I couldn't substantiate the story from contemporary evidence. Perhaps during the height of the shark hunting for the liver oil, the Seris used the oil also for wood polish, although it isn't very clear just what sort of artifact they make would require such treatment. The wooden tools or artifacts among them are in short supply at all times. Finally, the huge horned manta was supposedly hunted also for its hide but just in what circumstances it was not explained. It is the only fish which the Seri ever mentioned as having been put to such use.

Fishing

As already mentioned, fishing nowadays is largely accompanied from flat-bottomed boats with hook and line. The old ways of getting fish by spearing are almost gone for good. Recently, an attempt has been made to teach the Seris siene fishing, but 10 years of these endeavors accomplished only ruination of a number of expensive nets and of much fishing gear and the desertion of the project by the Indians. It may be that their individualistic and almost anarchistic attitudes preclude cooperation, essential in this type of fishing.

The bait is obtained in any one of the three ways: by dynamiting fish in tide pools or along the shore, or by catching small fry with small hook and line, or finally by collecting small fishlets in the tide pools, prying them out from under rocks or simply—and here the Seri boys excel—by shooting them in the tide pools with tiny toy arrows or simply spearing them with a stick. The dynamiting is done with the purchased sticks of dynamite which the Seris obtain in the tiendas. The procedure is often risky and down right dangerous. Some of the Seris have blown themselves up with dynamite. I have seen one of them, who lost both arms and had a jaw broken during a dynamiting trial. He went about with a dirty rag tied up over his head to support the wrecked jaw-bone. He was carried off by measles two years later in the 1955 epidemic.

The Seris' commercial fishing is pretty much controlled and exploited by the two or three Mexican fish traders from Nogales and Hermosillo. These have their tiendas in Desemboque, which at set price sell things to the villagers. They also provide the Indians with the five horse-power motors for fishing trips and pleasure cruises and with the oil and gasoline essential to run these—also at set price. They finally purchase the fish—at a set price—and from the proceeds the Seris purchase goods at the tiendas, completing the cycle. Not all Seris are compelled to work for the Mexicans, and, in fact, they do not always do so. Some families stay away from Desemboque and depend on the sail and oars for propulsion. They come to the village only once every few months to obtain supplies. Even when in the village, the Seris make little effort to fish for more than they wish to get in order to satisfy their immediate needs.

Fishing expeditions usually take place in the morning. Most Seris will set off before daybreak and will return with the catch by 11 a.m. or noon.

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MOLLUSCA

VII

USES

Species	Food Prsn.	Food Past	Decoration Prsn.	Decoration Past	Trade Prsn.	Trade Past	Bait
Octopus bimaculatus	x	x				x	x
Cadakia distinguenda		x					
Laviocardium elatum		x			x[1]		
Carditamera affinis	x	x					
Acmaea dalliana			x	x	x		
Crucibulum spinosum		x	x	x	x		
Chione undatella	x	x					
Chione californiensis	x	x					
Pteria peruviana	x	?	x	?	x		
Volsella capax	x	x					
Olivella dama			x	x	x		
Cyprea annettae				x[2]			
Tegula rugosa		x		x		x	
Conus regularis		x[3]		x	x	?	
Phyllonotus erythrostomus		x				x	
Turritella bradcifiana		x[3]			x	?	
Polinices reclusiana	x	x					
Chlamys subdudosa	x	?					
Atrina maura	x	?			x[4]		
Navicula pacifica		x					
Turbo fluctuosa	x	?			x		
Solenosteira pallida			x	?	x		
Ceritium stercusmuscarum			x				
Trivia radiana			x				
Ficus ventricosus	x						
Niocke bistrinoca	x	x					

[1]Occasionally used as dip spoon

[2]Supposedly used in the past for money

[3]In the past "giants of 300-400 maybe years ago have eaten it."

[4]Only pearls

These figures show then 26 out of 37 species exploited economically in some way, that is 70%. These figures show increase over the figures I have published previously (1956) which were 21 out of 36 species and 58% respectively. The corrected figures are the result of brief additional field work in 1955.

Food

A good part of the molluscan forms are used as food. Altogether 19 species are listed as such, although out of these, only 11 were reported as being part of the diet today while the remainder only in the past. It is obvious that there has been progressive decrease in the Seris' dependence on the molluscan diet within the past few generations.

Four of the species reported as part of the Seri diet at various times had been collected from the kitchen-middens. There are: *Pteria peruviana*, *Chlamys subdudosa*, *Volsella capax*, and *Navicula pacifica*. Of these four, *Navicula* has been reported as eaten in the past "maybe 100 years ago, but not

[P 38 B]

301 + 825 worn. I have observed women wearing necklaces of the former and women and very young boys of the latter. The olive shell, incidentally, is made into two sorts, the natural, unroasted shells which retain a greenish-purple, mottled color and the white. The white pallid color is achieved by roasting the shells over fire. The necklaces are mostly made up of either colored or white but occasionally they may be made of mixed shells and then they are usually alternately interlaced, now with one, now with another.

+ 825 b) *Utensils:* Two species had been reported used as occasional drinking or dipping cups and spoons. *Lavicardium elatum* and *Ficus ventricosus*. *Ficus* is presently discarded, but the *Lavicardium* is still occasionally used so. There is no doubt that the incidental use of these shells increases during longer fishing expeditions when the Seris are apt to lose some of their gear. [412] [415]

[436] c) *Money:* Interestingly, the brown cowry was supposed to have been used as a means of exchange, as money—in the past. If this is so, then the selection of this shell for such purpose is not surprising considering its widespread use throughout the world. [171]

439 + 825 d) *Trade:* Altogether 12 species had been reported as traded off either in the past or present. The trade importance of various species of shells varies with the demand of the market and sometimes may be only sporadic and short-lived. Only a few of the species had been indicated as having been of any trade importance in the past, and it may well be that the Seris did not register the species which may have been briefly sold to and outsiders during the short-lived fads of demand. It may be said in general that the trade importance of the shells increases and that greater variety of them are exploited now than formerly. This is surely owing to the increasing accessibility of the Seri country and the increasing tourism, not only visitors from Hermosillo, but also from such far flung places as Tucson, Phoenix and even Los Angeles. [177]

In some instances, the Seris had no idea what the shells were sold for. The augur shell is on and off sold to some American traders who show up in Desemboque once in a while and for whom the Seri women accumulate these shells. But what uses were made of these, the Indians surely didn't know. Neither did they know what uses were made of the *Murex* shell and the *Turbo*, both of which were periodically sold in bulk to Hermosillo. On the other hand, they had some idea what uses were made of some other shells. *Pteria* and *Atrina* contain pearls and these are much desired. Especially the pearls of *Atrina* which are sold to the Mexicans or to the visitors for 25-50 pesos each and therefore have immense value, for the local market. The *Pteria* shells are said to be used for button making, and the Seris themselves claim that they make buttons of this shell. The most important of all, however, at least at the time of my visits in 1953 and 1955, was the olive shell. It was easily the most commonly and most numerously collected shell of all that the Seris ever collected. Owing to the scarcity of it in Desembo- [435] [237] [226]

*825 439 [226] [415] [435] que (as a result of the ecology of the coastal waters) it is gathered in huge quantities largely on the shores of Tiburon where it is said to occur in great numbers. This animal is gathered in large bulk in 5 gallon gasoline cans and then sold either as finished necklaces at the rate of five pesos each, or as bulk, by the liters, with 20 liters for each gasoline can. There is a steady market for these shells.

226 e) *Bait:* Only the octopus has been reported as used for fish bait for the *pinta*, *baya* and *pescara*, and I have seen it used in that manner. But it is certain that on occasion the Seri will use also for bait the flesh of some of the shelled smaller molluscs, especially when they wish to capture live fishlets for bait.

Hunting

[462] [857] Collecting of molluscs is almost invariably a job of adult women and of the children of both sexes who at low tides scavenge the exposed mud flats and gather or dig out various marine animals. Some are collected on the surface only. Among those that must be excavated are the octopus and *Niocke* which hide in burrows or mud, respectively. A large shell is usually used as a tool to pry the *Niocke* out.

Taxonomy

*825 Molluscs on the whole are recognized as one group of animals. However, this does not include the octopus and the chitons which are considered as different sort of creatures. Some sort of feeble association between the *Pelecypods* and the *Gastropods* is recognized and various species of both are placed together. I noticed a tendency to consider some of the *Gastropods*, the limpets and *Crepidula* for example, as supposedly having two valves while in fact they are both univalves. The explanation offered for this was "it lost one side," meaning one valve.

Although *Chitons* spend most of their time motionless attached to rocks they are both considered animals. The motions of these animals may not [857] have been observed by the adult, but the Indians, young boys especially, certainly noticed the changed positions after a period of time.

In some instances the Seris observed quite small differences between animals—recognizing them as different species. In the *Neritina* two different forms were correctly identified as representative of the same species, although they differed considerably in size and color. On the other hand *Columbella* and *Solenostira* had been given the same Seri name palémex[8] but were recognized as different kinds of animals.

Sexing

A distinct tendency to consider the molluscan males larger than the females emerges readily from the Seri answers. This can be shown in the table below:

[P. 40 A]

XI

SUMMARY

* 825 [114] In 1956 (Malkin 1956:74) I published tables indicating the degree of economic exploitation of the animal world by the Seris. These tables were incomplete and also need corrections. Therefore below I am reproducing the revised version.

Class	Species Reported	Species Exploited	Percentage
Mammalia	21	9	40
Birds	24	6	25
Reptiles and Amphibia	25	17	68
Fishes	44	23	52
Molluscs	37	27	70
Crustacea	10	2	20
Insects	92	—	—
Miscellaneous	9	—	—
Totals	262	82	30

These figures show as yet remarkable degree of exploitation of the products of the sea and also of the reptiles with correspondingly lesser interest in the terrestrial animals in general. Of course, mere listing of animals does not tell the whole story. In the first place, it does not indicate the changes that took place nor does it suggest the relative importance of any group or species. Historically, the situation is different now. Out of nine species of mammals reported as eaten only six still figure out in the diet. The reduction is even more striking in birds where only three are admittedly eaten and two of these only furtively. More yet, only 12 species of marine molluscs out of 27 are eaten while the rest get discarded. All this is tied up then with the changes in the economy, with the importation and increase of the trade foods and goods and also with increasing preoccupation with the commercial fishing at the expense of hunting and gathering.

262 177

262 Individually, by far the most important in the Seri diet and economy are the fishes with half a dozen large commercially lucrative species leading the list. Next come the marine turtles and following these for the third place tie the molluscs, the mammals (lagomorphs, bighorn and peccary) and probably the rest of the reptiles of which the rattlers are probably most important by volume. Insects do not figure any longer in the Seri economy in any way, although at one time they probably had some significance. On the other hand, while the food importance of the molluscs decreased immensely, their trade importance is on the upswing owing to the demand from the outside. Thus the basic changes in the Seri patterns of exploitation of animals has been a result largely of an outside stimulus.

[439] [177]

Fishing and Hunting

226 185 Fishing is practiced mostly to satisfy the immediate needs, of petty cash and food. Once these are satisfied, there is no incentive to fish until the need arises again.

[P. 54 A]

123 We have given the Seris so much we are now short ourselves. Variety is very restricted. We haven't enough tin dishes or tools to go around, but that does not trouble us at all. All the cleaning is done in salt water and sand. Fresh water is only used to drink. Nothing else. We can't even take a shave. Not a drop of water. We are very lax in our personal toilets and appearance. We are barefooted always in the boat, as we have to wade to get the boat in deep water, and often the waves slosh on board.

This boat is made of a hollowed log twenty feet long and three feet, three inches wide, and she is very cranky. She almost upset with us several times. When everybody is placed in it, it is difficult to even change a posture without endangering everybody. She has no keel and leaks some, so we have to bail out often. But she is a good sea boat and rides the waves well if they are not too rough.

123 One evening we decided to get a message through to Juan Tomas, the
139 Chief, some twenty or thirty miles distant. Herrera promised to go if
[203] we gave him twenty thirty-thirty cartridges. He would go one day and
[494] return, the next, a round trip of about fifty miles. We gave him the message to tell those people we had a lot of things to trade for the things they use in every day life. Pelican skin kilts, bows and arrows, ollas, baby cradles, hair brushes and other interesting things. I had already made a trade with Blanco for his *balsa*, promising him sufficient lumber, nails and tools, to make a boat large enough to carry five men. This promise I fulfilled to the letter, and later on another expedition to Seriland I had the pleasure of sailing in this boat, which was well built and seaworthy. The unusual part of this bargain was that Blanco permitted me to deprive him of his only means (apparently) of making a living in hunting *cahuama* for himself and his family, freely and without hesitation, simply on my promise of lumber in the future. I was deeply touched by the trust reposed in me by this old sea rover.

322 These people are splendid mechanics with the crudest of tools---
[504] rocks, fire, bones, knives. For instance, the pole of the harpoon was composed of five pieces of driftwood and a seagoing boat which I saw in Guaymas, captured by Mexican fishermen after killing the Seri crew, was composed of fully one hundred pieces of driftwood fastened with nails made of wire, and tied with fiber, and all the seams were filled
[325] with a black composition of native origin resembling pitch. Previous to the use of old iron, harpoon points were made of ironwood, but now iron is universally used.

283 I asked old Blanco for some of his native rope. He gave me some of
[122] it. He said they get the slender roots of the mesquite and peel the bark, and then the girls and women chew the fibrous wood. This is shreaded and twisted into small two-stranded ropes. It is this rope, tied around and around, that holds the *carriso balsa* together.

ever washed; it is licked clean.

415 197 One time a bunch of Seris camped near a ranch and spied a white porcelain chamber pot sunning itself. They immediately secured it and began cooking in it, without washing it first. The rancher saw them and told them that it was dirty and told them not to cook in it. They said they would clean it up after they got through and leave it as it was before they finished with it. When they come to Hermosillo they get pots from heaps of city refuse and carry them back as prizes to the Island.

123 501 We made smokes to attract attention, but all to no purpose, until about three o'clock the car appeared. It could not come close to the beach as the sand was too soft, so we had to pack everything two hundred yards in soft sand. The balsa was very heavy and some distance away. It also had some things tied on it, so Bob pulled off his pants and we pushed it into the surf. Bob first stood up, but it rocked so he got on his knees and pushed out with a pole and got it headed to the rollers, after which it rode easier. He then lost his pole, and in struggling to recover it the balsa rolled over with him and dumped him in the surf, but he grabbed the side and rolled it right again. He could then touch bottom, so he came in through the surf with it and we dragged it up and unloaded three turtle shells and a few other things. There were four of us and we put oars under it and gradually lifted and carried it to the truck.

It must have weighed six hundred or seven hundred pounds, a good part of which was water. I must say I was glad to see it started on its long land-journey.

123 The Indian messenger had arrived with my note which brought the truck. Bob, Luis and the Mexican took the boat and tried to go into the place where they hid it, but it was low tide and the boat could not enter, so they beached it and walked to Agua Sarco where we had preceded them by two or three hours. We had, over the last of our grub, a little rice and beans. As many doves were flying about the water, I shot fifteen or twenty. One of my shots brought down seven doves.

439 123 Before night all the Seris were camped near us, and when Bob came, Louis had brought all our trade stuff, so I began bartering right away.

As all were hungry we gave each man and woman three cups of flour, and three pieces of *panoche*, cakes of coarse brown sugar. They were wild for this, so when they had finished they were well disposed.

On the Island I had been called a cheerful liar for promising things, but now it was different. Three new butcher knives, all bright and shiny, I traded for three rusty homemade affairs. Two were made of barrel hoops and one from the piece of a shovel. This was a way-up knife. For the violin I traded a harmonica, and for three carved

(text continues on p. 187)

439 123 little gods I traded some muslin, a harmonica and some *panoche*. For native hair brushes, I traded three fine-tooth combs for catching *piojos*, or lice, easier. I gave each woman a little round mirror and they were greatly pleased.

To the old Chief I presented a good pocket knife and a mirror. For the bow I traded a spark lighter. By striking the edge of a small wheel with milled edge it strikes a spark from a small flint and lights a wick.

123 535 [534] [252] [415] We asked for a dance, and the Seris, using the bow and striking sticks for music, the slender girl jumped up and down on a flat piece of tin which served, instead, of a turtle shell and also served for baking flour cakes upon also. A while before, Louis had seen a woman wash her head and that of a child in the chamber pot, empty the water and then cook in it.

After the girl had danced a while on the tin, old Manual Encina pushed her away and hopped on himself and did the double-shuffle for half an hour, after which we left for our camp.

197 194 The language of the Seris is the most difficult and peculiar I have ever heard. It is spoken deep in the throat with the mouth open and sounds like no other language I have ever heard except that there are some sounds like Papago.

439 123 Even before breakfast of the next day we were still trading with the Indians, and in an hour or so I possessed nearly everything they had except their rags. They seemed happy and contented and postponed their trip to Hermosillo. I left some stuff with Louis Thomson to be traded later for bows and arrows, Pelican skin dresses and baby cradles.

We then arranged our loads, said *Adios* to the Seris, and left for Hermosillo, where we arrived without accident about six-thirty p.m. The sun was very hot and the road heavy and the sun glaring, and we were all very tired when we reached town. I stored my stuff with Mr. Marks at Hotel Cohen, and will crate it before leaving for Yaqui River.

123 202 Before leaving the Seri Chief I told him that whenever he saw this sign---Circle Bar Deand left hand below it, it was me---their friend, and not to shoot at me. He said he would tell all the Seris, and I left him my card with the same sign on it. When will I see him again!

123 261 We were up long before the sun, the following day the eighth of March, but the baking of bread delayed our breakfast, so that while we ate, forty Indians were looking on at us. Little ones with streaming hair and fluttering shirt tails, paddled over the sand hills as fast as their brown legs could carry them in their fear of being late. Women in patched and ragged skirts hurried and plowed through the sand and over thorny mesquite brush to be in time---for what? To see the gringos eat their breakfast and to possibly pick up a few crumbs. Each grain of corn, each bean, even a piece of dough half the size of a dime is precious and carefully garnered and eaten.

To eat under the devouring eyes of these people who rarely have enough to eat and most of the time not half enough, to see the hungry dog-like look as I tried to swallow a piece of bread, to see the children half start up as if to run and seize it and watch the mothers jerk them back, to see them eye hungrily our sacks of provisions and not dart to touch them, is enough to make one choke.

Any bread left over we broke into little chunks and gave to the children. I then gave each child two lumps of cube sugar. A little later, as they would hide their sugar and try to repeat, I lined up fifteen or twenty eager, frowsy bare-legged boys and girls and gave each an orange.

123 431 Later, the mother would trade a basket or a hair brush for an orange, a knife for two oranges. They brought Pelican skin rugs made from six Pelican hides sewed together which used to form their kilts. For these I traded four yards of manta, or cotton goods, of which they made garments.

I soon had a thriving trade on hand, especially in necklaces. I had bought a few cheap glass bead necklaces at fifteen cents each. These set them wild. For native necklaces of seeds I traded the bead ones. I secured most of the necklaces, and when they ran out the children were sent by their mothers into the brush to gather more beans and seeds. These were hastily strung and hung around the neck and exposed to my admiring gaze, but it was useless as I would not trade any more beads. I had to save them for the Seris on the Island. I would have given everything away there.

Also, I had to consider the moral effect of them securing things without effort on their part. Only for service, must we pay in food or goods. For bringing food, water, to go hunting for us, or for trade---except giving things to the little children. It was heart-breaking, but they were lucky to have water. Like many others less primitive, they work, hunt, fish, only when hunger drives them.

231 With the people were a crowd of undersized, starved, bony dogs. A Seri cleans up everything and the dogs get the rest. Each day they are gnawing on some old fish head that is long past having any nourishment, and is tough and strong as rawhide, but hope springs eternal in an Indian dog's heart or stomach, and again and again, will they search out an old fish head or Pelican bone. Discouraged, never!

177 123 been fastened with a string---each child eager for a safety pin. A little child two and a half years old was shoved forward for a pin, its round black eyes dancing with anticipation, but its dress had no opening in front, so I laughed and shook my head and everyone appreciated the joke. But, not to be defeated, a little girl untied the child's waist from behind and spread it open, exposing its little brown body from head to feet, and called my earnest attention to it. I then pinned up the dress. Then the older ones crowded around me, but I had used up a whole paper of pins, so I shook my head. I gave the empty paper to an eager child, although a dozen hands were outstretched for it. By making the children happy I pleased the parents.

123 By this time the flour soup was thick and ready, and Roberto baled it out with a cup into the various vessels eagerly outstretched to receive it. As the cup would drip, little hands caught the priceless drops before they reached the sand. As each got his proportion he began sticking his fingers into the mess and licking them off. Many took their *pinole* to camp and the others secured a taste also. A small piece of bread dropped into the sand was snatched up, by a child, from under the nose of a dog. She rubbed off the sand and devoured it.

When all had vanished to their various camps I opened the box of candies---small round drops of green, red and yellow. I filled our coffee pot and went to each camp and gave each man, woman and child about ten candies.

439 123 Since I wanted shell necklaces, the women had combed the beaches and gathered plenty of shells, and strung them while resting. This evening they were draped about their necks, and they wished to trade, so I traded for about a dozen---one small round mirror for one, five needles for another, five safety pins for another, blue face paint for another. Mirrors were most in favor.

291 302 142

206 *Seri outside beauty parlor*

Whitaker F-5 (1953-1955)1982 MUSI Seri MUSI

quite possible but I couldn't substantiate the story from contemporary evidence. Perhaps during the height of the shark hunting for the liver oil, the Seris used the oil also for wood polish, although it isn't very clear just what sort of artifact they make would require such treatment. The wooden tools or artifacts among them are in short supply at all times. Finally, the huge horned manta was supposedly hunted also for its hide but just in what circumstances it was not explained. It is the only fish which the Seri ever mentioned as having been put to such use.

Fishing

As already mentioned, fishing nowadays is largely accompanied from flat-bottomed boats with hook and line. The old ways of getting fish by spearing are almost gone for good. Recently, an attempt has been made to teach the Seris siene fishing, but 10 years of these endeavors accomplished only ruination of a number of expensive nets and of much fishing gear and the desertion of the project by the Indians. It may be that their individualistic and almost anarchistic attitudes preclude cooperation, essential in this type of fishing.

The bait is obtained in any one of the three ways: by dynamiting fish in tide pools or along the shore, or by catching small fry with small hook and line, or finally by collecting small fishlets in the tide pools, prying them out from under rocks or simply—and here the Seri boys excel—by shooting them in the tide pools with tiny toy arrows or simply spearing them with a stick. The dynamiting is done with the purchased sticks of dynamite which the Seris obtain in the tiendas. The procedure is often risky and down right dangerous. Some of the Seris have blown themselves up with dynamite. I have seen one of them, who lost both arms and had a jaw broken during a dynamiting trial. He went about with a dirty rag tied up over his head to support the wrecked jaw-bone. He was carried off by measles two years later in the 1955 epidemic.

The Seris' commercial fishing is pretty much controlled and exploited by the two or three Mexican fish traders from Nogales and Hermosillo. These have their tiendas in Desemboque, which at set price sell things to the villagers. They also provide the Indians with the five horse-power motors for fishing trips and pleasure cruises and with the oil and gasoline essential to run these—also at set price. They finally purchase the fish—at a set price—and from the proceeds the Seris purchase goods at the tiendas, completing the cycle. Not all Seris are compelled to work for the Mexicans, and, in fact, they do not always do so. Some families stay away from Desemboque and depend on the sail and oars for propulsion. They come to the village only once every few months to obtain supplies. Even when in the village, the Seris make little effort to fish for more than they wish to get in order to satisfy their immediate needs.

Fishing expeditions usually take place in the morning. Most Seris will set off before daybreak and will return with the catch by 11 a.m. or noon.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

their rigorously maintained purity of blood; it is manifested in their commonplace conduct by a singular combination of hauteur and servility, forbidding association with aliens on terms of equality. The entire group at Costa Rica in 1894 were on good behavior, partly, no doubt, for profit, partly because they were at peace bought by bloodshed; yet they kept an impassable gulf between themselves and the Caucasians, and a still wider chasm against the Papago and Yaqui. They came to the tanque, usually in groups, rarely alone, always alert; especially when alone or in twos or threes, they moved slowly and stealthily in their peculiar collected and up-stepping gait, often stopping, always glancing furtively with roving eyes, and bearing a curious air of self-repression—as of the camp-prowling coyote who seems to hold down his instinctively bristling mane by voluntary effort. And the visitor to their ranchería sent a wave of influence before as his approach was noted; laughter ceased, languor disappeared, and a forced, yet sullen, amiability took their place, though the children and females edged away; if he appeared unexpectedly or came too close, the children and younger adults simply flitted like young partridges, while the elders stiffened rigidly, with bristling brows and everting lips and purpling eyes, perhaps accompanied by harsh gutturization—indeed the curiously canine snarl and growl, often evoked by the stranger unintentionally, betrayed the bitterness of Seri antipathy toward even the most tolerable aliens. Every human is panoplied in a personality, perhaps intangible but none the less real, which repels undue approach and fixes limits to familiarity on the part of strangers, friends, kinsmen, and mates, according to their respective degrees of mutually elective affinity; but the Seri are so close to each other and so far from all others that they are collectively panoplied against extra-tribal personalities even as are antipathetic animals against each other—and the Seri can no more control the involuntary snarl and growl at the approach of the alien than can the hunting-dog at sight or smell of the timber-wolf.

While the highly developed traits represented by pedestrian habit and hand-and-tooth habit and segregative habit expressing race-sense are conspicuous during exercise, each carries an equally well-marked obverse. Thus, while the Seri are known as runners par excellence in a region of runners, and were named by aboriginal neighbors from their spryness of movement, they have been no less notorious among the Caucasian settlers of two generations for unparalleled laziness—for a lethargic sloth beyond that of sluggish ox and somnolent swine, which was an irritating marvel to the patient padres of the eighteenth century, and is today a byword in the even-tempered Land of Mañana; concordantly the sinewy hands and muscular jaws are noticeably inert during the intervals between intense functionings, are practically free from the spontaneous or nervous movements of habitually busy persons, and contribute by their immobility to the air of indolence or languor which

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

461 so impressed padres and rancheros; concordantly also, the manifestations of race hate, doubtless culminating among warriors on the warpath, are strongly contrasted with the abject docility of the Seri groups when at peace and in camp near Costa Rica and other ranchos—a docility far exceeding that of the Papago, whose personal dignity is an ever-present possession, or that of Yaqui, whose strong spirit so often breaks the curb of Caucasian control. So the observer of the Seri is impressed by the intensity of functioning along lines defined by their characteristic traits, and equally by the capriciousness of the functioning and the remarkably wide range between activity and inactivity which render them aggregations of extremes—the Seri are at once the swiftest and the laziest, the strongest and the most inert, the most warlike and the most docile of tribesmen; and their transitions from rôle to rôle are singularly capricious and sudden. At the same time the observer is impressed by the relatively long intervals between the periods of activity; true, the intense activity may cover hours, as in the chase of a deer, or days, as in a distant predatory raid, or perhaps even weeks, when the tribe is on the warpath; yet all the known facts indicate that far the greater portion of the time of warriors, women, and children is spent in idle lounging about rancherias and camps, in lolling and slumbering in the sun by day and in huddling under the scanty shelter of jacales or shrubbery by night—i. e., when their activity is measured by hours, their intervals of repose must be measured by days.

000 Summarizing those somatic traits connected with habitual functioning, the Seri may be considered as characterized by (1) distinctive pedestrian habit, (2) conspicuous hand-and-tooth habit correlated with defective tool-sense, and (3) pronounced segregative habit correlated with a highly specialized race-sense; yet they are characterized no less by extreme alternations from the most intense functioning to complete quiescence—the periods of intensity being relatively short, and the intervals of quiescence notably long.

14 On reviewing the more conspicuous somatic structures and functions jointly, they are found to throw some light on their own development, and hence on the natural history of the Seri tribe.

Certain characteristics of the tribe strongly suggest lowly condition, i. e., a condition approaching that of lower animals, especially of carnivorous type; among these are the specific color, the centripetally developed body, the tardy adolescence, the defective tool-sense, the distinctive food habits (especially the consumption of raw offal and carrion), the independence of fixed habitations, and the extreme alternations between the rage of chase and war and the quiescence of sluggish repose. But these primitive characteristics are opposed or qualified by such features as the noble stature, the capacious and shapely brain-case, the well-developed hands, and the considerable intelligence revealed in native shrewdness as well as in organization and belief. Collectively the characteristics are in some measure incongruous; yet

1: McGee E-5 (1894-1895) 1898 NU31 Sert NU31

miles in search of it, and acute enough to follow trails and indications. Naturally the meager water-supply serves as a mechanism for sorting out and preserving the strong and the acute, and for eliminating the weakly and the dull; and hence the tribe have developed a faculty, or perhaps a potentiality, of distinctive sort—the potentiality of providing against thirst-death by a reserve power in the organism itself rather than in the form of mechanical devices such as characterize higher culture. Quite similar are the relations to the resource of second importance, i. e., ordinary food. Habituated to dispensing with storage and transportation of their primary resource, and accustomed to finding food whenever forced to sufficiently active effort to obtain it, the Seri have never grasped that first principle of thrift expressed in the accumulation of food supplies; and accordingly they intuitively rely on successful fishing or chase or search of vegetal edibles for sustenance, and habitually delay effort until they are stirred into activity by the pangs of hunger. Naturally this improvidence serves as another mechanism for perpetuating families of stored vitality, and especially those able to prevail over swift or strong or cunning quarry by sustained vigor and alertness after prolonged deprivation; and the effect of this mechanism, too, is to develop a reserve power in the organism itself, in lieu of the material reserve made through thrift in higher culture. Similar in their consequences are the relations of the individual organisms to the third industry of Seriland, i. e., navigation of the gale-swept and tide-troubled waters. Even the buoyant balsa can not weather the williwaws or ride the tiderips of El Infiernillo without exercise of the utmost strength and skill on the part of the navigators; while the often persistent storms may delay for days embarkation on voyages in quest of fresh water or food. Naturally, the frequent delays and not infrequent perils of such navigation constitute a mechanism for selecting navigators possessed of reserve powers adequate to meet desperate emergencies with vigor and judgment even after enervating waits for wind and tide, while those not so well endowed are either brought up to standard in their hard training school or expelled from their class by drowning or dashing on the rocks, as may happen; so that the effect of this mechanism also is to preserve individuals and perpetuate generations characterized by reserve power, and hence to develop latent potentiality in the tribe. Now, the normal product of these and other natural mechanisms immediately reflecting environmental conditions is capacity for sparta, or for intense functioning under severe stress, despite accentuation of the stress by thirst or hunger or exhaustion, or by all combined—i. e., the effect of habitat and habit is to produce precisely such a somatic regimen as that so conspicuously displayed by the Seri folk. So the intensified activity with long intervals of inertness, simulating the habits of carnivorous and some other lower animals, and hence suggesting primitive condition, would appear to be largely a phylogenetically acquired character expressing specific adjustment to environment.

8: Ascher E-5 (1960) 1962 NU31 Seri NU31

for the point may come from the transmission of an abandoned car or from flotsam. The wood for the hafting can be mesquite or ironwood, both indigenous in the area; waste from boat construction or other scraps of wood may also be used. Rubber for the gasket may be obtained from a worn automobile tire. The wrapping cord and lead cord are store bought, and mesquite gum is used to seal the hafting.

In manufacturing foreshafts Seri fishermen use three tools: a knife, a hacksaw blade, and a triangular file. The hacksaw blade is used to cut an appropriate length of metal for the point and to rough out the barb; the triangular file is employed to finish the point barb and stem; the tang of the file is used to puncture the hole in the gasket which is to receive the point. The shaping of the hafting and gasket, and the cutting and wrapping of the lead cords, are accomplished with a knife.

With regard to the method of manufacture, all fishermen report essentially the same procedure. They describe the pattern as a series of steps under two headings: (1) shaping and (2) assembling. Two individuals did not mention steps 1c and 2b, and the others considered these two steps to be optional.

1) Shaping
   a) Shaping the metal into a point
   b) Shaping the wood for hafting the point
      α) Shaping the general form
      β) Splitting the form lengthwise and grooving each half to receive the point (see section in Figure 1)
   c) Shaping the rubber for the gasket

2) Assembling
   a) Placing the mesquite gum in the grooved portions of each half of the hafting (see section in Figure 1)
   b) Placing the gasket on the point
   c) Inserting the point base into the hafting and reuniting the split hafting form
   d) Wrapping with the wrapping cord and with it interweaving the lead cord
   e) Refinishing the hafting base to fit the mainshaft socket

Four men were able to explain the foregoing procedure in detail and were in agreement in the following matters. The point is shaped before the hafting because its length determines the length of the latter, and because the diameter of the point base dictates the grooving of the haft. The gasket is shaped after the point and the hafting because the diameter of its hole is determined by that of the point base and its total diameter by that of the hafting. The mesquite gum then secures the point and seals the hafting. Interweaving the lead cord with the wrapping cord secures the former to the hafting.

The amount of time required to complete a foreshaft shows marked variation. This is not primarily a function of the working habits of the artisan. If all the materials are present, the time it takes to make a foreshaft ranges from four to eight hours, but if all the materials are not available, as much as a year may be required. There may, for example, be a considerable lapse of time between the shaping of a point and the shaping of a gasket when material for the

411 gasket is not available. If a Seri needs a foreshaft for immediate
H61 use he can dispense with the gasket, but all the other materials are necessary to make the tool functional. As a result, a Seri may have one or several foreshafts in the same or in different stages of manufacture (see Plate II)[2], and he may also have a number of shaped or unshaped points or pieces of metal but few finished foreshafts.

411 If an archeologist were to excavate the remains of contemporary Seri culture at some time in the future his observational field would be limited to the results of behavior. Under ideal conditions, the data available to him for reconstructing the turtle fishing complex might include foreshafts, the materials from which and implements with which they were manufactured, and turtle carapaces.

411 All 21 finished foreshafts (Plate I)[1] exhibit an obvious general
184 similarity despite the fact that they range in age from one to eight years. Twenty of them have a single barbed point. Plate II[2] illustrates the general shape of the hafting, the place where the hafting has been split, a mesquite gum sealing, and a refinished hafting base—a combination of features that is exhibited in all 21 foreshafts. The manner in which the lead cord is interwoven with the extension cord is similar in all foreshafts except those in which either cord has been repaired. In nineteen cases (excluding one very long and one very short point), the length of the point beyond the hafting ranges from 4.4 to 6.1 cm. With three exceptions (one long and two short) the length of the hafting ranges from 5.8 to 7.8 cm. In all but two examples the hafting is longer than the point. The difference in length between the hafting and the point above the hafting varies within a range of 0.1 to 3 cm. Thus, with the exceptions noted, the maximal variation with respect to these measurements is small—1.7 cm. for the length of the point above the hafting, 2 cm. for the length of the hafting, and 3 cm. for the difference in length between the hafting and the point above the hafting (see Table 1).[3]

Examination of the three available sets of foreshafts produced by single individuals reveals a smaller range of variation within each set than within the entire collection. In four foreshafts of Juan Moreno the length of the point above the hafting ranges from 4.9 to 5.2 cm., and the length of the hafting from 6.1 to 6.7 cm. The sets produced by Francisco Barnett (see Plate II)[2] and by Miguel Barnett show a comparable restriction in the range of variation. A comparison of the three sets, however, shows that their measurements are similar enough to each other to provide little basis for distinction. The range in length of the haftings of Juan Moreno (6.1 to 6.7 cm.), for example, overlaps that of the haftings made by Francisco Barnett (6.4 to 7.7 cm.).

Variety in the 21 finished products taken as a group, other than that due to differential age and use, is most evident in one particular respect: eight of them lack a gasket. Each owner of foreshafts without gaskets was asked to explain this absence. Two could not or would not give an explanation; five replied that rubber was not available; and one man, Ignacio Molina, stated that he omitted a gasket be-

[1] [Facing p. 364] [2] [Facing p. 365] [3] [page 367]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

On putting the indi-

323 [462] cations together it would seem probable that the ware is made by the women, and that each piece is shaped from a lump of tempered and well-kneaded clay of suitable size, first hollowed and rudely shaped over one hand, and gradually expanded by spiral rubbing, kneading, and pressure between the hands of the maker. The burning is incomplete and variable, suggesting a little outdoor fire in a shallow pit adapted to a single vessel. The ware is without glaze or slip or other surficial treatment save that the lamellar texture is best developed toward the surfaces; hence it is so porous that the filled vessel is moist even in the sun.

482 [462] Ordinarily women are the water-bearers, each carrying an olla balanced on the head with the aid of a slightly elastic annular cushion, usually fashioned of yucca fiber (plate XXXII and figure 15), though in some cases two ollas are slung in nets at the ends of a yoke (figure 16) after the Chinese coolie fashion (this device being apparently acultural).

FIG. 15.—Seri olla ring.

415 The function of the conventional Seri olla is exclusively that of a canteen or water-carrying vessel, and its form is suited to no other use; while its lines, like its thinness of wall, are adapted to the stresses of internal and external pressure in such wise as to give maximum strength with minimum weight. It is by reason of this remarkably delicate adaptation of materials to purposes that the plain olla figured in plate XXXIII, weighing an ounce or two more than 10 pounds in dry air, holds and safely carries three and one-third times its weight of water. When such ollas are broken, the larger pieces may be used as cups or

FIG. 16.—Water bearer's yoke.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

ness of the cords used in construction; in fact, the outer layers of canes 501
are so ingeniously interlocked by the insertion of their butts into interstices that each bundle holds itself together with slight aid from the exterior cording, while even the bundles themselves are held in proper relative position by the secure terminal tying rather than by the intertwined cording of the body of the craft. And the entire construction exemplifies the compartment principle to perfection; a slight injury may affect but a single joint of one out of several thousand canes, while even a severe fall on sharp rocks seldom injures more than a few score canes, and these in a few joints only. The most objectionable feature of the balsa lies in the fact that it affords little protection from the wet. The water rises freely through the reed bundles to a height depending on the load, and not only the spray but the whitecaps and combers as well dash freely over the unprotected body of the craft; but this defect is of little consequence to the hardy and nearly nude navigators, or to their scanty and practically uninjurable freight.

FIG. 28—Seri balsa as seen by *Nuevaguasti* party.

The gracefulness and efficiency of the balsa itself stand in strong 502
contrast with the crude methods of propulsion. According to Mashém, [462]
the craft is commonly propelled by either one or two women lying prone on the reeds and paddling either with bare hands or with large shells held in the hands; according to Hardy, the harpoon main shaft is used by turtle fishermen for paddling (and probably for poling, also); according to the Dewey picture (figure 28), the vessel is driven by a woman with a double-end paddle like that used in connection with the conventional canoe; while the expedition of 1895 found on Isla Tiburon four or five paddles rudely wrought from flotsam boards and barrel-staves, and partly hafted with rough sticks 3 or 4 feet long, but partly without handles and evidently designed to be grasped directly, like the shells of Mashém's descriptions. No trace of oars, rowlocks, sculls, rudders, or masts were found, and there is nothing to indicate the faintest notion of sails and sailing. On the whole there is no trace of well differentiated propelling devices—i. e., the craft is perfected only as a static device and not at all as a dynamic mechanism.

1; McGee E-5 (1894-1895)1898 NU31 Seri NU31

mon convenience. Usually the several jacales are entirely separate; but at Punta Tormenta, Punta Narragansett, and still more notably at Roda Ballena, individual huts were found either extended to double length or joined obliquely in such wise as to show two fronts (as illustrated in plate VI). The conventional frameworks appear to be common tribal property, at least to the extent that an abandoned skeleton may be preempted by any comer; while the addition of walls and roof appears to afford a prescriptive proprietary right to the elderwoman and family by whom the work is done—though the right seems to hold only during occupancy, or until the temporary covering is dislodged.

The jacales are without semblance of furnishing, beyond an occasional shat and a few loose pebbles used as hupfs; though the nooks behind the bows and tie-sticks sometimes serve as places of concealment for paint-cups, awls, hair bobbins, and other domestic trifles. There is no floor but earth, and this remains in natural condition, except for trampling and wearing into wallows, recalling those of fowls and swine, which afford a rough measure of the periods of occupancy; there is no fireplace—indeed, fires are rarely made in the jacales, nor for that matter frequently anywhere; and there are no fixed places for bedding, water ollas, or other portable possessions, none of which are left behind when the householders are abroad.

Little is known of the actual process of jacal building, especially in Seriland proper; but the observations of Señor Encinas and his vaqueros on the frontier corroborate Mashém's statements that the houses are built by (and belong to) the matrons; that several women customarily cooperate in the collection of the okatilla and erection of the framework; that the only tools used in the processes are hupfs and miscellaneous sticks; and that the placing and fitting of the beams and tie sticks are accompanied by a chant, usually led by the eldest matron of the group. The same informants support the ready inference from the structure that the shrubbery and other material forming walls and roofs are gathered and placed from time to time by the women occupying the jacales.

The Seri building chant is suggestive. Neither Señor Encinas nor Mashém regarded it as religious or even ritualistic, but merely as a work-song designed (in the naïve notion of the latter) to make the task lighter; and it seems probable that the local interpretation is correct. If so, the simple chant at once offers rational explanation for its own existence, and opens the way to explanation of the elaborate building rituals of more advanced tribes. The work-song is a common device in many lowly activities, ranging from those of children at play to those of sailors at the windlass, and undoubtedly serves a useful purpose in guiding, coordinating, and concentrating effort; to some extent the vocal accompaniment to the manual or bodily action apparently expresses that normal interrelation of functions manifested by second-

1: McGee E-5 (1894-1895)1896 NU31 Seri NU31

relation may be considered to begin in the animal realm with organisms adapted to environment through physiologic processes, and to end in that realm of enlightened humanity in which mind molds environment through complete nature-conquest. In the serial scale so defined the various primitive tribes and more advanced peoples may be arranged in the order of mental power or culture-status; when the same arrangement will express in inverse order the relative closeness with which the several tribal minds reflect their environments. It follows that the lowly minds and craft of the Seri reflect their distinctive environment with exceeding, perhaps unparalleled, closeness, because of their very lowliness; it follows, too, that any other equally lowly folk imported into the region and perfectly wonted to it by generations of experience would equally reflect the physical features of the region in their craft and in their thinking; it follows, also, that if the Seri were transported into any other district of equally distinctive physical features, they would gradually adapt themselves to the new environment—though with some added intelligence, and hence with diminished closeness, as is the way of demotic development—in such manner that their craft and thinking would reflect its features. In a more general way it follows that those similarities in culture, or activital coincidences, which have impressed the ethnologic students of the world (notably Powell and Brinton), are normal and inevitable in primitive culture and of diminishing prominence with cultural advancement.

Social Organization

Among the Seri, as among many other aboriginal tribes, the social relations are largely esoteric; moreover, in this, as in other savage groups, the social laws are not codified, nor even definitely formulated, but exist mainly as mere habits of action arising in instinct and sanctioned by usage; so that the tribesmen could not define the law even if they would. Accordingly the Seri socialsy[1] is to be ascertained only by patient observation of conduct under varying circumstances. Unfortunately, the opportunities for such observation have been too meager to warrant extended description, or anything more, indeed, than brief notice of salient points.

Clans and Totems

The most noticeable social fact revealed about the Seri rancherias is the prominence of the females, especially the elderwomen, in the management of everyday affairs. The matrons erect the jacales without help from men or boys; they carry the meager belongings of the family and dispose them about the habitation in conformity with general custom and immediate convenience; and after the household is prepared, the men approach and range themselves about, apparently in a definite

[1] A convenient term proposed by Patten.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

approaching nubility—receive some advantage through the connivance of the matrons. To a considerable extent in the matter of sustentation, and to a dominant degree in the matter of apparceling, the distribution of values is affected by a highly significant (though by no means peculiar) humanitarian notion of inherent individual rights—i. e., every member of the family or clan is entitled to necessary food and raiment, and it is the duty of every other person to see that the need is supplied. The stress of this duty is graded partly by proximity (so that, other things equal, it begins with the nearest person), but chiefly by standing and responsibility in the group (which again are reckoned as equivalents of age, whereby it becomes the business of the first at the feast to see that enough is left to supply all below him; and this duty passes down the line in such wise as to protect the interests of the helpless infant, and even of the tribal good-for-naught or hanger-on, who may gather crumbs and lick bones within limits fixed by the tribal consensus. Beyond these limits lies outlawry; and this status arises and passes into the tribal recognition in various ways: Kalusio was outlawed for consorting with aliens, and Mashem narrowly missed the same fate at several stages of his career; the would-be grooms who fail in their moral tests are ostracized and at least semioutlawed, and range about like rogue elephants, approved targets for any arrow, until they perish through the multiplied risks of solitude, or until some brilliant opportunity for display of prowess or generosity brings reinstatement; deformed offspring are classed as outside the human pale, even when the deformity is defined rather by occult associations than by physical features; abnormal and persistent indolence, too serious for scorn and ostracism to cure, may also outpass the tribal toleration; and, as indicated by Mashem's guarded expressions and slight additional data, disease, mental aberration, and decrepitude are allied with indolence and deemed sufficient reason for excluding the persistently helpless from the tribal solidarity, and hence from recognized humanity—and the fate of the outlaw, even if nothing more severe than abandonment in the desert, is usually sure and swift. The entire customs of outlawry among the Seri are singularly like those of gregarious animals, including especially kine and swine in domestication. Now, studied equity in the distribution of necessaries might seem to be allied to thrift; but it is noteworthy that this is not so among the Seri, who take thought for one another but not for the morrow, who seem to have no conception of storage (save an incipient one in connection with water and the repulsive notion underlying the "second harvest"), and who habitually gorge everything in sight until their stomachs and gullets are packed—and then waste the fragments.

The division of labor which affects proprietary interests is undoubtedly affected in turn by the militant habit of the tribe and by the frequent decimation of the warriors. In general, the adult males limit their work to fighting and fishing, with occasional excursions into the hunt-

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

462 ing field; though by far the greater part of their time is spent in listless lounging or heedless slumber under the incidental guard of roaming youths and toiling women. The matrons are the real workers in the tribal hive; they are normally alert and active, passing from one simple task to another, gathering flotsam food along the beach or preparing edibles in the shadow of the jacal, with an eye ever on material possessions and children; they frequently join in hunting excursions of considerable extent; they are the chief manufacturers of apparel, utensils, and tools; and the scions of Castilian caballeros are not infrequently staggered at the sight of half a dozen Seri women "milling" a band of horses, and at intervals leaping on one to kill it with their hands. The masculine drones are the more petted and courted by reason of their fewness, for during a century or two, at least, the women [162] [562] have far outnumbered their consorts—a disproportion doubtless tending in some respects toward the disintegration of the clan system and, reciprocally, toward the firmer union of the tribe.

[756] One of the most noteworthy extensions of feminine functions among the Seri is toward shamanism. So far as could be ascertained from Mashém and the associated matrons at Costa Rica, it is such beldams as Juana María who conceive the arrow "poison", compound both necromantic medicines and curative simples, cast spells on men and things, and even fabricate the stone arrowpoints and counterfeit cartridges; though unhappily the data are neither so full nor so decisive as desirable.[1]

562 Conformably with their prominence in proprietary affairs, the Seri
623 matrons seem to exercise formal legislative and judicative functions; for not only do they hold their own councils for the arrangement of the domestic business of the rancherías, but they also participate prominently in the tribal councils (as explained by Mashém), and play important rôles in carrying out the decisions of such councils—as when they cooperate with war parties as decoys, or journey across their bounding desert to spy out the land of the enemy.

614 On the whole, it would appear that the clan organization of the Seri conforms closely with that characteristic of savagery elsewhere, especially among the American aborigines. The social unit is the maternal clan, organized in theory and faith in homage of a beast-god, though defined practically by the ocular consanguinity of birth from a common line of mothers; yet the several units are pretty definitely welded into [619] a tribal aggregate by common feelings, identical interests, and conjugal ties. The most distinctive features brought out by the incomplete 562 investigation are the somewhat exceptional manifestation of property-right in the females, the singularly strong sense of maternal relation, and the apparent prominence of females in shamanistic practices as well as in the tribal councils.

[1] The agency of the women in applying the arrow "poison" was noted by Hardy; cf. p. 288.

hundred Seris at a time. They lived in maternal groups or clans in which the elder females were of great prominence in the management of everyday affairs. When, in the wanderings of a family a new camp was decided upon, the elder matron usually erected the jacal alone, without the aid of men or boys, gathering the long poles of the ocotillo or the branches of desert trees and fashioning them into an arched framework over which a covering of brush, and often later of turtle shells, served to give protection from the desert sun. After the household was prepared, she took her place within easy reach of the meager and squalid family possessions, and around this nucleus other matrons and their children gathered in the course of a day or two. It was usually three or four days, and sometimes a week, before the brothers and husbands came wandering in from their roving search for food to take their places at the new camp site.

From the turtle fishing camps on the channel, the nearest fresh water was at a distance

[p.196(A)]

3:Davis & Dawson E-5 (1922-1960) 1945
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482 fashioned to fit the head (Fig. 7) and to aid in balancing the forty- to fifty-pound water-filled olla as it was carried over the rough and hilly trails from aguaje to jacal. (It is not certain whether the use of the shoulder pole, or palanca, was a part of original Seri culture, but in more recent times two water vessels were frequently carried, hung from either end of the notched pole.)

396 [462] While the tasks of supplying water and of manufacturing the vessels used in its transport were generally delegated to the women and children of the household, the building of the balsa was an undertaking that required the co-operation of the entire group. The carrizo canes were first gathered by the women and boys from the patches growing about the few permanent fresh waters of Seriland (Fig. 4). The leaves and tassels of the canes were removed by hand and the canes tied in bundles for carrying to the shore. There the men proceeded to lay, overlap, interlace and bind the canes into a larger and larger cylindrical bundle, tapering at

[p. 197(B)]

3:Davis & Dawson E-5 (1922-1940) 1945
NU31 Seri NU31

396 the extremities. Throughout the process the
cord used for lashing was laboriously made
[283] by hand and mouth by the women who ob-
tained the fibrous raw material from mes-
[462] quite tree roots, from the yucca or the
maguay. Three of the finished bundles were
lashed together to form a watercraft some
thirty feet in length and of four-foot beam.
These large balsas were buoyant enough to
carry several members of a family across El
Infiernillo channel. One-man balsas were
also made (Fig. 5) principally for use in
turtle fishing.

225 Except during the egg-laying season
411 turtles had to be sought from the balsa. The
Seris lacked tool sense in the extreme, but
their clumsy brains had devised a harpoon
for use against the turtle. The hard, pene-
trating point was commonly made of native
ironwood, but may also have been the sharp-
ened tooth of a sea lion or the shin bone of
a deer. It was fitted and firmly cemented
with mesquite gum to a short, hardwood
foreshaft whose rounded end fitted into the

[p. 197(C)]
[text continues on p. 198(B)]

Game pursuit is usually done on foot, mostly in the winter and very little in the summer. The intense heat of the desert in the summer makes hunting unattractive. The most frequent trophies are the Sonoran bighorn, peccary, cottontail and jack-rabbits. Sometimes, semi-wild burros, running loose on the adjacent extensive Mexican "rancherias", are poached for meat. The peccary is the only animal hunted with the aid of dogs. Large rodents are dispatched by sling-shot, stick, stone, or shot with a .22 caliber rifle. Birds, such as sea-gulls, ducks and pelicans, are clubbed, stoned or shot with a small caliber rifle.

While fishing and hunting are primarily men's occupations, the gathering of the terrestrial and marine animals is almost exclusively women's work. Rattlesnakes and other reptiles are often killed and brought to the encampments by the women from their morning trek into the desert after firewood and fruit. Small fish and marine invertebrates in the tidal pools are collected by women, aided by children of both sexes.

Preparation of meat is quite simple. It is either boiled in hot water with salt added as the only seasoning or else roasted whole, if small enough, over an open fire with or without a grill. The use of spices such as tomato sauce, chili, peppers, and the like, depend upon the tastes of the individuals and also upon the availability of money.

In individual competence as hunters or fishermen the men show a great deal of variability. Some excel in fishing while others do so in hunting. Hand in hand with this, goes the degree of knowledge of the local natural history and, as expected, the best fishermen lead in the knowledge of fishes while the best hunters possess the most extensive knowledge of terrestrial animals and insects. It has also been observed that boys were far ahead of adults in their knowledge of inconspicuous or otherwise commercially unimportant creatures such as insects, obscure marine invertebrates and small fishes. Interest in the commercially or otherwise economically important forms of animals unquestionably becomes overwhelming in adult life while much of the natural history lore learned in youth is forgotten.

Food Preferences and Taboos

A number of animals were reported as being a part of their diet in the past but which were not used at the present time. Several species of shells collected from kitchen middens along the coast were thus identified. In some instances it has been denied that a certain animal was used for food; yet, later when such a beast was brought to the camp, it would be added to the menu. Undoubtedly, some of the species were held in low esteem as food and the Seris preferred not to admit eating them.

Large fishes, especially pinta and baya, sea-turtles, and the very large chuckawalla lizard, which is brought back from rare expeditions to San Esteban Island, are the preferred cuisine. Cochi fish, also called puercos, are disdained. Large catches of these were frequently brought in from the sea, only to be unceremoniously dumped on the beach and left to the dogs and the vultures. But when other fish were scarce, the puercos were eaten. Pelicans, once an

POPULATION ABLE TO WORK
(between 11 and 65 years)

Men, 71 or 69% of the masculine population. 464
Women, 76 or 70% of the feminine population. 162
462

We can add that, at least as far as the male population is concerned, the figure of 69% with a potential work capacity is equivalent, in general terms, to the percentage of the population economically active, since one of the singular characteristics of the Seri population is the fact that they constitute a community fully occupied: all the men of working age have a place set aside in the fishing activities; this is an advantageous position for increasing economic development of the tribe. With relation to the women the situation is not the same, since the majority of girls of marriageable age carry on very few productive activities; it could be said that economic responsibility begins with matrimony. [226]

If it is true that all the Seri men are fishermen, it is also true that there is the beginning of some specialization of jobs, which are carried on complementing or as an accessory to the principal occupation. Thus we have among the men: 463 462 162

Carpenters, constructors of *piraguas* (a kind of canoe)	6
Medicine men	14
Farmers	2

And among the women:

Seamstresses	4
Farmers	1
Midwives	22

The relatively high number of medicine men and midwives should not be surprising; Seri popular medicine is very well known and depends principally on magical propitiation and since the magic powers are acquired in a variety of ways, including dreams, and the healing rites are, on the other hand, very simple, it is not strange that medicine men should abound. As for the midwives, it can be said that every woman who has undergone the experience of childbirth feels herself able to help at a birth; nevertheless, it is said that the more experienced women are those best able to take care of those giving birth. 755 756 844

Problems which should be attended to

In addition to the sanitary problem mentioned above, mention should also be made of the problem of agriculture, linked with the necessity for supplying food to an Indian population which since economically it depends principally on fishing, needs to complement its diet with agricultural products to achieve a better one. In close relation 185 262 241 423

8: Ascher E-5 (1960) 1962 NU31 Seri NU31

McGee (1898:214)

estimated that maritime resources provided two-thirds of the Seri diet. Kroeber (1931: 20), approximately 30 years later, estimated the proportion at about three-fifths. In the winter of 1960, 30 years after Kroeber's visit, the Seri were obtaining at least three-fifths of their food from the sea.

In pursuit of their main source of subsistence, the Seri travel up and down the narrow coastal band. In the winter of 1960 they were occupying one temporary camp toward the southern end of the band and a permanent camp at the northern extreme. Seri women and children gather mollusks; fishing is a male occupation. In addition to gathering and fishing for their own needs, the Seri dispose of a portion of their catch on the commercial market. This enterprise began about 1930, and was encouraged by the establishment, in 1958, of the Sociedad Cooperative de Produccion Pesquera Seri with the cooperation of the Mexican government.

The Pacific green turtle constitutes the largest single item in the Seri diet for at least six months of the year—from January to June—and it is also caught occasionally at other seasons. In 1896 McGee estimated that it provided 25 per cent of the total food supply. Emphasizing the intimate ecological relationship between the Seri and the turtle, McGee (1898: 186-187) wrote:

> ... perhaps half of the aggregate life of the tribe is spent within easy reach of its [the turtle's] feeding and breeding grounds, and tribesman and turtle have entered into an inimical communality something like that of the Siouan Indian and buffalo in olden time. ...

Kroeber (1931: 20) believed that McGee stressed the Seri-turtle relationship too strongly and overestimated its contribution to the diet. McGee (1898: 187), in support of the importance of the turtle to the Seri, points to the fact that the turtle carapace is used for, among other things, a house covering and buckler, a cradle, a coffin, and footgear. The carapace is currently used for supporting and roofing houses and as a starvation food. The contribution of the turtle to the diet varies from year to year, but observations made in 1960 suggest a range of from 15 to 20 per cent as a reasonable estimate.

Seri men fish for turtle from boats, which are manned by two or three men and are propelled by oars, sails, outboard engines, or any combination of the three. The boats operate either individually or in groups. The men fish by night or day, depending on the weather and sea conditions. When they fish at night, they use a kerosene lamp to attract turtles to the surface. The principal implement is the harpoon.

The harpoon tackle of the Seri is illustrated in Figure 1. It consists of a foreshaft (c-h), a mainshaft (j-k), and an extension cord (i). The component parts of the foreshaft are a projectile point (c), a gasket (d), a wrapping cord (f), a hafting base (g), and a lead cord (e and h). In preparation for turtle fishing, the hafting base (g) is plugged into the socket (j) on the main shaft (k), and the extension cord (i) is looped through the lead cord (h).

226 411 177 commercial origin are their main instruments of fishing. To this they added dynamite, sometimes with disastrous results to themselves, mostly as a way of securing bait. Single-pointed fish-spears which loomed so importantly in McGee's account have gone the way of the Dodo for its original purpose and transformed into iron bar lances, now used largely as weapons against rattlesnakes that men encounter in their desert roamings. However, in the forties, when the Seris spent a great deal of time getting sharks and huge rays, they killed them with these weapons.

226 411 What retain some importance are the harpoon and the two-pronged spear called "puiero." The two-pronged spear is one of their oldest weapons. The construction is much the same as when McGee visited them. The spear is used mainly to stab large-size fish, the giant *bais* or *mero* for example, after it has been brought up on the line. The [225] harpoon is now exclusively a weapon for the turtle hunt.

226 177 [157] An interesting fate met an effort to teach these Indians net fishing in 1947. They tried, ruined the nets and never took it up since. The instigators were Mexicans, the fish traders. I suspect that Seri individualism had a great deal to do with their lack of interest in net fishing which after all demands a certain amount of cooperation. With the hook and line fishing, men can have much more their own way.

501 177 648 An added "tool" of the Seris is the plank boat. The balsa which McGee still observed during his visit, had already vanished by the time Kroeber came to the Seriland and had been replaced by these boats. The boats are flat bottomed but good sized. The material was provided by the Mexican government. Boats are usually propelled by 5 hp. motors leased from the Mexicans (no Seri is rich enough to purchase [439] one) who also sell them gasoline and oil at exorbitant prices and in return buy Seris' catch of fish and sea turtle for low prices. At the time of my visits these amounted roughly to less than a peso [435] per kilo of the flayed, degutted and cleaned fish (less than 8 cents) with fluctuation up and down the scale depending on the kind of the fish, and to about 30-50 pesos for medium to large size "cahuama," the live marine turtle.

501 648 The Seri boats are also propelled by paddles and sail—this is always the case with the families who wish to stay away on Tiburon for some time. The Mexicans will not lease them their motors for such trips even if the Seri, some of them at least, have enough knowledge of the motors to repair minor stoppages—a demonstration of the fallacy [114] of McGee's idea that they are genetically unable to handle tools. In this respect, Kroeber's (1930: 25) estimate of them is closer to the truth.

462 [439] Sexual division of labor in procuring food goes on, much the same as it had 70 and 30 years ago, with the sole exception of the imported goods. Here purchases are made either by men or women or by children, depending on who at the time has the cash and what one wishes to buy.

Fishing is still done by men and so is hunting. Women still concentrate on gathering, whether of

[P.7 B]

462 desert plants or littoral fishlets from tide-pools or of the shellfish. Both men and women will [224] bring in an occasional rattler, although women [857] are more likely to do this because they spend more [883] time in the desert. Children of both sexes are engaged in the female occupations here, but adolescent boys already join in their fathers' hunts on land or sea.

342 Housing has undergone some changes. In the
184 desert or on Tiburon the Indians construct the kind of shelter they did in the recorded past, an ocotillo frame, bent over in the middle and covered up with dried plant debris and twigs from the desert, or with the sail cloth. But in Desemboque they have more substantial houses—of wattle and adobe, with flat roofs, rectangular or square, often with corrugated tin or drift planks and other debris piled up on top, or along the walls.

178 In the remainder of their material culture, not much has been left from years past although one must remember that from the very beginning of [291] recorded Serian history it has been of a most [412] meager sort. Pelican robes, which some Seris ap- [323] parently still wore in 1930 are gone for good. [301] So are the stone tools. So is the pottery which had [291] probably disappeared in Kroeber's time. The human hair necklace with rattlesnake rattles is also a thing of the past. The rattlesnake skin belts McGee (1898:170) described and figured are probably all gone. I havn't seen or heard of any.

412 But what remains much as they had been in
285 1894 are the bone-awls. These are made of burros' carpals and the blossoming of basketry, owing to

9:Malkin E-5 (1953-1955)1962 NU31 Seri NU31

Coyote figures out probably

as an important and perhaps disreputable figure in the mythology although nothing but scraps and bits of information suggest this. It is possible that there is actually a taboo on eating this animal or perhaps it is so disreputable that eating its flesh would put a gourmant in an inferior position.

How important is the Seri mammalian diet is hard to tell. It certainly looms more heavily during the winter, because in the cool season hunting is easier than during the heat of the summer and in fact this is when most of it is done by the ardent hunters. Too, winter subjects the Seris to greater hazards and is apt to increase their dependence on the desert resources over that during the summer, even if these resources are scantier at that time.

To all of these animals one should add the semi-wild burros running about the extensive Mexican rancherias. The Indians poach on them frequently using their fire arms, usually the .22 caliber rifles. In any case, it appears that during the summer when the field work was carried out, the mammalian diet figures quite lightly on the Seri table.

Food preparation: Very little is done in the preparation of the mammalian meat. All that I could observe was the boiling of it in hot water spiced with salt. The Indians were saying that in order to have the meat of a peccary, deer or bighorn ready to eat one must boil it 2-3 hours. The same procedure is followed with the meat of the burros. In contrast to this, as shall be seen later, fish are boiled as well as roasted while the turtles are also dried and salted. Preparation of meat is done by women, certainly at least in the encampments when they are present.

Food preferences: Some of the Seri food preferences have already been mentioned. At the top of the list as the desirables are the peccary, the deer, the bighorn and the blacktail jackrabbit; at the bottom is the badger, whose meat "is not much good." There is also preference by sex. Females of both the bighorn and peccary are preferred over the males "because they do not have the bad odor like the males." This sort of favoritism also occurs among the Mexicans. However, the Indians did not elaborate beyond this point.

Other economic uses: Apart from meat, hides are also used. The hides of the deer, bighorn and peccary had been used for sleeping mats although this matter has been expressed in the past tense. Miguel Barnett also suggested that the bighorn hides had been used for clothing by the Indians in the past—but he neglected to say how long ago. During Kroeber's stays, no Seris went about in the animal or bird (pelican) skins but earlier when McGee visited them they went about in these simple garments. Judging then by Miguel's memory, the use of the bighorn hide for clothing must be pushed back to the period of World War I or even earlier.[1]

[1] Miguel Barnett indicated that the "fur" of the bighorn had once been worn for the cold season "but not now."

[P 10 A]

262 them to their shelter and held them there for several days before they and their families finally ate them up. The turtles are also a well-liked item.

As already indicated in some instances there exista preference for a particular part of an animal. Of the Gila monster only the fat tail was said to have been eaten, and of both rattlers, the head and the tail are discarded on the grounds
* [825] that they contain toxin. Finally the toad and the gecko and *Xanthusia* are all rejected as completely venomous.

178 It is also evident that changes in the Seri
262 taste have occured in the course of the past several decades. Some animals are on their way out as food, and here we have the Gila monster, the whipcoach, the red racer and smaller lizards. In several cases, and this includes the Gila monster, the responses indicated that the animal had been eaten in the past. I also observed that on the sly, the Seris would eat them when other food was in short order. But they are reluctant to admit this and often altogether denied it.

Hunting

224 Most reptiles are captured by hand or else killed
[225] with a stick, stone or pea-shooter. Except for the turtles, the Seris will not make special expeditions. But it is certain that if they find themselves on any of the islands near the shores of Baja California they will go ashore deliberately in search of the chuckawalla.

225 The turtles are another matter. Here now, just as in the past, special expeditions are made in order to get them. These expeditions take place
[501] nowadays in the usual flat-bottomed plank boats, either motor or oar propelled. The hunt takes place only during unusually quiet and dark nights, when the Gulf is smooth and calm and there is neither wind nor ripple. With the slightest disturbance,
[354] turtle fishing is impossible. It is all done with the
[411] torch lights or Coleman lanterns. The principal and only weapon is the harpoon, identical with that described and illustrated by McGee. The turtles are then harpooned, dragged into the boat and either left alive, when the hunters have a sale of live ones in mind, or pounded to death with a
[251] club or oar, quartered and then either consumed on the spot or else dried and salted."

[224] While the collecting of the smaller animals us-
● [462] ually falls to the children or women, turtle hunting is men's job. Men, too, usually get the chuckawalla because they usually visit more distant islands.

Pets

231 None of the reptiles are pets in a real sense. Those few that might be kept are only held until the day when they are butchered and eaten. It is motivated more by the wish to preserve fresh food than by any affection for the animal. The turtles, the tortoises and the chuckawalla belong here. Occasionally a Seri boy will string a lizard, a *Seel-*

"The loggerhead is hunted in the daytime because, owing to its great strength, night hunt would be too dangerous. Two harpoons are always used on it, while for the smaller species, one harpoon usually suffices.

que (as a result of the ecology of the coastal waters) it is gathered in huge quantities largely on the shores of Tiburon where it is said to occur in great numbers. This animal is gathered in large bulk in 5 gallon gasoline cans and then sold either as finished necklaces at the rate of five pesos each, or as bulk, by the liters, with 20 liters for each gasoline can. There is a steady market for these shells.

e) *Bait:* Only the octopus has been reported as used for fish bait for the *pinta*, *baya* and *pescara*, and I have seen it used in that manner. But it is certain that on occasion the Seri will use also for bait the flesh of some of the shelled smaller molluscs, especially when they wish to capture live fishlets for bait.

Hunting

Collecting of molluscs is almost invariably a job of adult women and of the children of both sexes who at low tides scavenge the exposed mud flats and gather or dig out various marine animals. Some are collected on the surface only. Among those that must be excavated are the octopus and *Nioche* which hide in burrows or mud, respectively. A large shell is usually used as a tool to pry the *Nioche* out.

Taxonomy

Molluscs on the whole are recognized as one group of animals. However, this does not include the octopus and the chitons which are considered as different sort of creatures. Some sort of feeble association between the *Pelecypods* and the *Gastropods* is recognized and various species of both are placed together. I noticed a tendency to consider some of the *Gastropods*, the limpets and *Crepidula* for example, as supposedly having two valves while in fact they are both univalves. The explanation offered for this was "it lost one side," meaning one valve.

Although *Chitons* spend most of their time motionless attached to rocks they are both considered animals. The motions of these animals may not have been observed by the adult, but the Indians, young boys especially, certainly noticed the changed positions after a period of time.

In some instances the Seris observed quite small differences between animals—recognizing them as different species. In the *Neritina* two different forms were correctly identified as representative of the same species, although they differed considerably in size and color. On the other hand *Columbella* and *Solenostira* had been given the same Seri name palémex[s] but were recognized as different kinds of animals.

Sexing

A distinct tendency to consider the molluscan males larger than the females emerges readily from the Seri answers. This can be shown in the table below:

[P. 40 A]

9:Malkin E-5 (1953-1955)1962 NU31 Seri NU31

XI

SUMMARY

224 Hunting is very decidedly secondary to fishing, although it is still much practiced by certain individuals and in a desultory way probably by all.

●462 There is a clean cut division of labor in all these occupations. Fishing and hunting are men's occupations, gathering of the desert animals and beachcombing for the intertidal animals is largely the job of women and children. Boys get broken [868] into men's occupations in adolescence, girls into women's jobs very much earlier.

224 Avoidance of fishing or hunting certain creatures appears much more a matter of custom than of well defined and socially rationalized attitude. Frequently an animal is not hunted simply because the Seri feel it is too big and too strong for them to tackle.

157 Through all these activities, Seri individualism is curiously woven and accounts for the failure of anything that might resemble a collective effort.

Food Preferences and Preparation

252 Seri food is prepared in a simplest sort of way. [263] Boiling in water is usual with salt and sometimes a few other spices added. While most food is prepared that way, snakes and fishes are usually fried, without any ingredients. There has been a [178] notable shift toward greater fanciness in the ingredients, as they have become more readily available.

262 There are many preferences. Animals are scaled in desirability. Some fishes, marine turtles, chuckawalla, deer and peccary and duck are at the top of the list; lower animals, smaller fishes including puerco in the middle, while the sea gull and the pelican are probably at the very bottom of the pit. This again reflects temporal changes in tastes [178] although not necessarily a direct influence from the Mexicans.

Pets

231 Few pets are kept, other than dogs. Such animals as come are those captured accidentally. In most cases they are bird nestlings.

Taxonomy

* 825 Differential criteria are applied in the classification of different groups. There is less tendency to group birds than to group different mammals and classificatory ideas break down almost completely in smaller animals, especially insects and molluscs. Considering the economic importance of the molluscs, poor ability to distinguish the Gastropods from the Pelecypods is striking.

The classificatory criteria differ for different groups. Mammals are generally recognized by the furiness, birds by the ability to fly and the pres-

[P·54 B]

535 semi-darkness.
123 Soon two little boys joined the dance, stepping up and down in the sand. Lighted only by the flickering flames of the driftwood fires on the shores of this mysterious and dreaded isle, the soft murmur of the sea as a refrain to the wild chanting, the weird circling of glittering eyes, and wild dark faces, presented a scene of uncanny and savage fascination witnessed by white men probably for the first time.

[533] After each stanza there was a short rest. The singing was similar to most other tribal chanting.

582 836 622 Bob made the remark that the girl was old enough to be broken in by the old Chief. I said, "How?"

583 [839] He said, when a girl thirteen or fourteen has her menses, the Chief takes her and goes through the family act. This is called 'breaking her in'. She is then eligible for marriage. A young man desiring marriage has to purchase the girl by giving the father a boat or rifle, both being necessary to the Seri's existence and protection. At the wedding they have sort of a fiesta and much mescal is drunk, which properly solemnizes a wedding.

585 844 845 When a girl has a baby it usually comes very naturally and easily, but I remember one girl's first baby was three days in coming, and she suffered a great deal. This was on a subsequent trip. She was staying with many of her people on the mainland and someone asked them if they didn't want a doctor or other help. They said: No, they had one. It was a Medicine Man who chanted over the girl and dug hollows in the sand to fit her heels into. He said that the legs had to be kept apart. This was all he did. But ordinarily there is no trouble, and if a baby is born at noon the mother is up and doing, and cooks supper for her lord and master. The men treat their wives with kindness and each shares with the other any delicacy.

462 [593] [482] In Seriland domestic duties are reversed from the usual Indian methods. The men get the water and the women get the wood. This consists mostly of driftwood gathered along the shore, and it is a picturesque sight to see a string of women and girls bringing in loads of wood in baskets on their heads at sunset.

622 595 There are no plural marriages, but sometimes when a Chief is old, or rather when his wife is old and can have no more babies, he can take a younger woman as his wife. The present Chief is getting old now, almost too old to break in the girls, so they may get a younger man. This might be called the perquisites of office. He takes the cream.

832 825 They hunt lice in the head and eat them. This is said to increase the amorous desires. The penis of the male turtle is cut out and dried. This is pounded and pulverized and placed in the food of the women. This is said to create a desire for a man and the family act.

12: Moser L-5 (no date) 1964
(ca. 1960) NU31 Seri NU31

SERI BLUE

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ABSTRACT

The blue which the Seri Indians of Sonora, Mexico, use in face painting is not the mineral dumortierite, as previously believed, but is a prepared pigment. This paper is a description of the process in which three elements are combined to produce this pigment.

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McGee and Kroeber reported the mineral dumortierite as the source of the blue pigment used in Seri face painting (McGee 1898: 165-6; Kroeber 1931: 27). Coolidge described two blues, one a mixture of gypsum and a boiled root, the other a blue stone found on Tiburon Island (Coolidge 1939: 200). Xavier mentioned dumortierite and commercial bluing. She also referred to a third blue obtained from a plant on Tiburon (Xavier 1946). Present investigation has shown that as far as the Seri know, the only blues they have ever used are *ika?óil* "to cause to be blue" (commercial bluing) and the highly prized *?antezj kóil* "blue clay" of their own manufacture.[1]

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The components and the method of manufacture of *?antezj kóil* are said to have been taught to the women long ago by *?ant i?akímxoj* "they who tell the things about the earth." The actual color transformation is veiled in mystery to the Seri who say that if the process of making the clay is observed by any girl who has not passed the menarche, the blue will not appear. Its appearance is not attributed to shaman power, however.

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?antezj kóil has been in less demand during the last few decades since commercial bluing has been readily available. Nevertheless, *?antezj kóil* is the blue preferred by those women who continue to adorn their faces in the traditional manner.

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The three ingredients used in making the blue clay are the root bark of *xkoktz (Franseria dumosa)*, *iki kóizj* "to grind with" (a mixed clay in which montmorillonitic layers predominate), and *mokni óoxW* "excrement (sap) of *mókni (Guaiacum coulteri)*." The Seri say that the *iki kóizj* and the *mókni* are found only on Tiburon Island. The root bark of *tinkl (Franseria ambrosioides* Cav.) or of *xneejan stiktoj (Stegnospermum halimifoliam)* can be used instead of *xkoktz*. *tinkl* gives a distinct aroma to the clay. The plants mentioned are fairly common along the Sonoran coast.*

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*EDITOR'S NOTE: It is interesting to note that none of the ingredients is blue in its unaltered state.

7: Marroquin E-5 (1955) 1957 NU3₁ Seri NU31

POPULATION ABLE TO WORK
(between 11 and 65 years)

Men, 74 or 69% of the masculine population. 464
Women, 76 or 70% of the feminine population. 162
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We can add that, at least as far as the male population is concerned, the figure of 69% with a potential work capacity is equivalent, in general terms, to the percentage of the population economically active, since one of the singular characteristics of the Seri population is the fact that they constitute a community fully occupied: all the men of working age have a place set aside in the fishing activities; this is an advantageous position for increasing economic development of the tribe. With relation to the women the situation is not the same, since the majority of girls of marriageable age carry on very few productive activities; it could be said that economic responsibility begins with matrimony. [226]

If it is true that all the Seri men are fishermen, it is also true that there is the beginning of some specialization of jobs, which are carried on complementing or as an accessory to the principal occupation. Thus we have among the men: 463● 462 162

Carpenters, constructors of *piraguas* (a kind of canoe)	6
Medicine men	14
Farmers	2

And among the women:

Seamstresses	4
Farmers	1
Midwives	22

The relatively high number of medicine men and midwives should not be surprising. Seri popular medicine is very well known and depends principally on magical propitiation and since the magic powers are acquired in a variety of ways, including dreams, and the healing rites are, on the other hand, very simple, it is not strange that medicine men should abound. As for the midwives, it can be said that every woman who has undergone the experience of childbirth feels herself able to help at a birth; nevertheless, it is said that the more experienced women are those best able to take care of those giving birth. 755 756 844

Problems which should be attended to

In addition to the sanitary problem mentioned above, mention should also be made of the problem of agriculture, linked with the necessity for supplying food to an Indian population which since economically it depends principally on fishing, needs to complement its diet with agricultural products to achieve a better one. In close relation 185 [262] [241] [423]

7: Marroquin E-5 (1955) 1957 NU31 Seri NU31

way. Since the preparation of the drinks served to them is not very hygienic, they often produce severe gastro-intestinal upsets and even affect their vision.

Demographic Data

The following chart shows the population distribution by age groups:

SERI POPULATION BY AGE GROUPS AND SEXES
(as of December 31, 1955)

	Men	*Women*
Less than 1 year	4	3
From 1 to 5 years	10	11
From 6 to 10 years	15	12
From 11 to 15 years	15	16
From 16 to 20 years	13	14
From 21 to 25 years	4	1
From 26 to 30 years	7	15
From 31 to 35 years	16	13
From 36 to 40 years	5	2
From 41 to 45 years	2	2
From 46 to 50 years	3	6
From 51 to 55 years	5	5
From 56 to 60 years	—	—
From 61 to 65 years	4	2
From 66 to 70 years	1	2
From 71 to 75 years	—	3
From 76 to 80 years	—	1
From 81 to 85 years	2	—
From 86 to 90 years	—	—
From 91 to 95 years	1	—
Total	107	108

The pyramid of ages formed by the data of the above chart does not present the usual characteristics of a young community in full growth, as is common in the Indian villages; rather it is closer to the old communities, with predomination of the working age groups over the infant and old age groups.

Work

The population able to work can be calculated as that between 11 and 65 years of age; because even though they begin to work very early, the cycle of economic productivity is very long. Calculation of that population gives us the following figures:

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(between 11 and 65 years)

Men, 71 or 69% of the masculine population.
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9:Malkin E-5 (1953-1955)1962 NUSI Seri NUSI

I

INTRODUCTION

[31] [12] [36] [22] [46] The territory discussed in this paper is somewhat larger than the historical area occupied by the Seris. While Seri settlements are limited today to a quite narrow range, the Tiburon Island and the coast of Sonora immediately adjacent to it, they are familiar with a far larger region, owing to their periodic trips, either on their own after fish, turtle and game or, occasionally, in the temporary employ of the Mexican fish-traders and even farmers. The further away from Tiburon perimeter, the lesser their familiarity with a locality.

The area is limited by Hermosillo in the east, Punta Penasco and Porto Libertad in the north, and Nogales in the south, and finally it includes also the coast of Baja California which the Seris sometimes visit. It also includes all of the islands within that area, Tiburon, Patos, Rasa, Angel de la Guarda, San Lorenzo and San Esteban.

137 With very minor variations this entire region belongs properly to the Sonoran desert. *Palo Verde, Palo Fierro, Pithaya, Mesquite, Cholla, Sahuaro,* prickly pear, elephant tree and creosote bush are the basic plants. Among the vertebrates, 136 such forms as the Sonoran bighorn, deer, cougar, jumping rat, badger, coyote, skunk, rattlesnake, sidewinder and Gila Monster are most conspicuous and diagnostic. Among the birds are the roadrunner, the raven, as well as many pelagic or littoral birds, the pelican and cormorant among them.

132 The region is one of very low rainfall, limited to the hot summer months, in some places occuring only a few times in a year. Winters are chilly and dry with persistent winds and dust, with the temperature falling down, on rare occasion, to just above the freezing point. Summers are intensely hot, with daily temperatures usually over 100 and the water temperature of the sea along the shore not infrequently as much as 85 degrees. There are great differences between diurnal and nocturnal temperatures, very much influencing the desert life.

134 Within this region there are several different ecological zones or perhaps sub-zones, varying from the alkaline flats like Playa Noriega, and the alkali-and salt-permeated soils of Desemboque to the more bountiful slopes of the mountains and the irrigated mud-flats around Hermosillo.

121 For the sake of distinction, I have selected several of the typical localities or zones as a point of reference either because of their ecological distinctions or because of their significance as a landmark, readily delineating a peculiar habitat. Personally I am familiar only with some of the

[P. 1A]

9:Malkin E-5 (1953-1955)1962 NU31 Seri NU31

13 17. **San Lorenzo Island** — a narrow long island along the coast of Baja, California, and opposite to Tiburon. Altitude up to 1200 feet. Fauna limited, owing to the distance from the mainland. Vegetation much as elsewhere but impoverished. Visited incidentally as is San Esteban.

18. **Angel de la Guarda** — large island along the coast of the peninsula, longer but narrower than Tiburon, slightly lower at its highest point, pretty much waterless. Vegetation as elsewhere, fauna limited. Visited by the Seris very rarely.

[312]

19. **Desemboque (Mountains)** — high mountains immediately back of Desemboque, 5 miles away, rising perhaps to 1200 feet. Vegetation much richer than in Desemboque, with giant *Sahuaro* growing to considerable size. More moisture than immediately near the sea-shore. Full Sonoran fauna with cougar and bighorn. Frequently visited during hunts.

20. **Tepopa (Mountains)** — in distinction from Punto Tepopa as a whole, this refers only to the rugged head. The mountain reaching to over 1800 feet. Thus by Punto Tepopa are meant only the shores and the littoral.

21. **Buena Vista** — a ranch inland on the way to Hermosillo, newly deserted. Water present in the large well and periodically in the dry river. Willows, large mesquite, Palo Verde, etc. Now only incidentally visited by the Seris but formerly of some importance as a camp site.

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22. **San Francisco de Costa Rica**—a ranch inland halfway between Kino and Hermosillo near the main road, presently a large Mexican ranch. Formerly a frequent Seri campsite. The distinctive feature of this locality is extensive sandy areas with very peculiar fauna.

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23. **Hermosillo**—capital of Sonora of some 40,000 people. Extensive agriculture, irrigation, river and water-dammed reservoir and cattle and cotton ranges. Once the Seris ranged almost as far as this town but presently they come here only on special business, to the hospital or for a ride to town, with the Mexican truckers. Their observations in Hermosillo are only incidental.

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[484] 24. **Nogales**—U.S.-Mexican frontier town. Seris come here very rarely and only certain individuals. Observations less than incidental.

25. **Campo Utah** — large track of irrigated flat lands given up to cotton, operated by the Utah Construction Company between San Francisco and Hermosillo. Somewhat off the main road. Selected as a distinct region owing to the irrigation and cotton fields with their ecological peculiarities. Seris visit this only in transit or on most unusual occasions when they work a few days for the Mexicans.

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The Problem

121 The basic problem concerns the state of Seris' zoological knowledge, that is the general knowledge of the natural history of animals in its main outlines; of their ecology, habits, reproduc-

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9:Malkin E-5 (1953-1955)1962 NU31 Seri NU31

II

OUTLINE OF SERI CULTURE

161 At the moment their number should have in-
164 creased again, after a disastrous epidemic in the spring of 1955.

Biological Background

142 The Seris are somewhat atypical among the peoples of the general area in that they represent a very slender, sinewy, tall type. This is true of both men and women. This physical type in general is apt to be associated with the desert habitat and the Seris answer the requirements very well. As shall be seen, their economy also repre-
433 sents characteristic adaptation to the desert conditions of pre-agricultural people.

Economy

The Seris readily fell into the category of the pre-agricultural hunters and gatherers with one variant, dependence on the produce of the sea, whether marine turtles, fish or littoral invertebrates.

[241] Here the Seri provide another exception for the region. They are the only group that never had any agriculture. McGee has pointed out their lack of agricultural sense and this has also been mentioned by Kroeber and by incidental Mexican visitors. Of late years, some efforts have been made by the Mexican government and the Amer-
[648] ican Friends' Service Committee to persuade them toward agriculture, but to no avail. The Seris
[464] occasionally hire out to the surrounding Mexican or American rancher-farmers but grow restless after a few days of cotton picking and retire, with their advanced pay lost to the employer. On the other hand, efforts to teach them related practices, well digging for example, also failed to interest them. To this day they remain much in the original pattern of economy.

262 McGee (1898:214) who had a chance to observe
114 them from the first hand and who also had access to valuable information from the outsiders gives the following figures for their diet:

land game, large and small (incl. stolen stock)	21%
waterfowl and eggs, incl. pelican	13
sea-turtles	25
fish	15
shellfish	10
cactus fruit	9
other plants	6
miscellaneous	2
total animal 84%	marine 65%

Kroeber (1930:20) questions these figures and thinks that shellfish represents greater percentage than McGee indicated. He also thinks the use of turtles had been exaggerated. He figures the dependence on the animal diet as 75% and on marine 60% but he suspects that these figures are too high for a band with ready access to countless cacti and mesquite.

[P.6B]

Last year the Seris and their families worked on the ranches gathering corn and beans and made three thousand *pesos*, and then they came to town to spend it. They go back and forth much more than they used to.

We ate supper with Mrs. Thomson and then we went to the Plaza to watch the carnival. Much confetti and *cascaroni* was thrown on boys and girls, and the square was thronged by a mass of weaving people, while the military band played seductive Mexican pieces.

The next morning after breakfast we started shopping and kept at it all day, purchasing things to trade with the Indians and groceries for them and ourselves.

While at one of the stores six or eight Yaqui Indians, from their town about one hundred and thirty miles distant, came to buy things for the Easter period. This is the one big fiesta of the year for them. The women were bare-footed and the men wore rawhide sandals. One Yaqui soldier came with them, and he wore three belts of ammunition. They were very dark, with short hair. Rather gaunt, fierce, striking faces.

We walked into a cigarette factory and saw them manufacture cigarettes by machinery. Four machines were running, turning out one hundred and sixty each per minute. Altogether, twenty-three thousand packets of fourteen each every eight hours. These packets are usually tied together in the shape of a solid wheel, one hundred packets each called a *ruedo*, or wheel.

After dinner we went to Roberto's house and they told us there that the Indian boy Pascual had gone out alone and was lost. The Captain left to hunt for him and later brought him in, and then he went out to hunt for us. We finally saw him on a side street and sent him home to his dinner.

Last night, Roberto said they slept up till midnight, then waked up, opened the bride's bundle, and gloated over the bright colors. Later on they opened it twice again. Then they sang and talked for a while before going to sleep again.

On the following day it was nearly three in the afternoon before we got the car repaired and all supplies on board, including our blankets and grips and lumber for a Seri *balsa*, or boat. This was a heavy load for the Ford truck besides five men, which included the two Indians. Every item had to be considered---food for ourselves and the Indians, all the trade things, lumber for a boat and tools to make it, gas, oil, cans for water and many other things.

We soon left the city behind and rattled through the outskirts of poor adobe or stick mud houses, many half in ruins but still sheltering some family.

After about fifteen or twenty miles we arrived at one of Rafael Ysabel's ranches, *Europa*, where Senor Feliz is the foreman or *Mayor*

8: Ascher E-5 (1960) 1962 NU31 Seri NU31

McGee (1898:214)

estimated that maritime resources provided two-thirds of the Seri diet. Kroeber (1931: 20), approximately 30 years later, estimated the proportion at about three-fifths. In the winter of 1960, 30 years after Kroeber's visit, the Seri were obtaining at least three-fifths of their food from the sea.

In pursuit of their main source of subsistence, the Seri travel up and down the narrow coastal band. In the winter of 1960 they were occupying one temporary camp toward the southern end of the band and a permanent camp at the northern extreme. Seri women and children gather molluska; fishing is a male occupation. In addition to gathering and fishing for their own needs, the Seri dispose of a portion of their catch on the commercial market. This enterprise began about 1930, and was encouraged by the establishment, in 1958, of the Sociedad Cooperative de Produccion Pesquera Seri with the cooperation of the Mexican government.

The Pacific green turtle constitutes the largest single item in the Seri diet for at least six months of the year—from January to June—and it is also caught occasionally at other seasons. In 1896 McGee estimated that it provided 25 per cent of the total food supply. Emphasizing the intimate ecological relationship between the Seri and the turtle, McGee (1898: 186-187) wrote:

> ... perhaps half of the aggregate life of the tribe is spent within easy reach of its [the turtle's] feeding and breeding grounds, and tribesman and turtle have entered into an inimical communality something like that of the Siouan Indian and buffalo in olden time. ...

Kroeber (1931: 20) believed that McGee stressed the Seri-turtle relationship too strongly and overestimated its contribution to the diet. McGee (1898: 187), in support of the importance of the turtle to the Seri, points to the fact that the turtle carapace is used for, among other things, a house covering and buckler, a cradle, a coffin, and footgear. The carapace is currently used for supporting and roofing houses and as a starvation food. The contribution of the turtle to the diet varies from year to year, but observations made in 1960 suggest a range of from 15 to 20 per cent as a reasonable estimate.

Seri men fish for turtle from boats, which are manned by two or three men and are propelled by oars, sails, outboard engines, or any combination of the three. The boats operate either individually or in groups. The men fish by night or day, depending on the weather and sea conditions. When they fish at night, they use a kerosene lamp to attract turtles to the surface. The principal implement is the harpoon.

The harpoon tackle of the Seri is illustrated in Figure 1. It consists of a foreshaft (c-h), a mainshaft (j-k), and an extension cord (i). The component parts of the foreshaft are a projectile point (c), a gasket (d), a wrapping cord (f), a hafting base (g), and a lead cord (e and h). In preparation for turtle fishing, the hafting base (g) is plugged into the socket (j) on the main shaft (k), and the extension cord (i) is looped through the lead cord (h).

8: Ascher E-5 (1960) 1962 NU31 Seri NU31

225 In fishing for turtle, one man stands at the bow of the boat, holding the mainshaft and extension cord in one hand. When he sights a turtle, he propels the mainshaft at the animal's carapace, retaining a firm grip on the mainshaft and the extension cord. If it is struck, the turtle lurches away, loosening the foreshaft and unplugging it from the mainshaft. Tired eventually by the tension [411] applied by the fisherman on the extension cord, the turtle is finally stunned by a wooden club and lifted into the boat.

225 There is evidence that the turtle-fishing complex has consider-175 able time depth and stability. The Seri were using similar apparatus and methods at least as early as 1825 (Hardy 1829: 296-297). At [501] this time they employed balsa boats rather than wooden boats with outboard motors and torches of cactus fibers instead of kerosene lamps. The complex continued, apparently with little change, through 1896 (McGee 1898: 187-193). Wooden boats and kerosene [177] lamps began to be adopted during the 1920s, and outboard motors were introduced in the 1940s.

411 During the entire period of 135 years (1825-1960), however, the harpoon tackle underwent only one important innovation. The 225 gasket on the foreshaft was introduced by a Seri Indian about the 196 year 1935. The addition of the gasket was related to, and coincided [439] in time with, the first attempts of the Seri to supply turtles to the commercial market. When they caught turtles solely for their own use, they did not need to keep the animals alive for very long, but when they began to sell them it became important to preserve them alive until they reached the market. The gasket acts like the hilt on a sword, preventing the entrance of the foreshaft hafting into the turtle's body. Through its contact with the carapace, it restricts the rotation of the point within the animal's body and provides a seal which inhibits the loss of blood, and thus prevents early death. After the turtle is stunned with a club and lifted into the boat, the foreshaft is removed and the hole which it made is stuffed with a piece of cloth.

124 Seri men were shown a harpoon foreshaft from a museum archive and asked what it was for and whether they themselves made similar 411 ones. If an informant acknowledged that he made them, he was asked, at the minimum, to detail the materials he used, the procedures he followed, and the approximate amount of time it would take him to produce one. Later he was requested to show the field worker examples of the foreshafts he had made. Of the approximately 40 adult Seri males, about 25 were available for questioning. Of these, approximately ten did not make foreshafts or had made them in the ● [474] past but did so no longer; they were mainly older men and those [887] engaged in the administration of the Sociedad Cooperative de Produccion Pesquera Seri. Five men either would not or could not volunteer information. Data were obtained from the remaining ten adult men and from one eight-year-old boy; they include 21 foreshafts made by these eleven people.

411 The materials from which a foreshaft can be shaped and as-325 sembled vary within what is available in the Seri environment. Iron

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

prepared by trituration with a pebble or rubbing with the fingers, usually in a shell cup. Sometimes the shell used for the purpose is the valve of a *Cardium*, which serves indiscriminately as cup, spoon, skin-scraper, etc; but preference is apparently given to thick and strong shells, such as the wave-worn valve of *Chama* (?), shown in plate XXVII, figure 7, which are consecrated to the use and eventually buried with the user, together with a supply of the paint (like that illustrated in the cane cylinder—figure 4—which was a mortuary sacrifice). The gypsum is usually carried in natural slabs or other fragments, perhaps rounded by wear (plate XXVII, figures 6 and 8); it is prepared by wetting and rubbing two pieces together, the larger being reduced to metate shape by the operation. The dumortierite was observed only in the form of a pencil made by pulverizing the substance and mixing with sufficient clay to give consistency. The several pigments are applied wet by means of human-hair brushes kept for the purpose, the process occupying from half an hour to three or four hours for the more elaborate designs. So far as observed at Costa Rica in 1894, the paints were mixed in water only; but since painting outfits found on Tiburon island in 1895 were smeared with grease, it is probable that either water or fats may serve for menstrua, at the convenience of the artists. Commonly the process of painting is measurably cooperative. The matron usually depicts her device on the faces of her daughters up to the age of 12 or 15 years, when they learn to make the applications themselves; and frequently two or more women (usually those with similar devices) work together in preparing and applying the pigments, each laying the paint on her own face and apparently guiding her hand partly by the sense of feeling and partly by suggestions from her coworkers; but Candelaria and some other of the younger women at Costa Rica frequently worked alone, aided by a mirror in the form of a shallow bowl of water set in the shadow while the brilliant desert glare fell full on the face.

The mines yielding the pigments were not located. The geologic conditions are such that the ochers are undoubtedly abundant; but it is probable that the gypsum is uncommon and confined to a remote locality or two, and that the dumortierite is rare and scanty here as elsewhere. The care with which the paints are preserved, prepared, and applied, the fact that they are indispensable feminine appurtenances even on the longest journeys, and their sacred rôle in the mortuary customs, all combine to indicate that they are among the most highly prized possessions of the people and by far the most precious of their minerals.

The sematic functions of the designs are esoteric, yet an inkling of their meaning was obtained through Mashém, the interpreter at Costa Rica in 1894; from his expressions it appears that the designs are sacred insignia of totemic character, serving to denote the clans of which the tribe is composed. But three clans were identified, and

642 621 618 714 [786] [476]

The third specification states that a kin group, to constitute a clan, must exhibit actual social integration. Murdock stresses the necessity of observing a positive group sentiment, such as would be manifested by organized collective activities or group functions, before the group can be characterized as a clan. An essential feature of this group sentiment is the inclusion of the wife as an integral member of her husband's kin group.

621 618 [628] [622] [701] [583] [476]

This sort of social integration was indeed exhibited by the Seri kin group of each subdivision. It was, in fact, fostered by the isolation brought about by the inhabitants' reservation of hunting and fishing rights for themselves. Tension existed between certain subdivisions and, since there was no chief, the oldest capable male organized and led the fighting force of the clan. In times of need, the members of the group united to give mutual assistance. The groom-to-be could expect material aid from his fellow clan members in the payment of the bride price. Mutual assistance was given in the fulfillment of puberty ceremony and burial obligations. The men cooperated in their hunting and fishing expeditions. The women of the clan, including the in-married spouses, cooperated in the gathering and sharing of food. Everyone could attend the various fiestas. It is said that in the performance of these collective activities, close harmony generally prevailed.

BAND INTERNAL AND EXTERNAL RELATIONS

642 619 578 [648]

The division of the Seri tribe into bands was likely brought about through internal strife. During the period of band history known to the present-day Seri,[8] however, serious skirmishes seem to have been fought predominantly with non-Seri groups.[9]

Band I

642 621 628 578 [721] [648]

Band I internal relations appear to have been relatively peaceful. The inhabitants of subdivisions 1, 2, 3, 4, and 5 were fishermen as well as hunters and gatherers, whereas the people of subdivision 6 preferred to subsist on gathered food and wild game. Also, the members of Band I robbed cattle and horses, which pursuit brought reprisals from the Mexican ranchers. There was apparently considerable social intercourse among the six subdivisions, even to the extent that hunting rights of one were sometimes granted to inhabitants of a neighboring section.

Trouble developed when some members of Band I speared fish within the domain of Band V. Here also bitter fighting broke out, and any semblance of peaceful co-existence between the two groups was destroyed.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

F. E. Grossmann defines the term "*ac*, very, ad. (prefix)", and over a hundred and fifty of his terms illustrate the use of this adjectival or adverbial prefix as an undifferentiated yet vigorous intensive (*e. g.*, *aʃ*, female or woman, *ac-aʃ*, a lady—great or grand woman; *ōk*, high or height, *ac-ōk*, highmost); and in the Pimentel vocabulary this signification is attested by several other terms (*e. g.*, "*Xeerrui*, paso menudo y bueno"). Finally, the intervalated consonant *r* is a common participial element in the Piman, while the suffix *ōi* is a habitual assertive termination, as shown by various terms in the Pimentel and other vocabularies. Dropping this termination, the expression becomes *ac-erer*, or—without the nonessential participial element—*ac err*, signifying (so far as can be ascertained from the construction of the language) "moving", or "mover", qualified by a vigorous intensive.[1] To one familiar with the strikingly light movement characteristic of the Seri—a movement far lighter than that of the professional sprinter or of the thoroughbred "collected" by a skilful equestrian, and recalling that of the antelope skimming the plain in recurrent impulses of unseen hoof-touches, or that of the alert coyote seemingly floating eerily about the slumbering camp—this appellation appears peculiarly fit; for it is the habit of the errant Seri to roam spryly and swiftly on soundless tiptoes, to come and go like fleeting shadows of passing cloudlets, and on detection to slip behind shrub or rock and into the distance so lightly as to make no audible sign or visible trail, yet so fleetly withal as to evade the hard-riding horseman. The Seri range over a region of runners: the Opata themselves are no mean racers, since, according to Velasco and Bartlett, "In twenty-four hours they have been known to run from 40 to 50 leagues";[2] and, according to Lumholtz, their collinguals, the Tarahumari, or "Counting-Runners", are named from their custom of racing,[3] and display almost incredible endurance:

> An Indian has been known to carry a letter from Guaxaparas to Chihuahua and back again in five days, the distance being nearly 800 miles. In some parts where the Tarahumaris serve the Mexicans they are used to run in the wild horses, driving them into the corral. It may take them two or three days to do it, sleeping at night and living on a little pinole. They bring in the horses thoroughly exhausted, while they themselves are still fresh. They will outrun any horses if you give them time enough. They will pursue deer in the snow or with dogs in the rain for days and days, until at last the animal is cornered and shot with arrows or falls an easy prey from sheer exhaustion, its hoofs dropping off.[4]

[1] The latter form (*ac err*) corresponds precisely with the current Papago pronunciation of the term, though none of the various Papago informants consulted were able to interpret the expression; indeed, they simply relegated it to the category of "old names" which they deemed it needless to discuss. An archaic form of orthography, used in the synonymy (pp. 128-139), is *Seeri*, which suggests the same sounding of the initial sibilant.

[2] From 105 to 120 miles. Bartlett, Personal Narrative, vol. i, p. 445.

[3] Memoirs of the International Congress of Anthropology, Chicago, 1894, p. 304. In a letter to Mr F. W. Hodge, under date of September 11, 1900, Dr Lumholtz says: "After renewed investigation I have come to another opinion regarding the meaning of the tribal name *Tarahumare*. This word is a Spanish corruption of the native name 'Rarámuri'. Though the meaning of this word is not clear, that much is certain that *rale* or *lare* means 'foot', and I therefore take it that we must be at least approximately correct when we say that the word signifies 'foot-runner'."

[4] American Anthropologist, vol. VIII, 1895, p. 92.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

171 481 The Papago, of the same region and linguistic stock, have a racing game in which a ball of wood or stone caught on the foot is thrown, followed, and thrown again until the two or more rival racers have covered 20 to 40 miles in the course of a few hours; and their feats as couriers and trailers are quite up to those of the Opata. Yet among all these tribes, and among the Mexicans as well, the Seri are known as *the* runners par excellence of the Sonoran province; and it is but natural that their astounding swiftness and lightness of foot should have brought them an appellation among contemporaries to whom these qualities peculiarly appeal.

101 Accordingly, both derivation and connotation give meaning to the name, and warrant the rendering (much weakened by linguistic infelicities) of "spry" or "spry-moving", used in substantive sense and with an intensive implication.

101 114 175 197 The chronicles of the tribe, especially those written during the seventeenth and eighteenth centuries, indicate that the alien designation was applied loosely and with little appreciation of the tribal organization, just as was the case elsewhere throughout the continent. Gradually the chroniclers took cognizance of intertribal and intratribal relations, and introduced various distinctions in nomenclature expressing tribal or subtribal distinctions of greater or less importance. One of the earliest distinctions was that between the Seri and the Tepoka, and this distinction has been consistently maintained by nearly all later authorities, despite the commonly accepted fact (brought out most authoritatively by Hardy) that the tongues of the tribes are substantially alike. Another early distinction was that made between the Seri and the Guayma; it was based primarily on diversity of habitat and persistent enmity, though all the earlier authorities agreed, as well shown by Ramirez, that the tongues were essentially identical. The distinction has been maintained by most authorities and strongly emphasized by one (Pinart, as quoted by Bandelier), and since the Guayma are extinct, and hence beyond reach of direct inquiry, the early interpretation of tribal relation must be perpetuated.[1] Still another distinction was that made between the Upanguayma and the Guayma, and inferentially the Seri also; although the grounds for this distinction were not specifically stated, it seems to have grown out of diversity in habitat merely; but there were clear implications that the tribe or subtribe was affiliated linguistically with the Guayma, and hence with the Seri, and this assignment has been adopted by leading authorities, including Pimentel and Orozco. Among the earlier distinctions based on indus-

101 114 175

[1] In view of the clear indications, both a priori and a posteriori, that the latest Guayma survivors must have taken the language of the Pima (Yaqui) tribesmen with whom they *found* refuge, and in view of his failure thus far to present his data for public consideration, M Pinart's inference that the Guayma belonged linguistically to the Pima stock can hardly be admitted to hold against the specific statements of the Jesuit missionaries and such accomplished inquirers as Ramirez and Pimentel.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

its astounding protective efficiency being attested by the readiness with which the Seri run through cactus thickets so thorny as to stop horses and dogs, or over conglomerated spall-beds so sharp that even the light coyote leaves their trail. In the absence of measurements it may merely be noted that the hands and feet of the Seri are materially larger, not only absolutely but relatively to their stature, than those of neighboring tribesmen or even of Mexican and American workmen. And, on the whole, it may be said that in their proportions, as in their stature and color, the Seri are strikingly uniform, their range being less than that commonly observed in contemporary tribes, and the differences between them and their neighbors much exceeding the range among themselves. 142

Somatically distinctive as is the Seri at rest, he (or she) is much more so in motion—though the characteristics so readily caught by the eye are not easily analyzed and described. Perhaps the most conspicuous element in their walk is a peculiarly quick knee movement, bringing the foot upward and forward at the end of the stride; this merges into an equally quick thrust of the foot forward and downward, with toe well advanced, toward the beginning of the next stride; and these motions combine to produce a singular erectness and steadiness of carriage, the body moving in a nearly direct line with a minimum of lateral swaying or vertical oscillation, while the legs neither drag nor swing, but spurn the ground in successive strokes. Thus the walk seems notably easy and graceful, while the walker carries an air of alertness and reserve power, as if able to stop short at any point of a pace or to bolt forward or backward or sidewise with equal facility; he simulates the "collected" animal whose feet tap the ground lightly and swiftly while his body appears to yield freely to voluntary impulse. In this deer-like or antelope-like movement all the Seri are much alike, and all are decidedly removed from their neighbors, even the light-footed Papago. The component motions are most conspicuous in leisurely walking, though the resultant movement is more striking in rapid walk or the incredibly swift run of youths and adults. The general movement is akin to that shaped by the habit of carrying burdens balanced on the head, as the Seri women actually carry their water ollas for astonishing distances; but the carriage is shrewd—indeed, best displayed—by the warriors and growing boys, who are not known to carry water in this way. 148 [482]

Among the conspicuous but nondistinctive somatic characters of the Seri is luxuriant straight hair habitually worn long and loose. Commonly the hair is jet-black for most of the length, growing tawny toward the tips; sometimes it is black throughout, while again the tawny tinge, or perhaps a bleached appearance, extends well toward the scalp. Age-grayness seems not to be characteristic; the most aged matrons known have no more than a few inconspicuous and scattered gray hairs, though the pelage of some is slightly bleached or faded. None of the warriors at Costa Rica showed the slightest grayness except 142 [302] 142 145

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

blocks or metates, though it is manifest that most of the camps were fireless and many foodless. It is particularly noteworthy that even the more temporary resting-places are seldom if ever less than a mile or two from the nearest fresh water. In short, the Seri are not a domiciliary folk, but rather homeless wanderers, customarily roving from place to place, frequently if not commonly sleeping where overtaken by exhaustion or storm, ordinarily slumbering through a part of the day and watching by night, habitually avoiding fresh waters save in hurried and stealthy visits, and apparently gathering in their flimsy huts only on special occasions.

In conformity with their rovingness the Seri are notable burden-bearers. They habitually carry their entire stock of personal belongings (arms, implements, utensils, and bedding), as well as their stock of food and—weightiest burden of all—the water requisite for prolonged sustenance amid scorching deserts, in all their wanderings, the water being borne chiefly by women, in ollas, either balanced on the head singly or slung in pairs on rude yokes like those of Chinese coolies. And they have never grasped the idea of imposing their burdens on their bestial associates; their coyote-curs are not harnessed or even led; when they surround and capture horses, burros, and kine they make no use of ropes, never think of mounting even when pursued by vaqueros, but immediately break the necks or club out the brains of the beasts, perchance to tear the writhing body into quarters and flee for their lives with the reeking flesh still quivering on their sturdy heads and brawny shoulders—and scores of vaqueros agree in the affirmation (wholly incredible as it would be if supported by fewer witnesses) that even when so burdened the Seri skim the sand wastes of Desierto Encinas more rapidly than avenging horsemen can follow.

The hardly conceivable fleetness of the Seri is conformable with their habitual rovingness and their ability as burden-bearers; and this faculty is established by cumulative evidence so voluminous and consistent as to outweigh the presumption arising from the standards attained among other peoples. A few minutes after they were photographed, the group of boys shown in plate XVI, with several others of about the same size, provided themselves with a stock of their favorite human-hair cords, "rounded up" a dozen mongrel coyote-dogs haunting the rancheria at Costa Rica, and herded the unwilling animals toward a shrubbery-free space a quarter of a mile away, in order to rope them in imitation of the work of the Mexican cowboys earlier in the morning. From time to time as they went a frightened cur sneaked or broke through the cordon of boys, and made for distant shrub-tufts at top speed; yet in every case a boy darted from the ring, headed off the animal within one or two hundred yards, and lashed it back to its place. On arriving at their miniature rodeo the boys widened their ring, and at a signal scattered and frightened the dogs; then, when the fleeing animals had a fair start, each selected his victim and fol-

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

857 481 [177] [231] lowed it, yelling and swinging his light lasso, until, after much doubling and dodging and many unsuccessful casts, he caught and dragged the howling beast back to the open; and it was only after half a dozen repetitions that enough dogs had escaped to spoil the sport. As the boys lounged chattering back toward the rancheria their course lay between two clumps of the usual desert shrubbery, so placed that when the first was obliquely left and 40 or 50 feet distant from them, the other was obliquely right and 100 feet away. At this point a bevy of small birds (perhaps blackbirds—at any rate corresponding to blackbirds in size and flight) fluttered suddenly out of the nearer clump toward the more distant one, when, too instantaneously for the untrained eye to catch exchange of signal or beginning of movement, the boys lunged forward in a common effort to seize the birds; and though none were entirely successful, one exultantly displayed a tuft of feathers clutched by his fingers as the bird darted into and through the thorny harbor. When the distances were paced it was found that, although the birds had the advantage of the start, the boys covered at least 90 per cent of their distance in the same time; while the spontaneity of the impulse demonstrated habitual chase of flying game under fit conditions.

124 224 857 While obtaining the Seri vocabulary with Mashém's aid, advantage was taken of every opportunity to secure collateral information concerning the actual use of the terms, and thereby of gaining insight into the tribal habits. Through his naive explanations, usually repeated and corroborated by the elderwoman of the Turtle clan (Juana María) and others of the tribe, it was learned that half-grown Seri boys are fond of hunting hares (jack-rabbits); that they usually go out for this purpose in threes or fours; that when a hare is started they scatter, one following it slowly while the others set off obliquely in such manner as to head it off and keep it in a zigzag or doubling course until it tires; and that they then close in and take the animal in their hands, frequently bringing it in alive to show that it was fairly caught—for it is deemed discreditable, if not actually wrong, to take game animals without giving them opportunity for escape or defense by exercise of their natural powers. Similarly, Mashém described the chase of the bura and other deer as ordinarily conducted by five persons (of whom one or two may be youths), who scatter at sight of the quarry, gradually surround it, bewilder it by confronting it at all points, and finally close in either to seize it with their hands, or perhaps to brain it with a stone or short club; the former being held the proper way and the latter a partial failure. This hunting custom, described as a commonplace by Mashém, is established by the vaqueros who had frequently witnessed it from a distance; and the same extra-tribal observers described still more striking feats of individual Seri hunters: Don Manuel, son of Señor Encinas, and Don Ygnacio Lozania were endeavoring to train to work a robust Seri (one of a band sojourning temporarily at Costa

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

Rica) noted for his prowess in hunting. One hot afternoon he begged 224
relief from his tasks, saying the spirit of catching a deer had hold on him; and he was excused on condition that the deer be brought entire to the rancho. Two hours later he was seen driving in a full-grown buck; on approaching the rancho the terrified animal turned this way and that, describing long arcs in wild efforts to avoid the human habitation; yet the hunter kept beyond it, heading it off at every turn and gradually working it nearer, until, at a sudden turn, he was able to rush on it; whereupon he caught it, threw it over his shoulders, and ran in to the rancho with the animal still struggling and kicking off its overheated hoofs.

Señor Encinas himself, with Don Andrés Noriega and several other [648]
attachés, vouch for the catching of a horse by a Seri hunter in still more expeditious fashion: one of the horses belonging to the rancho was exceptionally fat, and hence exceptionally tempting to the Seri band (and at the same time worthless to the vaqueros); the chief begged for it persistently until, wearied by his importunities, the ranchero offered the horse to the band on condition that a single one of them should catch it within a fixed distance (about 200 yards) from the gateway of the corral—and the offer was promptly accepted. With the view of making the test of fleetness fair, a vaquero was called in to frighten the horse and start him running around the interior of the corral, while a boy stood by to drop the bars at the proper moment, the Indian standing ready outside the gateway; when the animal had gained its best speed the bars were dropped and it bolted for the open plains—but before the 200-yard limit was reached the hunter had overtaken it, leaped on its withers, caught it by the jaw in one hand and the foretop in the other, and thereby thrown it in such manner as to break its neck. Knowing of these and other instances, L. K. Thompson, of Hermosillo, undertook arrangements for publicly exhibiting Seri runners as deer catchers at different expositions during the nineties; but his arrangements failed, chiefly because of the anticipated (and probably underestimated) difficulty of taming the Seri sufficiently for the purpose.

About 1893, Señor Encinas and several attendants left Costa Rica 481
one morning for Hermosillo, leaving at the rancho, among others, a Seri matron with a sick child nearly a year old; in the evening (as they learned later) the child was worse, and the matron took the trail about dusk, in the hope of finding a cure in the white man's touch or other medicine—and at dawn next morning she was at Molino del Encinas, 17 leagues (nearly 45 miles) away, with her helpless child and a peace offering in the form of a hare, which she had run down and caught in the course of the journey. And the matrons, with children [484]
astride their hips and water-filled ollas balanced on their heads, and all their goods and chattels piled on their backs, habitually traverse Desierto Encinas from the sea to Costa Rica (some 30 miles), or from Costa Rica to the sea, in a night.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

Examples of Seri fleetness and endurance might be multiplied indefinitely, and many of still more striking character might be adduced; but these instances, all attested by several witnesses, all corroborated by independent facts, and all consistent with the observations of the 1894 expedition, seem fairly to represent one aspect of the pedestrian habit of the tribe.

A trait of the Seri hardly less conspicuous than their pedestrian habit is habitual use of hands and teeth in lieu of the implements characteristic of even the lowly culture found among most primitive tribes. Perhaps the most nearly universal implement is the knife—at first of shell, tooth, bone, or wood, later of stone, and last of metal—and hardly a primitive tribe known from direct observation or from relics has been found independent of this most serviceable implement; yet the Seri may be described with reasonable accuracy as a knifeless folk. Awls and marlinspikes of bone and wood, shell cups, and protolithic mullers or hammers are found in numbers in their hands, on their rancheria sites, and in their ancient shell accumulations, while rudely chipped stone arrowp ints are sparsely scattered over their range; yet not a single knife of stone or other wrought substance has been found in their territory or in their possession, save for an occasional metal knife obtained by theft or barter. And the habit of dispensing with this primary implement is attested both by everyday customs and by the traditions and chronicles concerning the tribe. Thus, various observers (notably Hardy) have recorded the features and uses of balsas, harpoons, ollas, etc, yet no records of cutting implements have been found; similarly the chronicles contain records of barter between the Seri and the Sonorenses through which the savages acquired aguardiente, manta, garments, sugar, grain, etc, yet no record is known of the leading articles of exchange to practically all other tribes of the continent, viz, cutlery; and in like manner the local traditions recount the constant desire of the Seri for liquor and tobacco, saccharine and other food substances, clothing or material for making it, tin cups, lard-cans, and other metallic utensils, as well as nails for harpoons and hoop-iron for arrowpoints, in addition to firearms and ammunition; yet the recounters are significantly silent on the subject of knives.

Conformably, the 60 Seri gathered near Costa Rica in 1894 made it their business to pick up or beg all sorts of industrial products and materials, yet apparently did not possess so many as a dozen knives in the entire band; and while protolithic implements, ollas, shell cups, paint-stones, etc., were seen in constant use, none of the men, women, or children were observed to use knives for cutting meat or for any other customary purpose. Among the supplies laid on top of the jacal shown in plate x, to keep them out of the way of the dogs, was a hind leg of a horse, from femur to hoof (some three days dead and still

2: Kroeber E-5 (1930)1931 NU31 Seri NU31

to prepared defence or attack. The Seri mode of life and induced temperament must have led to many instabilities, with make-shifts often actually more in use, but finished or efficient types of artifact seemingly latent and sporadically emerging in the stream of their culture. Thus, the shell alongside the double-bladed paddle; plain baskets seen in use, but a series patterned in a definite style being produced as soon as their manufacture was profitable; unroofed and roofed houses. Similarly, the two-pointed fish-spear and olla carrying-net, which neither McGee nor I saw, but which may persist in memory in the culture ready for revival on occasion.

Somewhat similar, perhaps, is the status of polygyny, which prevailed in McGee's day (p. 279) a half generation after a disastrous war, but was not the rule, or was successfully disavowed, in earlier times and to-day.

Errors and Misconstructions

McGee dwells at length (pp. 152-156) on three strong trends of Seri life and culture: the pedestrian habit, accompanied by quite exceptional fleetness; a hand and tooth sense with corresponding absence of tool sense; and a race sense unalterably opposed to mixture with alien blood.

All the Sonora and Southwestern Indians were and largely still are fast and sustained long-distance travelers on foot. There is nothing to show that the Seri were superior to the others. The one time they remember having met the Papago in a foot-ball race, they were beaten. Yaqui warfare is a record of at least equal endurance and ability to evade superior civilized forces. In fact the faculties of the Yaqui are the more remarkable in that they have always been settled farmers and often moved in larger bodies. The incredible fleetness of the Seri was probably most manifest in mesquite thickets and on rocky ground. That they should outrun a horseman on an open plain is the sort of tale that one hears on every frontier and which the more intelligent frontiersman does not take seriously.

Hand and tooth sense was undoubtedly strong among the Seri. The same thing, especially as regards food, is reported for the Lower Californians. But the inference of lack of tool sense is erroneous. Knives are prized by the Seri, and, along with nails, axes, and the like, are handled with a direct, crude effectiveness. The crudity is due to the lack of standard, order, and interest in finish which pervades all Seri cultural manifestations and which rests ultimately on their essential isolation and self-sufficiency in an unusually forbidding environment. What a Seri is interested in is not a neat job but one that will substantially meet his immediate need. Their modern plank boats are weak in plan, badly joined, and always leaky; but they serve. A structurally stronger boat would probably profit noth-

283 302 from coarse, wiry grass stems, and saved all the brushings to be used in the making of strong threads and cords.

147 481 The fleetness of foot and remarkable physical endurance of these people attest to the rigorous and difficult life in Seriland where the ability of an individual to survive a season of want depended upon the reserve energy of his own body by which he could carry himself long distances in search of food and yet have strength to return to a waterhole, left miles behind. The slender, sinewy limbs and capacious chests of the Seris, in whom no trace of obesity has ever been observed, show clearly the result of untold centuries of selection of the strong by the severity of the environment, where water, [312] too heavy for transport, too difficult of storage, is yet always within reach of an organism strong enough to journey ten, twenty, or even fifty miles in search of it.

224 Perhaps the most severe physical exercise practiced by the Seris was the chase of animal game, particularly since it was often resorted to only after a period of weakening hunger which prompted the all-out effort to obtain adequate food supply. Days of wandering over the deserts in search of vegetable food were sometimes unrewarded, and although rabbits were to be had for the chase, they were too small to be of much consequence in the feeding of a family. The deer were fairly plentiful and provided excellently for a lasting feast.

The deer hunt was conducted by several tribesmen without weapons. When an animal was sighted it was followed by one and circled by others of the party, chased until frantic and exhausted, whereupon one of the men rushed upon it, threw it to the ground and caved in its skull with a stone.

The most avidly sought prey in the Seri chase were the helpless young and heavily pregnant does which were pursued and rent to fragments with a horrible fury, particularly with intent upon the succulent tidbits afforded by the fetal flesh.

222 A time of ease and plenty came each summer, for usually in late May or June the cactus plants with which Seriland abounds begin to mature their fruits. In the foothills of Sierra Seri on the mainland, great

3:Davis & Dawson E-5 (1922-1940) 1945
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their minds and to live among them without undue fear of losing his life. Through the kindness of Señor Thomson the senior author succeeded in making himself a friend of the Seri and, enlarging upon this friendship through long periods of living and traveling among them, has acquired an intimate knowledge of these strange people.

In 1922 the fishing industry of the Gulf of California was not yet well developed, and it was to be ten years before the village of Kino should appear on the maps of the Sonora coast. The Seris were still isolated in their desert domain and their numbers, then about 250, were maintaining themselves out of reach of the infectious diseases of the white man. The clan life had disappeared, and the people lived as a single tribe with their old chief, Juan Tomas, 90 years old at that time

FIG. 15. MOVING DAY AMONG THE SERIS
THESE BURDENS, BORNE FOR MANY MILES OVER ROCKS, THROUGH CACTUS AND DEEP SAND, CONTAIN UTENSILS FOR HOUSEKEEPING WHEREVER THE SERIS MAY STOP.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

its astounding protective efficiency being attested by the readiness with which the Seri run through cactus thickets so thorny as to stop horses and dogs, or over conglomerated spall beds so sharp that even the light coyote leaves their trail. In the absence of measurements it may merely be noted that the hands and feet of the Seri are materially larger, not only absolutely but relatively to their stature, than those of neighboring tribesmen or even of Mexican and American workmen. And, on the whole, it may be said that in their proportions, as in their stature and color, the Seri are strikingly uniform, their range being less than that commonly observed in contemporary tribes, and the differences between them and their neighbors much exceeding the range among themselves. 142

Somatically distinctive as is the Seri at rest, he (or she) is much more so in motion—though the characteristics so readily caught by the eye are not easily analyzed and described. Perhaps the most conspicuous element in their walk is a peculiarly quick knee movement, bringing the foot upward and forward at the end of the stride; this merges into an equally quick thrust of the foot forward and downward, with toe well advanced, toward the beginning of the next stride; and these motions combine to produce a singular erectness and steadiness of carriage, the body moving in a nearly direct line with a minimum of lateral swaying or vertical oscillation, while the legs neither drag nor swing, but spurn the ground in successive strokes. Thus the walk seems notably easy and graceful, while the walker carries an air of alertness and reserve power, as if able to stop short at any point of a pace or to bolt forward or backward or sidewise with equal facility; he simulates the "collected" animal whose feet tap the ground lightly and swiftly while his body appears to yield freely to voluntary impulse. In this deer-like or antelope-like movement all the Seri are much alike, and all are decidedly removed from their neighbors, even the light-footed Papago. The component motions are most conspicuous in leisurely walking, though the resultant movement is more striking in rapid walk or the incredibly swift run of youths and adults. The general movement is akin to that shaped by the habit of carrying burdens balanced on the head, as the Seri women actually carry their water ollas for astonishing distances; but the carriage is shared—indeed, best displayed—by the warriors and growing boys, who are not known to carry water in this way. 481 [482]

Among the conspicuous but nondistinctive somatic characters of the Seri is luxuriant straight hair habitually worn long and loose. Commonly the hair is jet-black for most of the length, growing tawny toward the tips; sometimes it is black throughout, while again the tawny tinge, or perhaps a bleached appearance, extends well toward the scalp. Age-grayness seems not to be characteristic; the most aged matrons known have no more than a few inconspicuous and scattered gray hairs, though the pelage of some is slightly bleached or faded. None of the warriors at Costa Rica showed the slightest grayness except 142 [302] 142 145

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

blocks or metates, though it is manifest that most of the camps were fireless and many foodless. It is particularly noteworthy that even the more temporary resting-places are seldom if ever less than a mile or two from the nearest fresh water. In short, the Seri are not a domiciliary folk, but rather homeless wanderers, customarily roving from place to place, frequently if not commonly sleeping where overtaken by exhaustion or storm, ordinarily slumbering through a part of the day and watching by night, habitually avoiding fresh waters save in hurried and stealthy visits, and apparently gathering in their flimsy huts only on special occasions.

In conformity with their rovingness the Seri are notable burden-bearers. They habitually carry their entire stock of personal belongings (arms, implements, utensils, and bedding), as well as their stock of food and—weightiest burden of all—the water requisite for prolonged sustenance amid scorching deserts, in all their wanderings, the water being borne chiefly by women, in ollas, either balanced on the head singly or slung in pairs on rude yokes like those of Chinese coolies. And they have never grasped the idea of imposing their burdens on their bestial associates; their coyote-curs are not harnessed or even led; when they surround and capture horses, burros, and kine they make no use of ropes, never think of mounting even when pursued by vaqueros, but immediately break the necks or club out the brains of the beasts, perchance to tear the writhing body into quarters and flee for their lives with the reeking flesh still quivering on their sturdy heads and brawny shoulders—and scores of vaqueros agree in the affirmation (wholly incredible as it would be if supported by fewer witnesses) that even when so burdened the Seri skim the sand wastes of Desierto Encinas more rapidly than avenging horsemen can follow.

The hardly conceivable fleetness of the Seri is conformable with their habitual rovingness and their ability as burden-bearers; and this faculty is established by cumulative evidence so voluminous and consistent as to outweigh the presumption arising from the standards attained among other peoples. A few minutes after they were photographed, the group of boys shown in plate XVI, with several others of about the same size, provided themselves with a stock of their favorite human-hair cords, "rounded up" a dozen mongrel coyote-dogs haunting the rancheria at Costa Rica, and herded the unwilling animals toward a shrubbery-free space a quarter of a mile away, in order to rope them in imitation of the work of the Mexican cowboys earlier in the morning. From time to time as they went a frightened cur sneaked or broke through the cordon of boys, and made for distant shrub-tufts at top speed; yet in every case a boy darted from the ring, headed off the animal within one or two hundred yards, and lashed it back to its place. On arriving at their miniature rodeo the boys widened their ring, and at a signal scattered and frightened the dogs; then, when the fleeing animals had a fair start, each selected his victim and fol-

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

On putting the indi-
323 [462] cations together it would seem probable that the ware is made by the women, and that each piece is shaped from a lump of tempered and well-kneaded clay of suitable size, first hollowed and rudely shaped over one hand, and gradually expanded by spiral rubbing, kneading, and pressure between the hands of the maker. The burning is incomplete and variable, suggesting a little outdoor fire in a shallow pit adapted to a single vessel. The ware is without glaze or slip or other surficial treatment save that the lamellar texture is best developed toward the surfaces; hence it is so porous that the filled vessel is moist even in the sun.

482 [462] Ordinarily women are the water-bearers, each carrying an olla balanced on the head with the aid of a slightly elastic annular cushion, usually fashioned of yucca fiber (plate XXXII and figure 15), though in some cases two ollas are slung in nets at the ends of a yoke (figure 16) after the Chinese coolie fashion (this device being apparently accultural).

FIG. 15—Seri olla ring.

415 The function of the conventional Seri olla is exclusively that of a canteen or water-carrying vessel, and its form is suited to no other use; while its lines, like its thinness of wall, are adapted to the stresses of internal and external pressure in such wise as to give maximum strength with minimum weight. It is by reason of this remarkably delicate adaptation of materials to purposes that the plain olla figured in plate XXXIII, weighing an ounce or two more than 10 pounds in dry air, holds and safely carries three and one-third times its weight of water. When such ollas are broken, the larger pieces may be used as cups or

FIG. 16—Water bearer's yoke.

1: McGee E-S (1894-1895)1898 NU31 Seri NU31

and XIX; the birdskin kilt (put on for the purpose) is illustrated in plate XVIII, while the aboriginal fabric is fairly represented in plate XXIX. Although ordinarily worn as a kilt, the same article (temporarily replaced by an improvised substitute) serves other purposes at the convenience of the wearer; in the chase for tunas and for moving game it becomes a bag or pack-sheet; in case of cold rain it is shifted to the shoulders or the exposed side; during the siesta it is elevated on an shrub and a stick to serve as a canopy; at sleeping time generally it forms (especially when of birdskin) a bed, i. e., a combined mattress and coverlet; and in attack or defense the pelican skin is at once standard, buckler, and waving capa to confuse quarry or enemy after the manner of the torero's cloak.

An almost equally distinctive garment is a short shirt or wammus, with long sleeves, worn by men and women but not by children; ordinarily it covers the thorax, missing connection with the kilt by a few inches, and so affording ventilation and space for suckling the teeming offspring. Unlike the kilt, it is an actual garment, fitted with sleeves and fastened in front with hair-cord strings. Although the Seri wammus corresponds fairly with a Yaqui garment, it seems practically certain that it is of local aboriginal design, and that it was made primitively of haircloth or native textiles (as illustrated in plate XXIX) and worn rather ceremoniously; but latterly it is made of manta and is worn habitually (at least by the women and on the frontier), though cast aside in preparation for any special task or effort—i. e., it is not connected with pudency-sense, save to a slight degree in the younger women. The form, function, and prevalence of the wammus are illustrated by the group shown in plate XIII, in which nearly all of the thirty-odd adults wear the garment.

These two articles constitute the ordinary wearing apparel of the Seri, though they are commonly supplemented (especially when both are of manta) by a pelican-skin robe, which is habitually carried to serve as bed or mackintosh, according to the chance of journey and weather, or as a shield in sudden warfare. No head-covering is used, save in the ceremonial masquerade, when the heads of animals are worn as masks,[1] or in aping Caucasian customs, especially on expeditions for barter (as illustrated in plate XII). Loose trousers of Mexican pattern are sometimes put on at frontier points, but are discarded in Seriland proper, save by Mashém, who maintains prestige partly by this borrowed badge of Caucasian superiority. Leggings and moccasins are eschewed, naturally enough, since they would afford little protection from the sharp spalls and savage thorns of the district, and would give lodgment for the barbed spines inevitably gathered in rapid chase or flight over cactus-dotted stretches; and the only foot-covering ever (save Mashém's boots) was a single sandal made from the rough skin of a turtle-flipper, apparently for ceremonial rather than practical use.

[1] Hardy (Travels, p. 336) describes the ceremonial wearing of the heads of deer with horns attached.

2: Kroeber E-5 (1930)1931 NU31 Seri NU31

524 Dice are three splints of cane; tapering toward both ends, nearly flat. The concave inside is greenish white, the outside darker. The count is: 0 insides up, win 4; 1 inside up, win 1; 2 insides up, lose 1 and play; 3 insides up, lose 4. The 3 splints are stacked together, then thrown endwise against the palm, a piece of turtle shell, or anything similar, so as to fly forward and scatter on the ground. (Some players probably acquire a degree of skill in making the canes fall right.) A player repeats until he throws 2 whites or insides. For points scored, he draws lines on the ground in front of himself. His opponent erases his lines as he wins, or adds to them as he loses, until he himself is ahead, when he begins to mark his own lines. Ten points wins the game. A stick is then set in the ground by the winner, who goes on playing the next game. That is, if he has 8, and throws 4, he sets up his stick, erases 6 lines so as to start the new game with a credit of 2, and throws again. The Seri perform these additions and subtractions with the rapidity of a practiced white man.

A ring of people may play at once. Their scoring in relation to one another was not ascertained, but it is presumably each from his neighbor, with the totals shown by sticks.

Since with fair throws the losses in this game must equal gains, a lead of 10 over an opponent is as much as could expectably be played for if the game were not to be unduly protracted.

526 Football race is played with *palo fierro* balls, perhaps 3 inches in diameter, one to each side of 4 runners. The ball may be moved only with the foot. The race is along the beach, where cactus and brush do not interfere. The distance, according to places named to Sr. Thomson and known to him, is about 6 miles. The men on a side relieve each other in informal relays; usually only 1 or 2 finish. The [648] Seri once went north to play the Papago this game, but lost.

Shinny is a woman's game, preliminary to the football race. Four women to a side carry sticks with which they try to throw an 8-12 inch hoop to a goal mark at the end of a short field. Behind each side stand the 4 men runners who are to race with a ball.

Notes on Material Culture

● 482 Women carry loads on their heads with a ring: men with the pén, Spanish *palanca* or lever, a stick over the shoulder, with load [171] hung from each end. These are the usual Sonora and Sinaloa Indian ways of carrying.

516 The Seri sit and lounge randomly. The men squat, occasionally cross the legs, put them sidewise, or sit with one knee up. The women wear long cloth skirts, but apparently sit just as variously.

714 Body armor, *naiłanika'p*, with sleeves and helmet, and a shield. *saXe'tiX*, both of hide, were worn. The shield was described as 4 or 5 feet high, roof-shaped toward the front. It is not clear whether

2: Kroeber E-5 (1930)1931 NU31 Seri NU31

McGEE ON THE SERI

114 The pages that follow deal with McGee's well-known monograph
[128] on the Seri,[1] discussing first points on which his data are fuller or mine confirm or modify his, and then points on which I believe him to have been in error or to have misconstrued his observations. McGee spent little more time in actual contact with the Seri than I did.[2] His work impresses me as that of an extraordinarily good observer, keen in seeing significant evidence, but of uncontrolled imagination and unconscious of his preconceptions. It is only fair to state that where he founds an interpretation on slender or uncertain data, he generally indicates the fact to a careful reader.

Data and Discussion

114 The ratio of kilogram weight to liter capacity of water jars is
415 given by McGee (p. 183) as follows: 2 Seri, .126-.147; 2 Papago, .239-.279; 4 modern Pueblo, .252-.295. There is no doubt that the Seri olla is unusually thin-walled. Sherds seen at a campsite near San Rafael, on the dry course of the Bacuachi, 20 or more miles from the coast, ran from 2 to 5.5 millimeters in thickness, averaging 3.8; their curvature was slight, indicating large vessels. McGee remarks (p. 184) that the purpose of nearly all Seri pottery is to hold or transport water, other uses being secondary, generally after breakage. My observations on the island confirm this.

114 Head loads are carried on a ring of "yucca" fiber (p. 184).

480 The carrying stick or yoke, with nets to hold ollas, is considered aecultural by McGee (p. 184), although he mentions (p. 68) that Ugarte in 1721 saw the device in use by men, the women carrying single ollas, presumably on their heads. Nordenskiöld has recently shown the "coolie yoke" to be ancient in the area.[3] It is used today in Sinaloa and Sonora.

114 McGee (pp. 11, 191, 292) thought that he understood that the
773 "Ancient of Pelicans" was the chief creative deity and brought up the islands and earth with the help of the Turtle or Shark. This

[1] W J McGee, The Seri Indians, BAE-R 17, part 1, pp. 1-128, 129*-344*, 1898. (In citations of the higher page numbers, the asterisk is omitted.)

[2] McGee (pp. 12, 98, 291) in 1894 spent "about a week" at Costa Rica west of Hermosillo where some 60 Seri were temporarily congregated, his principal informants being sub-chief Mashém who spoke Spanish, and Juana María. A Spanish-English interpreter is referred to. In 1895 the coast and Tiburon Island were visited, camps examined, but not a single Seri encountered. The vocabulary was obtained chiefly at Hermosillo from Kohuio, an old Seri official interpreter who had left the island in childhood, never revisited it, considered himself an outlaw in Seri eyes, and had long had no dealings with them except under Mexican protection. I spent six days or parts of days with Seri, sleeping two nights on Punta San Miguel and three in the *rancheria* on the island opposite. Two Seri accompanied us back to Hermosillo to draw their government stipends, and were available for some supplementary questioning and revision of notes on the two following days.

[3] Comparative Ethnographical Studies, No. 8, 284, 1930.

614 hundred Seris at a time. They lived in maternal groups or clans in which the elder females were of great prominence in the management of everyday affairs. When, in
342 the wanderings of a family a new camp was
[462] decided upon, the elder matron usually erected the jacal alone, without the aid of men or boys, gathering the long poles of the ocotillo or the branches of desert trees and fashioning them into an arched framework over which a covering of brush, and often later of turtle shells, served to give protection from the desert sun. After the household was prepared, she took her place within
361 easy reach of the meager and squalid family
592 possessions, and around this nucleus other matrons and their children gathered in the course of a day or two. It was usually three or four days, and sometimes a week, before the brothers and husbands came wandering in from their roving search for food to take their places at the new camp site.

482 From the turtle fishing camps on the chan-
312 nel, the nearest fresh water was at a distance

[p. 196(A)]

312 of four miles by a rough and stony trail. In
482 other parts of the island, habitations were occupied as distant as 15 miles from the nearest watering places. Under these conditions the Seris became essentially and primarily water carriers, and all their other industries were subordinated to this function. [271] They learned to economize on water carrying by gulping incredible quantities on their occasional visits to the aguajes, yet, more than half of the water required in their vital economy was consumed after transportation over distances of four to twelve miles. The
312 women were ordinarily the water bearers and
482 for this important business manufactured a distinctive vessel for the purpose. From fine
323 adobe clay they hollowed, expanded and shaped by manipulation with the fingers and without the aid of implements of any sort, a large olla of remarkably light weight in proportion to its capacity. Its mouth was made no larger than the hand that shaped it.
482 thus to prevent spilling on the trail. From yucca fiber a cylindrical cushion was also

[p. 196(B)]

[text continues on p. 197(B)]

3:Davis & Dawson E-5 (1922-1940) 1945
NU31 Seri NU31

482 fashioned to fit the head (Fig. 7) and to aid in balancing the forty- to fifty-pound water-filled olla as it was carried over the rough and hilly trails from aguaje to jacal. (It is not certain whether the use of the shoulder pole, or palanca, was a part of original Seri culture, but in more recent times two water vessels were frequently carried, hung from either end of the notched pole.)

396 [462] While the tasks of supplying water and of manufacturing the vessels used in its transport were generally delegated to the women and children of the household, the building of the balsa was an undertaking that required the co-operation of the entire group. The carrizo canes were first gathered by the women and boys from the patches growing about the few permanent fresh waters of Seriland (Fig. 4). The leaves and tassels of the canes were removed by hand and the canes tied in bundles for carrying to the shore. There the men proceeded to lay, overlap, interlace and bind the canes into a larger and larger cylindrical bundle, tapering at

[p. 197(B)]

3: Davis & Dawson E-5 (1922-1940)1945 NU31 Seri NU31

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FIG. 7. CARRYING WATER FROM A DESERT AGUAJE

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FIG. 8. STRETCHING AND DRYING THE PELICAN SKIN ROBE

[p. 198(A)]

3:Davis & Dawson E-5 (1922-1940) 1945
NU31 Seri NU31

[142]
[294]
[482]
[854]

[231]
[853]

FIG. 12. SERI MOTHER AND BABE
SERI MOTHERS COMMONLY HAVE TOO MUCH MILK AND FREQUENTLY RELIEVE THEMSELVES BY SUCKLING AN ORPHANED PUPPY OR SOMETIMES EVEN A BABY PIG.

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ing, and were carried in cane tubes. The paints were carefully prepared, applied, and preserved, and, as indispensable feminine accompaniments even on the longest journeys, were among the most highly prized of the people's possessions. The importance of

302
614

the face-painting custom, established in the old tribal life, remained strong even as the slaughter of the warring tribe progressed

[p. 201(B)]

3:Davis & Dawson E-5 (1922-1940) 1945
NU31 Seri NU31

114 648 [123] their midst and to live among them without undue fear of losing his life. Through the kindness of Señor Thomson the senior author succeeded in making himself a friend of the Seri and, enlarging upon this friendship through long periods of living and traveling among them, has acquired an intimate knowledge of these strange people.

105 178 In 1923 the fishing industry of the Gulf of California was not yet well developed, and it was to be ten years before the village of Kino should appear on the maps of the Sonora coast. The Seris were still isolated in their desert domain and their numbers, then about 250, were maintaining themselves out of reach of the infectious diseases of the white man. The clan life had disappeared, and the people lived as a single tribe with their old chief, Juan Tomas, 90 years old at that time

[161]

[291] [481] [482] [415]

FIG. 15. MOVING DAY AMONG THE SERIS
THESE BURDENS, BORNE FOR MANY MILES OVER ROCKS, THROUGH CACTUS AND DEEP SAND, CONTAIN UTENSILS FOR HOUSEKEEPING WHEREVER THE SERIS MAY STOP.

[p. 263(B)]

3:Davis & Downum E-5 (1922-1940) 1945
NU31 Seri NU31

105 178 and a veteran of nearly a century of warfare against the soldiers of Sonora. The turtle remained their most important source of food, and the pitahaya harvest the most enjoyed. The crafts of their old culture were largely gone, however. Hoop-iron had come in for many uses: harpoon points, scrapers, and knives. The bow and arrow had been almost entirely supplanted by rifles of which the tribe possessed more than thirty. The handmade olla was fast disappearing in favor of the five-gallon tin can, and water carrying, now much done by the males, was [482] accomplished by means of a palanca, borne on the heavily calloused shoulder, to which a can was suspended from each end.

178 396 [126] It seemed that the balsa building art was encountered barely as it passed into extinction, for the last balsa known to have been made by the Seris was found in use near Kino, in 1922. This rare prize was immediately bargained for and in exchange it was agreed that the tribesman should have lumber to build a boat large enough for all the people of his family. A few months later the finished craft, caulked with a "pitch" made

[p. 264(A)]

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FIG. 20. SERI WOMEN BEARING FIRE WOOD TO THE CAMP AT KINO

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FIG. 21. A MEXICAN TOTUAVA CATCH ON THE BEACH AT KINO

[p.267(A)]

ingenuity of a modern shipbuilder to have constructed a boat. These simple, desert people, however, through centuries of struggle for life in their desolate realm had learned to use every natural material available to them, however laborious the tasks and inefficient the products. The carrizal reed, *Phragmites communis*, grows about the few permanent water holes of Seriland, and from countless numbers of these slender, buoyant canes they built their watercraft. The reeds were stripped of leaves and gathered in long bundles, bound together and gradually augmented by more and more interlaced canes until a bundle 18 to 30 feet long and 1½ feet in diameter, tapering at both ends, was made. Three of these were then bound together with cords of fiber or human hair, making a maneuverable one or two man raft, easily transported to the shores.

The mesquite tree, *Prosopis juliflora*, provided fiber for cords. The flexible outer tissues of the roots were stripped off, soaked and progressively pounded, split and worked between hand and mouth until very slender, fibrous threads were obtained which were then twisted into cords. In some cases a coarse, rough fabric was woven from these fibers, but most garments were made of pelican skins. The strips of workable mesquite root or sometimes yucca fiber were also used in making doughnut-shaped head pads which aided in balancing the capacitous earthen water jars as they were carried on the heads of the women over rough and stony trails from water hole to camp site.

While occupying the turtle fishing camps on El Infiernillo during the good season, vegetable supplements to the fishy diet were few. Every nourishing seed or woody fruit yielded by the desert was carefully gathered; even the tiny seeds of the sea grass, *Ruppia*, were sorted from beach drift and made into meal. Never did the Seris learn to cultivate any crop or domesticate any animals other than the half wild coyote dogs that lived in mutual toleration with them. Even had they done so, their success in the barren, waterless land would have been small.

Sterile as is the Seri's hinterland, for a time each summer the thorny plants with which it is so profusely stocked ripen an abundant crop of fruit. The cacti in particular yield a wonderful harvest of luscious and succulent fruits, and toward this fortuitous supply the Seris were accustomed to move in June and July. The foothills of Sierra Seri on the mainland are adorned with great numbers of giant cacti, *Pachycereus Pringlei*, *Carnegiea gigantea* and *Lemaireocereus Thurberi* from which the luscious pitahayas were readily knocked down when ripe. The Indians wandered into the cactus forest and after a simple ritual marking the beginning of the feast, proceeded to gorge themselves for weeks on the succulent fruit until waning supply and cloying appetite drove them back to more severe food-getting activity by the sea. They did not customarily find it necessary to leave the cactus forest, however, as soon as the supply of fruits was no longer sufficient, for by the time the fruiting season was ended they had provided themselves with a second harvest. The pitahayas, gorged in such tremendous quantity throughout the season, were very imperfectly digested; the miriads of hard seeds, particularly, passed through the system unchanged and with the preservation of these in mind the Indians carefully collected with the aid of large sea shells all such seedy discharges and let them dry in the desert sun. Thus, as the supply of fresh fruit faded they proceeded to the use of this hoard

5:Dawson N-5 (1940) 1944 NU31 Seri NU31

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Preparing a mesquite bean meal cake on the stone metate.

Seri women carrying firewood back to camp. Note the baskets and the head pads made of mesquite or torote.

123 handed to show their friendliness.

142 One was a young man with rather pleasant features, his braided
291 hair hanging below his shoulders. His name was Antonio Herrera. The
123 other was a wild-looking specimen called Ramon Blanco. His hair was a
[302] tangled mat with a short braid behind, suspicious black piercing eyes,
long sparse moustache and chin-beard hiding a broad cruel mouth. He
[411] wore the remnants of an old sweater, a short dirty kilt, or skirt,
nearly to his knees, a belt full of cartridges, mostly empty, and a
long knife in a rawhide scabbard.

123 The young man had been baptized and given a name by Roberto, who
[705] had acted as godfather or *patrona*, many years ago. He wore a hat,
[291] jacket, and pants of blue denim, and *guaraches*, or sandals of rawhide.

We shook hands all around and then they called and halloed in the brush and soon three women and a lot of children, wild and half-
[415] clothed, filed into camp. The women were tall, gaunt, unkempt, ragged
[482] and barefooted, paying us not the slightest notice. They were bearing
[422] on their heads large baskets filled with all their earthly posses-
[854] sions---cooking ollas, scraps of cloth, pieces of turtle meat, bone
[231] brads, hair brushes, and odds and ends. They carried, also, an infant or two wrapped in odd bits of rags. Several gaunt dogs followed in their wake.

342 In all, three families came trailing in, removed their household
equipment from their heads and resumed their interrupted and primitive
[512] housekeeping. Each family occupied its apartment in the row of brush
shelters, separated from each other only by brush partitions with a
total lack of privacy. These shelters, always open to the sea, serve
as shade from the fierce rays of the sun, and also as windbreaks, but
[361] are no protection from infrequent rains. They are occupied only for a
brief period and then their nomadic tenants move on to fresh *cahuama*,
or sea turtle range.

123 Soon, a third man arrived while we were near the huts, Manuel
[142] Encina. He was a man of sixty-five, gray hair and mustache, seamed
features, and not evil looking. He was out of breath. He had gone for
water to the same water hole where we had been yesterday, struck our
tracks, had left his water cans and hurried back to warn his people.
He was greatly relieved to find friends.

Since he had gone for water, inquiry revealed there had been no water in camp for two days, and six adults and one girl of thirteen and six children were thirsty. We gladly gave them one of our five-
[225] gallon cans of water and they were very grateful. They had caught a
[262] sea turtle the day before and gave us some turtle steaks which looked like beef or mutton.

312 As the camp was without water and we were running short, the young
482 man and Encina offered to get some. Each took a *palanca*, or short
123 shoulder pole with knotched ends, fitted empty five-gallon cans in

123 312 [492] nets of twisted fiber, hooked the nets in the ends of the notched stick and started off nine or ten miles to the water hole in the heart of the mountains.

Water carried so far over loose, sandy soil, dodging cactus, threading a devious way among the *talus* thrown off the cliffs and slopes of canyon walls, with the water-bearer barefoot, acquires a value absolutely unknown to the man who draws an unlimited supply from a faucet.

The two men were gone six hours and when they returned they were almost staggering under the heavy loads of water, each man carrying at least one hundred and ten pounds of water, as the cans were full. In addition, one man had a canteen full.

The thirsty people drank sparingly, and a little Seri maid poured some of the precious liquid into a cooking olla for a thirsty dog. After the dog had lapped sufficient to allay his thirst, she carefully poured the residue back into the can, never losing a drop. One drop of water could not be spared after that arduous trip.

484 147 648 Bob says a man goes to Hermosillo occasionally and returns to the coast, ninety miles, with two to five cans of *mescal*. It takes probably four days to do it, but it is a wonderful feat of endurance. He said about thirty years ago a woman walked the ninety miles during one night, afoot, and reported to the Government House when it was opened at nine in the morning that about fifty of her people had been shot by Roberto's uncle at various times. This uncle was a very hard rough man and the Seris were fond of his mares and steers for meat, and used to steal, so he began shooting a goodly number. Fearing a man messenger would be shot, as men were frequently shot while going along the road, they sent a woman.

Ysabel was Governor at the time. Judgment was rendered against the uncle, and it is probable that a hanging squad would have been sent out to execute him. The Governor, a great friend of the family, sent for him, and he rode ninety miles at night on horseback and was saved with the Governor's help.

Roberto saw twelve Seris pack meat from two mares, two steers and two yearling heifers, for four or five miles to their boats. Their endurance and strength is phenomenal. The question naturally arises, "Why are not burros used by the Seris on the Island to ride and pack, [492] as they are by their Mexican neighbors on the mainland?" It has been tried, but things were reversed; the Seris packed the burros around in their stomachs.

261 262 Roberto said: "These people, living on the verge of starvation, never having a continuous food supply, would kill and eat every burro, and it is a common thing on the mainland, if a cow or horse dies, and Seris are in the neighborhood, they will try to beat the buzzards to it. They will gorge in times of plenty, and when food is scarce they

[text continues on p. 160]

10: Davis E-5 (1922-ca.1939) 1965 NU31 Seri NU31

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Carrying firewood

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Seri basket maker - 1934

535 semi-darkness.
123 Soon two little boys joined the dance, stepping up and down in the sand. Lighted only by the flickering flames of the driftwood fires on the shores of this mysterious and dreaded isle, the soft murmur of the sea as a refrain to the wild chanting, the weird circling of glittering eyes, and wild dark faces, presented a scene of uncanny and savage fascination witnessed by white men probably for the first time.

[533] After each stanza there was a short rest. The singing was similar to most other tribal chanting.

582 836 622 Bob made the remark that the girl was old enough to be broken in by the old Chief. I said, "How?"

583 [838] He said, when a girl thirteen or fourteen has her menses, the Chief takes her and goes through the family act. This is called 'breaking her in'. She is then eligible for marriage. A young man desiring marriage has to purchase the girl by giving the father a boat or rifle, both being necessary to the Seri's existence and protection. At the wedding they have sort of a fiesta and much mescal is drunk, which properly solemnizes a wedding.

844 845 When a girl has a baby it usually comes very naturally and easily, but I remember one girl's first baby was three days in coming, and she suffered a great deal. This was on a subsequent trip. She was staying with many of her people on the mainland and someone asked them if they didn't want a doctor or other help. They said: No, they had one. It was a Medicine Man who chanted over the girl and dug hollows in the sand to fit her heels into. He said that the legs had to be kept apart. This was all he did. But ordinarily there is no trouble, and if a baby is born at noon the mother is up and doing, and cooks supper [543] for her lord and master. The men treat their wives with kindness and each shares with the other any delicacy.

462 [343] [482] In Seriland domestic duties are reversed from the usual Indian methods. The men get the water and the women get the wood. This consists mostly of driftwood gathered along the shore, and it is a picturesque sight to see a string of women and girls bringing in loads of wood in baskets on their heads at sunset.

622 595 There are no plural marriages, but sometimes when a Chief is old, or rather when his wife is old and can have no more babies, he can take a younger woman as his wife. The present Chief is getting old now, almost too old to break in the girls, so they may get a younger man. This might be called the perquisites of office. He takes the cream.

832 825 They hunt lice in the head and eat them. This is said to increase the amorous desires. The penis of the male turtle is cut out and dried. This is pounded and pulverized and placed in the food of the women. This is said to create a desire for a man and the family act.

123 [202] It was a beautiful morning in early May, and the water was still as a pond, reflecting all the sunrise tints like a mirror. After a breakfast of clams and broth, bread and sand and bronco tea, we made a big smoke and were answered by a similar smoke two miles off, so we knew our friends were on the way.

123 482 [115] In one hour they began trailing in, the women each with a load on her head, walking graceful and erect. On one head was an inverted turtle shell containing nearly all the family belongings done up in rags. On the top was the most precious belonging of all---the rifle. The man carried two or three ollas and other things on a shoulder stick. Everything necessary for their home was carried on their heads.

123 Soon the Indian Blanco was seen paddling in his *balsa;* he also had a load and had paddled all the way from Ironwood camp against wind and sometimes tide. As they were all very thirsty we gave them water around. They immediately went to the shore as it was low tide, and began gathering small oysters from the rocks. Soon each woman returned with a half bushel of them on her head.

About three o'clock and for an hour or so thereafter, Antonio Herrera, the Chief's son Chico, the old Chief Juan Tomas, two other men and one woman, came drifting into camp with their dogs. Each one was loaded with things. They were a pretty wild looking bunch. There was very little food and little water for so many.

648 731 The Chief said that a day or two before, some of his men had a fight with some sailors (Mexicans) on the Island of San Estevan four or five miles off the south west corner of Tiburon. Nobody was killed, but the two boats, the wealth of the Island, had drifted away and were lost, leaving eight men marooned on the Island. They had gone there to gather *mescal* to make drink to celebrate a wedding to come off soon. Three men were five days without water. They sent up frantic smoke signals every day. At last they were seen, and help went for them in the only remaining boat on the Island. They were rescued.

648 484 123 The Chief and his men and women, with us, are going to Hermosillo ninety miles afoot with all their belongings to ask the Government for food and help.

142 [622] [302] [291] The Chief looks to be seventy years old, a grim dark-skinned individual with a thin fringe of hair on his upper lip, broad nose, wide nostrils, small black eyes. He is well-built and erect. None of these that I have seen so far have any fat. They are lean and sinewy. The young men are of large build, high cheek bones, some with hair on their lips, their long black hair braided; sometimes with a strand of red worsted. All were either barefooted or wore sandals. I saw one pair of sandals made out of turtle hide; another of burro hide.

648 123 When the Chief arrived, the sail of a vessel was seen over the beach. Bob recognized it as belonging to a launch of a Yaqui Indian

[text continues on p. 180]

[123] gunwales, and then in trying to balance, she would dip the other way.

As we got to the point, the swells were larger and the danger so imminent we stopped the boat in lee of the point nearest Sonora, and Bob and I landed.

Old Blanco had paddled his *balsa* with some of the freight to the Sonora side. The boat put off again, and rode the sea better and it landed all right on Sonora side. In the meantime, several of the women and children, with their loads, had reached the Seri point ready to be ferried across. The boat returned with two Seris paddling. We loaded a lot of Indian junk, Bob and I and several children, the Chief and a woman. Nine in all. We reached the Sonora side, all right.

By this time breakfast had been cooked and we sat down to drink black coffee and eat rice and onions. The wild-looking Seris sat around us watching each mouthful, hungrily. When we finished we gave them all that was left and they cleaned it up.

[231] As we left the Seri point, and as their masters left, the dogs trotted to the water's edge and howled. Bob said that when all had crossed, the dogs would plunge in and swim across the swift current.
[136] The water was infested with sharks, so it was possible that some of them would not reach shore. At last everybody got across, dogs and all.

[142] The Indians carried their packs; the men with the shoulder sticks and the women balancing their loads with marvelous dexterity on their heads. Two men packed twenty gallons of water in five-gallon cans.

When we had all our things in the boat, Juan Tomas jumped in with his pack. We were well loaded before, but this made us a little too deeply laden. Nevertheless, we pushed off and raised the sail to take advantage of the wind. We sailed parallel to the shore for a few miles until the waves got too overpowering and the boat had a lot of water in her. The mast was unstepped---a very delicate operation---and we made for the shore after shipping some of the waves.

My heart was in my mouth most of the time as each time the boat rolled, one side almost dipped up a wave. It was a matter of personal safety as well as safety of what few things I had already collected. One olla I had bought was smashed. The waves looked like clear green paint.

We finally landed without mishap and pulled the boat up, but it was so rocky we had great difficulty in walking in our bare feet. Our legs and feet were bare when we were in the boat and mine were badly scalded by the sun.

The Seris had made camp one quarter of a mile down the beach from us, and the old Chief shouldered his pack and strode down to them. We were very thankful.

[225] Soon some of the men came back to borrow the boat to hunt for

10: Davis E-5 (1922-ca.1939) 1965 NU31 Seri NU31

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Santo Blanco and Edward H. Davis - this hombre gambled away his only shirt - Sonora - 1929

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Seri method of carrying infant

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

strong wrench on the horns or stunned with a blow of war-club or hupf, as conditions may demand. Straggling swine and wandering dogs are occasionally ambushed or stalked and transfixed with arrows, torn hurriedly into fragments, or shouldered and carried off struggling, as exigency may require; while sheep and goats are practically barred from the entire Seri frontier because of their utter helplessness in the face of so hardy huntsmen.

The quantity of stock consumed by the Seri varies greatly with the policy of rancheros and vaqueros. At different times during the last two and a half centuries it has been estimated that the chief portion of the subsistence of the tribe was derived from stolen stock, and it is probable that during the early period of the Encinas régime this

FIG. 23—Dismounted park.

estimate was fair; but under the Draconian rule of a Seri head for each head of slaughtered stock, the consumption is reduced to a few dozen head annually, including superannuated, crippled, and diseased animals unable to keep up with the herds, those bogged in Playa Noriega and other basins during freshets, the stallions and bulls slain in strife for leadership of their bands, and the festering or semimummied carcasses gladly turned over by idle rancheros on the chance visits of Seri bands to the frontier (such as the specimen in the protograph reproduced in figure 23).

No special devices have been developed in connection with the chase for stock, nor has material progress been made in acquiring Caucasian devices. There are, indeed, indications of a disposition to use

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

Rica) noted for his prowess in hunting. One hot afternoon he begged 224
relief from his tasks, saying the spirit of catching a deer had hold on him; and he was excused on condition that the deer be brought entire to the rancho. Two hours later he was seen driving in a full-grown buck; on approaching the rancho the terrified animal turned this way and that, describing long arcs in wild efforts to avoid the human habitation; yet the hunter kept beyond it, heading it off at every turn and gradually working it nearer, until, at a sudden turn, he was able to rush on it; whereupon he caught it, threw it over his shoulders, and ran in to the rancho with the animal still struggling and kicking off its overheated hoofs.

Señor Encinas himself, with Don Andrés Noriega and several other [648]
attachés, vouch for the catching of a horse by a Seri hunter in still more expeditious fashion: one of the horses belonging to the rancho was exceptionally fat, and hence exceptionally tempting to the Seri band (and at the same time worthless to the vaqueros); the chief begged for it persistently until, wearied by his importunities, the ranchero offered the horse to the band on condition that a single one of them should catch it within a fixed distance (about 200 yards) from the gateway of the corral—and the offer was promptly accepted. With the view of making the test of fleetness fair, a vaquero was called in to frighten the horse and start him running around the interior of the corral, while a boy stood by to drop the bars at the proper moment, the Indian standing ready outside the gateway; when the animal had gained its best speed the bars were dropped and it bolted for the open plains—but before the 200-yard limit was reached the hunter had overtaken it, leaped on its withers, caught it by the jaw in one hand and the foretop in the other, and thereby thrown it in such manner as to break its neck. Knowing of these and other instances, L. K. Thompson, of Hermosillo, undertook arrangements for publicly exhibiting Seri runners as deer catchers at different expositions during the nineties; but his arrangements failed, chiefly because of the anticipated (and probably underestimated) difficulty of taming the Seri sufficiently for the purpose.

About 1893, Señor Encinas and several attendants left Costa Rica 481
one morning for Hermosillo, leaving at the rancho, among others, a Seri matron with a sick child nearly a year old; in the evening (as they learned later) the child was worse, and the matron took the trail about dusk, in the hope of finding a cure in the white man's touch or other medicine—and at dawn next morning she was at Molino del Encinas, 17 leagues (nearly 45 miles) away, with her helpless child and a peace offering in the form of a hare, which she had run down and caught in the course of the journey. And the matrons, with children astride their hips and water-filled ollas balanced on their heads, and all their goods and chattels piled on their backs, habitually traverse [484]
Desierto Encinas from the sea to Costa Rica (some 30 miles), or from Costa Rica to the sea, in a night.

7: Marroquin E-5 (1955) 1957 NU31 Seri NU31

Geographical Distribution

The Seri Indians live in two small Indian villages on the coast of the Gulf of California, State of Sonora, Desemboque and Punta Chueca. From there they frequently go to Isla Tiburón in the Gulf of California.

Approximately 35 Seri families live in Desemboque and 16 in Punta Chueca. Only in the first of these two places are there five "yori" (mestizo) families.

Sanitary Problems

The Seris have no defense against certain diseases which, like measles and flu, they acquire in their relations with the "yoris"; these diseases cause many deaths among the Indians. According to the ancient Seri Chico Romero, last Seri Governor, there was a great smallpox epidemic there about 1897 which caused the death of a third of the tribe which was living in Costa Rica, a small ranch on the coast of Sonora.

Seri Indian woman of Desemboque, Sonora. *Photo Henriette Yurchenco.*

In 1955 measles appeared among the Seris, with a great number of victims, children and adults; the actions of the rural teacher Leo Sandoval, the Linguistic Eduardo Mosser and of the sanitation authorities of Hermosillo, succeeded in keeping the mortality rate down; nevertheless, the number of deaths reached 5% of the total native population.

13 17. **San Lorenzo Island** — a narrow long island along the coast of Baja, California, and opposite to Tiburon. Altitude up to 1200 feet. Fauna limited, owing to the distance from the mainland. Vegetation much as elsewhere but impoverished. Visited incidentally as is San Esteban.

18. **Angel de la Guarda** — large island along the coast of the peninsula, longer but narrower than Tiburon, slightly lower at its highest point, pretty much waterless. Vegetation as elsewhere, fauna limited. Visited by the Seris very rarely. [312]

19. **Desemboque (Mountains)** — high mountains immediately back of Desemboque, 5 miles away, rising perhaps to 1200 feet. Vegetation much richer than in Desemboque, with giant *Saäuaro* growing to considerable size. More moisture than immediately near the sea-shore. Full Sonoran fauna with cougar and bighorn. Frequently visited during hunts.

20. **Tepopa (Mountains)** — in distinction from Punto Tepopa as a whole, this refers only to the rugged head. The mountain reaching to over 1800 feet. Thus by Punto Tepopa are meant only the shores and the littoral.

21. **Buena Vista** — a ranch inland on the way to Hermosillo, newly deserted. Water present in the large well and periodically in the dry river. Willows, large mesquite, Palo Verde, etc. Now only incidentally visited by the Seris but formerly of some importance as a camp site. [312] [361]

22. **San Francisco de Costa Rica**—a ranch inland halfway between Kino and Hermosillo near the main road, presently a large Mexican ranch. Formerly a frequent Seri campsite. The distinctive feature of this locality is extensive sandy areas with very peculiar fauna. [361]

23. **Hermosillo**—capital of Sonora of some 40,000 people. Extensive agriculture, irrigation, river and water-dammed reservoir and cattle and cotton ranges. Once the Seris ranged almost as far as this town but presently they come here only on special business, to the hospital or for a ride to town, with the Mexican truckers. Their observations in Hermosillo are only incidental. [484]

24. **Nogales**—U.S.-Mexican frontier town. Seris come here very rarely and only certain individuals. Observations less than incidental. [484]

25. **Campo Utah** — large track of irrigated flat lands given up to cotton, operated by the Utah Construction Company between San Francisco and Hermosillo. Somewhat off the main road. Selected as a distinct region owing to the irrigation and cotton fields with their ecological peculiarities. Seris visit this only in transit or on most unusual occasions when they work a few days for the Mexicans. [484] [464]

The Problem

12 The basic problem concerns the state of Seris' zoological knowledge, that is the general knowledge of the natural history of animals in its main outlines; of their ecology, habits, reproduc-

[P 28]

\# 825 informants suggested that maybe the animals die with the onset of cold. But in such cases it does not occur to them to figure out how the species may carry on from the fall to the spring. The eggs, they know, usually are laid in the spring and if the adult dies off in the fall before depositing eggs, then what? To this Seri idea we have no answer. The usual reply is often "in winter not seen."

But occasionally more specific beliefs are advanced, of which the most common is that the adult sits out the cold season underground (just as it may sit out the heat of the day or cool of the night, depending on its requirements). The toad thus "lives underground. It goes underground in October and comes out in May." It also "comes out when it rains and then it makes the noise—raurrau, rrau, rrau—the male and the female make it." The cold season, to the Seri, lasts from [805] October till May and frequently May through October has been indicated as time of occurrance of the animal. Like the toad, the tortoise and the race runner disappear underground for the duration of the cold season and there had been a few feeble suggestions from the informants that the patch nose snake does the same. As for the sea turtles, they go to deeper waters for the winter. Nothing much of this sort had been said about the loggerhead turtle, undoubtedly owing to its extreme rarity.

Sometimes the informants went beyond mere statement of the absence or presence and indicated where the animal may be absent during either of the seasons. Thus, for example, the black whipsnake is common in Desemboque during the summer but very rare during the winter.

In some instances, association between rains and sudden activity is made. The tortoise and the toad both come with the rains, they thought.

b) Geographical

The appended table of the distribution of animals as seen by the Seris requires few comments. Four species had been described by the blanket statement "found everywhere" and this is indicated in the chart. But while it may well be true of the utas, very small and ubiquitous lizards, it is less likely to be true of the patch nose snake and the western diamond back. Unfortunately, the exact distribution of these reptiles in the area is little known, even in the islands of the Gulf. What basis there exists for the Seri statement is hard to tell.

On the whole, the distribution often reflects the Seris' acquaintance with this or that locality rather than peculiarities of the fauna. Hence, Desemboque, Kino and Tiburon are most frequently mentioned localities, while Punto Peñasco least, [484] and these are really localities most and least frequently visited by them. But, in other instances, there is a real reflection of the natural situation. It is known that the fauna of Isla Patos is extremely limited and also that some species, chuckawalla, for example, are found on three of the larger Gulf islands toward the coast of Baja California, but not on the Sonoran side of the Gulf

[P. 27 B] ½ [See category 116, p62. - Analyst.]

4 825 analysis of the data given for the individual species. Where such data are available, for 21 species, fully 15 show preference for this kind of habitat and only six, it is said, prefer sandy bottoms. In many instances, such ecological preferences had been very emphatically pointed out and the informants denied that the animal lives over either rocky or sandy bottom, as the case might be. Geographical distribution has often also been indicated in the same manner, and explanation for the presence or absence of a fish in a certain place has been represented in just these terms. But this will be discussed later on. On the whole, the rock-loving fishes are all of the small species and economically not particularly important. The six sand loving species are:

Sphoeroides annulatus
Lythrulon flaviguttatum
Myrichtys tigrinum
Mugil sp.
Cynoscion parvipinnis
Bairdiella incistius

There are a few more factors introduced into the ecological considerations. Sometimes ecological preferences had been indicated for the large and immature individuals of the same species. Thus the big *mero* "live in deeper water 25 meters or more deep" while the "little *meros* go to the Esteros." The large shark *pinturera* is said to be absent from Desemboque because "it is too shallow there" and this presumably holds true also for other sharks. A similar situation pertains to the sting ray where the smaller individuals do come to the bank. Sometimes the fish may keep to the deeper waters but stay on its surface, and here, the Seris say, belongs the *choveta*, a small fishlet, traveling about in countless schools.

Distribution 4

The distribution charts of fishes indicate in the main the Seris' familiarity with the coast. The locality near which they live or places where they fish show the great number of species listed by them as present. The further away from Desemboque and Tiburon, the fewer species are listed. [484] [226] The Seris do not go to the coast of Baja California to fish, hence no species are listed for it. Those that are marked so are the species which the informants included under a blanket statement "present everywhere." The basis for this kind of statement seems to be the frequency and numbers of fishes that are encountered.

On the other hand, there are a number of such records that are indicative of the ecological preferences and frequently a fish might be marked

[P. 37 A]

4 [see category 116 - pp 63-64. - Analyst.]

* 825 during the warm season and are very rare during the cold time of the year. To this second category belong *Axius*, *Microphyrus*, *Petrolistes* and *Leptodius*.

Rhythm

There are no data on this subject among the crustaceans and there is no indication that the Seris believe in any differences in the amount of crustacean activity from daytime to night.

Ecology

Here there is more information because the Seris were able to provide ecological data of some sort for each of the species in the list. They pointed out that each of the species was exclusively a sea-dwelling animal and that the majority of them are associated with the rocky habitat. In fact, not one appears to be a sand dweller. The only exception is the mud-shrimp *Axius*, which animal they say (and in fact it does) lives in deep burrows in mud, some foot and half deep. All except the mud-shrimp and the barnacle live under rocks, the barnacle on the rock or on the marine turtle. All prefer shallow waters although some are also found in deeper waters. They walk under rocks but do not like to wander away and some do not even move much under rocks. The informants indicated that presence of some species in a given locality depends on the presence of suitable rock habitat. In addition to this, they credit *Callinectes* with a particular fondness of the Esteros.

Distribution 1/4

Even from the small numbers of species it is clear that once more the general knowledge of the animal distribution is related to the frequency of visitations. The Seris' rare trips to the larger outer islands, San Esteban, San Lorenzo and

● [444]

1/4 [see category 116 - p 65 for distribution chart - Analyst.]

[P. 44 A]

9:Malkin E-5 (1953-1956)1962 NU31 Ser1 NU31

#825
[484]

Angel de la Guarda or to Guaymas and Punta Peñasco, result in little knowledge of the fauna and habitat, and for such localities they answer usually in a form of a question mark. On the other hand, localities with which they are well familiar, Kino, Desemboque, various places on Tiburón or Isla Patos and the Esteros between Kino and Desemboque, have to them then much greater fauna, and also the informants are able to state reasons why an animal may or may not be present. Again, we have the familiar explanation for the absence of certain creatures from Kino, "too sandy" or "no rocks." The mud-loving *Axius* they say is especially prolific in the muddy esteros of Estero Sargente, and in Tecomate it occurs only in one spot where there is mud. Finally, absence of *Leptodius* from the Isla Patos' shores is due to unusually turbulent waters, an explanation offered also for the absence from that spot of several marine invertebrates.

Anatomy

An interesting idea has been suggested in connection with the identification of the body parts in *Leptodius occidentalis*. (The informants correctly identified the mouth.) They also said that the animal has two eyes, no teeth, two legs and eight arms. The front enlarged legs (pincers) they think are legs, the eight smaller limbs behind them are arms. The reason for this division has been advanced, namely that legs are large and arms are small. This is yet in contrast with the real function.

Dangerous and Toxic

Not one of the crustaceans is considered dangerous or toxic. None have any venom. *Axius* and *Leptodius* bite mildly with their forelegs but do no harm. That is the extent of information I could get.

[P. 44 B]

123 nets of twisted fiber, hooked the nets in the ends of the notched
312 stick and started off nine or ten miles to the water hole in the heart
[492] of the mountains.

Water carried so far over loose, sandy soil, dodging cactus, threading a devious way among the *talus* thrown off the cliffs and slopes of canyon walls, with the water-bearer barefoot, acquires a value absolutely unknown to the man who draws an unlimited supply from a faucet.

The two men were gone six hours and when they returned they were almost staggering under the heavy loads of water, each man carrying at least one hundred and ten pounds of water, as the cans were full. In addition, one man had a canteen full.

The thirsty people drank sparingly, and a little Seri maid poured some of the precious liquid into a cooking olla for a thirsty dog. After the dog had lapped sufficient to allay his thirst, she carefully poured the residue back into the can, never losing a drop. One drop of water could not be spared after that arduous trip.

484 Bob says a man goes to Hermosillo occasionally and returns to the
147 coast, ninety miles, with two to five cans of *mescal*. It takes probably
648 four days to do it, but it is a wonderful feat of endurance. He said about thirty years ago a woman walked the ninety miles during one night, afoot, and reported to the Government House when it was opened at nine in the morning that about fifty of her people had been shot by Roberto's uncle at various times. This uncle was a very hard rough man and the Seris were fond of his mares and steers for meat, and used to steal, so he began shooting a goodly number. Fearing a man messenger would be shot, as men were frequently shot while going along the road, they sent a woman.

Ysabel was Governor at the time. Judgment was rendered against the uncle, and it is probable that a hanging squad would have been sent out to execute him. The Governor, a great friend of the family, sent for him, and he rode ninety miles at night on horseback and was saved with the Governor's help.

Roberto saw twelve Seris pack meat from two mares, two steers and two yearling heifers, for four or five miles to their boats. Their endurance and strength is phenomenal. The question naturally arises, "Why are not burros used by the Seris on the Island to ride and pack,
[492] as they are by their Mexican neighbors on the mainland?" It has been tried, but things were reversed; the Seris packed the burros around in their stomachs.

261 Roberto said: "These people, living on the verge of starvation,
262 never having a continuous food supply, would kill and eat every burro, and it is a common thing on the mainland, if a cow or horse dies, and Seris are in the neighborhood, they will try to beat the buzzards to it. They will gorge in times of plenty, and when food is scarce they

[text continues on p. 160]

123 We have given the Seris so much we are now short ourselves. Variety is very restricted. We haven't enough tin dishes or tools to go around, but that does not trouble us at all. All the cleaning is done in salt water and sand. Fresh water is only used to drink. Nothing else. We can't even take a shave. Not a drop of water. We are very lax in our personal toilets and appearance. We are barefooted always in the boat, as we have to wade to get the boat in deep water, and often the waves slosh on board.

This boat is made of a hollowed log twenty feet long and three feet, three inches wide, and she is very cranky. She almost upset with us several times. When everybody is placed in it, it is difficult to even change a posture without endangering everybody. She has no keel and leaks some, so we have to bail out often. But she is a good sea boat and rides the waves well if they are not too rough.

123 439 [203] [404] One evening we decided to get a message through to Juan Tomas, the Chief, some twenty or thirty miles distant. Herrera promised to go if we gave him twenty thirty-thirty cartridges. He would go one day and return the next, a round trip of about fifty miles. We gave him the message to tell those people we had a lot of things to trade for the things they use in every day life. Pelican skin kilts, bows and arrows, ollas, baby cradles, hair brushes and other interesting things. I had already made a trade with Blanco for his *balsa*, promising him sufficient lumber, nails and tools, to make a boat large enough to carry five men. This promise I fulfilled to the letter, and later on another expedition to Seriland I had the pleasure of sailing in this boat, which was well built and seaworthy. The unusual part of this bargain was that Blanco permitted me to deprive him of his only means (apparently) of making a living in hunting *cahuama* for himself and his family, freely and without hesitation, simply on my promise of lumber in the future. I was deeply touched by the trust reposed in me by this old sea rover.

322 [504] These people are splendid mechanics with the crudest of tools---rocks, fire, bones, knives. For instance, the pole of the harpoon was composed of five pieces of driftwood and a seagoing boat which I saw in Guaymas, captured by Mexican fishermen after killing the Seri crew, was composed of fully one hundred pieces of driftwood fastened with nails made of wire, and tied with fiber, and all the seams were filled with a black composition of native origin resembling pitch. Previous [325] to the use of old iron, harpoon points were made of ironwood, but now iron is universally used.

283 [122] I asked old Blanco for some of his native rope. He gave me some of it. He said they get the slender roots of the mesquite and peel the bark, and then the girls and women chew the fibrous wood. This is shredded and twisted into small two-stranded ropes. It is this rope, tied around and around, that holds the *carriso balsa* together.

285 [324] I watched a woman make a basket. She used young branches from the terote tree, I think *terote blanco*. The bark was peeled and shredded into two parts, the heart taken out and kept separate. The coils of the round part were put in a pot of hot water to soften, and the edge of the basket was soaked a little in hot water. The center of the coils or woof consisted of six or eight strips of heart while the outer sap wood was woven around in regular coil-weave fashion.

[237] [412] A brad of deer shin-bone sharpened on pumice to a needle point was used as a brad. With this brad she split the fiber, held one piece in her mouth, and stripped the back down. Then she punched a hole in the bone brad, inserted the sharp end of the fiber and pulled it almost through. She then repeated the operation, adding a strip of heart once in a while. These baskets are coarse and unattractive, but they are hard and tough and stand heavy use.

323 Cooking vessels consist of two or three cooking ollas that nest together to facilitate transportation. These are made of coarse clay, solely for utility without regard for beauty of shape, color or design. In burning these ollas they use the shell of the sea turtle. [237] The cells of the shell are filled with a fine oil and this burns the [372] ollas. On most of the other places on the mainland, the Indians use cow chips, or dried droppings to fire the clay.

283 184 123 We proposed to shift camp to Tinajanita, our first landing place, where Herrera was to meet us in two days with the Chief and some of his men. Since it was blowing, he said the men couldn't fish and they would be on land probably hunting, so he would be able to see them. [277] At this time they gathered *aescal* on an island off the west coast to make the liquor they used at fiestas, weddings and other celebrations.

Herrera left at five o'clock in the morning, with a swinging gait, for the opposite side of the Island. The distance around by boat would be fifty miles, and across, only about twenty or twenty-five---a full day's trip and hard, as mountains would have to be crossed and the rocks were sharp and the way difficult.

123 We had breakfast on rice and bread. Our rations are running low and we expect to move this morning. We made arrangements about the native boat and saw Blanco trot off with two five-gallon cans for water, a distance of ten miles. We went to the camp to get a few things---an old basket, a Pelican hide and other things, and then we asked the help of everybody to get the boat down to water---the tide was very low. The one man, the women and five of us were required to drag and push the boat to water.

We waved goodbye, loaded her up and then rowed against the tide and wind for miles, and finally landed in a lovely sheltered lagoon, built our fire and had lunch. A few crabs were speared, and late in the afternoon the wind shifted. We loaded the boat again and pushed off for Tinajanita, our first landing place. After rowing, we raised

[text continues on p.174]

123 [202] It was a beautiful morning in early May, and the water was still as a pond, reflecting all the sunrise tints like a mirror. After a breakfast of clams and broth, bread and sand and bronco tea, we made a big smoke and were answered by a similar smoke two miles off, so we knew our friends were on the way.

123 482 [415] In one hour they began trailing in, the women each with a load on her head, walking graceful and erect. On one head was an inverted turtle shell containing nearly all the family belongings done up in rags. On the top was the most precious belonging of all---the rifle. The man carried two or three ollas and other things on a shoulder stick. Everything necessary for their home was carried on their heads.

123 Soon the Indian Blanco was seen paddling in his *balsa;* he also had a load and had paddled all the way from Ironwood camp against wind and sometimes tide. As they were all very thirsty we gave them water around. They immediately went to the shore as it was low tide, and began gathering small oysters from the rocks. Soon each woman returned with a half bushel of them on her head.

About three o'clock and for an hour or so thereafter, Antonio Herrera, the Chief's son Chico, the old Chief Juan Tomas, two other men and one woman, came drifting into camp with their dogs. Each one was loaded with things. They were a pretty wild looking bunch. There was very little food and little water for so many.

648 731 The Chief said that a day or two before, some of his men had a fight with some sailors (Mexicans) on the Island of San Estevan four or five miles off the south west corner of Tiburon. Nobody was killed, but the two boats, the wealth of the Island, had drifted away and were lost, leaving eight men marooned on the Island. They had gone there to gather *sescal* to make drink to celebrate a wedding to come off soon. Three men were five days without water. They sent up frantic smoke signals every day. At last they were seen, and help went for them in the only remaining boat on the Island. They were rescued.

648 484 123 The Chief and his men and women, with us, are going to Hermosillo ninety miles afoot with all their belongings to ask the Government for food and help.

142 [322] The Chief looks to be seventy years old, a grim dark-skinned individual with a thin fringe of hair on his upper lip, broad nose, wide nostrils, small black eyes. He is well-built and erect. None of these that I have seen so far have any fat. They are lean and sinewy. [302] The young men are of large build, high cheek bones, some with hair on [291] their lips, their long black hair braided; sometimes with a strand of red worsted. All were either barefooted or wore sandals. I saw one pair of sandals made out of turtle hide; another of burro hide.

648 423 When the Chief arrived, the sail of a vessel was seen over the beach. Bob recognized it as belonging to a launch of a Yaqui Indian

[text continues on p. 180]

464 Last year the Seris and their families worked on the ranches
431 gathering corn and beans and made three thousand *pesos*, and then they
484 came to town to spend it. They go back and forth much more than they used to.

123 We ate supper with Mrs. Thomson and then we went to the Plaza to watch the carnival. Much confetti and *cascaroni* was thrown on boys and girls, and the square was thronged by a mass of weaving people, while the military band played seductive Mexican pieces.

The next morning after breakfast we started shopping and kept at it all day, purchasing things to trade with the Indians and groceries for them and ourselves.

While at one of the stores six or eight Yaqui Indians, from their town about one hundred and thirty miles distant, came to buy things for the Easter period. This is the one big fiesta of the year for them. The women were bare-footed and the men wore rawhide sandals. One Yaqui soldier came with them, and he wore three belts of ammunition. They were very dark, with short hair. Rather gaunt, fierce, striking faces.

We walked into a cigarette factory and saw them manufacture cigarettes by machinery. Four machines were running, turning out one hundred and sixty each per minute. Altogether, twenty-three thousand packets of fourteen each every eight hours. These packets are usually tied together in the shape of a solid wheel, one hundred packets each called a *ruedo*, or wheel.

After dinner we went to Roberto's house and they told us there that the Indian boy Pascual had gone out alone and was lost. The Captain left to hunt for him and later brought him in, and then he went out to hunt for us. We finally saw him on a side street and sent him home to his dinner.

Last night, Roberto said they slept up till midnight, then waked up, opened the bride's bundle, and gloated over the bright colors. Later on they opened it twice again. Then they sang and talked for a while before going to sleep again.

On the following day it was nearly three in the afternoon before we got the car repaired and all supplies on board, including our blankets and grips and lumber for a Seri *balsa*, or boat. This was a heavy load for the Ford truck besides five men, which included the two Indians. Every item had to be considered---food for ourselves and the Indians, all the trade things, lumber for a boat and tools to make it, gas, oil, cans for water and many other things.

We soon left the city behind and rattled through the outskirts of poor adobe or stick mud houses, many half in ruins but still sheltering some family.

After about fifteen or twenty miles we arrived at one of Rafael Ysabel's ranches, *Europa*, where Senor Feliz is the foreman or *Mayor*

so all the other flies could see and also come to this dead thing."

A few weeks ago, Antonio Herrera had a very vivid dream. He dreamed that he was hunting in the mountains for deer and came across a cave. (These volcanic mountains are pitted with caves.) He went into the cave and saw all kinds of things dear to the heart of a Seri---plenty of rifles, lots of cartridges, knives, *manta* (unbleached cotton), necklaces, red bandannas, blue overalls, *plata*, or silver, and many other things.

When he awoke he sought his father Manuel Encinas, who is a medicine man and interpreter of dreams, to explain his dream to him. The price demanded by Manuel was six *tiras*---or 30-30 cartridges, a very high price, according to Seri standard. The explanation was this:

It was true that the cave was there and all the things in it just as seen and described by Antonio, but in order to find it he would have to fast nine days and go without water that length of time also, in the heat of summer. Then the way would appear to reach the cave. So far, Antonio has not attempted the fast.

I witnessed the operation of making a certain kind of pitch or tar which the Seris use to make the seams in their canoes or boats tight. The women pound up the dried pulp next to the outside skin of a dead *pitahella* cactus (organ cactus). This is very dry and brown in color and the pieces are pounded up to a dry powder with a wash or shore rock in a dried deer hide. This is placed in a *batello*, or flat basket, and manipulated so that the coarse pieces come to the top and are scraped off and thrown away. The fine powder is then put in a five gallon can and some porpoise or sea-lion oil or horse oil is poured on it and stirred into a thick gummy mass. When thoroughly mixed it is put over the fire, in an olla, to boil and continually stirred for an hour or two until it is the consistency and has the appearance of coal tar. While being worked it is kept heated and applied to seams inside and outside the boat. It hardens just like tar and answers the same purpose.

Since the corn, which had kept this band of Seris in food, disappeared two days before we came, and they had barely kept going on seeds and a few fish, and they all had decided to leave camp with us in the morning---the women walking and the men and some children in boats---it was necessary to supply them with some food to take them to the hunting grounds of the *cahuama*, or sea turtles, and land them on the Island. The *cahuama* would furnish them meat---their favorite and national food, and the shores would supply them with clams, oysters, crabs and other sea food.

So the whole band was called around our camp and each family was furnished with two cups of corn, two of beans, some green coffee and a cup of cube sugar. For the first time our camp was free of Indians, and we ate and went to bed in peace.

The amenities of civilization were laid aside and forgotten in

123 our rough camping, and we lived more or less like the natives, along the lines of least resistance. Shaving was unknown; washing the hands took place possibly every few days---the face never; teeth never; hair combed never; dressed, always in bed and out. We did not shed our shoes. Our revolvers were our constant bedfellows and lay in the blankets next to our right hands. But the Seris have never made a move to take the least thing that was not given to them, and made not a hostile move or look. I did see a child surreptitiously wet his fingers and wipe them across the open flour sack and lick them off, but even then his mother pulled him back.

123 By starlight the next morning we were up again, and ate our breakfast before sun-up. We loaded most of the groceries and things in our boat, including about eighteen gallons of water. Besides ourselves, we took Luis Torres and his wife as helper and boat-steerer. This gave us a very heavy load. Chico Romero planned to take twenty gallons of water and one sack of flour and half beans and corn, and follow in his boat.

The Seri camp was a busy place, women carrying things to the boats and preparing to leave. The camp was stripped. Much water was taken in the boats to supply the families, who for the most part walked along the shore and made short cuts through the hills, planning to meet the boats at appointed places. Two other boats started with us.

The wind was dead ahead, so our sail was useless and we unshipped the mast, and three of the men took the long oars with Luis Torres at the helm and in the bow. The boat leaked quite a great deal and it [502] kept Lupe busy bailing. Chico Romero's boat was manned at the oars by two small boys about seven or nine, and he steered with a paddle. In the other boat were three men at the paddles, three children, two dogs, cans of water and baskets and cooking things.

[501] The wind kicked up quite a heavy sea for the small Seri craft, but this narrow, heavily-laden craft met the swells and floated over them gracefully, although oftentimes the water missed coming over the gunwale by an inch or two. The children laughed gleefully, showing even rows of white teeth innocent of brush and tooth powder.

123 On rounding one rocky point three deer stood outlined against the sky, and we landed three men to try and get one, Stan among them. They returned empty-handed, except Stan, who kept ashore and followed over the hills to try for game.

At noon we landed on a beautiful sandy shore laced by the green waters of the Sea of Cortez, with Tiburon Island opposite a few miles distant. Here we unloaded and built a fire of driftwood and cooked our dinner. Stan found us---without his deer---and we ate very heartily. Beans, bread, coffee. We camped here for the night in this delightful little cove, calm and protected from the strong wind outside. Green sea, purple mountains, cloudless blue sky, a little freedom from hordes of staring Indians.

123 Then Chico Romero and his load of children and dogs arrived and
484 he unloaded his impedimenta on the beach, and soon the women came walking along the beach and joined the party. The boats carrying the heavy things and children; the women, with their babies and a few light things on their heads, walk along the beach when possible and follow the boats, which hug the shore to avoid the strong currents and tide. The boats are propelled by paddles mostly, though some of the Indians use oars. The women are slightly built, slender and in-
501 clined to be gaunt, owing to the hard life and lack of food. Their
142 cheek bones are quite prominent and their profiles present protruding lips.

432 Having no permanent homes, moving hither and thither for their
[364] various food supply, household things are not accumulated and life is reduced to its very simplest elements and absolute necessities.

Crude baskets made from shoots of the torote tree, vessels in which to cook, and some patched rags in place of Pelican skins to serve as blankets to the fortunate few, constitute the family pos-
281 sessions. Strange to relate, many of the women have an over-supply of
[853] milk, and according to Roberto have puppies nurse what the babies cannot take. One woman was known to nurse a baby pig on one side and a puppy on the other.

[247] Family dogs lick all cooking vessels which is unnecessary as they
[884] are thoroughly clean when the Seris are through with them, and also lick the infants clean after performing their natural functions, so they are quite indispensable. I saw a Seri girl place on the sand a small can of water for a dog and then saw her drink some of the remainder and pour the rest back in a five-gallon can. Dogs frequently swim across the Infernillo to join their masters.

732 Asked about cripples and incompetents, Roberto said they probably did not exist. The conditions of survival were too precarious to admit of anyone living who was unable, by physical disability, to hunt or fish. There are two or three men who are nearly blind or so. The wives of these men eke an uncertain living for them by the hardest
262 struggle. The sea turtle is the staple; one man and one good boat can
483 secure a living for five families. There are now nine boats, but one
501 boat to a family would practically free them from continual want.
262 With the exception of four bones in the flippers and the bones of the
237 head, all the sea turtle is used---the meat, blood, entrails, shell which furnishes food and oil, skin of flippers which furnishes sandals, sinew for strings. Nothing is wasted except contents of the entrails.

123 Again, we laid our blankets on the clean white sand of the shore and were lulled to rest by the murmuring sea.

123 Daylight found us up the next morning, and we breakfasted, rolled
484 up our blankets, pushed the boats into the sea and were off by the time the sun rose over the mountains and shone over a glassy sea. Two Seris towed their boat by a tump line, while a boy of twelve steered

123 it from shore by a paddle. A little child in the boat sat still as a
484 mouse. No matter how the boat rocked, it never whimpered or cried. All the children stayed perfectly quiet in the frail crafts, in the very positions in which they were placed.

123 Once the boat approached shore to secure a small octopus for fish
484 bait. One was finally located by Stanley, who could see its eyes
136 shining with a baleful purple light under a large boulder in about
220 eighteen inches of water. The Seri got out and pinned it down with an oar, while Roberto pounded it time and time again with another oar. Even then it escaped in a cloud of sepia which it discharged. Its tentacles were easily a foot in length, and its color was the bottom of the sea. If it once gets a grip on a rock it is practically impossible to tear it loose.

Schools of porpoises played close to the boat each day, curving up to breathe and throw spray and then diving lazily below the surface, frequently gliding like a dark shadow below the waves. Sometimes, in the sheer joy of living, they would leap clear of the water and splash back in a spray of foam.

123 We soon reached the extreme point where it juts from the Sonora
484 shore, landed and set a signal smoke to notify other Seris on the
[208] Island. (A dry *pitahalla* cactus was selected for a black smoke.) No answering signal came. We crossed the narrow channel, the Infernillo, a little over a mile wide, the water like a mill pond, and landed on the sheltered side and unloaded on the stony beach. For miles the beach was covered by windrows of round wave-worn rocks and pebbles of all beautiful colors and sizes mingled with strange shells and seaweed. Here we made camp and stayed overnight.

The Indian canoe landed its cargo of women, children and dogs a little later, and established a camp adjoining. Three little boys were commissioned to secure us some clams and they returned in a while with a pail of clams, one crab and some oysters. These were boiled in salt water, the meat extracted and Pancho Oliverria cooked them in rice for supper. The crab was my especial delicacy.

123 Roberto and Stanley walked off after dinner to hunt in the mountains a few miles back from the coast, and they returned long after dark very weary from carrying, for seven miles, a young burro deer which they had shot. The Indians soon gathered around it chattering volubly, as both they and ourselves had eaten no meat for several days. We gave them nearly three-fourths of it, reserving a hind quarter and some ribs for ourselves. Rafael Feliz and Chico, with skill born of long practice, skinned and unjointed the animal in a very short time, and devoured a good part of their share in a cooking pot a little later, although they had eaten only a little while before. The boys cracked the bones and scraped the marrow, eating it like candy.

[484] At six thirty the next morning, we were crowded in the boats again

123 and on our way, headed south, rounding the point with the tide in our
• 484 favor. It was a rowing proposition. During mornings the sea is calm and the swells glassy. Usually at noon the wind comes up, mostly ahead and against us. Last night we could see the light of a camp fire on the point opposite us, and soon we spied a boat headed for the Island. We had left the women and older children to walk and they met us where we landed. At noon we camped for dinner in a lovely cove, and soon three other boats joined us with their cargoes of women, children and dogs. We ate quickly and got under way again as soon as possible, and even then we were the last boat. The trip was bad, as all the people were loaded in the boats which made them low in the water.

123 It was a pretty sight to see the Seris in their *pangas*, boats
484 shaped like dories, graceful, narrow and swift, kneel in the bottom
501 and dip their broad paddles into the waves and shoot into the open sea like dark-skinned Vikings, wild hair flying.

As soon as we emerged from the cove the wind and tide struck us dead ahead, and progress was slow although the swells were behind us. After rounding a point the wind blew on the forward quarter and all the boats, now increased to five, hoisted their sails. We also stepped our mast, sheeted our flour-sack sail, and bowled through the sea, carrying a bone in our mouth.

Chico's boat ahead had no sail and when we neared it, steered with superb skill by the wild-looking Seri, Luis Torres, he had a tow line aboard and thereafter we held him in tow until finally the wind shifted dead ahead and all the boats lowered their sails, unstepped their masts and began paddling. One *panga* had a sail with part of it loose and flapping at the top like a flag. Roberto said the Seris did not want to cut off this useless piece for fear of spoiling the sail, so there it flapped whenever the sail was sheeted home.

123 About three thirty in the afternoon we rounded a bold rocky point
484 and entered a beautiful curving bay of quiet water, and here we landed for the night camp. Soon all the boats were unloaded. Men and children hunted driftwood for camp fires, two boats at our insistence set off fishing, and Stan and three Seris took their rifles and went hunting. All parties later returned without fish or game, so, as our meat had disappeared like a beautiful dream, we had to dig into our corn and flour to feed thirty or forty hungry Indians. The children stood about like a bunch of hungry cormorants and we promised them *pinole*, or flour paste.

123 Looking at these half naked children with their swarthy little
177 bosoms bare and most of them bare from the waist down, I dug out some safety pins and began with the little girl Luz, who was vigorously stirring the paste mass and pinned her waist over her bare breast and tummy with two bright safety pins. She never ceased stirring. Each bare breast I pinned the shirt over as the night was chilly. The children quick to catch on and keen with desire born of privation, each pulled his or her shirt open even when it had a button, or had

622 Thus passed a very striking character among the primitive races of Sonora, Mexico. He was brave and fearless in battle; crafty, cautious, and cunning in attack; cruel and merciless to his enemies. He was rarely caught off his guard, and always managed to extricate himself and his men from difficult situations. He was quick to think and act, and was wise with the wisdom learned at first hand on desert and sea from a rugged nature, reluctant to give up her secrets. He was a master hand at *balsa* building, a good hunter, fisherman, harpooner of *cahuesa* (sea turtle), a good surfman, a good gambler, and an expert [519] tracker. It was not unusual to possess two or three wives, but the old Chief, while married three times, had only one wife at a time. He was quite fond of the writer, and used to greet him with the true Mexican *abrazo*.

[123] It was in 1922 that I first met the grim old warrior on the shores of Tiburon, whither I had gone on a quest for the Museum of the American Indian, Heye Foundation, New York.

[142] He was very dark, of medium height, thick set, with a broad, deep chest, very muscular, with shaggy brows and deep set eyes which, even at that age, ninety years, burned like coals of fire, and were suspicious and wary. He wore a braided pigtail down his back which contained a few gray hairs. For clothing, he wore a ragged shirt and an old pair of overalls, with a short kilt hanging from a belt, through which stuck a long naked knife of hoop iron, ground on abrasive rocks and keen as a razor.

[302] [318] [411]

[291] From infancy to the grave, the freedom of his feet was never hampered by shoes. Even at that advanced age, and until his last illness, he was perfectly able to care for himself, and follow his nomadic tribe on its devious trails along the coast and far in the interior. A walk of a hundred miles was not unusual. For ten rifle cartridges a Seri Indian once walked forty or fifty miles to deliver my message to Juan Tomas. From the time we first met, our friendship was never broken.

[484]

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Fig. 1. Area of Present Seri Occupation

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One descendant of this band states that long ago his ancestors wandered north from the region of Guaymas. Eventually, they established land rights to the coastal area extending from Campo Ona on the south to Puerto Lobos on the north. Before long, however, they relinquished claim to the area between Campo Ona and Punta Tepopa. [173] [167] [425]

It is to be understood, of course, that groups from this band, as well as groups from other bands, at times ranged far afield from their respective territories. Band I, for instance, had campsites as far north as the mouth of the Colorado River. [484]

BAND V

642 These people were apparently hunters, gatherers, and fishermen. It is said that they speared fish from the shore since they did not use balsas. They too apparently raided the ranches. Their warring nature has already been discussed; it resulted in the acquisition of few friends. However, several marriages between members of this band and members of subdivision 2 of Band III are said to have occurred.

BAND VI

The members of Band VI lived on San Esteban Island and were the most primitive of the tribe. They lived in huts made of driftwood and in caves and made extensive use of the balsa. Although they did not have the bow and arrow, they did become expert in the use of the spear. The people depended mainly on a seafood, iguana, and maguey diet.

621 Perhaps it was due to the confined living space on the small
628 island with the accompanying lack of fresh water that relations
578 between the four subdivisions were precarious and fights broke out frequently. The Seri today stress the fact that the members of this band were impetuous and unpredictable.

642 Their relations with the other bands were generally good however. Seri from Band III were free to visit San Esteban where they were well treated.

The San Esteban people seldom traveled to the mainland, and, since they spoke no Spanish, it is probable that they made no peaceful contact with non-Seri groups.

642
628 COLLAPSE OF THE BAND SYSTEM
578
648 Internal strife in the Seri tribe was probably a major factor in the establishment of the band system. External strife was a major factor in its downfall.

Reference has been made to the plundering, killings and rustling of cattle to which certain of the bands were dedicated. The concern of the Sonora government was aroused, and steps were taken to crush the rebellious groups. According to the present-day Seri, military action by army units and rancher outfits against the various bands resulted in the near-destruction of the whole tribe.[11]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

133 into the saguaro forests of the eastern base of Sierra Seri; on the east it is miles in breadth, passing gradually into the normal Sonoran plain;
137 on the south it widens still farther, stretching all the way to Arenales de Gil and Pozo Escalante, and merging into the playa-like mud-flats bordering Laguna la Cruz, into which the gulf waters are sometimes forced by southwesterly gales at high spring tides. Throughout this portion of the desert, marine shells are scattered over the playa-like flats or lodged in the adjacent banks, sometimes in great beds; the vegetation is scantier than usual and largely of salt-loving habit; the mud-flats are usually coated with saline and alkaline crusts, while the dunes are soft and fluffy, and expand into broad belts perforated with the tunnels of the surprisingly abundant rodents. Across this plain
131 of bitter sand-dust lie the two hard land routes to Seriland—the supposed Escalante route of 1700, down the fan of Rio Bacuache and thence by Barranca Salina; and the Encinas route, down the northern border of the Rio Sonora fan and thence by Pozo Escalante to the shores of Bahia Kino.[1]

000 Desierto Encinas is an impossible human habitat in any proper sense; it is merely a broad and hardly passable boundary between habitats. The hardy stock of the frontier ranchos, pasturing partly on the thorny fruit of the cholla, push far out on the plains, and are sometimes watered for short periods, under strong guards of heavily armed vaqueros, at Barranca Salina; yet the greater part of the expanse is trodden only
36 by the Seri. Two or three ruined frames of Seri jacales and a few graves crown the low knoll near Pozo Escalante, and there are one or two house remnants near Barranca Salina; these are notable not only as the easternmost remaining outposts of Seri occupancy, but because they represent the only known instances in all Seriland of the erection of even temporary houses adjacent to water. Distinct paths, trodden
[487] deep by bare Seri feet, radiate from both waters toward the Seriland interior, but no traceable trails extend eastward.

The southern limit of Desierto Encinas is marked either by the broad
133 mud-flats opening into Laguna la Cruz or by the coast of the gulf, the coast cutting the lower portions of the plain being accentuated by a sand-bank 30 or 40 feet high, against which the surf thunders in nearly
[487] continuous roar, audible halfway or all the way to Pozo Escalante. A Seri trail skirts the crest of this bank, sending occasional branches into

[122] [1] Both the routes were traversed by the expedition of 1895, the former from the headwaters of Rio Bacuache to the upper portion of its alluvial fan, and thence from the abandoned Rancho Libertad on the lower portion of the fan across Desierto Encinas by way of Barranca Salina. In the northern crossing a light vehicle (the first to traverse this portion of the desert), drawn by four horses and aided by several horsemen, was taken from Rancho Libertad across the northern portion of Playa Noriega and thence up Arroyo Mitchell to a point midway between Barranca Salina and Johnson peak, and was brought back over the same route. The Encinas trail from Rancho San Francisco de Costa Rica was traversed four times each way by the same outfit, and once each way by the running gear of a heavy wagon carrying the rude craft (about 1,000 pounds in weight) in which the Seri waters were navigated, this vehicle being drawn by 8 to 12 horses, frequently changed. Typical aspects of both routes are shown in plate III, the upper figure representing the Encinas trail and the lower a distant view of Sierra Seri, taken from Playa Noriega, in the depths of Desierto Encinas.

h: McGee E-5 (1894-1895)1898 NU31 Seri NU31

the interior. At Punta Antigualla the bank expands and rises into a great mammillated shell-mound nearly 100 feet high, with several of the cusps occupied by more or less ruined jacales; and occasionally occupied houses occur midway thence to the southernmost point of Sierra Seri, and again at the base of the first spur east of Punta Ygnacio. Beyond Punta Antigualla the sweep of the waves is stronger than in Bahia Kino, and the coastal sand-bank is generally higher. Between the rocky buttresses of Punta Ygnacio and the next spur eastward the sand-ridge rises fully 50 feet above mean low tide, and here, as elsewhere, its verge is protected by a fog-fed chaparral thicket with occasional clumps of okatilla and other cacti. Behind the coast barrier lie lagoon-like basins, generally dry and floored with saline silt-beds, though sometimes occupied by briny pools formed through seepage during southwesterly gales; and there are physiographic indications that the northwestward extension of Laguna la Cruz formerly stretched some miles farther than now and lay in the rear of Punta Antigualla in such wise as to form a source of supply of the clam-shells of which the eminence is built.

2. Sierra Seri is a double range, divided mid-length by a broad saddle barely 2,000 feet in height.[1] Like other Sonoran ranges, the nuclear portions are exceedingly rugged and precipitous—at least two of its pinachos shoot so boldly that they commonly seem to overhang, and have been called leaning peaks. In large part the precipices rise abruptly from a symmetrical dome molded by sheetflooding, much as the insulated buttes rise from the Bacuache fan in northeastern Seriland; so that the tract lying between Desierto Encinas and El Infiernillo is a composite of exceptionally precipitous and exceptionally smooth mountain slopes. One of the Seri trails radiating from Barranca Salina lies across the mid-sierra saddle; others push into several mountain valleys, and the largest leads to Tinaja Trinchera, at the base of Johnson peak, where there are a few low walls of loose-laid rubble, somewhat like those of the trincheras (entrenched mountains) farther eastward—the only structures of the sort seen in Seriland. Toward the southern end of the range lie various trails, the most conspicuous paralleling the coast, either near the shore or over the steep salients, according to the configuration; while here and there ruinous jacales a few yards from the coast attest sporadic habitation. The eastern shore of Bahia Kunkaak from Punta Ygnacio northward reveals a typical geologic section of the Sonoran province: the transgressing waves have carved in the granitic subterrane a broad shelf lying just below mean low tide and usually stretching several furlongs offshore; this shelf is relieved here and there by remnantal crags of obdurate rocks, cumbered by bowlders and locally sheeted with sand and arkose derived from mechanically disintegrated granite; while the

[1] The northern portion, as seen from the east, is shown in plate III; the southern portion, as seen from the west, appears in the upper part of plate IV, while the southwesternmost point is shown in the lower part of the same plate.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

133 inner margin of the shelf is a sea-cliff, usually 30 to 50 feet high, of which the lower half is commonly granite and the upper half unconsolidated and recent-looking mechanical debris collected by sheetflood erosion. Sometimes the granite of the subterrane is replaced by volcanics; sometimes ancient and firmly cemented talus deposits separate the superficial mantle from the subterrane, as shown in the lower part of plate v; sometimes the line of sheetflood planation passes below tide-level, when the waves beat against the unconsolidated deposits in a deep embayment; sometimes the sharply defined planation surface ends abruptly at the sides of subranges or buttes shooting upward in the abrupt slopes characteristic of the sierra proper; yet this 10-mile stretch of coast is a nearly continuous revelation of the structure of sheetflood-carved plains and of modern marine transgression. The debris of the combined processes forms an abundant and varied assortment of bowlders, cobbles, and pebbles, whence the inhabitants readily derive their simple implements without need for studied forethought or manual cunning.

The long sand-spit terminating in Punta Miguel and the shorter one terminating in Punta Arena are the product of geologically recent wave building, and consist of irregular series of V-bars, backed by lagoon-like basins and enclosing considerable bodies of brine in the central portions; and the bars and basins become successively higher outward, in such wise as to attest the secular subsidence of this coast. [361] Several jacales are located on the higher portion of the southern sand-spit, midway between Punta Granita and Punta Miguel, while foot-[487] paths traverse the flat and skirt the coast. Toward the terminal portion of the spit the sand is blown into hummocks, held by clumps of salt enduring and sand-proof shrubbery; but there are no rancherias here, despite the fact that it is a natural point of embarkation—doubtless because no Seri structure could withstand the sand-drifting gales and storm inundations of this exposed spot. The more protected [136] lagoons behind the outer bars harbor abundant waterfowl, within bowshot of shrub-glumps and dunes well adapted to the concealment of hunters, while the mud-flats open to the tide abound in clams and other edible things. The features of the Punta Miguel sand-spit are repeated with variations along the eastern shore of El Infiernillo; and [361] Seri jacales, evidently designed for temporary occupancy, occur here and there, usually on higher banks above reach of the severer storms.

3. Tiburon island itself is apparently the chosen home of the Seri—[131] a habitat to which the mainland tract is at once a dependency, an alternative refuge, and a circumvallation. Its dominant range, Sierra Kunkaak, mates Sierra Seri in its essential features, though the rocks are for the greater part ordinarily obdurate eruptives rather than exceptionally obdurate granites, as in the mainland sierra; accordingly the range is somewhat lower and broader, while the sheetflood sculpture, with its sharp transition into precipitous cliffs, is somewhat less trench-

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

133 fortable haven at high tide, it is mostly mud-flat and sand-waste at extreme low tide—a condition which explains the stranding of an 80-foot whale in this treacherous harbor about 1887. The ruda is between two and three miles in length. It abounds in marine life of
136 kinds preferring quieter waters: clams are plentiful in its mud-flats, a sponge lines portions of the bottom toward its inner extremity, oysters cluster numerously on bowlders and on the mangrove-like roots and trunks of a large shrub along the outer shore, and various fishes find refuge here from the fierce currents and the hungry sharks and porpoises of the open strait; these and other creatures form food for innumerable waders and other water-fowl that seek shelter in the quiet bay, which is still further protected by salt-enduring shrubbery on the bars of the point and by the shrubby thickets and wave-cast banks and wind-built dunes on the mainland side.

361 The combination of conditions renders this portion of the Tiburon coast the optimum habitat of the Seri Indians. There are, indeed, no houses or other traces of permanent habitation on Punta Tormenta itself, which is not only swept by gales but must sometimes be inundated by gale-driven waters at high spring tide; but at the inner end of the long sand-spit, and also on the mainland opposite the outer portion of Rada Ballena, there are extensive and well-kept rancherias, capacious enough to accommodate comfortably thirty or forty Seri families, i. e., 150 or 200 persons. Toward its landward end the sand-spit is built
311 largely of pebbles and cobbles, of which thousands of tons are adapted to industrial use; sea-food is practically unlimited and is readily taken; water-fowl literally crowd the protected ruda within arrow-shot of natural cover; the outer slope of the bar is admirably suited for landing and embarking balsas in calm weather, while the bay is an ideal harbor for the portable craft, and the shrub-grown shores give unlimited opportunity for concealing them when not in use; the dunes and banks are high enough to protect the low jacales from storm-winds, while the abundant sponges and turtle-shells afford material for thatching and shingling the more exposed walls and roofs; and finally,
[312] it is but a favorite distance (about 4 miles) to the permanent fresh
● 487 water of Tinaja Anita. From this Seri metropolis well-trod trails radiate toward all other parts of the island; the best-beaten leads to the tinaja, sending branches into all the neighboring gorges, in which game is sometimes taken; next best-worn is the trail laid across Sierra Kunkaak to strike Arroyo Carrizal mid-length of its permanently wet portion; others pass northward to rancherias at different points on the coast, and still another skirts the coast southward by several smaller rancherias to the considerable jacal collection near Punta Narragansett—this, like other longshore routes, having alternative trails, the evanescent fair-weather one following the beach, while the permanent path threads the thorn-set thickets marking the crest of the sea-cliff or cuts across the longer salients. The Narragansett rancheria is

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

also a center for radiating trails, the best-beaten of these leading toward the fresh waters of Tinaja Anita and Arroyo Carrizal; and even the rancherías half-way thence to Punta Mashém send their most permanent paths over 15 miles of intervening ranges and spall-strewn valleys toward the same waters. According to Mashém's cautious statements, there is a minor Seri metropolis at the northwestern spur of Sierra Kunkaak, within reach of Pozo Hardy and Arroyo Agua Dulce, and two or three smaller rancherías along the western shore; but these were not reached by the 1895 expedition. 487 [361]

4. The seas washing Seriland are notably troubled by tides and winds. Gaping toward the Pacific, and narrowing and shoaling for the 800 miles of its length (measured from midway between Islas de Tres Marías and Cabo San Lucas), Gulf of California approaches Bay of Fundy, Bristol channel, and Broad sound as a tide accumulator; while the semidiurnal sweep of the waters in the upper half of the gulf is conditioned by the constriction of the basin to a fraction of its average cross-section at the narrows between Isla Tiburon and Punta San Francisquito. Toward the head of the gulf the ordinary spring tides range from 20 to 25 feet, and may be much increased by favoring winds; the debacles culminate there, but the currents culminate off Seriland in the great tide-gate half dammed by the islands of Tiburon, San Esteban, San Lorenzo, and Salsipuedes,[1] with their marine buttresses, and through the breaches of Paaaje Ulloa, Estrecho Alarcon, and Canal de Salsipuedes flow, four times daily, some two or three cubic miles of water in tremendous tidal floods, probably unsurpassed in vigor elsewhere on the globe. Naturally the islands and the adjacent coasts afford extraordinary examples of marine transgression; and while exceptional wave-work is a factor, the transgression is undoubtedly due mainly to the extraordinary tidal currents in this gateway of the gulf. The fierce currents and the frequent storms of the region condition local navigation, and have undoubtedly contributed to the development of the peculiarly light, strong, and serviceable water-craft of the aboriginal navigators among the islands. 133

El Infiernillo derives its distinctive characteristics largely from the local character of the tides. Bahía Kunkaak is a funnel-shape embayment so placed as to catch half the volume of the incoming tide and to

[1] Originally the name Islas Sal-si-pue-des (Get-out-if-canst) was applied to the various islands of this gateway of the gulf, including San Lorenzo, San Esteban, and San Agustin (now Tiburon), together with the smaller islets, as shown in the map of Padre Fernando Consag (in Noticia de la California y de su Conquista, etc., por el Padre Miguel Venegas, 1757, tomo iii, p. 194); and Padre Consag's account of the currents encountered in 1746 explains the designation: "The great sea which runs here even in fair weather would not allow us to stay, and it was with great difficulty we took in a little water. We now attempted to weather the Cape of San Gabriel de Sal-si-puedes, so greatly dreaded by seamen on account of these islands, several contiguous points of land and many ledges of sunken rocks extending a great way from the land. Here the sea is so agitated by the current that a gale or a calm makes but little difference" (English translation of Venegas' Noticia, titled A Natural and Civil History of California, 1759, vol. ii, pp. 312-313). Hittell speaks of "the group of islands known as Salsipuedes, the largest of which is now called Tiburon" (History of California, 1898, vol. i, p. 235). Dewey restricted the name to a single small island near the Baja California coast. Further references to the islands and their designations are noted postea, p. 46. 103 114

9:Malkin E-5 (1953-1958)1962 NU31 Seri NU31

I

INTRODUCTION

121 localities, but I think it is advisable to include others, whose nature is not so different from the main places of Seris' habitations.

361 I have selected then 25 localities and I shall give 13 their main characteristics below:

1. **Punta Peñasco** — a village along the upper shores of the Gulf of California, close to the U.S., [491] connected by a paved highway from Gila Bend. Typical Sonoran zone with extensive sand flats. Very rarely visited by the Indians.

2. **Porto Libertad** — rocky shores, located some 30 miles north of Desemboque. A Mexican village frequently visited by the Seris.

3. **Desemboque** — Seris' main settlement after 1940, just north of and around Punto Tepopa, only a few miles from Tiburon. A narrow strip of poor land, thoroughly permeated with alkali and salt. Vegetation is very sparse. The mesquite, elephant bush, creosote bush, *Cholla* and *Sahuaro* are the main trees. No *Palo Verde* or *Palo Fierro*. *Ocotillios*, *Sahuaros* and mesquite are stunted and scarce, only toward the mountains increasing in frequency and size. Along the shores, sand dunes [172] with kitchen middens, partly covered by vegetation. An arroyo nearby is empty except on a few occasions during the year when flash flood after rains rushes through. Rainfall very scarce. During the summer of 1953 I spent there, it rained very little—only twice and that was short and feeble. [312] Water is obtained from a well, near which there is a Mexican ranch where, owing to irrigation, some vegetables are grown and weeds are present such as *Datura*. The coast is largely rocky. Narrow beaches lack wide sand bars. Hence the fauna here is poor.

4. **Estero Sargente** — alkali flats and mud flats some 25 km. south of Desemboque along the coast. Vegetation very scarce. *Sahuaros* and *Ocotillios* and other desert trees grow some distance from the shore. Short grasses in some places clump the coastal dunes. Breeding and feeding place of many shore birds, especially of willets and egrets. On the alkali flats near the shore are many peculiar insects, not found in Desemboque, particularly tiger beetles and Oedemerids.

5. **Campo Vivora** — little more than half way down toward Desemboque from Estero Sargente, [103] also along the coast. So named after supposedly numerous rattlesnakes. Clumpy grasses. Favorite encampment of the Seris and others while fishing and hunting turtle. The only loggerhead turtle I have seen was right here.

[491] 6. **Porto Kino** — fishing village directly due east of Hermosillo, nowdays connected with Sonora's

[P. 1 B]

Malkin E-5 (1953-1955)1962 NU31 Seri NU31

361 13 [491] [166] capital by paved road. Formerly, in the twenties and early thirties, Seris' chief mainland settlement. Now with the influx of the Mexicans, the Seris deserted the place completely as a camp site, although they still visit it occasionally. Distinct in the extensive sand beaches and sand marine flats which harbor peculiar bird, fish and insect fauna.

7. **Guaymas**—southernmost point considered here and probably also of the Seris' historical extension. Nowadays very rarely visited by them and probably only while cruising with the Mexicans. Large settlement, many tourists. Backlands; rocky desert.

8. **Tepopa**—spectacular rocky head just south of Desemboque, opposite to Tiburon. Caves, usual mountainous vegetation, *Sahuaro*. Many Seri hunting encampments and one of the places where the Sonoran bighorn is still hunted.

9. **Coast of Baja California** — very rocky area across the bay—almost never visited by the Indians.

13 10. **Tiburon**—island in the Gulf of California separated from the mainland by a narrow channel called "Infernillo," only a mile wide. Rugged, mountainous. By **Tiburon** is meant an overall island area in distinction from **Tecomate** or the mountains.

[361] [221] 11. **Tecomate** — a water-hole and Seri campsite on the northern shore of Tiburon. Today this is the only permanent site on the island where these Indians, actually only a few families among them, still go to live for part of the year.

12. **Mountains of Tiburon** — rugged interior of the island, reaching up to almost 4000 feet. Usual vegetation cover with *Sahuaro* and other typically Sonoran floral components, fauna much as on the mainland except lacking cougar, bighorn and some other larger forms. The interior does have some "tenajas," that is water-holes and there is said to be a rivulet up in the mountains.

13. **Infernillo**—narrow channel between Tiburon and the mainland, often called locally "canal." For the terrestrial fauna and for birds reference is made to the mainland shores of Infernillo. For the marine fauna is meant either the open water in this channel or to the littoral off the mainland. The opposite shores and littorals are covered as "Tiburon." Maximum depth is said to be up to 25 fathoms.

14. **Isla Patos** — small island north of Tiburon and directly due west of Estero Sargente and halfway between Tiburon and Punto Tepopa. Visited by the Indians only occasionally, mostly in connection with the duck hunt. [223]

15. **Isla Raza** — a small island between Angel de la Guarda and San Lorenzo.

16. **San Esteban Island**—a round island between Tiburon and San Lorenzo, up to 1700 feet elevation. Visited occasionally during fishing or turtle hunt trips or in search of a chuckawalla. [221]

[P. 2A]

123 312 [402] nets of twisted fiber, hooked the nets in the ends of the notched stick and started off nine or ten miles to the water hole in the heart of the mountains.

Water carried so far over loose, sandy soil, dodging cactus, threading a devious way among the *talus* thrown off the cliffs and slopes of canyon walls, with the water-bearer barefoot, acquires a value absolutely unknown to the man who draws an unlimited supply from a faucet.

The two men were gone six hours and when they returned they were almost staggering under the heavy loads of water, each man carrying at least one hundred and ten pounds of water, as the cans were full. In addition, one man had a canteen full.

The thirsty people drank sparingly, and a little Seri maid poured some of the precious liquid into a cooking olla for a thirsty dog. After the dog had lapped sufficient to allay his thirst, she carefully poured the residue back into the can, never losing a drop. One drop of water could not be spared after that arduous trip.

484 147 648 Bob says a man goes to Hermosillo occasionally and returns to the coast, ninety miles, with two to five cans of *mescal*. It takes probably four days to do it, but it is a wonderful feat of endurance. He said about thirty years ago a woman walked the ninety miles during one night, afoot, and reported to the Government House when it was opened at nine in the morning that about fifty of her people had been shot by Roberto's uncle at various times. This uncle was a very hard rough man and the Seris were fond of his mares and steers for meat, and used to steal, so he began shooting a goodly number. Fearing a man messenger would be shot, as men were frequently shot while going along the road, they sent a woman.

Ysabel was Governor at the time. Judgment was rendered against the uncle, and it is probable that a hanging squad would have been sent out to execute him. The Governor, a great friend of the family, sent for him, and he rode ninety miles at night on horseback and was saved with the Governor's help.

Roberto saw twelve Seris pack meat from two mares, two steers and two yearling heifers, for four or five miles to their boats. Their endurance and strength is phenomenal. The question naturally arises, "Why are not burros used by the Seris on the Island to ride and pack, [402] as they are by their Mexican neighbors on the mainland?" It has been tried, but things were reversed; the Seris packed the burros around in their stomachs.

261 262 Roberto said: "These people, living on the verge of starvation, never having a continuous food supply, would kill and eat every burro, and it is a common thing on the mainland, if a cow or horse dies, and Seris are in the neighborhood, they will try to beat the buzzards to it. They will gorge in times of plenty, and when food is scarce they

[text continues on p. 160]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

hours tumultuous waves come and go sporadically, while about the mile-wide boca the choppy sea sometimes takes the form of spire-like jets, spurting 5 or 10 feet high and breaking into aigrettes of glittering spray in most unwaterlike and wholly indescribable fashion. Dewey described the strait as "unsafe for navigation by any except the smallest class of vessels"; it is safe, indeed, only for portable and indestructible craft like the Seri balsas, which may be put off or carried ashore at will by craftsmen willing to wait for wind and tide, and unpossessed of impediments of a sort to be injured by wetting. Of such an environment the balsa is a natural product.

The adjunct islets of Seriland are miniatures of Tiburon in all essential respects, save that they are without fresh water. The largest is San Esteban, a somewhat complex butte rising sharply from the waters in a nearly continuous sea-cliff recording vigorous work by storms and tides; it is occasionally visited by the Seri, chiefly in search of water-fowl and eggs. The most important of the series in Seri economy and mythology is Isla Tasasne, off the mouth of Bahia Kino; it is a rugged butte some 600 feet high, rising in wave-cut cliffs on the sea side and pedimented by low spits and banks of sand toward the lea; the sand-banks are literally flocked with pelicans, while other fowl cover the flatter ledges and crowd the crannies of the pinnacle. Isla Turner is a somewhat smaller and still more rugged butte, bounded on both sides by precipitous cliffs, while Roca Foca is merely a great rock shelving upward from the storm-swept waters off the most exposed angle of Tiburon; in the crannies of the former birds nest abundantly, while the lower ledges of both are haunted by seals. Isla Patos, north of Tiburon, is a breeding-place for different water-fowl, and is especially noted as a refuge for ducks; it, too, is for the most part a rocky butte, with a sandy shelf at the eastern base. Beyond San Esteban lies the similar but smaller Isla San Lorenzo, while Isla Salsipuedes and a few other islets stretch thence northward half way to the southern point of Isla Angel de la Guarda, the second-largest island of the gulf. San Lorenzo and the smaller islets are occasionally visited by the Seri, partly for a mineral pigment used in face-painting, partly in quest of game; and they sometimes push on to the larger island to enjoy its fairly abundant game, including the easily taken iguana, amid the ruins of an ancient culture apparently akin to that of southern Mexico. Even the most frequented islets, Tasasne and Patos, can be reached only by crossing miles of open sea; but in their way the Seri are as canny navigators as they are skilful boat-builders—it is their habit to hug the shore in threatening weather, to await wind and tide for hours or days together, to set out on distant journeys only when all conditions favor, and in emergency to seize inspiration from the storm like the vikings of old, and bend supernormal power to the control of their craft.

Summarily, the prevailing features of Seriland may be said to be

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

Naturally the surveyors came into contact with the Seri tribesmen. Of them Commander Dewey wrote:

During the greater part of the year Tiburon Island is resorted to by the Seris (or Coras) tribe of Indians, who inhabit the adjacent mainland, and their huts and encampments may be seen in many places along the shore, principally on the eastern side of the island. They are reputed to be exceedingly hostile and to use poisoned arrows in opposing the landing of strangers on what they consider their domain, but during the stay of the *Narragansett* in the vicinity they were very friendly. At first they were shy and made threatening gestures, but soon finding that our intentions were peaceable, became friendly and returned our visits to the ships by frequent and lengthy calls on board ship. They are very expert in hunting with the bow and arrow and in catching fish and turtles, which abound in the surrounding waters. The canoes of these Indians deserve especial mention. They are made of long reeds, which are bound together with strings after the manner of fascines, three of which when fastened together . . . have sufficient buoyancy to support one or two persons. They kneel in these canoes when paddling, the water being at the same level in the canoe as outside of it.[1]

Illustrations of the "Tiburon canoe" (or balsa), drawn by H. Von Bayer, were also introduced.[2] In addition Mr Von Bayer succeeded in obtaining two photographs of Seri Indians, taken on shipboard; one of these is of special interest in that it illustrates the peculiar attitude of the Seri archer in the act of using his weapon.[3]

Unfortunately the surveys were confined to the coast, and the interior remained unmeasured and unmapped save on the basis of tradition and travelers' tales, supplemented by a few vague itineraries and traverses. Except along the international boundary and the railway (Ferrocarril de Sonora), the locations of pueblos and ranchos remained guesses, the delineation of mountains remained a work of imagination, and even the best cartographers continued to run in rivers at random or in such wise as to afford artistic effect.[4]

In 1879 M Alphonse L. Pinart traveled extensively in northern Mexico and southwestern United States, and made considerable linguistic collections among various tribes. Desiring to obtain a Seri vocabulary, he planned a visit to the tribal territory; but on reaching Caborca in March he was met by the information that the Seri were on the warpath, and had recently devastated a hacienda on their frontier and slain more than a dozen white settlers.[5] Thence he repaired

[1] Publication No. 56, U. S. Hydrographic Office, Bureau of Navigation. The West Coast of Mexico, from the Boundary Line between the United States and Mexico to Cape Corrientes, including the Gulf of California (revised edition), 1889, p. 148.

[2] Ibid., pl. xv, p. 198 (one of these illustrations is reproduced in figure 26).

[3] The negatives of these pictures were retained by Mr Von Bayer, and have been kindly turned over to the Bureau of American Ethnology. Unfortunately the archery negative had been shattered, but enough of the fragments were preserved to show all essential details and to afford a basis for the drawing reproduced in plate xxix.

[4] The imposing official map of 1889, titled Carta General de la Republica Mexicana, formada en el Ministerio de Fomento con los datos mas recientes, por disposicion del Secretario del Ramo, General Carlos Pacheco, engraved and printed by Erhard Hermanos, Paris, on a scale of about 32 miles to the inch, represents Rio Bavispe as about the right length and with its course in about the right location, but as running at almost exactly right angles to its actual course; and it contains divers other equally startling errors.

[5] Recorded by Gatschet, Zeitschrift für Ethnologie, Berlin, Band xv, 1883, p. 186. The location of the hacienda was not specified, but there are local traditions of Seri raids about that time, both at Hacienda Seris (between Caborca and Libertad anthracite) and at Bacuachito.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

ripening); most of the larger muscles were already gnawed away, leaving loose ends of fiber and strings of tendon clinging to the bone, the condition being such that the remaining flesh might easily have been cut and scraped away by means of a knife; yet whenever a warrior or woman or youth hungered he or she took down the heavy joint, squatted or sat on the ground with back to one side of the doorway, held the mass at the height of the mouth, and gnawed, sucked, and swallowed, frequently tearing the tissue by twisting and backward jerks of the head, and not only masticating, but swallowing the free ends of tendons still attached to the bone. This process was varied only by seizing with the hands and tearing off a strip of flesh or skin already loosened by the teeth; and it was continued until the bones were practically clean, when they were wrenched apart by the stronger men in order that the cartilaginous cushions and epiphyses might be gnawed away. The only approach to cooking or carving was a parboiling of the foot, after the leg was wrenched off at the hock, until the hoof was sufficiently softened to be knocked off with the protolithic hupf[1] shown in plate XLIII, when half a dozen matrons and well-grown maidens gathered about to gnaw the gelatinous tissue (already softened by incipient decay as well as by the parboiling) investing the coffin bone. The entire procedure in this as in many other cases proclaimed the absence of knife-sense. The Caucasian huntsman does not have to think of his knife when game is to be bled or skinned or dissected; his habit-trained hand knows where to find the implement, how to seize it, and in most cases how to wield it advantageously; but the Seri hand possesses no such cunning, and uses the knife only clumsily and at second thought, if at all. The Seri huntsman, on the other hand, does not have to think of nails and teeth, for they are trained and coordinated by hereditary habit to spontaneously act in unison and with the utmost possible or needful vigor; while the Caucasian at least has completely lost the claw-and-teeth instinct of offense and defense.

Conformably with their striking independence of knives, the Seri are conspicuously unskilful in all mechanical operations involving the use of tools. Their most elaborate manufacture is the balsa, made from reeds broken at the butts and with the leaves and tops removed by the hands or by fire, bound together with hand-made cords; next in elaborateness come the bow and arrow, normally made without cutting tools; then follows their fictile ware, which is made wholly by hand, without aid of the simple molds and paddles and other devices used by neighboring tribes; while their primitive fabrics were apparently of hand-extracted fibers, twisted and woven wholly by hand, with the aid of wood or bone perforators in sewing and possibly in weaving. Practically the Seri possess but a single tool, and this is applied to a peculiarly wide variety of purposes—it is the originally natural cobble used for crushing bones and severing tendons, for grinding seeds and

[1] Defined passim, p. 188.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

Naturally the conditions at Costa Rica were unfavorable to the study of native ideas concerning apparel. The women and some of the children were arrayed chiefly in cast-off habiliments of the rancheras or in nondescript raga, while the men either aped Mexican fashions, like Maabém, or shamefacedly sweltered under the unaccustomed burden of tatterdemalion gear; yet there was a meaningful absence of that desire for finery so prominent among primitive peoples—a fact quite as eloquent in itself as the absence of bracelets and bangles, tassels and trappings. It is probable that the shamans and mystery-hedged crones in the depths of Seriland enhance their influence by the aid of symbolic paraphernalia (indeed, some inkling of such customs is found in the meager records of earlier visitors);[1] yet the conspicuous feature of Seri costumery is the dearth of decorative devices.

FIG. 13.—Necklace of wooden beads.

The habitations of the tribe are the simplest of jacales—mere bowers, affording partial protection from sun and wind, but not designed to shed rain or bar cold. Half a dozen of these were examined at Costa Rica in 1894 and probably a hundred more, in various stages of habitability, in Seriland proper in 1895, yet not the slightest trace of decoration was observed—the structures are plainly and barrenly utilitarian in every feature. The same may be said of the balsas in which the Seri navigate their stormy waters; for the peculiarly graceful curves of the craft evidently stand for nothing more than the mechanical solution of a complex problem in balanced forces, wrought out through the experience of generations, while the simple reed bundles are absolutely devoid of paint, of superfluous cord, of fetishistic appendages or markings, of tritons, nereids, or other votive symbols at bow or stern, and of industrially superfluous features or attachments in general—indeed, the only appendages discovered were one or two simple wooden marlinspikes (shown in figure 26), thrust among the reeds to be at hand in case of need for repairs.

Among the utensils employed in the primitive householdry of the Seri the most conspicuous and at the same time the most essential is the olla, or water-jar. Its technical features are described elsewhere; but it may here be noted that the olla is the central artifact about which the very

[1] Hardy noted the use of "a small leathern bag, painted and otherwise ornamented", as a medicine rattle (Travels, p. 342), and also described a wind-symbol and an effigy used for thaumaturgic purposes (ibid., pp. 294, 295).

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

the turtle is either drowned or driven ashore, or else lifted on the craft.[1] Immediately on landing the quarry, the plastron is broken loose by blows of the hupf[2] and torn off by vigorous wrenches of the warriors and their strong-taloned spouses in the impetuous fury of a fierce blood-craze like that of carniverous beasts; the blood and entrails and all soft parts are at once devoured, and the firmer flesh follows at a rate depending on the antecedent hunger, both men and women crushing integument and tendon and bone with the hupf, tearing other tissues with teeth and nails, mouthing shreds from the shells, and gorging the whole ravenously if well ahungered, but stopping to singe and smoke or even half roast the larger pieces if nearer satiety. If the quarry is too large for immediate consumption and not too far from a rancheria the remnants (including head and flippers and shells) are hoisted to the top of the jacal immediately over the open end—the conventional Seri larder—to soften in the sun for hours or days; and on these tough and gamey tidbits the home-stayers, especially the youths, chew luxuriously whenever other occupations fail. In times of plenty, such sun-ripened fragments of reeking feasts are rather generally appropriated first to the children and afterward to the coyote-dogs; and it is a favorite pastime of the toddlers to gather about an inverted carapace on hands and knees, crowding their heads into its noisome depths, displacing the rare scavenger beetles and blowflies of this arid province, mumbling at the cartilaginous processes, and sucking and swallowing again and again the tendonous strings from the muscular attachments, until, overcome by fulness and rank effluvia, they fall asleep with their heads in the trough—to be stealthily nudged aside by the cringing curs attached to the rancheria. Com-

[1] A lively and explicit account of Seri turtle-fishing appears in Hardy's Travels in the Interior of Mexico, 1829, pp. 396-397: "Bruja's bay is of considerable extent, and there are from five to three fathoms water close to Arnold's island, in the neighborhood of which the Indians catch abundance of turtle in a singular manner. I have already described their canoes, which in Spanish are called 'balsas'. An Indian paddles himself from the shore on one of these by means of a long, slender pole of about 12 or 14 feet in length, the wood of which is the root of a thirty [illegible], growing near the coast; and although the branches of this tree are extremely brittle, the underground roots are as pliable as whalebone and nearly as dark in color. At one end of this pole there is a hole an inch deep, into which is inserted another bit of wood, in shape like an oar, having a square bit of iron 4 inches long fastened to it, the other end of the iron being pointed. Both the bolt and oar are first moistened and then tightly inserted one within the other. Fastened to the iron is a cord of very considerable length, which is brought up along the pole, and both are held in the left hand of the Indian. So securely is the nail thus fixed in the pole that although the latter is used as a paddle it does not fall out.

"A turtle is a very lethargic animal, and may frequently be surprised in its watery slumbers. The balsa is placed nearly perpendicularly over one of these unsuspecting sleepers, when the fisherman, softly sliding the pole through the water in the direction of the animal till within a foot or two of it, he suddenly plunges the iron into its back. No sooner does the creature feel itself wounded than it swims hastily forward and endeavors to liberate itself. The slightest motion of the turtle displaces the iron point from the long pole, which would otherwise be inevitably broken and the turtle would as certainly be lost; but in the manner here described it is held by the cord fastened on to the iron which has penetrated its back till, after it has sufficiently exhausted its strength, it is hoisted on board the canoe by the fisherman, who proceeds to the shore in order to dispose of his prize."

[2] The universal stone implement of the Seri, imported from a subjacent and used in nearly every industrial occupation (see pages, p. 220); the designation is mimetic, or onomatopoetic, from the sound of the stroke, particularly on animal tissues.

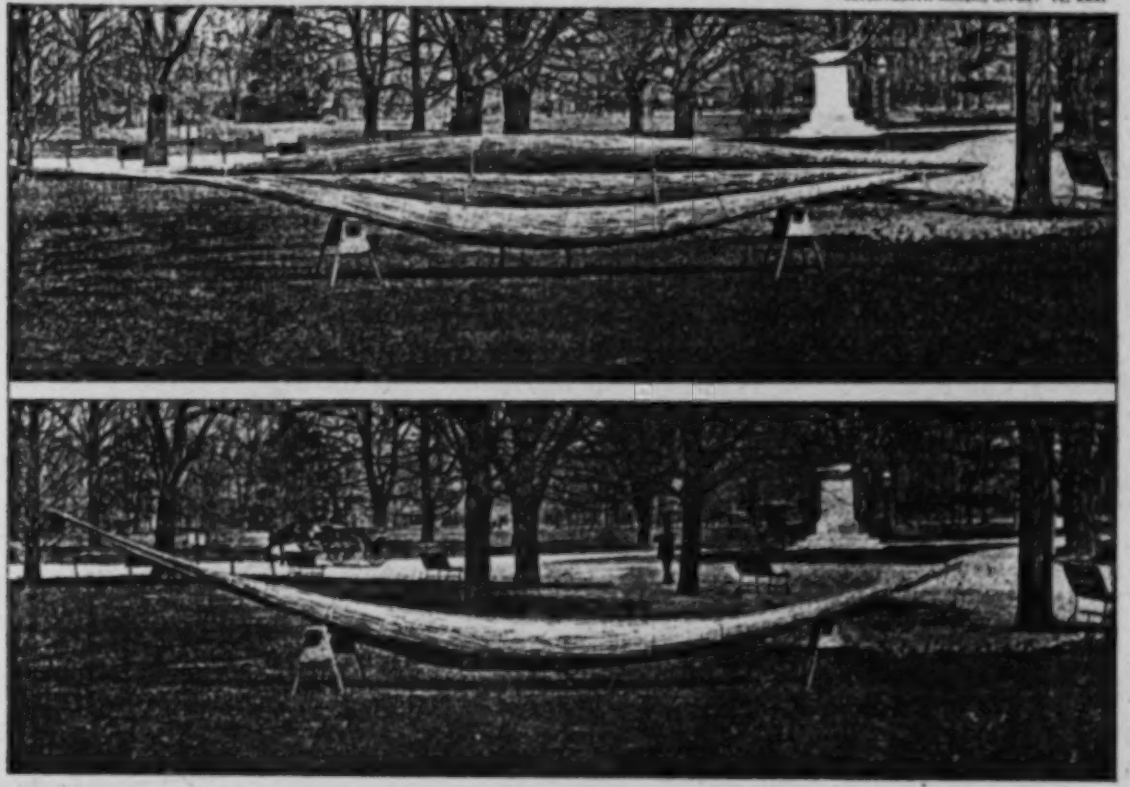
1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

131 especially as they are reflected in the primitive minds of the local tribe; and careful study of the habits and history of the Seri shows that the dangerous strait has been a potent factor in preserving tribal existence and perpetuating tribal integrity. Naturally the factor operates through
502 navigation; for it is by means of this art that the tribesmen are able to
609 avoid or to repel the rare invaders of either mainland or insular portions of their province, the overland pioneers from the east being stopped by the strait and the maritime explorers from south and west being unable to maintain themselves long about the stormy shores and never outfitted for pushing far toward the mainland retreats and strongholds; while by means of their light and simple craft the Seri were able to retreat or to advance across the strait as readily as over the adjacent lands to which they were wonted by the experience of generations. In their minds, indeed, El Infiernillo is the nucleus of their province. So the Seri were among the lowliest learners of that lesson of highest statecraft, that lands are not divided but united by intervening sea; and their ill-formulated and provincial notions are of much significance in their bearing on autochthonous habits and habitats.

501 The water craft of which the Seri make so good use is a balsa, made of three bundles of carrizal or cane lashed together alongside, measuring barely 4 feet abeam, 1½ feet in depth, and some 30 feet in length over all. A fine specimen (except for a slight injury at one end) is shown in plan and profile in plate XXXI. It was obtained near Boca Infierno in 1895, partly towed and partly paddled thence to Embarcadero Andrade, wagoned laboriously across Desierto Encinas and on to Hermosillo, conveyed in an iron-sheathed box on two gondolas of the narrow-gage Ferrocarril de Sonora to the international frontier, and finally freighted to the United States National Museum, where (in the Mall just outside the building) the photographs reproduced in the plate were taken.

396 The manufacture of the balsa has never been seen by Caucasian eyes, but the processes are safely inferred from the structure, whose testimony is corroborated in part by Mashém's imperfect descriptions. The first step is the gathering of the carrizal from one of the patches growing about the three or four permanent fresh waters of Seriland, the canes being carefully selected for straightness, symmetry, and uniformity in size; these are then denuded of leaves and tassels, tied in bundles of convenient size (one seen on Tiburon contained 40 or 50 canes), and carried to the shore. In actual construction the canes are laid butt to butt, but overlapping 2 or 3 feet, the overlap being shifted this way and that with successive additions, so that the aggregate length of overlapping in the bundle reaches 10 or 12 feet—i. e., the full length of the body of the finished craft. The growing bundle is wrapped from time to time with lashings of mesquite root or magney fiber, and kept in cylindrical form by constant rolling and by means of the lashing; though the cord used for the purpose is so slender as to do little more than serve the purpose

501



SERI BALSA IN THE NATIONAL MUSEUM

J. McGee E-5 (1894-1895)1896 NU31 Ser1 NU31

[FACING P. 217]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

of manufacture (only stray shreds of the interior cording could be found in an old and abandoned balsa on Punta Antigualla). As the bundle approaches the requisite size, the building process changes; the butts of the successively added stalks are thrust obliquely into the interstices extending beyond the butts of earlier-used canes, and the stems are slightly bent to bring them into parallelism with their fellows; and this interweaving process is continued with increasing care until, when the bundle is completed, there are no visible butts (all being pushed into the interior of the bundle), while the only visible tips are those projecting to form the tapering extremities. The finished bundle is then secured by a spiral winding of slender cord. Two other bundles are next made, the three being entirely similar, so far as is known; then the three are joined by a lashing of slender cord like that used for the separate bundles, which is twined alternately above and below the central bundle in such manner as to hold the three in an approximate plane save toward the extremities, where the lashing is much firmer and the tapering tips of the bundles are brought into a triangular position, i. e., the position of smallest compass. The cordage is of either mesquite root or maguey fiber, the former being the more common, so far as observed (doubtless by reason of the dearth of the latter plant); it is notably uniform in twist and size, though surprisingly slender for the purpose, barely three-sixteenths of an inch, or 5 mm., in diameter, and limited in quantity.[1] The only tools or implements used in the manufacture (and repair), so far as is known, are light wooden marlinspikes, two of which are illustrated in figure 26; these are used in working the cane-butts into the bundles. In collecting the canes the tassels are broken off and the leaves stripped by the unaided hands, while the stalks are broken off usually below the secondary roots in the downward taper, and the rootlets and loose ends are removed either with the hands or by fire.

The finished balsa is notably light and buoyant. The Boca Infierno specimen was estimated to weigh about 250 pounds (113 kilograms) when thoroughly dry, and little more than 300 pounds (136 kilograms)

FIG. 26.—Seri marlinspikes.

[1] Only the finer cording shown in plate XXXI is original, the coarser ropes having been added to facilitate handling.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

501 when completely wet; so that it could easily be picked up by three or four, or even by two, strong men and carried ashore to be hidden in the fog-shrubbery skirting the coast. The craft floated high with one man aboard, rode better with two, carried three without much difficulty even in a fairly heavy sea, and would safely bear four adults aggregating 600 pounds (272 kilograms) in moderate water. The most striking features of the craft afloat are its graceful movement and its perfect adaptation to variable seas and loads. The lines are symmetric and of great delicacy, as indicated even by the photographs out of its element; the reed-bundles are yielding, partly by resilience and partly in the way of set, so that the body of the craft curves to fit the weight and distribution of the load and to meet the impact of swells and breakers. In smooth water a lightly laden balsa may appear heavy and logy, but with a heavier load and stronger sea each tapering end rises strongly and then recurves slightly in a Hogarthian line graceful as the neck of a swan, while the whole craft skims the waves or glides sinuously over their

FIG. 27—The balsa afloat.

crests in a lightsome way, recalling the easy movement of gull or petrel. A suggestion of its effect is shown in figure 27, a composite drawn largely from photographs; another suggestion is shown in figure 28, reproduced in facsimile from a drawing by the artist of the U. S. S. *Narragansett* in 1873,[1] the only known picture of the craft antecedent to the 1895 expedition.

Almost equally striking features of the balsa are its efficiency and safety under the severe local conditions. Carrying twice its weight of (chiefly) living freight, it breasts gales and rides breakers and stems tideripe that would crush a canoe, swamp a skiff, or capsize a yawl; while if caught in currents or surf and cast ashore it is seldom wrecked, but drops lightly on beach or rocks, to be pushed uninjured by the broken wave-tips beyond the reach of pounding rollers, even if it is not at once caught up by its passengers and carried to complete safety. The strength of the craft is amazing, especially in view of the slender-

[1] Publication No. 56, U. S. Hydrographic Office, Bureau of Navigation, 1877, plate xv, p. 136.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

ness of the cords used in construction; in fact, the outer layers of canes are so ingeniously interlocked by the insertion of their butts into interstices that each bundle holds itself together with slight aid from the exterior cording, while even the bundles themselves are held in proper relative position by the secure terminal tying rather than by the intertwined cording of the body of the craft. And the entire construction exemplifies the compartment principle to perfection; a slight injury may affect but a single joint of one out of several thousand canes, while even a severe fall on sharp rocks seldom injures more than a few score canes, and these in a few joints only. The most objectionable feature of the balsa lies in the fact that it affords little protection from the wet. The water rises freely through the reed bundles to a height depending on the load, and not only the spray but the whitecaps and combers as well dash freely over the unprotected body of the craft; but this defect is of little consequence to the hardy and nearly nude navigators, or to their scanty and practically uninjurable freight. 501

FIG. 28—Seri balsa as seen by Narragansett party.

The gracefulness and efficiency of the balsa itself stand in strong contrast with the crude methods of propulsion. According to Mashém, the craft is commonly propelled by either one or two women lying prone on the reeds and paddling either with bare hands or with large shells held in the hands; according to Hardy, the harpoon main shaft is used by turtle fishermen for paddling (and probably for poling, also); according to the Dewey picture (figure 28), the vessel is driven by a woman with a double-end paddle like that used in connection with the conventional canoe; while the expedition of 1895 found on Isla Tiburon four or five paddles rudely wrought from flotsam boards and barrel-staves, and partly hafted with rough sticks 3 or 4 feet long, but partly without handles and evidently designed to be grasped directly, like the shells of Mashém's descriptions. No trace of oars, rowlocks, sculls, rudders, or masts were found, and there is nothing to indicate the faintest notion of sails and sailing. On the whole there is no trace of well differentiated propelling devices—i. e., the craft is perfected only as a static device and not at all as a dynamic mechanism. 502 [462]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

22 Despite their poverty in propelling devices, the Seri navigate their
502 waters successfully and extensively. Perhaps the commonest function of the craft is that exercised in connection with the turtle fishery, though its chief office as a factor of general industrial economy is that of bridging El Infiernillo at the will of the roving clans. It is by means of this craft, also, that the semiceremonial pelican feasts on Tiburon are consummated; it is by the same means that Isla Patos, Isla Turner, Roca Foca, and other insulated sources of food-supply are habitually reached; and both Mashém's accounts and the Jesuits' records indicate that occasional voyages are pushed to San Esteban, San Lorenzo, Angel de la Guarda, and even to the Baja California coast.

Concordantly with the tribal customs, little freight is carried. The traveling family transport their poor possessions to the shore, bring out the balsa from its hiding place in the thick and thorny fog-shrubbery, launch it, lade it with a filled olla and the weapons of a man and implements of a woman, besides any chance food and clothing, and embark lightly to enjoy the semirepose of drifting before the breeze—until the rising gale brings labor still more arduous than that of scouring the spall-strewn slopes or sandy stretches of their hard motherland. Commonly the terminus of the trip is fixed largely by the chance of wind and tide; and when it is reached the party carry the craft inshore, conceal it shrewdly, and then take up their birdskin bed and walk forth in search of fresh water and meat. The successful fishing trips of course end in orgies of gorging, and when the voyage is the climax of a foray to the mainland frontier for stock-stealing, the quarters and paunches and heads hastily thrown aboard at the mainland side of the strait are carried to the rancherias for consumption at leisure; and this has happened so often that equine hoofs and bovine bones are common constituents of the middens on Tiburon.

171 Although measurably similar to Central American and South Amer-
501 ican types of water-craft, the Seri balsa is a notably distinct type for its region. The California natives, as well as those of the mainland of Mexico south of Rio Yaqui, used rafts made either of palm trunks or of other logs lashed alongside rather than balsas; while the far-traveling tribes used either sails or well-differentiated paddles for propulsion.

501 Briefly, the Seri balsa is remarkable for perfect adaptation to those needs of its makers shaped by their distinctive environment. It seems to approach the ideal of industrial economy—the acme of practicality—in the adjustment of materials and forces to the ends of a lowly culture; and, like the olla and harpoon and arrow, it affords an impressive example of the adjustment of artifacts to environment through the intervention of budding intelligence. Yet the chief significance of the craft would seem to reside in its vestigial character as a survival of that orarian stage in the course of human development

I: McGee E-5 (1894-1895)1898 NU31 Seri NU31

in which men lived alongshore and adjusted themselves to maritime conditions rather than to terrestrial environments; a stage evidently but barely passed by the Seri, since they still subsist mainly on sea food, still retain their suggestive navigation, and still view their stormy straits and bays as the nucleus and noblest portion of their province. 501

HABITATIONS

Among the Seri, as among primitive folk generally, the habitation reflects local conditions, especially climate and building materials. Now, Seriland is a subtropical yet arid tract, where rain rarely falls, frost seldom forms, and snow is known only as a fleeting mantle on generally distant mountains, so that there is little need for protection from cold and wet; at the same time the district is too desert to yield serviceable building material other than rock, which the lowly folk have not learned to manipulate. Moreover, the tribesmen and their families are perpetual fugitives (their movements being too erratic and aimless to put them in the class of nomads); they are too accustomed to wandering and too unaccustomed to long resting at particular spots to have a home-sense, save for their motherland as a whole; and, just as they rely on their own physical hardihood for preservation against the elements, so they depend on their combined fleetness and prowess for preservation against enemies. Accordingly, the Seri habitation is not a permanent abode, still less a domicile for weaklings or a shrine for household lares and penates, not at all a castle of proprietary sanctity, and least of all a home; it is rather a time-serving lair than a house in ordinary meaning. 182 342

Despite the poverty of the material and the squalor of the structure, certain features of the Seri jacal are notably uniform and conventional. In size and form it recalls the passing "prairie schooner", or covered wagon; it is some 10 or 12 feet long, half as wide measured on the ground, and about 4½ feet high, with one end (the front) open to the full width and height, and the other nearly or quite closed. The conventional structural features comprise the upright bows and horizontal tie-sticks forming the framework. The bows are made of okatilla stems (*Fouquiera splendens*) roughly denuded of their thorns; each is formed by thrusting the butts of two such stems (or more if they are slender) into the ground at the requisite distance apart, bending the tops together into an overlap of a yard or two, and securing them partly by intertwisting, partly by any convenient lashing; and about five or six such bows suffice for a jacal (the appearance of the bows is fairly represented by the ruin shown in plate VII). Next come the tie-sticks, which consist of any convenient material (okatilla stems, cane-stalks, palobianco branches, mesquite roots, saguaro ribs, etc.), and are lashed to the butts by means of withes, splints, or fiber wisps, at a height of some 4 feet above the ground, or about where the walls merge into the roof. With the placing of these sticks the conventional part 342

2: Kroeber E-5 (1930)1931 NU31 Seri NU31

114 The Seri "second harvest" of cactus seeds (p. 209), which Bae-
262 gert and Clavigero also describe from Lower California (p. 211) is
found also among the American Pima,[4] and is therefore likely to
171 have prevailed as far as Cereus fruits were a principal food supply.
514 The ground-squirrel is not eaten by the Seri, the badger not by the Baja Californiefios (p. 212).

McGee gives a valuable percentage estimate of Seri food composition: land game, large and small (including 6% of stolen stock), 21%; pelicans, other waterfowl, and eggs, 13; sea turtles, 25; fish, 15; shellfish, 10; cactus fruit, 9; other plants, 6; miscellaneous, 2; total animal, 84; maritime, nearly two-thirds. My impression is that clams, other mollusks, and crabs constitute more than a tenth of the total consumption. Clams especially can usually be obtained at low tide when wind and water prevent other food taking. I should also be inclined to raise the proportion of plant food, especially mesquite. The use of agave was almost certainly limited chiefly by the supply. Sealions, porpoises, and occasional whales could perhaps hardly be accounted for under the two percent of miscellaneous. On the other hand, deer are evidently taken only occasionally, and the figure for turtles seems too high, these animals being absent from Seri waters for months in the year and always free-swimming. McGee appears to have over-emphasized the importance of the turtle in Seri thought as well as life. I would incline to estimate the proportion of animal food in native times, before domestic animals could be preyed on, as rather under three-fourths of the total; of maritime, as perhaps three-fifths. Even these figures might be high for the bands primarily resident on the mainland, with free access to the mesquite thickets of the lower Sonora and Bacuachi (Bacavachi) courses, and the countless cactuses.

114 A double-bladed paddle pictured by the Dewey-Narragansett
171 expedition of 1873 is reproduced by McGee (p. 219, fig. 28) without
501 comment. This type of paddle is established for the Seri, Santa Barbara islanders, and San Francisco Bay Indians; then apparently is lacking until the Eskimo-Aleutian area. Among the Chumash it is native and associated with a plank-built canoe. On San Francisco Bay it was used with the rush balsa, and may or may not be due to Aleutian sea-otter hunters introduced by the Russians. It seems possible that the Seri and Chumash occurrences would prove connected by occasional use in Baja California, if we had fuller data, since some of the natives there went several leagues out into the open sea. We are so accustomed to think of the two-bladed paddle as an adjunct of the specialized kayak, that it too impresses as a complicated device, inappropriate with a simple raft. As a matter of fact, wherever scarcity of wood, or lack of skill and usage in working it,[5] resulted

[4] Russell, BAE-R 26:71, 1908.
[5] Cf. The Valley Nisenan, UC-PAAE, 24:288-290, 1929.

2: Kroeber E-5 (1930) 1931 NU31 Seri NU31

in a paddle blade being cut separately from the shaft, the inventive step from attaching one blade to attaching two blades would have been insignificant—in fact, would be an improvement or variation rather than an invention. The determining factor as to its adoption would probably be the type of navigation as set by water conditions. This is borne out by the distribution of the double paddle, which clings to areas of open salt-water navigation or large bays approximating open water conditions. On rivers and lakes the double paddle would rarely help and often be in the way. In this way the varying association with skin boat, wooden boat, and raft boat seems accounted for. Another factor must be size of the vessel navigated. A broad or high canoe would scarcely allow of alternate paddling on both sides. This may be the cause of the absence of the implement on the Northwest Coast. Whether the Arctic and the California-Seri occurrences are to be historically connected, must probably be left an open question for the present. An answer in favor of connection will evidently depend on the establishment of sufficient other connections to set up a favorable presumption. Until then, the considerations just mentioned make the possibility of independent origin equally plausible.

The single-bladed paddles seen by McGee (p. 219) and myself were two-piece and hafted with nails. McGee is more interested in balsa propulsion by recumbent women with hands, shells, or unhandled blades. That such crude devices were used along shore or in bays often enough to be mentioned, is wholly in line with the conspicuous Seri indifference, slovenliness, and lack of standards; but it is also obvious that real paddles being known and made, these would be the ones taken on open sea voyages of a dozen miles in a region of notably variable winds and currents. The Seri are never fools in practical matters within their compass; and they could not have acquired their indubitable navigating skill by letting their women do most of their paddling with bare hands. The one woman I saw aboard was carried as a passenger across the Infiernillo.

What is typical of Seri habits is that the harpoon shaft is also used for poling, and the harpoon cord as anchor rope, tow-line along shore, sheet rope, and for tying a blanket to a mast and pole to serve as sail; just as the bailer of a leaky skiff is an enamel-ware plate or pot employed at other times for food. The whole harpoon, including the rod-iron point, but dismounted, seems regularly to be taken along on a transport voyage.

The Seri houses I saw opposite Punta San Miguel were like those described by McGee (pp. 221-223): long, narrow, low, and open at least at one end; but they were unroofed. There was also one of double length, and another "joined obliquely"—that is, annexes occupied by younger kin and their families. The lengthwise double house was open through, though constricted at both ends and the

2: Kroeber E-5 (1930) 1931 NU31 Seri NU31

ing, because it would be swamped in a sea which it could resist. The joining and calking are always carried far enough that the boat can be bailed faster than it leaks. That the Seri prefer to bail rather than to finick over joints, is a matter of preference. Most of our real frontier life runs on much the same plan, though sprung from a tradition of intrinsic standard and provided with a superior tool equipment. Tribes like the Walapai and Papago, who live in nearly the same desert, show much of the Seri combination of technological crudeness and effectiveness. They do make an exception in basketry, which is what has chiefly reached our museum cases from their culture; but the Davis-Heye collection shows that the Seri too can make baskets of unsuspected quality. My impression, based on the way the Seri handle their knives, boats, bows, and the like, is that they have excellent practical mechanical sense, but that their standards are astonishingly different from our own. Most people that depended so much on sailing their boats as the modern Seri do, would not be content with two sticks, a blanket, and a harpoon line. But, given the willingness to operate with this equipment, very few would be as successful in quickly rigging and skilfully handling the sail. And sailing is something the Seri have recently learned or evolved. They are the frontiersmen of native culture: hardy, rude, unorganized, practical, efficient; but, like our own frontiersmen, in no sense only half-emerged from the tool-less animal. McGee was so inspired by the desire to find ultimate "primitiveness" among the Seri that he often ignored the tremendous effect of their habitat which he so well observed and described. After all, in his day cultural evolutionism was still in vogue.

As to race sense, McGee seems partly but only partly right. Chico Romero of his own accord asked me if other Indians had venereal diseases, and on the return question replied that the Seri were entirely free from them. I also saw and heard of no half-breeds. On the other hand, Chico's historical tradition told of the violation and keeping of captive Tepoca women, and since his own son was descended from one of them, in the second generation, Chico's mother-in-law must have been a Tepoca. McGee's "alien conjugal union" as the "blackest crime" (p. 11) is therefore an exaggeration, and his informant's statement that a Papago woman captive among the Seri never could have had children because she was an alien slave (p. 278), must rest upon a misunderstanding.

The groom's continence for a year after marriage as a moral test before admission to full husbandly status (pp. 280-3), is probably a matriarchally colored fantasy based on another misunderstanding. As already mentioned, Chico was interested, but mildly ribaldly amused, at the idea when it was put before him as a foreign Indian custom. He reacted like the average white man under the circumstances, not in the least like an actor skilfully feigning ignorance.

105 groups or clans between the waterholes and their temporary dwellings by the sea, chasing for game or searching for cactus fruits, sleeping wherever weariness overtook them, or where the successful end of a hunt left them gorged and drowsy. Under a climate where frost is almost unknown they needed no protection except from the sun, and built no other dwellings than their brush-heap jacals (Fig. 3). Living in animal-like savagery, without commerce or industry, the Seri's every bodily character and function were directed toward the provision, day by day, of the food and water necessary for life.

312 Potable water, a commodity so abundant in most regions as to divert conscious attention from its paramount role in physiologic function and in industrial economy, attained in Seriland the primary place of importance because of its rarity. In that arid land it is scanty to the extreme. Two thirds of the meager supply is confined to a single rivulet in the interior of Tiburon Island (Fig. 4). Because of this and other widely separated aguajes within the island whose shores provided the greater part of their food resources, the Seris early found this island the most tolerable habitat in their desolate realm.

225 The most conspicuous single article in the dietary of the Seri, and undoubtedly that [262] which first determined the location of his habitat, is the green sea turtle which is abundant throughout the Gulf of California, but particularly so in the narrow channel between Tiburon Island and the mainland. There the shallow lagoons abound with its marine grass food plant, and the sandy beaches provide optimum conditions for egg laying and hatching. In consequence of this natural provision for abundant food, easily obtained, perhaps half the aggregate life of the Seri tribe came to be spent within easy reach of the feeding and breeding grounds of the turtle.

[361] The most extensive and permanent of all Seri communities was established on the channel side of the island, just back of the lagoon in which the turtles feed and whose sands provided eggs and the succulent flesh 225 of newly-hatched turtle young. When fe- 501 males could not be captured at the laying grounds, the big chelonians were speared

[p. 194(B)]

[text continues on p 195(B)]

3:Davis & Dawson E-5 (1922-1940) 1945
NU31 Seri NU31

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from graceful balsas made of carrizo canes bound together with mesquite fiber cords (Fig. 5). On these buoyant craft, too, they navigated freely the narrow but stormy

[p. 195(B)]

3:Davis & Dawson E-5 (1922-1940) 1945
NU31 Serl NU31

225 channel separating their island habitations
501 from those on the mainland.

In pre-Columbian times the turtle fisheries
614 of the channel must have supported several

[p. 195(c)]

3: Davis & Dawson E-5 (1922-1940)1945 NU31 Seri NU31

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FIG. 5. THE NATIVE BALSA MADE OF CARRIZO REEDS

PHOTOGRAPHED IN 1922. THIS WAS THE LAST BALSA MADE BY THE SERIS. IT IS ONE OF THE SMALLER ONE-MAN BALSAS FROM WHICH TURTLES WERE SPEARED WITH THE LONG-SHAFTED IMPLEMENT PICTURED HERE.

[p. 196(c)]

Class	Species Reported	Species Exploited	Percentages
Mammals	21	2	2
Birds	28	6	5
Reptiles and Amphibians	25	11	10
Fish	45	23	20
Molluscs	36	21	18
Crustaceans	10	2	2
Total:	160	72	45

These figures show clearly the dependence of the Seris on marine life for a major source of their diet. Today, pinta, baya, cubera and sardinera are their primary source of income with mant and sea-turtles ranking second in importance. Several species of clams, limpets and gastropods supplement this diet.

All other animals represent only incidental additions to the menu. During the last war, sharks and mantas were hunted extensively for their liver, then a source of vitamin D. But since the war, the demand for shark liver has declined and because of this, a considerable income for the Seris has been lost. Shark and manta fishing have been abandoned for these fish were taken only for the commercially profitable liver and not for their flesh.

Fishing and Hunting

Seri fishing techniques are simple. In the past they used double-pronged spears and for the larger fish, harpoons. Today the spears are employed chiefly in fishing while the harpoons are reserved exclusively for sea-turtles. Hook and line fishing was introduced after 1930, as Kroeber (1931) saw none during his visit to Kino in 1930, and it is now the standard method of fishing. An abortive and unsuccessful attempt was made several years ago with net fishing. Another change has occurred within the past fifty years. The old balsas have been replaced by flat-bottomed plank boats outfitted with five-horsepower motors or sails. These motors, incidentally, are leased from the Mexican fish traders because none of the Seris are rich enough to own one.

Bait is obtained by dynamiting schools of small fish in coastal waters or by collecting them at low tide in the tidal pools and from under rocks. Fishing usually begins at dawn and lasts until noon when, as a rule, all of the "pangas", as the boats are called, return to Desemboque. In stormy weather no fishing expeditions are made and when this occurs, starvation becomes a real menace. Harpooning of sea-turtles takes place far out in the Gulf. It is done only at night in exceptionally calm weather by the light of torches or Coleman lanterns.

Hunting as it is done today has changed from the time of McGee's visit in 1894-95. The bow and arrow has disappeared completely except for a crude and diminutive form used as a toy by small boys. Iron spears once used in shark and manta hunting are now carried primarily as a weapon against the numerous and much feared rattlesnakes. They are said to be used occasionally in the peccary hunt. Old .22s or 30/30 rifles are owned by several of the men, some of whom specialize in hunting.

5:Dawson N-5 (1940) 1944 NU31 Seri NU31

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A rare photograph of the last native carrizal reed balsa made by the Seris in 1922. Tiburon Island.

8: Ascher E-5 (1960) 1962 NU31 Seri NU31

McGee (1898:214)

estimated that maritime resources provided two-thirds of the Seri diet. Kroeber (1931: 20), approximately 30 years later, estimated the proportion at about three-fifths. In the winter of 1960, 30 years after Kroeber's visit, the Seri were obtaining at least three-fifths of their food from the sea.

In pursuit of their main source of subsistence, the Seri travel up and down the narrow coastal band. In the winter of 1960 they were occupying one temporary camp toward the southern end of the band and a permanent camp at the northern extreme. Seri women and children gather mollusks; fishing is a male occupation. In addition to gathering and fishing for their own needs, the Seri dispose of a portion of their catch on the commercial market. This enterprise began about 1930, and was encouraged by the establishment, in 1958, of the Sociedad Cooperative de Produccion Pesquera Seri with the cooperation of the Mexican government.

The Pacific green turtle constitutes the largest single item in the Seri diet for at least six months of the year—from January to June—and it is also caught occasionally at other seasons. In 1896 McGee estimated that it provided 25 per cent of the total food supply. Emphasizing the intimate ecological relationship between the Seri and the turtle, McGee (1898: 186-187) wrote:

> ... perhaps half of the aggregate life of the tribe is spent within easy reach of its [the turtle's] feeding and breeding grounds, and tribesman and turtle have entered into an inimical communality something like that of the Siouan Indian and buffalo in olden time. ...

Kroeber (1931: 20) believed that McGee stressed the Seri-turtle relationship too strongly and overestimated its contribution to the diet. McGee (1898: 187), in support of the importance of the turtle to the Seri, points to the fact that the turtle carapace is used for, among other things, a house covering and buckler, a cradle, a coffin, and footgear. The carapace is currently used for supporting and roofing houses and as a starvation food. The contribution of the turtle to the diet varies from year to year, but observations made in 1960 suggest a range of from 15 to 20 per cent as a reasonable estimate.

Seri men fish for turtle from boats, which are manned by two or three men and are propelled by oars, sails, outboard engines, or any combination of the three. The boats operate either individually or in groups. The men fish by night or day, depending on the weather and sea conditions. When they fish at night, they use a kerosene lamp to attract turtles to the surface. The principal implement is the harpoon.

The harpoon tackle of the Seri is illustrated in Figure 1. It consists of a foreshaft (c-h), a mainshaft (j-k), and an extension cord (i). The component parts of the foreshaft are a projectile point (c), a gasket (d), a wrapping cord (f), a hafting base (g), and a lead cord (e and h). In preparation for turtle fishing, the hafting base (g) is plugged into the socket (j) on the main shaft (k), and the extension cord (i) is looped through the lead cord (h).

8: Ascher E-5 (1960) 1962 NU31 Seri NU31

225 In fishing for turtle, one man stands at the bow of the boat, holding the mainshaft and extension cord in one hand. When he sights a turtle, he propels the mainshaft at the animal's carapace, retaining a firm grip on the mainshaft and the extension cord. If it is struck, the turtle lurches away, loosening the foreshaft and unplugging it from the mainshaft. Tired eventually by the tension [411] applied by the fisherman on the extension cord, the turtle is finally stunned by a wooden club and lifted into the boat.

225 There is evidence that the turtle-fishing complex has consider-175 able time depth and stability. The Seri were using similar apparatus and methods at least as early as 1825 (Hardy 1829: 296-297). At [501] this time they employed balsa boats rather than wooden boats with outboard motors and torches of cactus fibers instead of kerosene lamps. The complex continued, apparently with little change, through 1896 (McGee 1898: 187-193). Wooden boats and kerosene [177] lamps began to be adopted during the 1920s, and outboard motors were introduced in the 1940s.

411 During the entire period of 135 years (1825-1960), however, the harpoon tackle underwent only one important innovation. The 225 gasket on the foreshaft was introduced by a Seri Indian about the 176 year 1935. The addition of the gasket was related to, and coincided [439] in time with, the first attempts of the Seri to supply turtles to the commercial market. When they caught turtles solely for their own use, they did not need to keep the animals alive for very long, but when they began to sell them it became important to preserve them alive until they reached the market. The gasket acts like the hilt on a sword, preventing the entrance of the foreshaft hafting into the turtle's body. Through its contact with the carapace, it restricts the rotation of the point within the animal's body and provides a seal which inhibits the loss of blood, and thus prevents early death. After the turtle is stunned with a club and lifted into the boat, the foreshaft is removed and the hole which it made is stuffed with a piece of cloth.

124 Seri men were shown a harpoon foreshaft from a museum archive and asked what it was for and whether they themselves made similar 411 ones. If an informant acknowledged that he made them, he was asked, at the minimum, to detail the materials he used, the procedures he followed, and the approximate amount of time it would take him to produce one. Later he was requested to show the field worker examples of the foreshafts he had made. Of the approximately 40 adult Seri males, about 25 were available for questioning. Of these, approximately ten did not make foreshafts or had made them in the past but did so no longer; they were mainly older men and those [474] engaged in the administration of the Sociedad Cooperative de Pro-[887] duccion Pesquera Seri. Five men either would not or could not volunteer information. Data were obtained from the remaining ten adult men and from one eight-year-old boy; they include 21 foreshafts made by these eleven people.

411 The materials from which a foreshaft can be shaped and as-325 sembled vary within what is available in the Seri environment. Iron

226 411 177 commercial origin are their main instruments of fishing. To this they added dynamite, sometimes with disastrous results to themselves, mostly as a way of securing bait. Single-pointed fish-spears which loomed so importantly in McGee's account have gone the way of the Dodo for its original purpose and transformed into iron bar lances, now used largely as weapons against rattlesnakes that men encounter in their desert roamings. However, in the forties, when the Seris spent a great deal of time getting sharks and huge rays, they killed them with these weapons.

226 411 What retain some importance are the harpoon and the two-pronged spear called "puiero." The two-pronged spear is one of their oldest weapons. The construction is much the same as when McGee visited them. The spear is used mainly to stab large-size fish, the giant *bais* or *mero* for example, after it has been brought up on the line. The [225] harpoon is now exclusively a weapon for the turtle hunt.

226 177 [157] An interesting fate met an effort to teach these Indians net fishing in 1947. They tried, ruined the nets and never took it up since. The instigators were Mexicans, the fish traders. I suspect that Seri individualism had a great deal to do with their lack of interest in net fishing which after all demands a certain amount of cooperation. With the hook and line fishing, men can have much more their own way.

501 177 648 An added "tool" of the Seris is the plank boat. The balsa which McGee still observed during his visit, had already vanished by the time Kroeber came to the Seriland and had been replaced by these boats. The boats are flat bottomed but good sized. The material was provided by the Mexican government. Boats are usually propelled by 5 hp. motors leased from the Mexicans (no Seri is rich enough to purchase [439] one) who also sell them gasoline and oil at exorbitant prices and in return buy Seris' catch of fish and sea turtle for low prices. At the time of my visits these amounted roughly to less than a peso [435] per kilo of the flayed, degutted and cleaned fish (less than 8 cents) with fluctuation up and down the scale depending on the kind of the fish, and to about 30-50 pesos for medium to large size "cahuama," the live marine turtle.

501 648 The Seri boats are also propelled by paddles and sail—this is always the case with the families who wish to stay away on Tiburon for some time. The Mexicans will not lease them their motors for such trips even if the Seri, some of them at least, have enough knowledge of the motors to repair minor stoppages—a demonstration of the fallacy [114] of McGee's idea that they are genetically unable to handle tools. In this respect, Kroeber's (1930: 25) estimate of them is closer to the truth.

462 Sexual division of labor in procuring food goes on, much the same as it had 70 and 30 years ago, *with the sole exception of the imported goods.* [439] Here purchases are made either by men or women or by children, depending on who at the time has the cash and what one wishes to buy.

Fishing is still done by men and so is hunting. Women still concentrate on gathering, whether of

Malkin E-5 (1953-1956)1962 MU31 Seri MU31

262 them to their shelter and held them there for several days before they and their families finally ate them up. The turtles are also a well-liked item.

As already indicated in some instances there exists preference for a particular part of an animal. Of the Gila monster only the fat tail was said to have been eaten, and of both rattlers, the head and the tail are discarded on the grounds
* [325] that they contain toxin. Finally the toad and the gecko and *Xantusia* are all rejected as completely venomous.

178 262 It is also evident that changes in the Seri taste have occured in the course of the past several decades. Some animals are on their way out as food, and here we have the Gila monster, the whipcoach, the red racer and smaller lizards. In several cases, and this includes the Gila monster, the responses indicated that the animal had been eaten in the past. I also observed that on the sly, the Seris would eat them when other food was in short order. But they are reluctant to admit this and often altogether denied it.

Hunting

224 [225] Most reptiles are captured by hand or else killed with a stick, stone or pea-shooter. Except for the turtles, the Seris will not make special expeditions. But it is certain that if they find themselves on any of the islands near the shores of Baja California they will go ashore deliberately in search of the chuckawalla.

225 The turtles are another matter. Here now, just as in the past, special expeditions are made in order to get them. These expeditions take place
● [501] nowadays in the usual flat-bottomed plank boats, either motor or oar propelled. The hunt takes place only during unusually quiet and dark nights, when the Gulf is smooth and calm and there is neither wind nor ripple. With the slightest disturbance, [354] turtle fishing is impossible. It is all done with the [411] torch lights or Coleman lanterns. The principal and only weapon is the harpoon, identical with that described and illustrated by McGee. The turtles are then harpooned, dragged into the boat and either left alive, when the hunters have a sale of live ones in mind, or pounded to death with a [251] club or oar, quartered and then either consumed on the spot or else dried and salted.[1]

[224] [462] While the collecting of the smaller animals usually falls to the children or women, turtle hunting is men's job. Men, too, usually get the chuckawalla because they usually visit more distant islands.

Pets

231 None of the reptiles are pets in a real sense. Those few that might be kept are only held until the day when they are butchered and eaten. It is motivated more by the wish to preserve fresh food than by any affection for the animal. The turtles, the tortoises and the chuckawalla belong here. Occasionally a Seri boy will string a lizard, a *Scel-*

[1] The loggerhead is hunted in the daytime because, owing to its great strength, night hunt would be too dangerous. Two harpoons are always used on it, while for the smaller species, one harpoon usually suffices.

* 825 237 [322] quite possible but I couldn't substantiate the story from contemporary evidence. Perhaps during the height of the shark hunting for the liver oil, the Seris used the oil also for wood polish, although it isn't very clear just what sort of artifact they make would require such treatment. The wooden tools or artifacts among them are in short supply at all times. Finally, the huge horned manta was supposedly hunted also for its hide but just in what circumstances it was not explained. It is the only fish which the Seri ever mentioned as having been put to such use.

Fishing

226 As already mentioned, fishing nowadays is largely accompanied from flat-bottomed boats with hook and line. The old ways of getting fish by spearing are almost gone for good. Recently, an [177] attempt has been made to teach the Seris siene fishing, but 10 years of these endeavors accomplished only ruination of a number of expensive nets and of much fishing gear and the desertion [157] of the project by the Indians. It may be that their individualistic and almost anarchistic attitudes preclude cooperation, essential in this type of fishing.

The bait is obtained in any one of the three ways: by dynamiting fish in tide pools or along the shore, or by catching small fry with small hook and line, or finally by collecting small fishlets in the tide pools, prying them out from under rocks or simply—and here the Seri boys excel—by shooting them in the tide pools with tiny [857] toy arrows or simply spearing them with a stick. [177] The dynamiting is done with the purchased sticks of dynamite which the Seris obtain in the tiendas. The procedure is often risky and down right dangerous. Some of the Seris have blown themselves up with dynamite. I have seen one of them, who lost both arms and had a jaw broken during a dynamiting trial. He went about with a dirty rag tied up over his head to support the wrecked [164] jaw-bone. He was carried off by measles two years later in the 1955 epidemic.

226 The Seris' commercial fishing is pretty much 648 controlled and exploited by the two or three Mexi- 439 can fish traders from Nogales and Hermosillo. These have their tiendas in Desemboque, which at set price sell things to the villagers. They also 443 provide the Indians with the five horse-power motors for fishing trips and pleasure cruises and with ● [501] the oil and gasoline essential to run these—also at set price. They finally purchase the fish—at a set price—and from the proceeds the Seris purchase goods at the tiendas, completing the cycle. Not all Seris are compelled to work for the Mexicans, and, in fact, they do not always do so. Some [501] families stay away from Desemboque and depend on the sail and oars for propulsion. They come to the village only once every few months to obtain supplies. Even when in the village, the Seris make little effort to fish for more than they wish to get in order to satisfy their immediate needs.

226 Fishing expeditions usually take place in the morning. Most Seris will set off before daybreak and will return with the catch by 11 a.m. or noon.

[P 33 A]

123 As a concrete result of that first trip to Tiburon, I secured a
115 *balsa* (boat) made of *carrizo* canes lashed together with native fibre,
581 which balsa Mr. Hepe said it was the finest one in North America.

[226] This *balsa* was given to me without hesitation, although it furnished one or two families with sea food.

115 I wish to pay tribute to Senor Roberto Thomson who has been my constant companion, friend, guide and interpreter during the past twenty years, on all my trips to Tiburon and various parts of Mexico. I found him absolutely dependable, using excellent judgment in critical situations. He was honest, fair, intelligent, looking out constantly for my safety and comfort always, enduring hardships cheerfully. A better all-round out-door man I have never seen equaled. In short, he is a real *hombre*, and my *simpatico*.

13 Tiburon, or *Shark Island*, long noted for its evil reputation as
181 the home of the most savage and treacherous Indians of North America,
193 lies in latitude 29°north and 112°30' west longitude, in the Gulf of California. It is shaped like a parallelogram about thirty-five miles long and eighteen to twenty miles wide, and lies parallel to the coast of Sonora, Mexico, of which, no doubt, at some remote period, it once formed a part.

It is separated from the mainland, for the most part, by a strait called *El Infernillo*, or The Little Hell, through which the rising
[127] tides pour a resistless flood. It is a desert island and supports a desert arboreal vegetation which includes several varieties of the cactus family and the *mesquite, palo verde, palo fierro, torote, palo blanco, ocotillo* and others. The giant *saguaro, sarbasso* and *pitahalla (pit-a-haya)* cactus are found here also.

Two desert ranges run lengthwise of the Island, which, on its westward or windward side, terminate in sea-worn cliffs against whose ramparts dash the heavy breakers of the Gulf, and on its eastern side, by long alluvial aprons from the foot of the mountains, sloping gently down to the lovely shell-strewn beaches. From this side the foot of the mountains lies from two to five miles distant. On this, the leeward side of Tiburon, the sea is much calmer, and often, in the early morning, it is as smooth and placid as a lake, reflecting each rosy, lavender and purple tint of the rugged Sierra Seri along the Sonoran coast, as in a mirror. The exquisite loveliness of marvelous sunrises over the pure limpid waters of the *Estrecho Infernillo* is mystical.

138 The soil is loose and sandy, unsuitable for cultivation, and im-
241 possible for producing domestic crops of any
142 kind.

262 The Seris also eat the fruit of the *cholla* cactus, *pitahalla* and *sag-*
222 *uaro*, and probably many other plants in season, but they are wild to get flour. But the principal diet is *cahuama*, or sea turtle.

225 After a day or so with the Seris, their food supply became exhaust-
123 ed and they made arrangements to take our boat (all they had was a
[177] *balsa*) and get a sea turtle. So at four o'clock in the morning, with Roberto and Nene, his brother, and myself, they shoved off for the fishing ground. It took two hours of hard rowing to reach the Sonora
[133] side, as the tide was racing up the *Infernillo*. Most of the waters are shallow, with patches of dark and light sandy bottom, with seaweed or grass. On this green grass the turtle feeds; it is their alfalfa field, and it takes a keen-practised eye to see a turtle at the bottom and harpoon him before he escapes.

225 Once on the hunting ground, water, one of the Seris stood in the
[411] bow with a harpoon twenty feet long, a detachable barb on the end of it, and a heavy line attached. The Seri in the bow motioned with his hand this way or that, slow or fast, and watched the bottom. At last
[411] he plunged his spear and withdrew the pole. The turtle swam awhile until exhausted, and then he was drawn alongside, his head pounded with an ironwood club, and then he was turned on his back and drawn on board. This called for great skill in balancing the cranky, smooth-bottomed boat to keep it from shipping a wave.

225 When a Seri goes in his native *balsa*, which only holds one man, he
• 581 straddles the middle part on his knees, resting them on seaweed. The craft is light and is a good sea craft, but it is low in the water and the man is wet all the time. He uses a double-bladed paddle, and his harpoon rests against pegs set in the *carrizos*. A rock which serves to quiet the turtle, two pointed stakes and a heavy fish line complete the equipment. He has to paddle across to the other side in that cramped position, say eight or ten miles, very early in the morning, then watch his chance to harpoon. If successful he brings up the turtle, knocks him on the head with the rock, pulls him on the end of the craft by skillful manipulation, cut slots in the front flippers, put stakes through and into the *carrizo*, pinning him firmly in place, then paddle back.

225 The wind came up strong when we started to return from our turtle
123 hunt and with wind and tide against us we rowed across the Island. Bob and his brother disembarked and took it afoot for camp, a distance of ten miles, reaching there at two p.m. The Seris made a tump line and towed the boat, one towing and two warping off-shore until we arrived at camp about four p.m.

When the bow was run up on the shore everybody came down, the women and children talking a steady stream in their strange jargon.
123 They soon jerked the heavy turtle out, dragged him up the beach on
262 his back, and began immediately to cut him up. Bob spoke for the breast, which is a white plate on the underside of the turtle with

[text continues on p. 168]

123 We have given the Seris so much we are now short ourselves. Variety is very restricted. We haven't enough tin dishes or tools to go around, but that does not trouble us at all. All the cleaning is done in salt water and sand. Fresh water is only used to drink. Nothing else. We can't even take a shave. Not a drop of water. We are very lax in our personal toilets and appearance. We are barefooted always in the boat, as we have to wade to get the boat in deep water, and often the waves slosh on board.

This boat is made of a hollowed log twenty feet long and three feet, three inches wide, and she is very cranky. She almost upset with us several times. When everybody is placed in it, it is difficult to even change a posture without endangering everybody. She has no keel and leaks some, so we have to bail out often. But she is a good sea boat and rides the waves well if they are not too rough.

123 One evening we decided to get a message through to Juan Tomas, the 131 Chief, some twenty or thirty miles distant. Herrera promised to go if [203] we gave him twenty thirty-thirty cartridges. He would go one day and [196] return the next, a round trip of about fifty miles. We gave him the message to tell those people we had a lot of things to trade for the things they use in every day life. Pelican skin kilts, bows and arrows, ollas, baby cradles, hair brushes and other interesting things. I had already made a trade with Blanco for his *balsa*, promising him sufficient lumber, nails and tools, to make a boat large enough to carry five men. This promise I fulfilled to the letter, and later on another expedition to Seriland I had the pleasure of sailing in this boat, which was well built and seaworthy. The unusual part of this bargain was that Blanco permitted me to deprive him of his only means (apparently) of making a living in hunting *cahuama* for himself and his family, freely and without hesitation, simply on my promise of lumber in the future. I was deeply touched by the trust reposed in me by this old sea rover.

322 These people are splendid mechanics with the crudest of tools--- [94] rocks, fire, bones, knives. For instance, the pole of the harpoon was composed of five pieces of driftwood and a seagoing boat which I saw in Guaymas, captured by Mexican fishermen after killing the Seri crew, was composed of fully one hundred pieces of driftwood fastened with nails made of wire, and tied with fiber, and all the seams were filled [325] with a black composition of native origin resembling pitch. Previous to the use of old iron, harpoon points were made of ironwood, but now iron is universally used.

283 I asked old Blanco for some of his native rope. He gave me some of [124] it. He said they get the slender roots of the mesquite and peel the bark, and then the girls and women chew the fibrous wood. This is shredded and twisted into small two-stranded ropes. It is this rope, tied around and around, that holds the *carrise balsa* together.

ever washed; it is licked clean.

415 One time a bunch of Seris camped near a ranch and spied a white
197 porcelain chamber pot sunning itself. They immediately secured it and began cooking in it, without washing it first. The rancher saw them and told them that it was dirty and told them not to cook in it. They said they would clean it up after they got through and leave it as it was before they finished with it. When they come to Hermosillo they get pots from heaps of city refuse and carry them back as prizes to the Island.

123 We made smokes to attract attention, but all to no purpose, until
• 901 about three o'clock the car appeared. It could not come close to the beach as the sand was too soft, so we had to pack everything two hundred yards in soft sand. The *balsa* was very heavy and some distance away. It also had some things tied on it, so Bob pulled off his pants and we pushed it into the surf. Bob first stood up, but it rocked so he got on his knees and pushed out with a pole and got it headed to the rollers, after which it rode easier. He then lost his pole, and in struggling to recover it the *balsa* rolled over with him and dumped him in the surf, but he grabbed the side and rolled it right again. He could then touch bottom, so he came in through the surf with it and we dragged it up and unloaded three turtle shells and a few other things. There were four of us and we put oars under it and gradually lifted and carried it to the truck.

It must have weighed six hundred or seven hundred pounds, a good part of which was water. I must say I was glad to see it started on its long land-journey.

123 The Indian messenger had arrived with my note which brought the truck. Bob, Luis and the Mexican took the boat and tried to go into the place where they hid it, but it was low tide and the boat could not enter, so they beached it and walked to Agua Sarco where we had preceded them by two or three hours. We had, over the last of our grub, a little rice and beans. As many doves were flying about the water, I shot fifteen or twenty. One of my shots brought down seven doves.

439 Before night all the Seris were camped near us, and when Bob came,
123 Louis had brought all our trade stuff, so I began bartering right away.

As all were hungry we gave each man and woman three cups of flour, and three pieces of *panocha*, cakes of coarse brown sugar. They were wild for this, so when they had finished they were well disposed.

On the Island I had been called a cheerful liar for promising things, but now it was different. Three new butcher knives, all bright and shiny, I traded for three rusty homemade affairs. Two were made of barrel hoops and one from the piece of a shovel. This was a way-up knife. For the violin I traded a harmonica, and for three carved

(text continues on p. 187)

123 our rough camping, and we lived more or less like the natives, along the lines of least resistance. Shaving was unknown; washing the hands took place possibly every few days---the face never; teeth never; hair combed never; dressed, always in bed and out. We did not shed our shoes. Our revolvers were our constant bedfellows and lay in the blankets next to our right hands. But the Seris have never made a move to take the least thing that was not given to them, and made not a hostile move or look. I did see a child surreptitiously wet his fingers and wipe them across the open flour sack and lick them off, but even then his mother pulled him back.

123 484 By starlight the next morning we were up again, and ate our breakfast before sun-up. We loaded most of the groceries and things in our boat, including about eighteen gallons of water. Besides ourselves, we took Luis Torres and his wife as helper and boat-steerer. This gave us a very heavy load. Chico Romero planned to take twenty gallons of water and one sack of flour and half beans and corn, and follow in his boat.

The Seri camp was a busy place, women carrying things to the boats and preparing to leave. The camp was stripped. Much water was taken in the boats to supply the families, who for the most part walked along the shore and made short cuts through the hills, planning to meet the boats at appointed places. Two other boats started with us.

The wind was dead ahead, so our sail was useless and we unshipped the mast, and three of the men took the long oars with Luis Torres at the helm and in the bow. The boat leaked quite a great deal and it [512] kept Lupe busy bailing. Chico Romero's boat was manned at the oars by two small boys about seven or nine, and he steered with a paddle. In the other boat were three men at the paddles, three children, two dogs, cans of water and baskets and cooking things.

[501] The wind kicked up quite a heavy sea for the small Seri craft, but this narrow, heavily-laden craft met the swells and floated over them gracefully, although oftentimes the water missed coming over the gunwale by an inch or two. The children laughed gleefully, showing even rows of white teeth innocent of brush and tooth powder.

123 On rounding one rocky point three deer stood outlined against the sky, and we landed three men to try and get one, Stan among them. They returned empty-handed, except Stan, who kept ashore and followed over the hills to try for game.

At noon we landed on a beautiful sandy shore laced by the green waters of the Sea of Cortez, with Tiburon Island opposite a few miles distant. Here we unloaded and built a fire of driftwood and cooked our dinner. Stan found us---without his deer---and we ate very heartily. Beans, bread, coffee. We camped here for the night in this delightful little cove, calm and protected from the strong wind outside. Green sea, purple mountains, cloudless blue sky, a little freedom from hordes of staring Indians.

123 484 Then Chico Romero and his load of children and dogs arrived and he unloaded his impedimenta on the beach, and soon the women came walking along the beach and joined the party. The boats carrying the heavy things and children; the women, with their babies and a few light things on their heads, walk along the beach when possible and follow the boats, which hug the shore to avoid the strong currents and tide. The boats are propelled by paddles mostly, though some of the Indians use oars. The women are slightly built, slender and inclined to be gaunt, owing to the hard life and lack of food. Their cheek bones are quite prominent and their profiles present protruding lips.

501 512

422 [364] Having no permanent homes, moving hither and thither for their various food supply, household things are not accumulated and life is reduced to its very simplest elements and absolute necessities.

Crude baskets made from shoots of the torote tree, vessels in which to cook, and some patched rags in place of Pelican skins to serve as blankets to the fortunate few, constitute the family possessions. Strange to relate, many of the women have an over-supply of milk, and according to Roberto have puppies nurse what the babies cannot take. One woman was known to nurse a baby pig on one side and a puppy on the other.

231 [853]

[214] [894] Family dogs lick all cooking vessels which is unnecessary as they are thoroughly clean when the Seris are through with them, and also lick the infants clean after performing their natural functions, so they are quite indispensable. I saw a Seri girl place on the sand a small can of water for a dog and then saw her drink some of the remainder and pour the rest back in a five-gallon can. Dogs frequently swim across the Infernillo to join their masters.

732 Asked about cripples and incompetents, Roberto said they probably did not exist. The conditions of survival were too precarious to admit of anyone living who was unable, by physical disability, to hunt or fish. There are two or three men who are nearly blind or so. The wives of these men eke an uncertain living for them by the hardest struggle. The sea turtle is the staple; one man and one good boat can secure a living for five families. There are now nine boats, but one boat to a family would practically free them from continual want. With the exception of four bones in the flippers and the bones of the head, all the sea turtle is used---the meat, blood, entrails, shell which furnishes food and oil, skin of flippers which furnishes sandals, sinew for strings. Nothing is wasted except contents of the entrails.

262 483 501 262 237

123 Again, we laid our blankets on the clean white sand of the shore and were lulled to rest by the murmuring sea.

123 484 Daylight found us up the next morning, and we breakfasted, rolled up our blankets, pushed the boats into the sea and were off by the time the sun rose over the mountains and shone over a glassy sea. Two Seris towed their boat by a tump line, while a boy of twelve steered

123 and on our way, headed south, rounding the point with the tide in our
484 favor. It was a rowing proposition. During mornings the sea is calm and the swells glassy. Usually at noon the wind comes up, mostly ahead and against us. Last night we could see the light of a camp fire on the point opposite us, and soon we spied a boat headed for the Island. We had left the women and older children to walk and they met us where we landed. At noon we camped for dinner in a lovely cove, and soon three other boats joined us with their cargoes of women, children and dogs. We ate quickly and got under way again as soon as possible, and even then we were the last boat. The trip was bad, as all the people were loaded in the boats which made them low in the water.

123 It was a pretty sight to see the Seris in their *pangas*, boats
484 shaped like dories, graceful, narrow and swift, kneel in the bottom
501 and dip their broad paddles into the waves and shoot into the open sea like dark-skinned Vikings, wild hair flying.

As soon as we emerged from the cove the wind and tide struck us dead ahead, and progress was slow although the swells were behind us. After rounding a point the wind blew on the forward quarter and all the boats, now increased to five, hoisted their sails. We also stepped our mast, sheeted our flour-sack sail, and bowled through the sea, carrying a bone in our mouth.

Chico's boat ahead had no sail and when we neared it, steered with superb skill by the wild-looking Seri, Luis Torres, he had a tow line aboard and thereafter we held him in tow until finally the wind shifted dead ahead and all the boats lowered their sails, unstepped their masts and began paddling. One *panga* had a sail with part of it loose and flapping at the top like a flag. Roberto said the Seris did not want to cut off this useless piece for fear of spoiling the sail, so there it flapped whenever the sail was sheeted home.

123 About three thirty in the afternoon we rounded a bold rocky point
484 and entered a beautiful curving bay of quiet water, and here we landed for the night camp. Soon all the boats were unloaded. Men and children hunted driftwood for camp fires, two boats at our insistence set off fishing, and Stan and three Seris took their rifles and went hunting. All parties later returned without fish or game, so, as our meat had disappeared like a beautiful dream, we had to dig into our corn and flour to feed thirty or forty hungry Indians. The children stood about like a bunch of hungry cormorants and we promised them *pinole*, or flour paste.

123 Looking at these half naked children with their swarthy little
177 bosoms bare and most of them bare from the waist down, I dug out some safety pins and began with the little girl Luz, who was vigorously stirring the paste mass and pinned her waist over her bare breast and tummy with two bright safety pins. She never ceased stirring. Each bare breast I pinned the shirt over as the night was chilly. The children quick to catch on and keen with desire born of privation, each pulled his or her shirt open even when it had a button, or had

642 [226] [501] [721] [582] [628]

BAND V

These people were apparently hunters, gatherers, and fishermen. It is said that they speared fish from the shore since they did not use balsas. They too apparently raided the ranches. Their warring nature has already been discussed; it resulted in the acquisition of few friends. However, several marriages between members of this band and members of subdivision 2 of Band III are said to have occurred.

BAND VI

[131] [342] [501] [411] [262]

The members of Band VI lived on San Esteban Island and were the most primitive of the tribe. They lived in huts made of driftwood and in caves and made extensive use of the balsa. Although they did not have the bow and arrow, they did become expert in the use of the spear. The people depended mainly on a seafood, iguana, and maguey diet.

621 628 578 [157]

Perhaps it was due to the confined living space on the small island with the accompanying lack of fresh water that relations between the four subdivisions were precarious and fights broke out frequently. The Seri today stress the fact that the members of this band were impetuous and unpredictable.

642 [574] [628]

Their relations with the other bands were generally good however. Seri from Band III were free to visit San Esteban where they were well treated.

[484] [191] [648]

The San Esteban people seldom traveled to the mainland, and, since they spoke no Spanish, it is probable that they made no peaceful contact with non-Seri groups.

642 628 578 648

COLLAPSE OF THE BAND SYSTEM

Internal strife in the Seri tribe was probably a major factor in the establishment of the band system. External strife was a major factor in its downfall.

[021]

Reference has been made to the plundering, killings and rustling of cattle to which certain of the bands were dedicated. The concern of the Sonora government was aroused, and steps were taken to crush the rebellious groups. According to the present-day Seri, military action by army units and rancher outfits against the various bands resulted in the near-destruction of the whole tribe.[11]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

heavy tumultuous waves come and go sporadically, while about the mile-wide boca the choppy sea sometimes takes the form of spire-like jets, sparting 5 or 10 feet high and breaking into aigrettes of glittering spray in most unwaterlike and wholly indescribable fashion. Dewey described the strait as "unsafe for navigation by any except the smallest class of vessels"; it is safe, indeed, only for portable and indestructible craft like the Seri balsas, which may be put off or carried ashore at will by craftsmen willing to wait for wind and tide, and unpossessed of impedimenta of a sort to be injured by wetting. Of such an environment the balsa is a natural product.

The adjunct islets of Seriland are miniatures of Tiburon in all essentials respects, save that they are without fresh water. The largest is San Esteban, a somewhat complex butte rising sharply from the waters in a nearly continuous sea-cliff recording vigorous work by storms and tides; it is occasionally visited by the Seri, chiefly in search of water-fowl and eggs. The most important of the series in Seri economy and mythology is Isla Tasane, off the mouth of Bahia Kino; it is a rugged butte some 600 feet high, rising in wave-cut cliffs on the sea side and pedimented by low spits and banks of sand toward the lee; the sand-banks are literally flocked with pelicans, while other fowl cover the flatter ledges and crowd the crannies of the pinnacle. Isla Turner is a somewhat smaller and still more rugged butte, bounded on both sides by precipitous cliffs, while Roca Foca is merely a great rock shelving upward from the storm-swept waters off the most exposed angle of Tiburon; in the crannies of the former birds nest abundantly, while the lower ledges of both are haunted by seals. Isla Patos, north of Tiburon, is a breeding-place for different water-fowl, and is especially noted as a refuge for ducks; it, too, is for the most part a rocky butte, with a sandy shelf at the eastern base. Beyond San Esteban lies the similar but smaller Isla San Lorenzo, while Isla Salsipuedes and a few other islets stretch thence northward half way to the southern point of Isla Angel de la Guarda, the second-largest island of the gulf. San Lorenzo and the smaller islets are occasionally visited by the Seri, partly for a mineral pigment used in face-painting, partly in quest of game; and they sometimes push on to the larger island to enjoy its fairly abundant game, including the easily taken iguana, amid the ruins of an ancient culture apparently akin to that of southern Mexico. Even the most frequented islets, Tasane and Patos, can be reached only by crossing miles of open sea; but in their way the Seri are as canny navigators as they are skilful boat-builders—it is their habit to hug the shore in threatening weather, to await wind and tide for hours or days together, to set out on distant journeys only when all conditions favor, and in emergency to seize inspiration from the storm like the vikings of old, and lend supernormal power to the control of their craft.

Summarily, the prevailing features of Seriland may be said to be

1: McGee E-5 (1894-1895) 1898 MU31 Seri MU31

miles in search of it, and acute enough to follow trails and indications. Naturally the meager water-supply serves as a mechanism for sorting out and preserving the strong and the acute, and for eliminating the weakly and the dull; and hence the tribe have developed a faculty, or perhaps a potentiality, of distinctive sort—the potentiality of providing against thirst-death by a reserve power in the organism itself rather than in the form of mechanical devices such as characterize higher culture. Quite similar are the relations to the resource of second importance, i. e., ordinary food. Habituated to dispensing with storage and transportation of their primary resource, and accustomed to finding food whenever forced to sufficiently active effort to obtain it, the Seri have never grasped that first principle of thrift expressed in the accumulation of food supplies; and accordingly they intuitively rely on successful fishing or chase or search of vegetal edibles for sustenance, and habitually delay effort until they are stirred into activity by the pangs of hunger. Naturally this improvidence serves as another mechanism for perpetuating families of stored vitality, and especially those able to prevail over swift or strong or cunning quarry by sustained vigor and alertness after prolonged deprivation; and the effect of this mechanism, too, is to develop a reserve power in the organism itself, in lieu of the material reserve made through thrift in higher culture. Similar in their consequences are the relations of the individual organisms to the third industry of Seriland, i. e., navigation of the gale-swept and tide-troubled waters. Even the buoyant balsa can not weather the williwaws or ride the tiderips of El Infiernillo without exercise of the utmost strength and skill on the part of the navigators; while the often persistent storms may delay for days embarkation on voyages in quest of fresh water or food. Naturally, the frequent delays and not infrequent perils of such navigation constitute a mechanism for selecting navigators possessed of reserve powers adequate to meet desperate emergencies with vigor and judgment even after enervating waits for wind and tide, while those not so well endowed are either brought up to standard in their hard training school or expelled from their class by drowning or dashing on the rocks, as may happen; so that the effect of this mechanism also is to preserve individuals and perpetuate generations characterized by reserve power, and hence to develop latent potentiality in the tribe. Now, the normal product of these and other natural mechanisms immediately reflecting environmental conditions is capacity for spurts, or for intense functioning under severe stress, despite accentuation of the stress by thirst or hunger or exhaustion, or by all combined—i. e., the effect of habitat and habit is to produce precisely such a somatic regimen as that so conspicuously displayed by the Seri folk. So the intensified activity with long intervals of inertness, simulating the habits of carnivorous and some other lower animals, and hence suggesting primitive condition, would appear to be largely a phylogenetically acquired character expressing specific adjustment to environment.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

especially as they are reflected in the primitive minds of the local tribe; and careful study of the habits and history of the Seri shows that the dangerous strait has been a potent factor in preserving tribal existence and perpetuating tribal integrity. Naturally the factor operates through navigation; for it is by means of this art that the tribesmen are able to avoid or to repel the rare invaders of either mainland or insular portions of their province, the overland pioneers from the east being stopped by the strait and the maritime explorers from south and west being unable to maintain themselves long about the stormy shores and never outfitted for pushing far toward the mainland retreats and strongholds; while by means of their light and simple craft the Seri were able to retreat or to advance across the strait as readily as over the adjacent lands to which they were wonted by the experience of generations. In their minds, indeed, El Infiernillo is the nucleus of their province. So the Seri were among the lowliest learners of that lesson of highest statecraft, that lands are not divided but united by intervening sea; and their ill-formulated and provincial notions are of much significance in their bearing on autochthonous habits and habitats.

The water craft of which the Seri make so good use is a balsa, made of three bundles of carrizal or cane lashed together alongside, measuring barely 4 feet abeam, 1½ feet in depth, and some 30 feet in length over all. A fine specimen (except for a slight injury at one end) is shown in plan and profile in plate XXXI. It was obtained near Ilom Inferno in 1895, partly towed and partly paddled thence to Embarcadero Andrade, wagoned laboriously across Desierto Encinas and on to Hermosillo, conveyed in an iron-sheathed box on two gondolas of the narrow-gage Ferrocarril de Sonora to the international frontier, and finally freighted to the United States National Museum, where (in the Mall just outside the building) the photographs reproduced in the plate were taken.

The manufacture of the balsa has never been seen by Caucasian eyes, but the processes are safely inferred from the structure, whose testimony is corroborated in part by Mashem's imperfect descriptions. The first step is the gathering of the carrizal from one of the patches growing about the three or four permanent fresh waters of Seriland, the canes being carefully selected for straightness, symmetry, and uniformity in size; these are then denuded of leaves and tassels, tied in bundles of convenient size (one seen on Tiburon contained 40 or 50 canes), and carried to the shore. In actual construction the canes are laid butt to butt, but overlapping 2 or 3 feet, the overlap being shifted this way and that with successive additions, so that the aggregate length of overlapping in the bundle reaches 10 or 12 feet—i. e., the full length of the body of the finished craft. The growing bundle is wrapped from time to time with lashings of mesquite root or magney fiber, and kept in cylindrical form by constant rolling and by means of the lashing; though the cord used for the purpose is so slender as to do little more than serve the purposes

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

ness of the cords used in construction; in fact, the outer layers of canes are so ingeniously interlocked by the insertion of their butts into interstices that each bundle holds itself together with slight aid from the exterior cording, while even the bundles themselves are held in proper relative position by the secure terminal tying rather than by the intertwined cording of the body of the craft. And the entire construction exemplifies the compartment principle to perfection; a slight injury may affect but a single joint of one out of several thousand canes, while even a severe fall on sharp rocks seldom injures more than a few score canes, and these in a few joints only. The most objectionable feature of the balsa lies in the fact that it affords little protection from the wet. The water rises freely through the reed bundles to a height depending on the load, and not only the spray but the whitecaps and combers as well dash freely over the unprotected body of the craft; but this defect is of little consequence to the hardy and nearly nude navigators, or to their scanty and practically uninjurable freight. 501

FIG. 29—Seri balsa as seen by Kerr-Pennell party.

The gracefulness and efficiency of the balsa itself stand in strong contrast with the crude methods of propulsion. According to Mashém, the craft is commonly propelled by either one or two women lying prone on the reeds and paddling either with bare hands or with large shells held in the hands; according to Hardy, the harpoon main shaft is used by turtle fishermen for paddling (and probably for poling, also); according to the Dewey picture (figure 28), the vessel is driven by a woman with a double-end paddle like that used in connection with the conventional canoe; while the expedition of 1895 found on Isla Tiburon four or five paddles rudely wrought from flotsam boards and barrel-staves, and partly hafted with rough sticks 3 or 4 feet long, but partly without handles and evidently designed to be grasped directly, like the shells of Mashém's descriptions. No trace of oars, rowlocks, sculls, rudders, or masts were found, and there is nothing to indicate the faintest notion of sails and sailing. On the whole there is no trace of well differentiated propelling devices—i. e., the craft is perfected only as a static device and not at all as a dynamic mechanism. 502 [462]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

22 502 Despite their poverty in propelling devices, the Seri navigate their waters successfully and extensively. Perhaps the commonest function of the craft is that exercised in connection with the turtle fishery, though its chief office as a factor of general industrial economy is that of bridging El Infiernillo at the will of the roving clans. It is by means of this craft, also, that the semiceremonial pelican feasts on Tiburon are consummated; it is by the same means that Isla Patos, Isla Turner, Rocas Foca, and other insulated sources of food-supply are habitually reached; and both Mashbom's accounts and the Jesuits' records indicate that occasional voyages are pushed to San Esteban, San Lorenzo, Angel de la Guarda, and even to the Baja California coast.

Concordantly with the tribal customs, little freight is carried. The traveling family transport their poor possessions to the shore, bring out the balsa from its hiding place in the thick and thorny fog-shrubbery, launch it, lade it with a filled olla and the weapons of a man and implements of a woman, besides any chance food and clothing, and embark lightly to enjoy the semirepose of drifting before the breeze—until the rising gale brings labor still more arduous than that of scouring the spall-strewn slopes or sandy stretches of their hard motherland. Commonly the terminus of the trip is fixed largely by the chance of wind and tide; and when it is reached the party carry the craft inshore, conceal it shrewdly, and then take up their birdskin bed and walk forth in search of fresh water and meat. The successful fishing trips of course end in orgies of gorging, and when the voyage is the climax of a foray to the mainland frontier for stock-stealing, the quarters and paunches and heads hastily thrown aboard at the mainland side of the strait are carried to the rancherias for consumption at leisure; and this has happened so often that equine hoofs and bovine bones are common constituents of the middens on Tiburon.

171 501 Although measurably similar to Central American and South American types of water-craft, the Seri balsa is a notably distinct type for its region. The California natives, as well as those of the mainland of Mexico south of Rio Yaqui, used rafts made either of palm trunks or of other logs lashed alongside rather than balsas; while the far-traveling tribes used either oars or well-differentiated paddles for propulsion.

501 Briefly, the Seri balsa is remarkable for perfect adaptation to those needs of its makers shaped by their distinctive environment. It seems to approach the ideal of industrial economy—the acme of practicality—in the adjustment of materials and forces to the ends of a lowly culture; and, like the olla and harpoon and arrow, it affords an impressive example of the adjustment of artifacts to environment through the intervention of budding intelligence. Yet the chief significance of the craft would seem to reside in its vestigial character as a survival of that ovarian stage in the course of human development

1: McGee E-5 (1894-1895)1898 NU31 Ser. NU31

and discarded hoops, a broken fictile figurine, etc), was the still ruder arrowpoint represented in figure 37b (both figures are natural size). The specimens are nearly identical in material—a jet-black slaty rock with a few lighter flecks interspersed, weathering gray on long exposure (as is shown by the partly natural surface of the larger point); similar rock abounds in several easterly spurs of Sierra Seri. The smaller specimen was evidently finished and used; its features indicate fairly skilful chipping, though its general form is crude—in addition to the asymmetric shouldering, the entire point is curved laterally in such manner as to interfere with accurate archery. The larger specimen is still more strongly curved laterally, and the chipping is childishly crude; while the rough surface, clumsy tang, and unfinished air indicate that it was never used even to the extent of shafting. It is possible that the specimens may have been imported by aliens, but the probabilities are strong that they were manufactured by the Seri. No other arrowpoints and no chips or spalls suggesting stone arrow-making were found in all Seriland, though the entire party of twelve were on constant lookout for them for a month. The natural inference from these facts is that the ancestral Seri, like their descendants, were not habitual stone arrow-makers.

There is a final category of Seri artifacts which would be classed as distinctive by Caucasians on the basis of material, though they are combined with the stone artifacts by the tribesmen; it comprises arrow-points of hoop-iron or other metal, harpoon-points of nails, spikes, or wire, awls of like materials, and other metallic adjuncts to ordinary implements. The use of iron is of course post-Columbian, and its ordinary sources are wreckage and stealage. The date of introduction is unknown, and probably goes back to the days of Cortés and Mendoza; certainly the value of metal was so well understood in 1709 that when Padre Salvatierra's bilander was beached in Seriland the tribesmen at once began to break her up for the nails (ante, page 67); yet the metal is wrought cold and only with hupf and abat like the local materials, and is habitually regarded and designated as a stone. By reason of the primitive methods of working, the metals are of course available only when in small pieces or slender shapes. There is a tradition among the vaqueros of the frontier that a quantity of hoop-iron designed for use in making casks was carried away from a rancheria in the vicinity of Bacanchito during a raid in the seventies, and that this stock has ever since served to supply the Seri with material for their arrowpoints; but it is probable that the chief supply is derived from the flotsam swept into the natural drift trap of Bahia Kunkaak by prevailing winds and tidal currents, and cast up on the long sandspit of Punta Tormenta after every storm. A surprising quantity and variety of wreckage was found on this point, and thence down the coast to Punta Narragansett, by the 1895 expedition: staves and heads of casks broken up after beaching, a telegraph pole crossbar which had evidently

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

brought in a cargo of large wire, and a piece of door-frame with heavy strap-iron hinges attached with screws, were among the troves of the tribesmen within a few weeks; and it was noted that while even the hinge screws and the tacks attaching tags to the cask-heads had been extracted by breaking up the wood, the roughly forged hinges of 3 by ⅞-inch wrought iron had been abandoned after a tentative battering with cobbles, and lay among the refuse stones about the jacales.

A rough census of the stone implements of Seriland is not without interest, even though it be no more than an approximation. Some 20 or 25 habitable and recently inhabited jacales were visited, with about twice as many more in various stages of ruin, fully two-thirds of these being on the island; and at least an equal number of camps or other houseless sites were noted. About these 150 jacales and sites there were, say, 50 ahsts, ranging from nearly natural bowlders to the comparatively well-wrought specimen illustrated in plate XXXIX, and an equal number of cobbles used interchangeably as ahsts and hupfs; there were also 200 or 300 pebbles bearing traces of use as hupfs, of which about a third were worn so decidedly as to attest repeated if not regular use; while no flaked or spalled implements were observed save the two doubtful examples illustrated in plates XLVII and L, and only two chipped arrowpoints. It may be assumed that the sites visited and the artifacts observed comprise from a tenth to a fifth of those of all Seriland, in addition to, say, 75 finished hupfs habitually carried by Seri matrons in their wanderings; and it may be assumed also that 50 or 100 metallic harpoon-points and several hundred hoop-iron arrowpoints are habitually carried by the warriors and their spouses.

The most impressive fact brought out by this census is the practical absence of stone artifacts wrought by flaking or chipping in accordance with preconceived design; excepting the exceedingly rare arrowpoints there are none of these. And the assemblage of wrought stones demonstrates not merely that the Seri are practically without flaked or chipped implements, but that they eschew and discard stones edged by fracture whether naturally or through accident of use.

Summarily, the Seri artifacts of inorganic material fall into three groups, viz: (I) The large and characteristic one comprising regularly-used hupfs and ahsts, with their little-used and discarded representatives; (II) the small and aberrant group represented by chipped arrowpoints, and (III) the considerable group comprising the cold-wrought metal points for arrows and harpoons and awls—though it is to be remembered that the Seri themselves combine the second and third of these groups.

I. On reviewing the artifacts of the larger group it becomes clear (1) that they immediately reflect environment, in that they are characteristic natural objects of the territory; (2) that they come into use as implements through chance demands met by hasty selection from the

2: Kroeber E-5 (1930) 1931 NU31 Seri NU31

in a paddle blade being cut separately from the shaft, the inventive step from attaching one blade to attaching two blades would have been insignificant—in fact, would be an improvement or variation rather than an invention. The determining factor as to its adoption would probably be the type of navigation as set by water conditions. This is borne out by the distribution of the double paddle, which clings to areas of open salt-water navigation or large bays approximating open water conditions. On rivers and lakes the double paddle would rarely help and often be in the way. In this way the varying association with skin boat, wooden boat, and raft boat seems accounted for. Another factor must be size of the vessel navigated. A broad or high canoe would scarcely allow of alternate paddling on both sides. This may be the cause of the absence of the implement on the Northwest Coast. Whether the Arctic and the California-Seri occurrences are to be historically connected, must probably be left an open question for the present. An answer in favor of connection will evidently depend on the establishment of sufficient other connections to set up a favorable presumption. Until then, the considerations just mentioned make the possibility of independent origin equally plausible.

The single-bladed paddles seen by McGee (p. 219) and myself were two-piece and hafted with nails. McGee is more interested in balsa propulsion by recumbent women with hands, shells, or unhandled blades. That such crude devices were used along shore or in bays often enough to be mentioned, is wholly in line with the conspicuous Seri indifference, slovenliness, and lack of standards; but it is also obvious that real paddles being known and made, these would be the ones taken on open sea voyages of a dozen miles in a region of notably variable winds and currents. The Seri are never fools in practical matters within their compass; and they could not have acquired their indubitable navigating skill by letting their women do most of their paddling with bare hands. The one woman I saw aboard was carried as a passenger across the Infiernillo.

What is typical of Seri habits is that the harpoon shaft is also used for poling, and the harpoon cord as anchor rope, tow-line along shore, sheet rope, and for tying a blanket to a mast and pole to serve as sail; just as the bailer of a leaky skiff is an enamel-ware plate or pot employed at other times for food. The whole harpoon, including the rod-iron point, but dismounted, seems regularly to be taken along on a transport voyage.

The Seri houses I saw opposite Punta San Miguel were like those described by McGee (pp. 221-223): long, narrow, low, and open at least at one end; but they were unroofed. There was also one of double length, and another "joined obliquely"—that is, annexes occupied by younger kin and their families. The lengthwise double house was open through, though constricted at both ends and the

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FIG. 10. SERI BELLE
WEARING A PAINTED DESIGN SUCH AS FORMERLY WAS INDICATIVE OF THE BLOOD LINE OF A GIVEN CLAN.

264 hut, the rotting flesh and cartilage of its noisome interior to be explored and mouthed by the toddling children or gnawed by the cringing coyote-curs attached to the rancheria.

223 At certain seasons or when deemed propitious by the elders of the family, a pelican harvest was planned. Isla Tasne, some fifteen miles from Tiburon Island, is the haunt and breeding ground of the pelican that served not only as a valuable food supply for the Seris, but also as the chief source of apparel. At such seasons temporary rancherias were set up on the shores of Bahia Kino, and when conditions were favorable, or when hunger prompted them, the balsas would be launched in the evening toward Isla Tasne, the women of the party lying prone on the cane bundles and propelling the craft by paddling with their hands or with large hatchet clam shells. Reaching the island after dark, the balsas were left in charge of the women while the men and older boys, armed with clubs, crept up over the slippery, guano-covered rocks to rush on the roosting fowls and slaughter them. The

●[502]

[264]

[p. 179(B)]

123 our rough camping, and we lived more or less like the natives, along the lines of least resistance. Shaving was unknown; washing the hands took place possibly every few days---the face never; teeth never; hair combed never; dressed, always in bed and out. We did not shed our shoes. Our revolvers were our constant bedfellows and lay in the blankets next to our right hands. But the Seris have never made a move to take the least thing that was not given to them, and made not a hostile move or look. I did see a child surreptitiously wet his fingers and wipe them across the open flour sack and lick them off, but even then his mother pulled him back.

123 484 By starlight the next morning we were up again, and ate our breakfast before sun-up. We loaded most of the groceries and things in our boat, including about eighteen gallons of water. Besides ourselves, we took Luis Torres and his wife as helper and boat-steerer. This gave us a very heavy load. Chico Romero planned to take twenty gallons of water and one sack of flour and half beans and corn, and follow in his boat.

The Seri camp was a busy place, women carrying things to the boats and preparing to leave. The camp was stripped. Much water was taken in the boats to supply the families, who for the most part walked along the shore and made short cuts through the hills, planning to meet the boats at appointed places. Two other boats started with us.

The wind was dead ahead, so our sail was useless and we unshipped the mast, and three of the men took the long oars with Luis Torres at the helm and in the bow. The boat leaked quite a great deal and it [502] kept Lupe busy bailing. Chico Romero's boat was manned at the oars by two small boys about seven or nine, and he steered with a paddle. In the other boat were three men at the paddles, three children, two dogs, cans of water and baskets and cooking things.

[501] The wind kicked up quite a heavy sea for the small Seri craft, but this narrow, heavily-laden craft met the swells and floated over them gracefully, although oftentimes the water missed coming over the gunwale by an inch or two. The children laughed gleefully, showing even rows of white teeth innocent of brush and tooth powder.

123 On rounding one rocky point three deer stood outlined against the sky, and we landed three men to try and get one, Stan among them. They returned empty-handed, except Stan, who kept ashore and followed over the hills to try for game.

At noon we landed on a beautiful sandy shore laced by the green waters of the Sea of Cortez, with Tiburon Island opposite a few miles distant. Here we unloaded and built a fire of driftwood and cooked our dinner. Stan found us---without his deer---and we ate very heartily. Beans, bread, coffee. We camped here for the night in this delightful little cove, calm and protected from the strong wind outside. Green sea, purple mountains, cloudless blue sky, a little freedom from hordes of staring Indians.

S:Davis & Deacon E-5 (1922-1940) 1945
NU21 Seri NU21

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[161]

Sea turtle was still the staple meat, and with better boats and improved tools and tackle borrowed from the Mexicans, the living was becoming considerably less harsh along the shores. They then had nine boats for some two hundred people. One good boat could secure a living for five families, and they had well improved this minimum standard of living.

372
773

The origin of the use of fire among the Seri's is unknown, but they have their own story of it. One day Chico Romero, present chief of the Seris (Fig. 19), made a fire drill out of a piece of dry driftwood and showed how to make a fire by turning the stick between the hands. In three or four minutes the fine dust became a glowing punk which, with the aid of some dry grass and the wind, was quickly fanned into a flame. He was then induced to tell the legend. He looked about and pointed to a little green and blue-bodied fly and said: "The gods sent this fly down from the sky to show us how to make fire. Notice when it lands. Did you not see

[534]
[535]

FIG. 18. THE NATIVE DANCE
IS DONE ON TOP OF A TURTLE SHELL TO THE BEAT OF A BOW STRING BEING STRUCK WHILE THE BOW IS HELD AGAINST TWO INVERTED BASKETS OR DRUM.

[p. 265 (B)]

[89 cont.]

000 abundant flying and, especially, marine fauna.

For a modern technology, their region has great resources,
● 511 but for the culture of the Seri it is frankly inhospitable. The standard of living is exceedingly low, as is proclaimed by natives and foreigners and as is demonstrated by the illnesses and hunger that weaken the population.

[90] The Seri truly form part of our Western society, in
226 439 so far as they catch fish, with fishhooks and motorboats, to sell
[177] in the markets of Hermosillo, Nogales, and Tucson, and they obtain payments in national specie and coin. The part that
182 they form, however, has its own internal structure, which regulates the relations with the environment and among its mem-
[161] bers, even though a group of 218 persons, which suffers severe alterations in percentages from disasters like the sinking of a boat or strokes of good luck like the establishment of a prosperous fishing camp, is almost insignificant for the nation.

Most probably they have never been much more numerous, and they must not have had great cohesion in the past, a situation explicable in view of their nomadic gathering economy.
621 Toward the close of the 18th century they were divided into bands, of which it is known that the most important were the Guaymas, Upanguaymas, Tepocas, Tiburones, and Salineros.
[648] They banded together at various times in order to defend themselves and to attack the nuclei of Mexicans of the zone, achieving combined action, but without effective political unity.

619 At present they seem to form a single group without marked subdivisions, although they recognize affiliations like that of "Tiburones," "half-Papago," etc., which appear to have little real classificatory significance.

184 There is great uniformity: they speak a single language
619 incomprehensible to the rest of humanity; they have a relatively uniform culture, and there is tribal unification for matters involving sexual exchange.

The most obvious relations are spatial; they have important
361 settlements that sprung up around the fishing establishments and are more or less permanently occupied. Of these, "El Desemboque," close to the mouth of a river from which they have been displaced, is the most important, with 80 per cent of the Seri

[90 cont.]

361 population. There is an obvious separation there between the
563 Seri and the yori, or non-Seri, with manifest differences in cultural patterns.

The yori occupy an extensive area per person; their homes are quite distant from one another, and four families in conjunction occupy a belt of land of about 100 by 50 meters.

361 The Seri are grouped by families, inhabiting minute squares of from one and a half to two meters to a side. The yori
182 feeling of prestige, based on the territorial expanse of their prop-
361 erty, contrasts with the feeling of security based on personal
● 511 contact that dominates many aspects of Seri life; the small size of the Seri habitation indicates, not a low standard of living, but a distinct [91] concept of comfort, according to which the Seri, having all the desert to live in, like the yori, confine themselves to the limits that personal contact permits.

In January, 1952, there were 33 dwellings, with an aver-
592 age of 4.6 persons in each, those lodging four, five, and six persons frankly predominating. Each three or four more closely related families occupied contiguous homes, forming relatively separate conjunctions by themselves, which we might call
596 macrofamilies.

The family is the basic Seri institution, which is manifest in all aspects of life: it is the center of production, co-operation, the division of labor, education, diversion, government, etc.

582 Going beyond the family and macrofamily organization,
619 we have a tribal structure based on the generalized exchange (2)
621

2. Lévy Strauss, Les Structures Élémentaires de la Parenté [Elementary Kinship Structures], Paris, 1949.

of members for concluding marriage, by which all the Seri are actually linked by consanguinity or affinity. One is almost able to include all the members of the tribe on a single genealogical chart, systematically excluding only some few outsiders who have penetrated the group.

582 This situation, which would make one think of a primitive

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

and XIX; the birdskin kilt (put on for the purpose) is illustrated in plate XVIII, while the aboriginal fabric is fairly represented in plate XXIX. Although ordinarily worn as a kilt, the same article (temporarily replaced by an improvised substitute) serves other purposes at the convenience of the wearer; in the chase for tunas and for moving game it becomes a bag or pack-sheet; in case of cold rain it is shifted to the shoulders or the exposed side; during the siesta it is elevated on an shrub and a stick to serve as a canopy; at sleeping time generally it forms (especially when of birdskin) a bed, i. e., a combined mattress and coverlet; and in attack or defense the pelican skin is at once standard, buckler, and waving cape to confuse quarry or enemy after the manner of the toreador's cloak.

An almost equally distinctive garment is a short shirt or wammus, with long sleeves, worn by men and women but not by children; ordinarily it covers the thorax, missing connection with the kilt by a few inches, and so affording ventilation and space for suckling the teeming offspring. Unlike the kilt, it is an actual garment, fitted with sleeves and fastened in front with hair-cord strings. Although the Seri wammus corresponds fairly with a Yaqui garment, it seems practically certain that it is of local aboriginal design, and that it was made primitively of haircloth or native textiles (as illustrated in plate XXIX) and worn rather ceremoniously; but latterly it is made of manta and is worn habitually (at least by the women and on the frontier), though cast aside in preparation for any special task or effort—i. e., it is not connected with modesty-sense, save to a slight degree in the younger women. The form, function, and prevalence of the wammus are illustrated by the group shown in plate XIII, in which nearly all of the thirty-odd adults wear the garment.

These two articles constitute the ordinary wearing apparel of the Seri, though they are commonly supplemented (especially when both are of manta) by a pelican-skin robe, which is habitually carried to serve as bed or mackintosh, according to the chance of journey and weather, or as a shield in sudden warfare. No head-covering is used, save in the ceremonial masquerade, when the heads of animals are worn as masks,[1] or in aping Caucasian customs, especially on expeditions for barter (as illustrated in plate XII). Loose trousers of Mexican pattern are sometimes put on at frontier points, but are discarded in Seriland proper, save by Mashém, who maintains prestige partly by this borrowed badge of Caucasian superiority. Leggings and moccasins are eschewed, naturally enough, since they would afford little protection from the sharp spalls and savage thorns of the district, and would give lodgment for the barbed spines inevitably gathered in rapid chase or flight over cactus-dotted stretches; and the only foot-covering seen (save Mashém's boots) was a single sandal made from the rough skin of a turtle-flipper, apparently for ceremonial rather than practical use.

[1] Hardy (Travels, p. 230) describes the ceremonial wearing of the heads of deer with horns attached.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

291 [177] Of all the party at Costa Rica in 1894 subchief Mashém was the only one who wore Caucasian apparel with any air of comfort and fitness; yet even he, with hat and shirt, boots and breeches, and loose bandana about his neck in cowboy style (plate XVII), did not feel fully dressed without the slender hair-cord necklace of his kin in its wonted place. On the frontier improvised fig-leaves were sometimes put on the children of less than a dozen years (as illustrated by the standing infant shown in plate XIV, who was thus dressed hastily for her picture); and a common garb of the smaller children at Costa Rica, as they played about the rancheria or wandered in directions away from the white

[412] [854]

FIG. 29—Seri hairbrush.

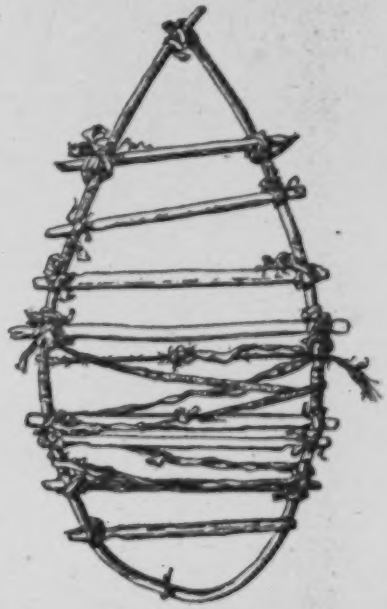

FIG. 30—Seri cradle.

man's rancho, was limited to a cincture of hair cord or snake skin, or perhaps of agave fiber, under which an improvised kilt might be tucked on the Caucasian's approach.

281 513 In addition to the individual apparel, each clan, or at least the elder woman or her fraternal executive, accumulates some surplus material as opportunity offers, and this serves as family bedding until occasion arises for converting it to other uses. Of late the prevailing materials are pelican skins, lightly dressed and joined into robes by sinew stitching; deerskins, dried or partially dressed; cormorant skins, treated like those of the pelican; seal skins, usually fragmentary; peccary skins,

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

apparently dried without dressing, together with skins of rabbits, mountain sheep, antelope, etc, usually tattered or torn into fragments. Commonly the hides and pelts are nearly or quite in natural condition, retaining the hair, fur, or feathers. The dressing is apparently limited to scratching and gnawing away superfluous flesh, followed by some rubbing and greasing; tanning is apparently unknown. By far the most abundant of the collective possessions are the pelican-skin robes, which form the sole article of recognized barter with aliens. The aggregate stock accumulated at any time is but meager, never too much to be borne on the heads and backs of the clan in case of unexpected decamping.

Aside from the painting paraphernalia, there is but a single conspicuous toilet article; this is a hair-brush made of yucca fiber bound into cylindrical form, as illustrated in figure 29. This article is in frequent use; both women and men give much attention to brushing their own long and luxurious locks and cultivating the hair and scalps of their children, the process being regarded as not only directly useful but in some measure sacramental. Ordinarily the hair is parted in the middle and brushed straight, the tresses being permitted to wander at will and never braided or bound or restrained by fillets save in imitation of Caucasian customs on the frontier; though in certain ceremonies the pelage is gathered in a lofty knot on the top-head.[1]

The Seri cradle is merely a bow of paloblanco or other switch with rude cross-sticks lashed on, as shown in figure 30. On this is laid a small pelican-skin robe, with a quantity of pelican down for a diaper, and perhaps a few pelican feathers attached as plumes to wave over the occupant's face; though on the frontier these primitive devices are largely replaced by rags.

Among the important appurtenances of Seri life are the cords used for belts and necklaces, as well as for the attachment of ceremonial headdresses, for converting the kilts into bags, and for numberless minor purposes. The finest of these are made from human hair; and for this purpose the combings are carefully kept, twisted into strands, and wound on thorns or sticks in slender bobbins, such as that illustrated

FIG. 31.—Hair spindle.

[1] Cf. Hardy, Travels, p. 350.

9:Malkin E-5 (1953-1955)1962 NU31 Seri NU31

Coyote figures out probably

as an important and perhaps disreputable figure in the mythology although nothing but scraps and bits of information suggest this. It is possible that there is actually a taboo on eating this animal or perhaps it is so disreputable that eating its flesh would put a gourmant in an inferior position.

How important is the Seri mammalian diet is hard to tell. It certainly looms more heavily during the winter, because in the cool season hunting is easier than during the heat of the summer and in fact this is when most of it is done by the ardent hunters. Too, winter subjects the Seris to greater hazards and is apt to increase their dependence on the desert resources over that during the summer, even if these resources are scantier at that time.

To all of these animals one should add the semi-wild burros running about the extensive Mexican rancherias. The Indians poach on them frequently using their fire arms, usually the .22 caliber rifles. In any case, it appears that during the summer when the field work was carried out, the mammalian diet figures quite lightly on the Seri table.

Food preparation: Very little is done in the preparation of the mammalian meat. All that I could observe was the boiling of it in hot water spiced with salt. The Indians were saying that in order to have the meat of a peccary, deer or bighorn ready to eat one must boil it 2-3 hours. The same procedure is followed with the meat of the burros. In contrast to this, as shall be seen later, fish are boiled as well as roasted while the turtles are also dried and salted. Preparation of meat is done by women, certainly at least in the encampments when they are present.

Food preferences: Some of the Seri food preferences have already been mentioned. At the top of the list as the desirables are the peccary, the deer, the bighorn and the blacktail jackrabbit; at the bottom is the badger, whose meat "is not much good." There is also preference by sex. Females of both the bighorn and peccary are preferred over the males "because they do not have the bad odor like the males." This sort of favoritism also occurs among the Mexicans. However, the Indians did not elaborate beyond this point.

Other economic uses: Apart from meat, hides are also used. The hides of the deer, bighorn and peccary had been used for sleeping mats although this matter has been expressed in the past tense. Miguel Barnett also suggested that the bighorn hides had been used for clothing by the Indians in the past—but he neglected to say how long ago. During Kroeber's stays, no Seris went about in the animal or bird (pelican) skins but earlier when McGee visited them they went about in these simple garments. Judging then by Miguel's memory, the use of the bighorn hide for clothing must be pushed back to the period of World War I or even earlier.

Miguel Barnett indicated that the "fur" of the bighorn had once been worn for the cold season "but not now."

[P 10 A]

* 825 what the informants say about it may be dubious. What is important, though, is the fact that there is far greater number of insects attracted to the lights—immense in fact.

●[513] In some cases, the Seris' idea of midday siesta which everybody, the animals included, take, turns up in their entomology. Thus, the *Tarantula* spends mid-day underground. The *Cicada* does not sing during the hot noon hours. *Chlenius* and *Diplotaxis* also rest at midday although really both are very much nocturnal animals anyway. As for the animals inactive during either time of the day, it had been suggested for some that "they sleep," the same motif showing up in the Seri knowledge of other animal groups.

Anatomy

Little information is available concerning Seri knowledge of the insect anatomy. But where inquiry has been made the Indians showed good knowledge of some of the gross morphological traits of the insects. In all species for which the data are available—a dozen altogether—the following are present: six legs, two wings, two horns (antennae), head and mouth parts usually in the front. An exception here for unaccounted reasons is Tettigonid *Erepemodes* which was said to have four legs. Of course, the Myriapods have "many legs."

Biting outfit is variously located. The wasps and the larger spiders (*Tarantula* and Black Widow) will bite with the fore end of the body but will sting with their rear. The Soliphugid (perfectly harmless in fact) "stings" with the rear end of the body while *Scolopendra* will bite like a viper. The Mutillid also stings. Inclusion of the spiders and Soliphugid as "rear stingers" is unexplainable unless their curving movement suggests a wasp to the Seris.

A most peculiar trait is ascribed to *Tetracha carolina*. This beetle, the Seris say, "has two red light spots on the body which are bright red at night like light." In daytime they indicated the two reddish marks on the elytra. Of course, the insect has no luminescence of any kind even though it is most active at night. This suggests that some sort of really luminescent beetle, a Lampyrid or most likely a *Pyrrhophorus*, does occur in the area and is mistaken for *Tetracha*, although the *Pyrrhophorus* lights are green and located up front.

Miscellaneous Behaviour

In general there is a clear cut recognition of which insects can fly and which cannot. Sometimes, however, this does not correspond to the real situation. If the insect is likely to fly off only at night, while during the day it will seek refuge in crevices from the light, *Saprinus*, for example, it is likely to be included among the supposedly apterous forms.

Web makers are only spiders, the smaller species. Of the Salticid, the informants said that "it sits in the web, only descending down the line to grab a victim." This is not exactly true of the

[P.518]

1: McGee E-3 (1894-1895)1895 NU31 Seri NU31

extreme lightness in proportion to capacity, a quality due to the spongy character of the torote coil and to the thinness of the splints used in the woof. The inside dimensions, weight, and dry-measure capacity (filled to the level of the brim with rice) of two typical specimens approaching extremes in size are indicated in the accompanying table. As noted elsewhere, the ware is absolutely without decorative devices in weave, paint, or form; it is baldly utilitarian, a model of economy in material and in the balance between structure and function, approaching in this respect the thin-walled canteen-olla, the graceful balsa, and the light but effective harpoon. The structural correspondence of the ware to a widespread type and its limited use among the tribe suggest an acultural origin for the Seri basketry; but the delicate adjustment of means to ends in the manufacture and the strictly local character of the material quite as strongly suggest an indigenous development.

Museum No.	Diameter	Depth	Weight	Capacity
174528	38 cm. (15 in.)	9.5 cm. (3¾ in.)	492 g. (17 oz.)	6.25 l. (6.6 qt.)
174529a ..	23 cm. (9 in.)	5.0 cm. (2 in.)	142 g. (5 oz.)	1 l. (1.06 qt.)

It is impossible to portray justly the food habits of the Seri without some reference to a systematic scatophagy, which seems to possess fiducial as well as economic features. In its simplest aspect this custom is connected with the tuna harvests; the fruits are eaten in enormous quantity, and are imperfectly digested, the hard-coated seeds especially passing through the system unchanged; the feces containing these seeds are preserved with some care, and after the harvest is passed the hoard (desiccated, of course, in the dry climate) is ground between hupf and shat, and winnowed in baskets precisely as are the mesquite beans; and the product is then eaten either dry or in the form of atole like the mesquite meal. In superficial view this food factor is the precise homologue of the "second harvest" of the California Indians as described by Clavigero, Baegert,[1] and others; but it gains importance, among

[1] "An Account of the Aboriginal Inhabitants of the Californian Peninsula, as given by Jacob Baegert, a German Jesuit missionary." . . . Translated and arranged for the Smithsonian Institution by Charles Rau: Ann. Rep. Smithsonian Inst. for 1863, pp. 352-389. Baegert's account of foods (pp. 368-367) is so opposite as to be worthy of quotation nearly entire:

"Notwithstanding the barrenness of the country, a Californian hardly ever dies of hunger, except, perhaps, now and then an individual that falls sick in the wilderness and at a great distance from the mission, for those who are in good health trouble themselves very little about such patients, even if these should happen to be their husbands, wives, or other relations; and a little child that has lost its mother or both parents is also occasionally in danger of starving to death, because in some instances no one will take charge of it, the father being sometimes inhuman enough to abandon his offspring to its fate.

"The food of the Californians, as will be seen, is certainly of a mean quality, yet it keeps them in a healthy condition, and they become strong and grow old in spite of their poor diet. The only period of the year during which the Californians can satisfy their appetite without restraint is the season of the pitahayas, which ripen in the middle of June and abound for more than eight weeks. The gathering of this fruit may be considered as the harvest of the native inhabitants. They can eat as much of it as they please, and with none this food agrees so well that they become corpulent during that period, and for this reason I was sometimes unable to recognize at first sight individuals, otherwise perfectly

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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the Seri at least, as the sole method of storing or preserving food-supplies, and hence as the germ of industrial economy out of which a

familiar to me, who visited me after having fed for three or four weeks on these pitahayas. They do not, however, preserve them, and when the season is over they are put again on short rations. Among the roots eaten by the Californians may be mentioned the yuka, which constitutes an important article of food in many parts of America, as, for instance, in the island of Cuba, but is not very abundant in California. In some provinces it is made into a kind of bread or cake, while the Californians, who would find this process too tedious, simply roast the yukas in a fire like potatoes. Another root eaten by the natives is that of the aloe plant, of which there are many kinds in this country. These species of this vegetable, however, which afford nourishment—for not all of them are edible—do not grow as plentifully as the Californians might wish, and very seldom in the neighborhood of water; the preparations, moreover, which are necessary to render this plant suitable for the mouth tire and labor. . . . I saw the natives also frequently eat the roots of the [illegible] reed, just as they were taken out of the water.' Certain seeds, some of them not larger than those of the mustard, and different sorts in pods that grow on shrubs and little trees, and of which there are, according to Father Piccolo, more than sixteen kinds, are likewise diligently sought, yet they furnish only a small quantity of grain, and all that a person can collect with much toil during a whole year may scarcely amount to 12 bushels.

"It can be said that the Californians eat, without exception, all animals they can obtain. Besides the different kinds of larger indigenous quadrupeds and birds, they live nowadays on dogs and cats; horses, asses, and mules; fish, as eels, mice, and rats; lizards and snakes; bats, grasshoppers, and crickets; a kind of green caterpillar without hair, about a finger long, and an abominable white worm of the length and thickness of the thumb, which they find occasionally in old rotten wood, sometimes in a particular delicacy. The chase of game, such as deer and rabbits, furnishes only a small portion of a Californian's provisions. Supposing that for 100 families 100 deer are killed in the course of a year, which is a very favorable estimate, they would supply each family only with three meals in three hundred and sixty-five days, and thus relieve but in a very small degree the hunger and the poverty of these people. The hunting for snakes, lizards, mice, and field-rats, which they practice with great diligence, is by far more profitable and supplies them with a much greater quantity of articles for consumption. Snakes, especially, are a favorite sort of small game, and thousands of them find annually their way into the stomachs of the Californians.

"In catching fish, particularly in the Pacific, which is much richer in that respect than the Gulf of California, the natives use neither nets nor hooks, but a kind of lance—that is, a long, slender, pointed piece of hard wood—which they handle very dexterously in spearing and killing their prey. Sea-turtles are caught in the same manner.

"I have now mentioned the different articles forming the ordinary food of the Californians; but, besides these, they reject nothing that their teeth can chew or their stomachs are capable of digesting, however tasteless or unclean and disgusting it may be. Thus they will eat the leaves of the Indian fig-tree, the tender shoots of certain shrubs, tanned or unbaked leather, old straps of rawhide, with which a house was tied together for years; fleas, the bones of poultry, sheep, goats, and calves; putrid meat or fish swarming with worms, damaged wheat or Indian corn, and many other things of that sort which may serve to appease the hunger they are almost constantly suffering. Anything that is thrown to the dogs will be also accepted by a Californian, and he takes it without feeling offended, or thinking for a moment that he is treated below his dignity. For this reason no one took the trouble to clean the wheat or maize, which was cooked for them in a large kettle, of the black worms and little bugs, even if the numbers of these vermin had been equal to that of the grains. By a daily distribution of about 150 bushels of bran (which they are in the habit of eating without any preparation) I could have induced all my parishioners to remain permanently in the mission, excepting during the time when the pitahayas are gathered.

"I saw one day a blind man, 70 years of age, who was busily engaged in pounding between two stones an old shoe made of raw deerskin, and whenever he had detached a piece he transferred it promptly to his mouth and swallowed it; and yet this man had a daughter and seven grandchildren. As soon as any of the cattle are killed and the hide is spread out on the ground to dry, half a dozen boys or more will instantly rush upon it and commence to work with knives, flints, and their teeth, tearing and scratching off pieces, which they eat immediately, till the hide is full of holes or scattered in all directions. In the mission of St. Ignatius and in others further toward the north there are persons who will attach a piece of meat to a string and swallow it and pull it out again a dozen times in succession, for the sake of prolonging the enjoyment of its taste.

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"I must here ask permission of the kind reader to mention something of an exceedingly disgusting and almost inhuman nature, the like of which probably never has been recorded of any people in the world, but which demonstrates better than anything else the whole extent of the poverty, carelessness, and voracity of these wretched beings. In describing the pitahayas I have already stated that they contain a great many small seeds resembling grains of powder. For some reason unknown to me these seeds are not consumed in the stomach, but pass off in an undigested state, and in order to save them the natives collect during the season of the pitahayas that which is discharged from the

1: McGee E-3 (1894-1895)1898 NU31 Seri NU11

feeble thrift-sense may be regarded as emerging. And the rise of thrift in Scotland, like esthetic and industrial beginnings generally, is shaped

human body, separate the seeds from it, and roast, grind, and eat them, making merry over their herbaceous meals, which the Spaniards therefore call the second harvest of the Californians. [This statement is corroborated in all particulars by Choriguro in his Noticia della California. Venice, 1790, vol. i, p. 157.] When I first heard that cork a filthy habit existed among them I was disinclined to believe the report, but to my utter regret I became afterwards repeatedly a witness to the proceeding, which they are unwilling to abandon, like many other bad practices (probably because of the bestial character of the contents—W J M.). Yet I must say in their favor that they have always abstained from human flesh, contrary to the horrible usage of so many other American nations who can obtain their daily food much easier than these poor Californians.

"They have no other drink but the water, and beware be pained that they are unacquainted with such strong beverages as are distilled in many American provinces from Indian corn, the aloë, and other plants, and which the Americans in these parts merely drink for the purpose of intoxicating themselves. When a Californian encounters during his wanderings a pond or pool, and feels a desire to quench his thirst, he lies flat on the ground and applies his mouth directly to the water. Sometimes the horns of cattle are used as drinking vessels.

"Having thus far given an account of the different articles used as aliment by the aborigines of the peninsula, I will now proceed to describe in what manner they prepare their victuals. They do not cook, boil, or roast like people in civilized countries, because they are neither acquainted with these methods nor possessed of vessels and utensils to employ for such purposes; and, besides, their patience would be found beyond endurance if they had to wait till a piece of meat in well cooked or thoroughly roasted. Their whole process simply consists in burning, singeing, or roasting in an open fire all such victuals as are not eaten in a raw state. Without any formalities, the piece of meat, the fish, bird, snake, field mouse, bat, or whatever it may be is thrown into the flames or on the glowing embers, and left there to smoke and to sweat for about a quarter of an hour; after which the article is withdrawn, in most cases only burned or charred on the outside, but still raw and bloody within. As soon as it has become sufficiently cool, they shake it a little in order to remove the adhering dust or sand, and eat it with great relish. Yet I must add here, that they do not previously take the trouble to skin the mice or disembowel the rats, nor deem it necessary to clean the half-emptied entrails and maws of larger animals, which they have to cut in pieces before they can roast them. Seeds, locusts, grasshoppers, green caterpillars, the white worms already mentioned, and similar things that would be lost, on account of their smallness, in the embers and flames of an open fire, are parched on hot coals, which they constantly throw up and shake in a turtle shell or a kind of frying pan worn out of a certain plant. What they have parched or roasted in this manner is ground to powder between two stones, and eaten in a dry state. Beans are treated in like manner.

"They eat everything unsalted, though they might obtain plenty of salt; but since they cannot dine every day on roast meat and constantly change their quarters, they would find it too cumbersome to carry always a supply of salt with them.

"The [illegible] of the aloë, also called *mescals* or *magney* by the Spaniards, requires more time and [illegible]. The roots, after being properly separated from the plants, are roasted for some hours in a strong fire, and then buried, twelve or twenty together, in the ground, and well covered with hot stones, hot ashes, and earth. In this state they have to remain for twelve or fourteen hours, and when dug out again they are of a fine yellow color, and perfectly tender, making a very palatable dish, which has served me frequently as food when I had nothing else to eat, or as dessert after dinner in lieu of fruit. But they act at first as a purgative on persons who are not accustomed to them, and leave the throat somewhat rough for a few hours afterwards.

"To light a fire the Californians make use of steel and flint, but obtain it by the friction of two pieces of wood. One of these is cylindrical, and pointed on one end, which fits into a round cavity in the other, and by turning the cylindrical piece with great rapidity between their hands, like a twirling stick, they succeed in igniting the lower piece if they continue the process for a sufficient length of time.

"The Californians have no fixed time for any sort of business, and eat, consequently, whenever they have anything, or feel inclined to do so, which is nearly always the case. I never asked one of them whether he was hungry who failed to answer in the affirmative, even if his appearance indicated the contrary. A meal in the middle of the day is the least to see among them, because they all set out early in the morning for their foraging expeditions, and return only in the evening to the place from which they started, if they do not choose some other locality for their night quarters. The day being thus spent in running about and searching for food, they have no time left for preparing a dinner at noon. They start always empty-handed; for if provisions something remains from their evening repasts they certainly eat it during the night in waking moments or on the following morning before leaving. The Californians can endure hunger under and much longer than other people; whereas they will eat enormously if a chance is given. I often tried to buy a piece of venison from them when the skin had but lately been stripped off the deer, but regularly received the answer that nothing was left; and I knew well enough that the hunter who killed the animal needed no assistance

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

262 by faith and attendant ceremony; for the doubly consumed food is
514 credited with intensified powers and virtues, and held to be specially potent in the relief of hunger and in giving endurance for the hard warpath or prolonged chase; it is—and makes—very strong ("mucho fuerte"), in the laconic and confident explanation of Machém. Incongruous as the custom is to higher culture, it finds natural suggestion in the everyday habits of the tribe, who are wonted not only to the eating of animal entrails in raw and uncleaned condition, but especially to the relief of the sharpest pangs of hunger by means of the soft structures and their semiassimilated contents—an association of much influence in primitive thought. Concordantly with the custom and the faith grown out of it, the excreta in general take a prominent place in the Seri mind; the use of urine in ablution, etc, is little understood and may be passed over; but all bony feces—and it may be noted that the "sign" of the Seri more resembles that of wolves or snake-eating swine than that of men—following gorges of large quarry are customarily located and kept in mind for recourse in time of ensuing shortage, when the mass is ground on the abut and reconsumed; and even the ordinary discharge is preserved during the seasons of less reliable
514 food-supply.
764 There is an obscure connection between this curious and repulsive food custom of the Seri and the mortuary customs of the tribe, which

000 to finish it. Twenty-four pounds of meat in twenty-four hours is all deemed an extraordinary ration for a single person, and to see anything eatable before him is a temptation for a Californian which he cannot resist; and not to make away with it before night would be a victory he is very seldom capable of gaining over himself."

Clavigero's account of the food habits of the California Indians is similar, though generally less explicit. According to him the seeds forming the "second harvest of pitahayas" are extracted carefully with little fresh, and are afterward roasted, ground, and preserved in the form of meal against the ensuing winter. Of the reconsuming habit, he says:

"The savages living in the southern part of the peninsula have found the secret, unknown to mortals in general, to eat and re-eat the same meal repeatedly. They tie a string around a mouthful of meat dried and hardened in the sun. After chewing it for a while they swallow it, leaving the string hanging from the mouth. After two or three minutes, by means of the string they draw the meat up again to be rechewed, and this they repeat as many times as may be necessary until the morsel is consumed or so softened that the string will not hold it any longer. In extracting it from the throat they make such a noise that to one who has not before heard it it appears that they are choking themselves.

"When many individuals are gathered together to eat in this manner it is practised with more ceremonies. They seat themselves on the ground, forming a circle of eight or ten persons. One of them takes the mouthful and swallows it, and afterwards draws it up again and passes it to the next one, and this one to another, proceeding thus around the circle with much enjoyment until the morsel is consumed. This has astonished the Spaniards who have seen it, and indeed it would not be credible if it had not been unanimously testified to by all who have been in that country. Several Jesuits who did not believe this, notwithstanding that others and prominent persons confirmed it, having afterwards gone to California saw it with their own eyes. Among those Indians who have embraced Christianity this loathsome and dangerous method of eating has been abandoned in consequence of the continual reproofs of the missionaries." (*Historia de la Antigua ó Baja California*, etc, por el Padre Francisco Javier Clavijero. Mexico, 1852, p. 34.)

171 The records of Clavigero and Burgert indicate fair correspondence in the food habits of the Californian Indians and the Seri, though there are certain noteworthy differences, e. g., the taboo of the badger among the former and of the ground squirrel among the latter. It would also appear that the Californians were the more largely vegetarian and the better advanced in culinary processes. The customs of the Seri throw light on the genesis of "re-eating", for the process would appear to be but an extension of the repeated mumbling and swallowing of tendinous strings still attached to the bones of larger animals.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

was not detected until the opportunity for personal inquiry had gone by. About the rancherias on Isla Tiburon, and especially about the extensive house-group at the base of Punta Tormenta, there are burial places marked by cairns of cobbles, or by heaps of thorny brambles where cobbles are not accessible; and most of these cairns and bramble-piles are supplemented by hoards of desiccated feces carefully stored in shells, usually of *Area* (a typical specimen is illustrated in figure 25). The hoards range from 50 to 500 shells in quantity, and there were fully a score of them at Punta Tormenta alone. About the newer rancherias, as at Rada Ballena, where there are no cemeteries, the hoards are simply piled about small clumps of shrubbery. The meaning of the association of the dietetic residua and death in the Seri mind is not wholly clear; yet the connection between the "strong food" for the warpath and the

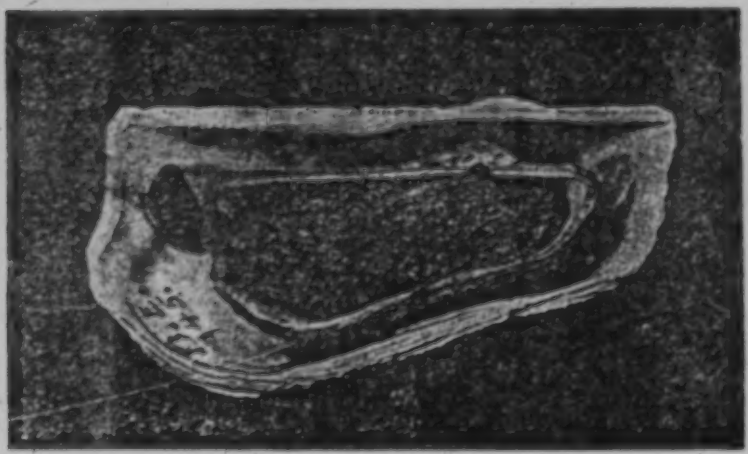

FIG. 25.—Anthropolith supplies.

mystical food for the manes in the long journey to the hereafter is close enough to give some inkling of the meaning.[1]

In recapitulating the food supplies of the Seri it is not without interest to estimate roughly the relative quantities of the several constituents consumed; and the proportions may be made the more readily comprehensible by expression in absolute terms. As a basis for the quantitative estimate, it may be assumed that the average Seri, living, as he does, a vigorous outdoor life, consuming, as he does, a diet of less average nutrition than the selected and cooked foods of higher culture, and attaining, as he does, an exceptional stature and strength, eats something more than the average ration; so that his ration of solid food may be lumped at 2.76 pounds (about 1,250 grams) daily, or 1,000

[1] Cf. Sentiments Rites of all Nations, by Capt. John G. Bourke, 1891, especially chapter II, pp. 439–468. The Seri custom, resting as it does, on an evident economic basis, tends to explain the esthetology of the Hopi and other tribes described by Bourke.

2: Kroeber E-5 (1930)1931 NU31 Seri NU31

The Seri "second harvest" of cactus seeds (p. 209), which Baegert and Clavigero also describe from Lower California (p. 211) is found also among the American Pima,[4] and is therefore likely to have prevailed as far as Cereus fruits were a principal food supply.

The ground-squirrel is not eaten by the Seri, the badger not by the Baja Californiefios (p. 212).

McGee gives a valuable percentage estimate of Seri food composition: land game, large and small (including 6% of stolen stock), 21%; pelicans, other waterfowl, and eggs, 13; sea turtles, 25; fish, 15; shellfish, 10; cactus fruit, 9; other plants, 6; miscellaneous, 2; total animal, 84; maritime, nearly two-thirds. My impression is that clams, other mollusks, and crabs constitute more than a tenth of the total consumption. Clams especially can usually be obtained at low tide when wind and water prevent other food taking. I should also be inclined to raise the proportion of plant food, especially mesquite. The use of agave was almost certainly limited chiefly by the supply. Sealions, porpoises, and occasional whales could perhaps hardly be accounted for under the two percent of miscellaneous. On the other hand, deer are evidently taken only occasionally, and the figure for turtles seems too high, these animals being absent from Seri waters for months in the year and always free-swimming. McGee appears to have over-emphasized the importance of the turtle in Seri thought as well as life. I would incline to estimate the proportion of animal food in native times, before domestic animals could be preyed on, as rather under three-fourths of the total; of maritime, as perhaps three-fifths. Even these figures might be high for the bands primarily resident on the mainland, with free access to the mesquite thickets of the lower Sonora and Bacuachi (Bacavachi) courses, and the countless cactuses.

A double-bladed paddle pictured by the Dewey-Narragansett expedition of 1873 is reproduced by McGee (p. 219, fig. 28) without comment. This type of paddle is established for the Seri, Santa Barbara islanders, and San Francisco Bay Indians; then apparently is lacking until the Eskimo-Aleutian area. Among the Chumash it is native and associated with a plank-built canoe. On San Francisco Bay it was used with the rush balsa, and may or may not be due to Aleutian sea-otter hunters introduced by the Russians. It seems possible that the Seri and Chumash occurrences would prove connected by occasional use in Baja California, if we had fuller data, since some of the natives there went several leagues out into the open sea. We are so accustomed to think of the two-bladed paddle as an adjunct of the specialized kayak, that it too impresses as a complicated device, inappropriate with a simple raft. As a matter of fact, wherever scarcity of wood, or lack of skill and usage in working it,[5] resulted

[4] Russell, BAE-R 26:71, 1908.
[5] Cf. The Valley Nisenan, UC-PAAE, 24:253-290, 1929.

222 forests of giant cacti (Fig. 9) provide during this season an unlimited supply of "pitahayas" toward which the tribespeople customarily moved to accomplish the annual harvest. The fruits were readily knocked down by means of long poles and, when ripe, the spines were easily brushed off, leaving a luscious pulp as big as a fig. During the height of the season all the clans withdrew from the coast and gave their undivided attention to the collection and consumption of the cactus fruit, gorging tremendous quantities for weeks until waning supply and cloying appetite drove them back to the more severe hunt for turtle and pelican.

252 Perhaps the only germ of thriftiness in the
262 Seris is shown by a peculiar custom with
514 respect to the pitahayas. The fruits, eaten in such enormous quantity, were imperfectly digested, the hard-coated seeds particularly passing through the body unchanged. Using
[445] large seashells, the feces containing these
[251] seeds were collected and preserved with some care. Thus, when the harvest of fresh fruits was over, there remained a hoard of these dry, nutritious discharges which were ground on the stone abat, winnowed in a shallow basket and made into a meal to be eaten, either dry, as a watery atole, or mixed with turtle grease to form a thick paste.

614 Although the Seri's omnipresent problems of food-getting and of personal subsistence have been of particular interest, the lost social customs of the tribe deserve a moment's attention. Before the death of all
[161] but a few of the 2,000–3,000 Seris at the hands of invading Spaniard and Mexican, the tribe consisted of a number of conspicuous maternal clans, each of which was presided over by a zoic tutelary such as the Pelican, the Turtle, the Rattlesnake, or the Badger. The totemic symbols denoting the
202 various beast-gods and incidentally indicat-
386 ing the blood-carriers of clans dedicated to
614 them, consisted of elaborate designs painted upon the face (Fig. 10). In accord with their savagery in which the social organization was based on blood kinship reckoned in the female line, under ordinary circumstances, the faces only of the females were painted. Colored minerals pounded to powder afforded the pigments for the paint-

[p. 201(A)]

5:Dawson N-5 (1940) 1944 NU31 Seri NU31

ingenuity of a modern shipbuilder to have constructed a boat. These simple, desert people, however, through centuries of struggle for life in their desolate realm had learned to use every natural material available to them, however laborious the tasks and inefficient the products. The carrizal reed, *Phragmites communis*, grows about the few permanent water holes of Seriland, and from countless numbers of these slender, buoyant canes they built their watercraft. The reeds were stripped of leaves and gathered in long bundles, bound together and gradually augmented by more and more interlaced canes until a bundle 18 to 30 feet long and 1½ feet in diameter, tapering at both ends, was made. Three of these were then bound together with cords of fiber or human hair, making a maneuverable one or two man raft, easily transported to the shores.

The mesquite tree, *Prosopis juliflora*, provided fiber for cords. The flexible outer tissues of the roots were stripped off, soaked and progressively pounded, split and worked between hand and mouth until very slender, fibrous threads were obtained which were then twisted into cords. In some cases a coarse, rough fabric was woven from these fibers, but most garments were made of pelican skins. The strips of workable mesquite root or sometimes yucca fiber were also used in making doughnut-shaped head pads which aided in balancing the capacitous earthen water jars as they were carried on the heads of the women over rough and stony trails from water hole to camp site.

While occupying the turtle fishing camps on El Infiernillo during the good season, vegetable supplements to the fishy diet were few. Every nourishing seed or woody fruit yielded by the desert was carefully gathered; even the tiny seeds of the sea grass, *Ruppia*, were sorted from beach drift and made into meal. Never did the Seris learn to cultivate any crop or domesticate any animals other than the half wild coyote dogs that lived in mutual toleration with them. Even had they done so, their success in the barren, waterless land would have been small.

Sterile as is the Seri's hinterland, for a time each summer the thorny plants with which it is so profusely stocked ripen an abundant crop of fruit. The cacti in particular yield a wonderful harvest of luscious and succulent fruits, and toward this fortuitous supply the Seris were accustomed to move in June and July. The foothills of Sierra Seri on the mainland are adorned with great numbers of giant cacti, *Pachycereus Pringlei*, *Carnegiea gigantea* and *Lemaireocereus Thurberi* from which the luscious pitahayas were readily knocked down when ripe. The Indians wandered into the cactus forest and after a simple ritual marking the beginning of the feast, proceeded to gorge themselves for weeks on the succulent fruit until waning supply and cloying appetite drove them back to more severe food-getting activity by the sea. They did not customarily find it necessary to leave the cactus forest, however, as soon as the supply of fruits was no longer sufficient, for by the time the fruiting season was ended they had provided themselves with a second harvest. The pitahayas, gorged in such tremendous quantity throughout the season, were very imperfectly digested; the miriads of hard seeds, particularly, passed through the system unchanged and with the preservation of these in mind the Indians carefully collected with the aid of large sea shells all such seedy discharges and let them dry in the desert sun. Thus, as the supply of fresh fruit faded they proceeded to the use of this hoard

[TEXT CONTINUES ON P. 136--ANALYST]

7: Marroquin E-5 (1955) 1957 NU31 Seri NU31

In general, the Seris have a healthy appearance; the most frequent complaints are gastro-intestinal and visual defects due to avitaminosis. It is very possible that given the difficult living conditions resulting from the desert environment, a rigorous selective process among the newborn takes place so that only those who possess exceptional physical qualities survive. This explains why the majority of them retain the physical characteristics described by Hardy more than a century ago: "the Indians of Isla Tiburón are tall, healthy and well built".

In spite of attempts at education, the Seris do not practice the elemental rules of hygiene; their way of life, neglecting this aspect, contributes to increase the unhealthy foci which exist in the places where they have established themselves.

Dwellings.—The Seris retain many vestiges of their nomadic life, among them the hut which serves as their living quarters; many of them are simple provisional arrangements for sheltering themselves from wind and sun, and they bear no relationship to the stability and durability of our dwellings. The Seri hut was made to meet the necessities of a nomadic people who had no reason to spend much time nor work on making a dwelling which would only be used for a season (one, two or at the most three months). Nevertheless, some innovations have been introduced in the last 20 years, so that we must distinguish between two types of houses. The primitive model consists of a series of scrub pine arches interwoven with branches from the same shrub almost totally covered by foliage, tortoise shells, *zacate*, etc., with only a small hole in one of its ends as an entrance (this type of hut is the same that McGee saw in 1894 when the Seris still led a nomadic life).

In the new model more resistent woods are used, like *sahueso*, *torote*, etc., and poles, between which is laid a layer mud. The house is rectangular, without windows; with only one entrance, but always larger than the entrance to the brush hut. Other models would have to be added to these two, due to the incorporation and utilization of tents made in the United States which some U. S. tourists or the Society of Friends have given them. The tent is used as permanent living quarters; or sometimes combined with branches to cover the primitive type huts.

Domestic Animals.—The Seris are very fond of domestic animals like the dog, cat, and finally, the chicken. For all practical purposes these animals live together with the family; they rest on the piles of rags and sand which serve the Indians as beds; lick the plates and cooking utensils; dirty the house; increase the household fauna with their fleas and other vermin thus contributing to create and unhealthy atmosphere in the home.

Problems of Intoxication.—Their dealings with the fish buyers, in whose stores are sold beer, mezcal and tequila, has turned them to the consumption of these drinks. The Seri drinks liquor in an uncontrolled

261 will exist on very small rations, bear burdens, and walk long dis-
262 tances. Their food is anything that walks, flies, crawls or swims,
[252] and they eat it raw with the same relish that we eat it cooked. There is but one thing they will not eat; they draw the line on the Gila monster. They are the most perfect type of human being adapted to desert conditions that exists today. Convey them blindfolded many miles into the heart of the desert, empty-handed, remove their blinders, and they will find both food and water where others would perish. The Papagos and Yaquis do almost as well."

302 We gave the women a small bag of flour and three or four cubes of
[123] sugar around, and the men three packets of tobacco each and two boxes of matches. Matches with them are very precious and are rarely used. Rather than use a match a woman came over to our fire and borrowed some coals to rebuild her fire. From this point the nearest matches are a good deal over one hundred and twenty miles distant, so they have to economize in every thing.

422 Each rag is valuable, and flour, sugar, coffee and rifle shells
[434] are absolutely priceless. While they know money, it has no value here.
[437] Only commodities go here. The most highly prized things are boards to
[389] make boats and rifle shells to get game and protect themselves. All empty shells are saved, the primer punched out, straightened, a match head put in, a little pinch of powder on top, the shell filled up, a long bullet inserted, the shell pinched tight, and a fresh set of ammunition is made.

142 The women and children certainly did look wild. Their hair was
291 frowsy and unkempt, their skirts and waists a patchwork of dirty rags
302 coming just below the knees; their features seamed and hard and cruel. Their complexion was very dark. They had no under garments. The children wore only a dirty shirt coming a little below their thighs, and even that is ragged. One or two of the women had a dirty bandanna over their heads. How I wished I could have seen them in their ancient, picturesque pelican-skin kilts!

302 I happened to witness the operation of a Seri beauty parlor. A
[024] mother brushed the hair of her thirteen-year-old daughter with a brush
[283] made from the fibrous roots of a certain grass tied together with
[515] sinew. During the operation if she came across a *piojo*, and she found several, she plucked him away from his feeding ground and dropped him in the fire.

The hair neatly brushed, the mother then mixed paint in a small vessel and with a tiny stick painted a bright blue design under the eyes and across the cheeks and nose, and then she added narrow white stripes, which, contrasting with the blue and the dark skin, produced a very striking effect. This paint is easily removed and the women often paint and remove three different face designs in one day.

304 I did not see tattoo work on either men or women, nor did they
301 wear ceremonial feathers as did our western Indians.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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TYPICAL SEMI HOUSE ON THE FRONTIER

[FACING P. 117]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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OCCUPIED RANCHERIA ON THE FRONTIER

BUREAU OF AMERICAN ETHNOLOGY

[FACING p. 119]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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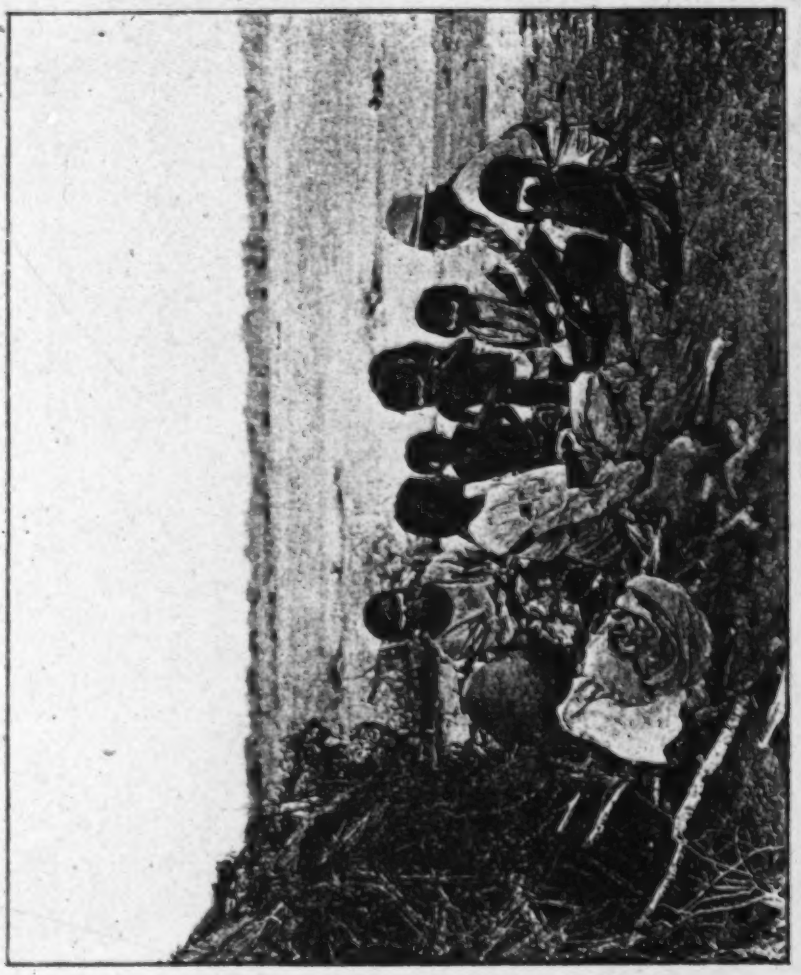

SERI FAMILY GROUP

SEVENTEENTH ANNUAL REPORT PL. XIV

BUREAU OF AMERICAN ETHNOLOGY

[FACING P. 139]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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GROUP OF SERI BOYS

[p. 144 A]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

ripening); most of the larger muscles were already gnawed away, leaving loose ends of fiber and strings of tendon clinging to the bone, the condition being such that the remaining flesh might easily have been cut and scraped away by means of a knife; yet whenever a warrior or woman or youth hungered he or she took down the heavy joint, squatted or sat on the ground with back to one side of the doorway, held the mass at the height of the mouth, and gnawed, sucked, and swallowed, frequently tearing the tissue by twisting and backward jerks of the head, and not only masticating, but swallowing the free ends of tendons still attached to the bone. This process was varied only by seizing with the hands and tearing off a strip of flesh or skin already loosened by the teeth; and it was continued until the bones were practically clean, when they were wrenched apart by the stronger men in order that the cartilaginous cushions and epiphyses might be gnawed away. The only approach to cooking or carving was a parboiling of the foot, after the leg was wrenched off at the hock, until the hoof was sufficiently softened to be knocked off with the protolithic hupf[1] shown in plate XLIII, when half a dozen matrons and well-grown maidens gathered about to gnaw the gelatinous tissue (already softened by incipient decay as well as by the parboiling) investing the coffin-bone. The entire procedure in this as in many other cases proclaimed the absence of knife-sense. The Caucasian huntsman does not have to think of his knife when game is to be bled or skinned or dissected; his habit-trained hand knows where to find the implement, how to seize it, and in most cases how to wield it advantageously; but the Seri hand possesses no such cunning, and uses the knife only clumsily and at second thought, if at all. The Seri huntsman, on the other hand, does not have to think of nails and teeth, for they are trained and coordinated by hereditary habit to spontaneously act in unison and with the utmost possible or needful vigor; while the Caucasian at least has completely lost the claw-and-teeth instinct of offense and defense.

Conformably with their striking independence of knives, the Seri are conspicuously unskilful in all mechanical operations involving the use of tools. Their most elaborate manufacture is the balsa, made from reeds broken at the butts and with the leaves and tops removed by the hands or by fire, bound together with hand-made cords; next in elaborateness come the bow and arrow, normally made without cutting tools; then follows their fictile ware, which is made wholly by hand, without aid of the simple molds and paddles and other devices used by neighboring tribes; while their primitive fabrics were apparently of hand-extracted fibers, twisted and woven wholly by hand, with the aid of wood or bone perforators in sewing and possibly in weaving. Practically the Seri possess but a single tool, and this is applied to a peculiarly wide variety of purposes—it is the originally natural cobble used for crushing bones and severing tendons, for grinding seeds and

[1] Pictured postea, p. 188.

2: Kroeber E-5 (1930)1931 NU31 Seri NU31

524 Dice are three splints of cane; tapering toward both ends, nearly flat. The concave inside is greenish white, the outside darker. The count is: 0 insides up, win 4; 1 inside up, win 1; 2 insides up, lose 1 and play; 3 insides up, lose 4. The 3 splints are stacked together, then thrown endwise against the palm, a piece of turtle shell, or anything similar, so as to fly forward and scatter on the ground. (Some players probably acquire a degree of skill in making the canes fall right.) A player repeats until he throws 2 whites or insides. For points scored, he draws lines on the ground in front of himself. His opponent erases his lines as he wins, or adds to them as he loses, until he himself is ahead, when he begins to mark his own lines. Ten points wins the game. A stick is then set in the ground by the winner, who goes on playing the next game. That is, if he has 8, and throws 4, he sets up his stick, erases 6 lines so as to start the new game with a credit of 2, and throws again. The Seri perform these additions and subtractions with the rapidity of a practiced white man.

A ring of people may play at once. Their scoring in relation to one another was not ascertained, but it is presumably each from his neighbor, with the totals shown by sticks.

Since with fair throws the losses in this game must equal gains, a lead of 10 over an opponent is as much as could expectably be played for if the game were not to be unduly protracted.

526 Football race is played with *palo fierro* balls, perhaps 3 inches in diameter, one to each side of 4 runners. The ball may be moved only with the foot. The race is along the beach, where cactus and brush do not interfere. The distance, according to places named to Sr. Thomson and known to him, is about 6 miles. The men on a side relieve each other in informal relays; usually only 1 or 2 finish. The [648] Seri once went north to play the Papago this game, but lost.

Shinny is a woman's game, preliminary to the football race. Four women to a side carry sticks with which they try to throw an 8-12 inch hoop to a goal mark at the end of a short field. Behind each side stand the 4 men runners who are to race with a ball.

Notes on Material Culture

482 Women carry loads on their heads with a ring: men with the pên, Spanish *palanca* or lever, a stick over the shoulder, with load [171] hung from each end. These are the usual Sonora and Sinaloa Indian ways of carrying.

516 The Seri sit and lounge randomly. The men squat, occasionally cross the legs, put them sidewise, or sit with one knee up. The women wear long cloth skirts, but apparently sit just as variously.

714 Body armor, *naitɬanika'p*, with sleeves and helmet, and a shield, saXe'*ti*X, both of hide, were worn. The shield was described as 4 or 5 feet high, roof-shaped toward the front. It is not clear whether

3:Davis & Dawson E-5 (1922-1940) 1945
MU31 Ser1 MU31

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[302]
[386]
[516]

FIG. 11. PAINTING THE FACE
USING A RED PIGMENT OBTAINED FROM THE TOROTE.

223 lice-infested carcasses were then gathered
264 and brought to a central place among the stinking rocks where a gluttonous feast was held in the dark, the long ahungered tribesmen gorging themselves with the soft entrails and succulent parts, and carousing in the carnage until overcome by slumber.

281 The day following the slaughter, the
294 matrons collected the carcasses with least damaged plumage and carefully removed the skins, which were then gnawed and sucked clean of flesh and grease and dried in the sun (Fig. 8). From two or more of these skins they made a kilt or robe (Figs. 1, 2), the principal apparel, not so much for protection from cold as from the scratch and prick of the abounding spines and thorns of Seriland. The skins were sewed with sinew and often held in place on the body by a
283 cord made of human hair (Fig. 1). The
302 culture of their long, luxuriant hair, indeed, was an important matter. They brushed their hair regularly with a brush fashioned

[p. 200(A)]

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FIG. 13. PREPARING BASKETRY MATERIAL

THE SPLINTS ARE MADE BY HAND AND MOUTH STRIPPING OF THE BRANCHES OF TOROTE AND PALO BLANCO.

3: Davis & Dawson E-5 (1922-1940)1945 NU31 Seri NU31

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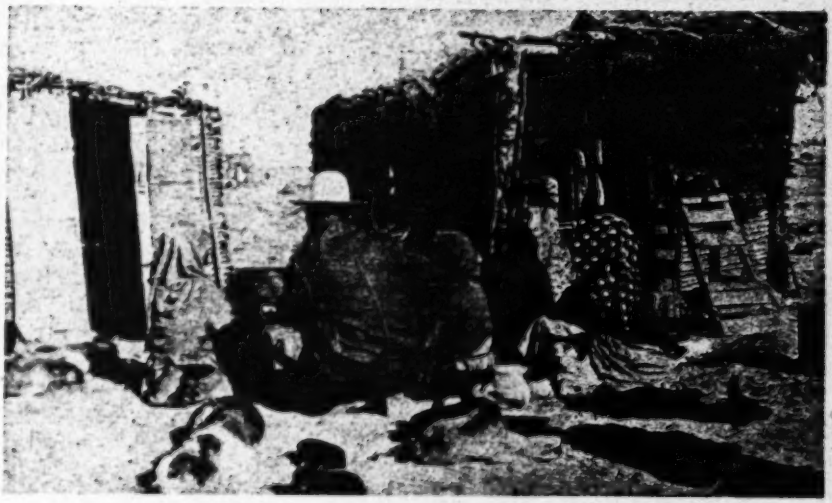

FIG. 16. FAMILY DOGS ARE OFTEN MORE NUMEROUS THAN THE PEOPLE
HERE A GROUP OF SEVEN SERIS IN THE VILLAGE NEAR KINO KEEPS TEN OR MORE OF THE MONGREL CANINES.

[p. 264(C)]

5:Dawson N-5 (1940) 1944 NU31 Seri NU31

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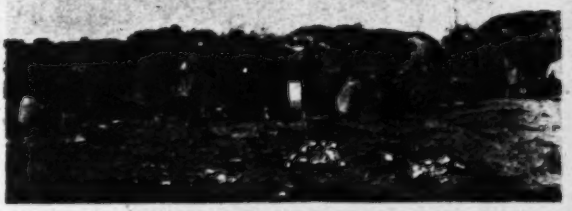
1. A basket of cactus meal.

342 2. A Seri village on Tiburon Island. Note the large shells of the sea turtle that serves as food.



285
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342 3. Making the Seri basket. House is constructed of ocotillo branches and brush.

[p. 135]

5:Dawson N-5 (1940) 1944 NU31 Seri NU31

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Preparing a mesquite bean meal cake on the stone metate.

Seri women carrying firewood back to camp. Note the baskets and the head pads made of mesquite or torote.

7: Marroquin E-5 (1955) 1957 NU31 Seri NU31

Distribución geográfica

000 Los indios seris viven en dos pequeñas poblaciones de la costa del Estado de Sonora, frente al Golfo de California, en Desemboque y en Punta Chueca. De allí pasan con alguna frecuencia a la Isla de Tiburón en el mencionado Golfo de California.

En Desemboque viven aproximadamente 35 familias seris y en Punta Chueca 16. Tan solo en el primero de estos dos lugares se hallan establecidas 5 familias "yoris" (mestizas).

Problemas sanitarios

Los seris carecen de defensa ante ciertas enfermedades que, como el sarampión y la gripe, adquieren en sus relaciones con los "yoris"; estas enfermedades causan muchas defunciones entre los indígenas.

[302]
[291]
[516]

Familia indígena seri de Desemboque, Sonora. *Foto Enriqueta Yurchenco.*

Según el anciano seri Chico Romero, último gobernador seri, hubo una fuerte epidemia de viruela allá por 1897, que causó la muerte de una tercera parte de la tribu que se encontraba residiendo en Costa Rica, ranchería de la costa de Sonora.

En 1955 se propagó el sarampión entre los seris, ocasionando gran número de víctimas, niños y adultos; la actividad del maestro rural Leo Sandoval, del lingüista Eduardo Mosser y de las autoridades sanitarias de Hermosillo, lograron contener la mortalidad; no obstante, el número de defunciones llegó al 5 % del total de la población nativa.

175 if they were as hungry then as they are today, they would not stop to
648 spike a man up preparatory to serving him. Their only tools then were
266 rocks to use as hammers and hoop iron for knives, and these are in
114 universal use today.

[412] There is no doubt that the men were killed, but I think these mining men purposely exaggerated their findings, if any.

648 There is no doubt that the Seris were brave fighters, treacherous
721 murderers, sparing neither men, women or children on their raids,
727 killing ruthlessly. But there is one charge which cannot be brought against them, which cannot be said of many tribes north of the border. So far as I could find out, they never tortured nor scalped.

648 The Seris never took prisoners and they never inter-married with
721 other tribes, so their strain is pure.

727 There was one exception. Sixty or seventy years ago, the Seri
563 Chief Coyote Iguana and his band of warriors held up the stage between Hermosillo and Guaymas, and killed all except a handsome Spanish girl of the better class. This girl, Coyote Iguana made his wife and by her raised a family. One granddaughter still survived in 1924, and while more attractive than the general run of Seri, her complexion was fully as dark.

800 The Seris, Ishmaelites among the native tribes of Mexico---the most fascinating Indians in North America!

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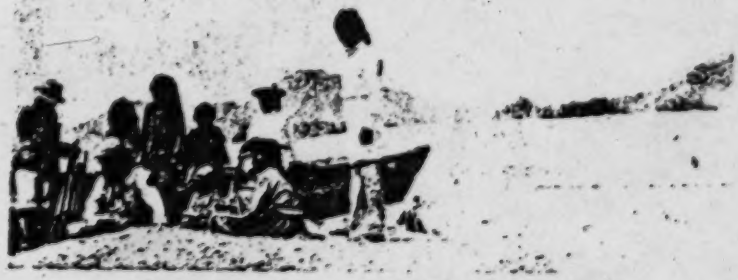

123 *Reception Committee, Tiburon Island - 1935*

115 On the twenty-fifth of April, nineteen twenty-two, I engaged the services of Roberto Thompson, who with his father and grandfather

[text continues on p. 149]

five-gallon cans full. They were fastened one each end of a *palanca*, or shoulder pole, and thus brought to camp. If anyone thinks this is easy they should try it over rocky, uneven, sandy, stony ground, dodging thorny vegetation at every step. 123

The colors of the mountains were mostly red of volcanic character, with great streaks of yellow and pink, deeply cut with side canyons and sharp ridges, all similar to other desert ranges. [133]

The men caught a few crabs and gathered clams in the afternoon, which helped out our larder. One of them told about his wife being shot. He said they had a big fiesta and during the drunk, a Seri shot at his head. He happened to be stooping alongside his wife and the bullet buried itself in his wife's thigh. We could feel it through her clothes.

A good many years ago when stages ran between Nogales and Guaymas, the Seris held up the stage, killed the men and captured one Mexican girl. She was brought here and made the wife of one of the chiefs, Coyote Iguana, and she bore children. Some years later her brothers came here to induce her to return, but she refused, saying that she was ashamed to go back and she had children here. About fifteen years ago in a battle with the Papagos, two of her sons were killed. 648 727 563

The Papagos have taken toll of many Seris, these hunted Indians who are such fascinating and ingenious companions, whether they are harpooning turtle or packing water through the thorny wastes. 648

372 516 291

Seris making fire (with fire drill) - Island of Tiburon

10: Davis E-5 (1922-ca. 1939) 1965 NU31 Seri NU31

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Fastening feathers on arrows with sinew held tight in his teeth.
1929

[283]

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Seri Indians at home

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Seri Indians preparing their meal

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415

FIG. 1. Crushing the root bark of zkoktz (*Fraxseria dumosa*), to a pulp. Note the pieces of root in the left foreground, the little pieces of *mókni ózxW* sap (*Guaiacum coulteri*) in the center foreground, and the chunks of mineral in the right foreground.

386
412

FIG. 2. The first or brighter batch of blue pigment, *?antezj kóll*.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

and the shell-strata are so like and so different from any other fictile ware as to be distinguished at a glance. Hence it would seem manifest that the Seri olla must constitute a normal nucleus for the Seri esthetic; yet even here the field is practically barren, as is shown by the study of a score of ample and mortuary specimens and of thousands of sherds. The most ornate specimen seen is that depicted in plate XXXIII. Its form, like that of the balsa, is a mechanical equation of forces and materials; its body-color is that of the clay, blotched and blackened irregularly by the smoke of the firing; and its decoration is limited to 17 faint lines or bands radiating downward from the ill-shaped neck. The radial bands were evidently drawn by a finger dipped in clayey water after the vessel was otherwise finished for the firing; they are irregular in placement, width, length, and direction; they generally run in pairs, two straight lines alternating with two zigzag lines, though the circuit is completed by two zigzags drawn wide apart and separated by a single straight line. The meaning of the device (if meaning there be) was not directly ascertained; but it is suggestive that its maker and owner was the mother of the youthful warrior from whom the rattlesnake necklace was obtained (her face-symbol is that shown in the lower left figure of plate XXVI), and that the vessel was surrendered more reluctantly than any other article obtained from the tribe.

Another utensil of some importance to the tribe is a basket of the type illustrated in figure 24. It is manufactured with much skill and is used for various domestic purposes, being practically water-tight and unbreakable, and materially lighter than even the unparalleledly light fictile ware of the Seri. In form and size and weave the half dozen examples seen correspond with widespread southwestern types; yet it is noteworthy that while otherwise similar baskets are habitually decorated by other basket-making tribes, the Seri specimens were absolutely devoid of decorative devices.

Practically the only remaining artifacts available for decoration are those connected with archery; and it suffices to say that while the bows are skilfully made and the arrows constructed with exceeding pains, not a single specimen seen showed the slightest trace of symbolism or of nonutilitarian motive.

Summarily, the Seri are characterized by extreme esthetic poverty. This has been noted by the early missionaries and by the few other travelers who have approached their haunts, as well as by the vaqueros on the Encinas and Serna and other ranchos bordering their range, who know them as "los pobrecitos". All observers have been struck with their destitution and squalor; yet when the impressions are particularized they are seen to denote absence of the poor luxuries, rather than the bare necessities, of primitive life. The people are pathetically poor in the industrial sense; their equipment in artifacts—implements, weapons, utensils, habitations, apparel—is meager almost, if not quite, beyond parallel in America; yet their esthetic equipment, practically

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

517 limited as it is to a single line of symbolic portrayal, is still more abjectly meagre.

[171] Any comparison of the Seri esthetic with that of other Amerind tribes serves only to emphasize its paucity: the tribes of the plains, with their eagle-feather headdresses, elaborately arranged scalp-locks, widely varied face-painting, and ritualistic camp circles; the Pueblo peoples, with their ornate masks, elaborate altars, figured stuffs, and painted pottery; the denizens of the eastern woods, with their feather-decked peace-pipes, divinatory games, fringe-bordered garments, and prayer-inscribed arrows; the coastwise peoples of the upper Pacific, with their labrets and tattoo-marks, totem-poles and carved house-fronts, painted canoes and prodigal potlatches; the neighboring desert tribes, with their festal footraces, decorated pottery and basketry, pendent scarfs and garters, and well-wrought caskets for family fetishes; even the timid acorn-eaters of California, with their sacramental baskets, artistically befringed kilts, bead-strings of far-traveled nacre, and patiently wrought fabrics of rare feathers—all of these seem rich in esthetic motives when contrasted with "los pobrecitos" of arid Seriland.

[105] And the contrast is only intensified when the economic motives of the various tribes are compared: the industrial motives of the Seri are fairly numerous and diverse; they are skilful huntsmen, successful fishermen, capable navigators, and competent warriors (as attested by the protection of their principality for centuries), so that despite the absence of agriculture and the avoidance of commerce, their industrial range is not very far below the aboriginal average; and while they are deficient in thrift, this shortcoming is balanced by a peculiarly developed vital economy whereby they are delicately adjusted to their environment, as has been already shown. On the whole, it would appear that the Seri are not only lower in esthetic development than the contemporary tribes thus far studied, but also that they stand at the bottom of the scale in the ratio of esthetic to industrial motives.

THE SIGNIFICANCE OF DECORATION

000 Largely through recent researches among the American aborigines, it has been shown that decorative and many if not all other esthetic concepts normally arise in symbolism, gradually expand in conventionism, and eventually mature in a realism which is itself the source of ever-extending esthetic motives; and the observations on the lowly Seri afford opportunity for somewhat extending the generalizations based on higher tribes.

When peoples of unequal cultural development are compared, it is commonly found that the higher are the more independent in action and thought: thus, advanced peoples make conquest of nature for their own behoof, while primitive peoples are largely creatures of environment; Caucasian citizens are self-conscious lawmakers, while Amerind tribesmen are semiconsciously dominated by mysteries fearsomely

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

283 gualla by the 1895 expedition), and then hatcheled with the hupf or the edge of a shell; when the fibers are gathered in slender wisps or loosely wound coils, both of which were among the possessions of the Seri matrons at Costa Rica in 1894. So far as could be ascertained, the final processes parallel those of hair-cord making, i. e., the fibers are patiently sorted into strands, sized in the fingers and twisted by rolling on the thigh, the strands being subsequently combined in similar fashion.[1]

286 Neither the weaving nor the woven fabrics of the Seri have ever been seen by technologic students so far as known, though the fabrics are shown in Von Bayer's photographs and have been described by various observers. According to Señor Encinas, they resemble coarse bagging, and are woven or netted quite plainly. The ordinary sewing material is sinew, used in connection with a bone awl (a good example of which is illustrated in figure 35), a fish

412 [239]

FIG. 35.—Bone awl.

FIG. 36.—Wooden awls.

spine or bone, a cactus thorn, or either the mandible of a water-bird or a hard-wood skewer shaped after this natural needle (figure 36 *a* and *b*). Sometimes hair or vegetal fiber is substituted for the sinew; and for certain purposes an agave thorn, with the fibers naturally attached, serves for needle and thread.

[524]

[1] A rope-twisting device of the sort commonly employed by southwestern Indians was found in use by Seri boys at Costa Rica in 1894, and was included in the Seri collection; but the indications were that the device was a mere toy used like the horse-hair rattan made by its aid, only in youthful sports.

2: Kroeber E-5 (1930) 1931 NU31 Seri NU31

on a string around his neck, which he got from his father. It is a two inch length of cane, with a wooden stopper, containing a white powder of stone (?). A little of this powder put into fresh water, brings dew; into salt water, rain. 778 789

Similarly, Chico Romero wears on his neck a tiny spool-shaped object of wood, scarcely 2 cm. long, with notched ends. When he dies, this will burst; or rather, it seems that a larger object of the same shape, which another man keeps, will burst with thunder.

To get luck, a man paints a "cross" on his forehead, breast, and "bed" and goes to sleep. Then a dream comes in which he gets what he is thinking of. Sometimes the dream comes true; sometimes not. Some dreams are lies. 787

The soul (*alma*), he'ë'sax, is all over the body and is noiseless. It is "nearly the same as blood": when the blood is lost, the soul goes. Some say that when the Seri die they are reborn in the north as Cocopa. 774 775

There seem to be no special beliefs or practises about twins. 845

Antiso'ma (— Montezuma?) is the size of a child, has a beard, a golden staff, white clothes inside and black outside. He lives in a cave. Once he tried to take a young man away with him in order to dress him nicely. Later the young man's relatives went with him to find Antiso'ma again, but could not. 776

Songs

Toad was a woman who had only a breech-clout and wanted a cotton shirt. She said she would give herself to a man for one. 533

Coyote was a Seri once.

Pinacate (dung-beetle?) wanted a bride and was jealous about her.

Colapriets, the black-bellied ant, also was a man and wanted to marry the holoo'ctim ant. He was making a house of grass for her. She was afraid of him, and her relatives took her away.

Games

The four-tube-hiding game is played with canes open at one end. These canes are: blackened all over, old man; unpainted, old woman; blackened at one end, boy; blackened in the middle, girl. The boy and girl are made by slitting off slivers on two sides. The names serve as designations only; the differences between the tubes do not enter into the game. The player with the tubes turns around, puts a piece of twig into one, fills them all with sand, and throws them before his opponent, who tries to empty the twig from the *third* tube he selects. If so, he wins the canes, that is, the right to play. If the twig is in the first tube emptied, he loses 10; if in the second, 6; if in the fourth, 4. Counters are little natural shell disks. 524

2; Kroeber E-5 (1930)1931 NU31 Seri NU31

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516 The Seri sit and lounge randomly. The men squat, occasionally cross the legs, put them sidewise, or sit with one knee up. The women wear long cloth skirts, but apparently sit just as variously.

714 Body armor, *naiłanikap*, with sleeves and helmet, and a shield. saXe'tiX, both of hide, were worn. The shield was described as 4 or 5 feet high, roof-shaped toward the front. It is not clear whether

*825 get paid for the fish or for the turtles at so much per kilo and they have the fish scaled for them on the spot by the Mexican fish traders. Some, in fact, developed a pretty good idea of the weights and have learned to make close estimates of the weight of the catch.

Their frequent attempts to guess the age of the animals even when they do not know it may well be in part due to their gambling talents. The [525] Seris are inveterate gamblers and it is possible that this habit enters into many other facts of their lives, not only at the games.

Development

According to the Seri, all mammals are born alive. On this subject there has been a remarkable uniformity of opinion among all of my informants. The only uncertain information concerns the porcupine where the informant who recognized this animal was unable to say whether it laid egg or whether it came forth alive. But as indicated, the porcupine is not well known to them and also does not resemble any of the familiar animals overly much. The size of the litter varied and in general corresponded pretty much to the actual situation in nature. Large litters, the Seris think, are typical of the coyote, the figure of 7-8 having been given by all informants which would indicate that this has been derived from actual observation. The coyote in this respect has been often referred to as "one like the dog." The kangaroo rat is next in line with six the most frequently mentioned number. Most other animals have a pair of offspring or only one. Bat, the Indians said, had two (which is just that). The killer whale is said to have only one. Interesting variation has been indicated in the bighorn. Here the ideas on the subject varied from 2-3 to one at a time. But one of the informants suggested that the female bighorn has only one young for the first time but at the next pregnancy delivers two young.

In general, the size of the litter has been indicated for the vast majority of species.[1]

The Seris are also aware of the limited or nonexistent parental function of the male. In at least half of the species the young, they indicated, "do not know the father." But the female parental functions have always been indicated, the suckling and the maternal care as well. On the subject of the aquatic mammals other than the sea lion there seems to be a certain amount of confusion—for here at least suckling has not been indicated or in the grey whale it has been indicated that there is not suckling by the female of the young.

Mating season was always mentioned but the informants could not always tell when mating took place. Further discussion of this subject will take place under the heading of *Seasonality*. Pairing apparently is not the mammalian feature, the Seri believe, as already indicated by their idea of the parental care. They elaborated more on the subject when discussing the sea lions, indicat-

[1]Jaguar is said to have "many," "maybe eight"—reasons already explained.

[P. 128]

2: Kroeber E-5 (1930)1931 NU31 Seri NU31

524 Dice are three splints of cane; tapering toward both ends, nearly flat. The concave inside is greenish white, the outside darker. The count is: 0 insides up, win 4; 1 inside up, win 1; 2 insides up, lose 1 and play; 3 insides up, lose 4. The 3 splints are stacked together, then thrown endwise against the palm, a piece of turtle shell, or anything similar, so as to fly forward and scatter on the ground. (Some players probably acquire a degree of skill in making the canes fall right.) A player repeats until he throws 2 whites or insides. For points scored, he draws lines on the ground in front of himself. His opponent erases his lines as he wins, or adds to them as he loses, until he himself is ahead, when he begins to mark his own lines. Ten points wins the game. A stick is then set in the ground by the winner, who goes on playing the next game. That is, if he has 8, and throws 4, he sets up his stick, erases 6 lines so as to start the new game with a credit of 2, and throws again. The Seri perform these additions and subtractions with the rapidity of a practiced white man.

A ring of people may play at once. Their scoring in relation to one another was not ascertained, but it is presumably each from his neighbor, with the totals shown by sticks.

Since with fair throws the losses in this game must equal gains, a lead of 10 over an opponent is as much as could expectably be played for if the game were not to be unduly protracted.

526 Football race is played with *palo fierro* balls, perhaps 3 inches in diameter, one to each side of 4 runners. The ball may be moved only with the foot. The race is along the beach, where cactus and brush do not interfere. The distance, according to places named to Sr. Thomson and known to him, is about 6 miles. The men on a side relieve each other in informal relays; usually only 1 or 2 finish. The [648] Seri once went north to play the Papago this game, but lost.

Shinny is a woman's game, preliminary to the football race. Four women to a side carry sticks with which they try to throw an 8-12 inch hoop to a goal mark at the end of a short field. Behind each side stand the 4 men runners who are to race with a ball.

Notes on Material Culture

482 Women carry loads on their heads with a ring: men with the pén, Spanish *palanca* or lever, a stick over the shoulder, with load [171] hung from each end. These are the usual Sonora and Sinaloa Indian ways of carrying.

516 The Seri sit and lounge randomly. The men squat, occasionally cross the legs, put them sidewise, or sit with one knee up. The women wear long cloth skirts, but apparently sit just as variously.

714 Body armor, *naitʟanika'p*, with sleeves and helmet, and a shield. *saXe'tiX*, both of hide, were worn. The shield was described as 4 or 5 feet high, roof-shaped toward the front. It is not clear whether

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

Naturally the conditions at Costa Rica were unfavorable to the study of native ideas concerning apparel. The women and some of the children were arrayed chiefly in cast-off habiliments of the rancheras or in nondescript rags, while the men either aped Mexican fashions, like Maahém, or shamefacedly sweltered under the unaccustomed burden of tatterdemalion gear; yet there was a meaningful absence of that desire for finery so prominent among primitive peoples—a fact quite as eloquent in itself as the absence of bracelets and bangles, tassels and trappings. It is probable that the shamans and mystery-hedged crones in the depths of Seriland enhance their influence by the aid of symbolic paraphernalia (indeed, some inkling of such customs is found in the meager records of earlier visitors);[1] yet the conspicuous feature of Seri costumery is the dearth of decorative devices.

FIG. 13—Necklace of wooden beads.

The habitations of the tribe are the simplest of jacales—mere bowers, affording partial protection from sun and wind, but not designed to shed rain or bar cold. Half a dozen of these were examined at Costa Rica in 1894 and probably a hundred more, in various stages of habitability, in Seriland proper in 1895, yet not the slightest trace of decoration was observed—the structures are plainly and barrenly utilitarian in every feature. The same may be said of the balsas in which the Seri navigate their stormy waters; for the peculiarly graceful curves of the craft evidently stand for nothing more than the mechanical solution of a complex problem in balanced forces, wrought out through the experience of generations, while the simple reed bundles are absolutely devoid of paint, of superfluous cord, of fetishistic appendages or markings, of tritons, nereids, or other votive symbols at bow or stern, and of industrially superfluous features or attachments in general—indeed, the only appendages discovered were one or two simple wooden marlinspikes (shown in figure 26), thrust among the reeds to be at hand in case of need for repairs.

Among the utensils employed in the primitive householdry of the Seri the most conspicuous and at the same time the most essential is the olla, or water-jar. Its technical features are described elsewhere; but it may here be noted that the olla is the central artifact about which the very

[1] Hardy noted the use of "a small leathern bag, painted and otherwise ornamented", as a medicine rattle (Travels, p. 362), and also described a wind-symbol and an effigy used for thaumaturgic purposes (ibid., pp. 294, 295).

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

and the shell-strata are so like and so different from any other fictile ware as to be distinguished at a glance. Hence it would seem manifest that the Seri olla must constitute a normal nucleus for the Seri esthetic; yet even here the field is practically barren, as is shown by the study of a score of usable and mortuary specimens and of thousands of sherds. The most ornate specimen seen is that depicted in plate XXXII. Its form, like that of the balsa, is a mechanical equation of forces and materials; its body-color is that of the clay, blotched and blackened irregularly by the smoke of the firing; and its decoration is limited to 17 faint lines or bands radiating downward from the ill-shaped neck. The radial bands were evidently drawn by a finger dipped in clayey water after the vessel was otherwise finished for the firing; they are irregular in placement, width, length, and direction; they generally run in pairs, two straight lines alternating with two zigzag lines, though the circuit is completed by two zigzags drawn wide apart and separated by a single straight line. The meaning of the device (if meaning there be) was not directly ascertained; but it is suggestive that its maker and owner was the mother of the youthful warrior from whom the rattlesnake necklace was obtained (her face-symbol is that shown in the lower left figure of plate XXVI), and that the vessel was surrendered more reluctantly than any other article obtained from the tribe.

Another utensil of some importance to the tribe is a basket of the type illustrated in figure 24. It is manufactured with much skill and is used for various domestic purposes, being practically water-tight and unbreakable, and materially lighter than even the unparalleledly light fictile ware of the Seri. In form and size and weave the half dozen examples seen correspond with widespread southwestern types; yet it is noteworthy that while otherwise similar baskets are habitually decorated by other basket-making tribes, the Seri specimens were absolutely devoid of decorative devices.

Practically the only remaining artifacts available for decoration are those connected with archery; and it suffices to say that while the bows are skilfully made and the arrows constructed with exceeding pains, not a single specimen seen showed the slightest trace of symbolism or of nonutilitarian motive.

Summarily, the Seri are characterized by extreme esthetic poverty. This has been noted by the early missionaries and by the few other travelers who have approached their haunts, as well as by the vaqueros on the Encinas and Serna and other ranches bordering their range, who know them as "los pobrecitos". All observers have been struck with their destitution and squalor; yet when the impressions are particularized they are seen to denote absence of the poor luxuries, rather than the bare necessities, of primitive life. The people are pathetically poor in the industrial sense; their equipment in artifacts—implements, weapons, utensils, habitations, apparel—is meager almost, if not quite, beyond parallel in America; yet their esthetic equipment, practically

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

extreme lightness in proportion to capacity, a quality due to the spongy character of the torote coil and to the thinness of the splints used in the woof. The inside dimensions, weight, and dry-measure capacity (filled to the level of the brim with rice) of two typical specimens approaching extremes in size are indicated in the accompanying table. As noted elsewhere, the ware is absolutely without decorative devices in weave, paint, or form; it is baldly utilitarian, a model of economy in material and in the balance between structure and function, approaching in this respect the thin-walled canteen-olla, the graceful balsa, and the light but effective harpoon. The structural correspondence of the ware to a widespread type and its limited use among the tribe suggest an accultural origin for the Seri basketry; but the delicate adjustment of means to ends in the manufacture and the strictly local character of the material quite as strongly suggest an indigenous development.

Museum No.	Diameter	Depth	Weight	Capacity
174329....	38 cm.(15 in.)	9.5 cm.(3¾ in.)	482 g.(17 oz.)	6.25 l. (6.6 qt.)
174328a ..	23 cm.(9 in.)	5.0 cm.(2 in.)	142 g.(5 oz.)	1 l. (1.06 qt.)

It is impossible to portray justly the food habits of the Seri without some reference to a systematic scatophagy, which seems to possess fiducial as well as economic features. In its simplest aspect this custom is connected with the tuna harvests; the fruits are eaten in enormous quantity, and are imperfectly digested, the hard-coated seeds especially passing through the system unchanged; the feces containing these seeds are preserved with some care, and after the harvest is passed the hoard (desiccated, of course, in the dry climate) is ground between hupf and abst, and winnowed in baskets precisely as are the mesquite beans; and the product is then eaten either dry or in the form of atole like the mesquite meal. In superficial view this food factor is the precise homologue of the "second harvest" of the California Indians as described by Clavigero, Baegert,[1] and others; but it gains importance, among

[1] An Account of the Aboriginal Inhabitants of the Californian Peninsula, as given by Jacob Baegert, a German Jesuit missionary. . . . Translated and arranged for the Smithsonian Institution by Charles Rau; Ann. Rep. Smithsonian Inst. for 1863, pp. 352-389. Baegert's account of foods (pp. 365-367) is so apposite as to be worthy of quotation nearly entire:

"Notwithstanding the barrenness of the country, a Californian hardly ever dies of hunger, except, perhaps now and then an individual that falls sick in the wilderness and at a great distance from the mission, for those who are in good health trouble themselves very little about such patients, even if these should happen to be their husbands, wives, or other relations; and a little child that has lost its mother or both parents is also occasionally in danger of starving to death, because in some instances no one will take charge of it, the father being sometimes inhuman enough to abandon his offspring to its fate.

"The food of the Californians, as will be seen, is certainly of a mean quality, yet it keeps them in a healthy condition, and they become strong and grow old in spite of their poor diet. The only period of the year during which the Californians can satisfy their appetite without restraint is the season of the pitahayas, which ripen in the middle of June and abound for more than eight weeks. The gathering of this fruit may be considered as the harvest of the native inhabitants. They can eat as much of it as they please, and with some this food agrees so well that they become corpulent during that period; and for this reason I was sometimes unable to recognize at first sight individuals, otherwise perfectly

2: Kroeber E-5 (1930) 1931 NU31 Seri NU31

ages (pp. 164-167), and Hardy's story of his being painted is interpreted as ceremonial adoption (pp. 277-8). My conviction is that the Seri paint primarily for adornment, and that further significance is either secondary or absent. When I reached the island and about thirty people, including visitors from other settlements, were gathered to receive and inspect me, all the younger women and one or two adolescent boys were freshly and very neatly painted. After all, their ragged cast-off civilized garments were nothing to make a show with on a state occasion. In former times, the everyday-wear pelican robes would not have served much better. The ocher red, dumortierite blue, and gypsum white pigments however gave a chance for decoration and display. Three days later, when our party was an old story, some of the faces still carried paint, but it was worn, defaced, and bedraggled. It seems unlikely that people should greet strangers by decorating themselves with representations of lineage totems which they at the same time denied or tried to conceal from their knowledge. The construal of Hardy's painting as an adoption-rite rests on the same blood-kin interpretation. It was probably nothing more than an act of friendliness tinged with the simple humor of which the Seri have a strong sense.

Face painting in fact seems to be the chief if not only purely aesthetic expression of Seri culture, their mode of life and psychophysiological habits being such as almost to prohibit any other form of art. In this painting, on the other hand, they have achieved a high degree of stylization and taste. The designs I saw were throughout in the manner illustrated by McGee in his plates 13-16, 18, 20, 22, 24-26.

Ethnographically, the interest of this style lies in its similarity to the river Yuman face paintings. The Seri first of all specialize on a horizontal bar across the nose and cheeks, immediately below the eyes; in addition to this, there may be vertical elements dependent over the cheeks. The design deliberately breaks across the natural lines of the face in such a way as to orient itself with reference to the eyes without touching them. Bordering or enclosing of the eyes is avoided; neither are planes like the cheeks, forehead, or chin felt as fields to be filled in with decoration. The fundamental plan attacks the face at once drastically and subtly. That the style has both feeling and rigor is shown by the fact that none of the endless variations of color and design detail depart much from the basic scheme. That this scheme is old is shown by Hardy's description of a century ago. It is a true art of high order within its narrow compass.

The Mohave paintings[9] are somewhat freer and more variable, but also less classical or chaste stylistically. The transverse element

[9] Kroeber, Handbook, BAE-B 78, figs. 60-62, 1925. With the Mohave, contrary to the Seri, the vertical elements predominate over the horizontal. The Gila Pima style (Russell, pl. 38), and the Havasupai (Spier, AMNH-AP 25:196, 1928), are also related.

2: Kroeber E-5 (1930) 1931 NU31 Seri NU31

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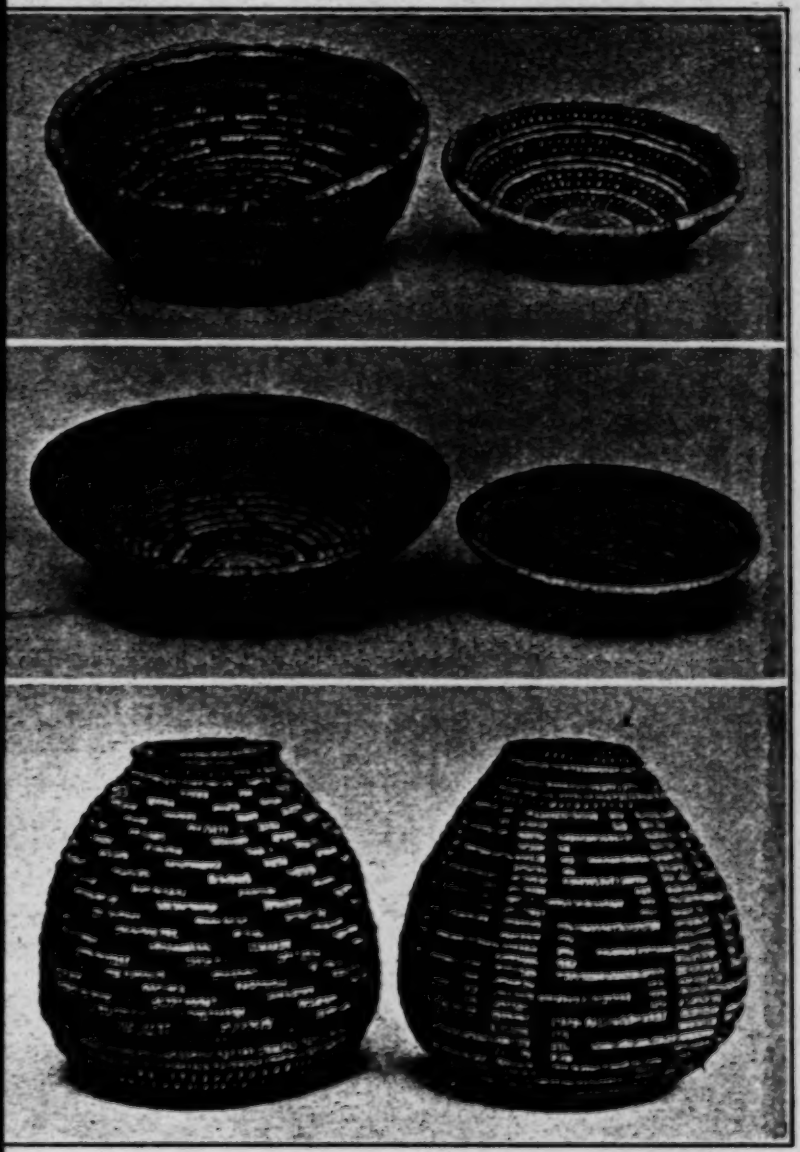

FIG. 12. *Seri Baskets in Museum of the American Indian, Heye Foundation.*
Nos. 15—4279, 4286, 4292, 4295, 4247, 4249.

2: Kroeber E-5 (1930)1931 NU31 Seri NU31

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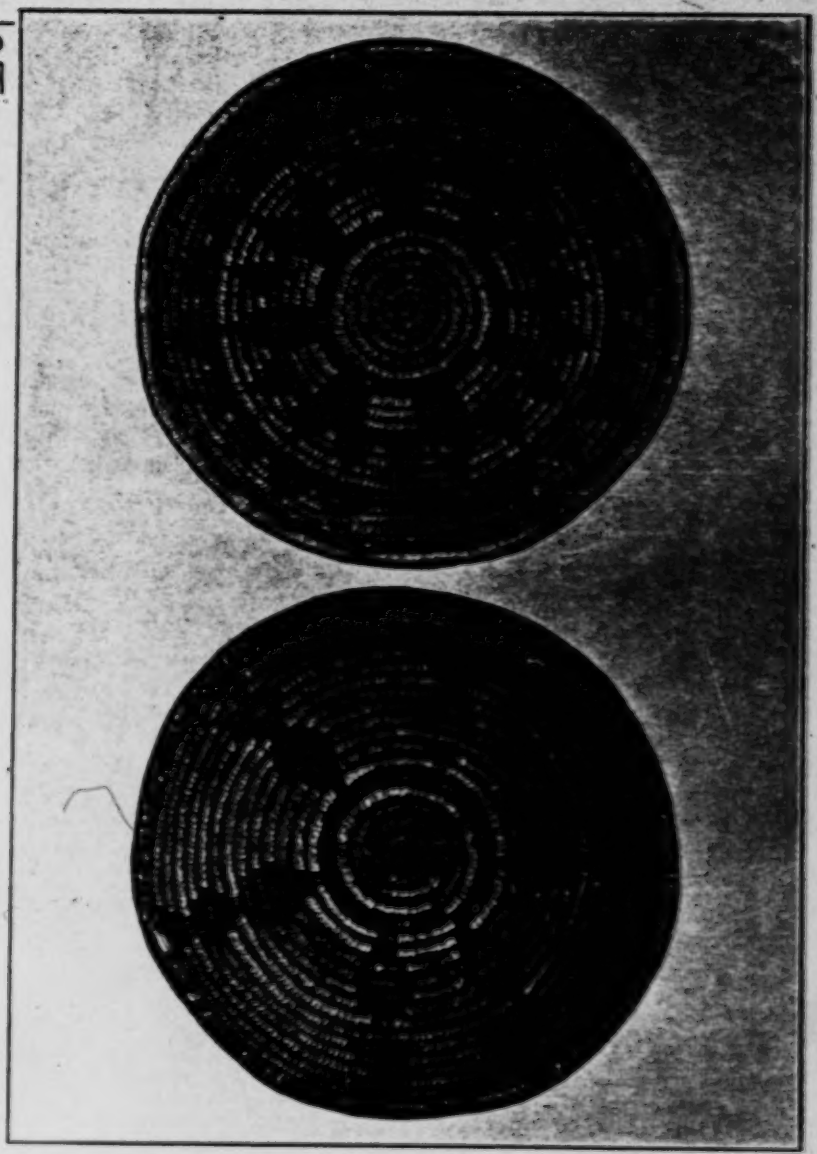

FIG. 13. *Seri Baskets in University of California Museum of Anthropology.*

12: Moser L-5 (no date) 1964
(ca. 1960) NU31 Seri NU31

To use the clay as paint, a bit of water is placed on a stone and the clay is rubbed into it to make a paste. It is then applied to the face (Fig. 4). It spreads smoothly and adheres firmly to the skin. The blue was formerly used for decorating pottery, clay figurines, headdresses, fetishes, arrows, wrist guards, and cane gaming sticks, as well as for face painting. In curing the sick, the shaman sometimes used the blue for painting crosses on the patient's chest. Also, women made necklaces using beads formed from the blue clay.

FIG. 4. Painting the face with the finished pigment.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

dishes, or even as kettles, in the rare culinary operations of the tribe (as shown in plate X); but the entire vessels appear to be religiously devoted to their primary purpose.

While some three-fourths of the observed fictile ware of the Seri and a still larger proportion of the scattered sherds represent conventional ollas, there are a few erratic forms. The most conspicuous of these is a smaller, thicker-walled, and larger-necked type, of which three or four examples were observed; two of these were in use (one is represented lying at the left of the jacal in plate X), and another was found cracked and abandoned on the desert east of Playa Noriega. The vessels of this type are used primarily as kettles and only incidentally as canteens. In both form and function they suggest accultural origin; but the ware is much like that of the conventional type. Another erratic type takes the form of a deep dish or shallow bowl, of rather thick walls and clumsy form, which may be accultural; a single example was observed in use (it is shown in plate XIV). There are also mortuary forms, including a miniature olla (figure 39) and bowl (figure 41), and such still smaller examples as those illustrated in figures 17 and 18. In addition to the utensils a few fictile figurines were found. Most of these were crude or distorted animal effigies, and one (broken) was a rudely shaped and strongly caricatured female figure some 2 inches high, with exaggerated breasts and pudenda. Analogy with neighboring tribes suggests that the very small vessels and the figurines are fetishistic appurtenances to the manufacture of the pottery; e. g., that the fetish is molded at the same time and from the same material as the olla, and is then burned with it, theoretically as an invocation against cracking or other injury, but practically as a "draw-piece" for testing the progress of the firing.

FIG. 17—Symbolic mortuary olla.

FIG. 18—Symbolic mortuary dish.

By far the most numerous of the utensils connected with potable water are drinking-cups and small bowls or dishes; but these are merely molluscan shells of convenient size, picked up alongshore, used once or oftener, and either discarded or carried habitually without other treatment than the natural wear of use (an example is illustrated in figure 19). Larger bowls or trays are improvised from entire carapaces of the tortoise (probably *Gopherus agassizii*), which are carried considerable distances; and still larger emergency water-vessels consist of carapaces of the green turtle (*Chelonia agas-*

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

764 a few yards from her jacal, preference being given to relatively elevated or commanding points. The excavation is about 30 inches (90 cm.) in depth; within it is placed first the pelican-skin robe of the deceased, so arranged as to fold over the body; then the corpse, dressed in the ordinary costume of life, is compressed into small compass by closely flexing the knees and bringing them against the thorax, extending the arms around and along the lower limbs so that hands and feet are together, and bending the head forward on the chest; when it is deposited in the receptacle in such manner as to lie on the left side, facing north-

[532]
[778]

FIG. 40.—Woman's fetishes.

ward. Near the face is laid a dish of baked clay or a large shell filled with food, and beside it a small olla of water (an actual example is shown in figure 39), while the hupf, awls, hairbrush, olla-ring, and other domestic paraphernalia are placed near the hands. Next the personal fetishes and votive symbols (in the form of puppets or dolls such as those shown in figure 40 *a* and *b*) of the dead mother are slipped beneath the face, and her paint-cup, with a plentiful supply of paint, is added; the poor personal possessions, in the form of shell-beads and miscellaneous trinketry, are then heaped over the face and shoulders, and these are covered with the superfluous garments and miscellaneous

1: McGee E-5 (1894-1895)1896 NU31 Seri NU31

mon convenience. Usually the several jacales are entirely separate; but at Punta Tormenta, Punta Narragansett, and still more notably at Bada Ballena, individual huts were found either extended to double length or joined obliquely in such wise as to show two fronts (as illustrated in plate VI). The conventional frameworks appear to be common tribal property, at least to the extent that an abandoned skeleton may be preempted by any comer; while the addition of walls and roof appears to afford a prescriptive proprietary right to the elderwoman and family by whom the work is done—though the right seems to hold only during occupancy, or until the temporary covering is dislodged. 361 [342] 423

The jacales are without semblance of furnishing, beyond an occasional ahat and a few loose pebbles used as hupfs; though the nooks behind the bows and tie-sticks sometimes serve as places of concealment for paint-cups, awls, hair bobbins, and other domestic trifles. There is no floor but earth, and this remains in natural condition, except for trampling and wearing into wallows, recalling those of fowls and swine, which afford a rough measure of the periods of occupancy; there is no fireplace—indeed, fires are rarely made in the jacales, nor for that matter frequently anywhere; and there are no fixed places for bedding, water ollas, or other portable possessions, none of which are left behind when the householders are abroad. 352 [342]

Little is known of the actual process of jacal building, especially in Seriland proper; but the observations of Señor Encinas and his vaqueros on the frontier corroborate Mashém's statements that the houses are built by (and belong to) the matrons; that several women customarily cooperate in the collection of the okatilla and erection of the framework; that the only tools used in the processes are hupfs and miscellaneous sticks; and that the placing and fitting of the beams and tie-sticks are accompanied by a chant, usually led by the eldest matron of the group. The same informants support the ready inference from the structure that the shrubbery and other material forming walls and roofs are gathered and placed from time to time by the women occupying the jacales. 342 462 [423]

The Seri building chant is suggestive. Neither Señor Encinas nor Mashém regarded it as religious or even ritualistic, but merely as a work-song designed (in the naïve notion of the latter) to make the task lighter; and it seems probable that the local interpretation is correct. If so, the simple chant at once offers rational explanation for its own existence, and opens the way to explanation of the elaborate building rituals of more advanced tribes. The work-song is a common device in many lowly activities, ranging from those of children at play to those of sailors at the windlass, and undoubtedly serves a useful purpose in guiding, coordinating, and concentrating effort; to some extent the vocal accompaniment to the manual or bodily action apparently expresses that normal interrelation of functions manifested by second- 182 342 533

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

182 342 533 ary sense-effects (as when the sense of smell is intensified by exercise of the organs of taste), or, in another direction, by the habit of the youthful penman who shapes his letters by aid of lingual and facial contortion; yet it is a characteristic of primitive life—one doubtless due to the interrelations of psycho-physical functions—to not only employ but to greatly exalt vocal formulas associated with manual activities, so that words, and eventually *the* Word, acquires a mystical or talismanic or sacred significance pervading all lower culture—indeed the savage shaman is unable to work his marvels without mumbled incantations ending in some formulated and well-understood utterance, and his practice persists in the meaningless mummery and culminating "presto" of modern juggery. So, viewed in the light of psycho-physical causes and prevalent customs connected with vocal formulas, it would seem probable that the conventional features of the Seri jacales are crystallized in the tribal lore quite as effectually through the associated work-chants as through direct memory of the forms and structures themselves. And the simple runes chanted in unison by Seri matrons engaged in bending and lashing their okatilla house-bows apparently define a nascent stage in the development of the elaborate fiducial house-building ceremonies characteristic of various higher tribes; for the spontaneous vocal accompaniment tends naturally to run into ritual under that law of the development of myth or fable which explains so many of the customs and notions of primitive peoples.[1]

APPARELING

177 291 Slightly as they have been affected by three centuries of sporadic contact with higher culture, the Seri reveal many marks of acculturation; and the most conspicuous of these are connected with clothing, especially on the frontier, where women and even warriors habitually wear a livery of subserviency in the form of cast-off Caucasian rags (as illustrated in most of the photographs taken at Costa Rica). Even in the depths of Seriland the native fabrics are largely replaced by white men's stuffs, obtained by barter, beggary, and robbery; yet it is easy to distinguish the harlequin veneer of borrowed trappings from the few fixed types of covering that seem characteristic.

The most distinctive piece of apparel is a kilt, extending from waist to knees, worn alike by men and women and the larger children. Aboriginally it was either a birdskin robe or a rectangle of coarse textile fabric, secured at the waist by a hair-cord belt; acculturally it is usually a rectangle of manta (coarse sheeting) or other stuff, preferably cotton or linen but sometimes woolen, fastened either by tucking in the corners or by a belt of cord. Good specimens of the acultural cloth kilt worn by men and larger boys are illustrated in plates XVI

[1] The law of fable in its relation to primitive surgery is formulated in the Sixteenth Ann. Rep. Bur. Am. Eth., 1897, p. 22.

2: Kroeber E-5 (1930) 1931 NU31 Seri NU31

on a string around his neck, which he got from his father. It is a two inch length of cane, with a wooden stopper, containing a white powder of stone (?). A little of this powder put into fresh water, brings dew; into salt water, rain. 778 789

Similarly, Chico Romero wears on his neck a tiny spool-shaped object of wood, scarcely 2 cm. long, with notched ends. When he dies, this will burst; or rather, it seems that a larger object of the same shape, which another man keeps, will burst with thunder.

To get luck, a man paints a "cross" on his forehead, breast, and "bed" and goes to sleep. Then a dream comes in which he gets what he is thinking of. Sometimes the dream comes true; sometimes not. Some dreams are lies. 787

The soul (*alma*), he'ë'sax, is all over the body and is noiseless. It is "nearly the same as blood": when the blood is lost, the soul goes. Some say that when the Seri die they are reborn in the north as Cocopa. 774 795

There seem to be no special beliefs or practises about twins. 845

Antiso'ma (— Montezuma?) is the size of a child, has a beard, a golden staff, white clothes inside and black outside. He lives in a cave. Once he tried to take a young man away with him in order to dress him nicely. Later the young man's relatives went with him to find Antiso'ma again, but could not. 776

Songs

Toad was a woman who had only a breech-clout and wanted a cotton shirt. She said she would give herself to a man for one. 533

Coyote was a Seri once.

Pinacate (dung-beetle?) wanted a bride and was jealous about her.

Colapriste, the black-bellied ant, also was a man and wanted to marry the hoko'ctim ant. He was making a house of grass for her. She was afraid of him, and her relatives took her away.

Games

The four-tube-hiding game is played with canes open at one end. These canes are: blackened all over, old man; unpainted, old woman; blackened at one end, boy; blackened in the middle, girl. The boy and girl are made by slitting off slivers on two sides. The names serve as designations only; the differences between the tubes do not enter into the game. The player with the tubes turns around, puts a piece of twig into one, fills them all with sand, and throws them before his opponent, who tries to empty the twig from the *third* tube he selects. If so, he wins the canes, that is, the right to play. If the twig is in the first tube emptied, he loses 10; if in the second, 6; if in the fourth, 4. Counters are little natural shell disks. 524

000 wear ceremonial feathers as did our western Indians. I saw no skin or
164 cutaneous disease, or evidence of tuberculosis or of trachoma---the curse of our Indians.

142. One boy-child of five years was a handsome child---fat, round,
302 sturdy, with roving great black eyes, large thick lips, a picture of
[241] perfect health. He was almost naked. His hair was done in a pigtail
[837] with a red string braided into it. His face like all the others was dirty, but he waded into the shallow water with a short spear and I saw him catch two crabs with his little harpoon. The water did not bother his face.

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364 belt knives were used for cutting, carving or skinning, and always the
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[24] Indian yell which pleased the Seris very much. For two hours they had a real swell time. We took one flashlight of the proceeding.

[342] Each family was in their hut, which afforded very slight shelter
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[341] campfire, which did not give much illumination, so the dancing was in semi-darkness.

{text continues on p. 163}

535 semi-darkness.
123 Soon two little boys joined the dance, stepping up and down in the sand. Lighted only by the flickering flames of the driftwood fires on the shores of this mysterious and dreaded isle, the soft murmur of the sea as a refrain to the wild chanting, the weird circling of glittering eyes, and wild dark faces, presented a scene of uncanny and savage fascination witnessed by white men probably for the first time.

[533] After each stanza there was a short rest. The singing was similar to most other tribal chanting.

582 Bob made the remark that the girl was old enough to be broken in
836 by the old Chief. I said, "How?"
622

583 He said, when a girl thirteen or fourteen has her menses, the
[939] Chief takes her and goes through the family act. This is called 'breaking her in'. She is then eligible for marriage. A young man desiring marriage has to purchase the girl by giving the father a boat or rifle, both being necessary to the Seri's existence and pro-
585 tection. At the wedding they have sort of a fiesta and much mescal is drunk, which properly solemnizes a wedding.

944 When a girl has a baby it usually comes very naturally and easily,
945 but I remember one girl's first baby was three days in coming, and she suffered a great deal. This was on a subsequent trip. She was staying with many of her people on the mainland and someone asked them if they didn't want a doctor or other help. They said: No, they had one. It was a Medicine Man who chanted over the girl and dug hollows in the sand to fit her heels into. He said that the legs had to be kept apart. This was all he did. But ordinarily there is no trouble, and if a baby is born at noon the mother is up and doing, and cooks supper
[513] for her lord and master. The men treat their wives with kindness and each shares with the other any delicacy.

462 In Seriland domestic duties are reversed from the usual Indian
[303] methods. The men get the water and the women get the wood. This con-
[482] sists mostly of driftwood gathered along the shore, and it is a picturesque sight to see a string of women and girls bringing in loads of wood in baskets on their heads at sunset.

622 There are no plural marriages, but sometimes when a Chief is old,
595 or rather when his wife is old and can have no more babies, he can take a younger woman as his wife. The present Chief is getting old now, almost too old to break in the girls, so they may get a younger man. This might be called the perquisites of office. He takes the cream.

932 They hunt lice in the head and eat them. This is said to increase
825 the amorous desires. The penis of the male turtle is cut out and dried. This is pounded and pulverized and placed in the food of the women. This is said to create a desire for a man and the family act.

648 123 friend of his from Guaymas, although only the upper part of the sail was visible. This greatly frightened the women who began packing to escape to the interior. They thought they were friends of ours and it was a plan to have them land. Bob proposed to go out and meet them, and if possible get provisions. With the Chief and two other Seris, Bob and his brother, leaving the firearms behind, hoisted the sail and headed for the mouth of the bay.

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123 At night everybody was happy. I had gathered two pails of oysters that are exposed on the rocks at low tide and I had built a fire over them so they would open readily, and then had cut them out. We made a sort of stew then, enough to go around the crowd.

123 534 [515] After supper the Indians gave a dance, a very weird affair. I have seen nearly all the musical instruments used by the Indians of the Southwest and Mexico in their ceremonial dances, but the Seris were the first tribe I had ever seen use the bow and arrow as a musical instrument. A six-foot bow with a tightly stretched bowstring of twisted sinew was held, back down, on two inverted bowl baskets by one of three men, all of whom struck the string with arrows. This [533] emitted a musical baritone note like the vibration of a piano wire, in perfect rhythm to the weird chanting of the three musicians, singing a wild plaintive air.

535 123 The dancer, Manuel Encina, a grim old boy, facing the orchestra, mounted the back of a turtle shell resting over a hollow in the sand, as a resonator, with a long staff held in his right hand to steady him, and gave one of the prettiest exhibitions of the double shuffle on the rounded top of an oily old turtle shell that I have ever seen. At the end of each *canto* there was a rest, and then they went at it again. This lasted two hours, and was lighted by a feeble camp fire and moon and was danced on the shore.

123 Before daybreak the following morning we arose, loaded the boat, and then the Indians brought a lot of things, besides three or four rifles. Then two young Indians jumped in. We were so crowded that we could not move. The two Indians and two of our men used paddles as we were too crowded to row. There were seven men besides all the junk, and the boat was so loaded and so cranky there was imminent danger of capsizing. At the least movement she would dip to the edge of her

123 Clustered near this well were brush windbreaks joined together, divided
[361] by brush partitions all open on one side. Here were gathered several
[312] Seri families. There was no such thing as privacy or seclusion.
[342]

As soon as we stopped and unloaded we were immediately surrounded by a curious, half-starved mob of forty men, women and children, about fifteen to twenty children. All dirty, all ragged, all hungry. Some of them I recognized: others were new to me.

While preparing and eating our supper this motley crowd formed a circle about us and hungrily watched every mouthful. We gave them a little food and an orange all around, and they finally left. By that time we had also finished our bread and coffee and followed to the brush shelters.

535 A dance was immediately started. A place was hollowed in the sand,
123 a few short planks placed over it, and the dance was on. Music was
[513] furnished by men tapping on an inverted basket and chanting. Only one man danced at a time. Sand was thrown over the planks and the Indian danced a shuffle, scraping his bare feet on the boards. He held a staff in his right hand and danced to a song called in Spanish *El*
[171] *Toro*. Later on other dancers performed, then gave us the *venado* (deer) dance, taught them by the Yaquis.

This dancer represents a timid deer, hopping up and down to the time of a rattle held in the right hand, and the chanting of the singers. The *venado* dancers stooped over frequently, turning first to one side and then the other to look behind. Manuel Encina was the *venado* and Chico Romero, a very large young Seri, acted the part of a coyote, crawling and jumping on all fours and barking and every once in a while biting the calf or thigh of the *venado*, then jumping back and barking. It was acted with great realism, and the onlookers, especially the children, enjoyed it immensely.

A wilder, more barbaric scene was probably seldom witnessed in America than this gathering of Seris on the shores of the Gulf of California, dancing the *venado*. The camp fire threw a flickering light over dark fierce faces with low foreheads and frowsy unkempt hair.
[302] One man, Luis Torres, the head "ship carpenter" with a moustache and chin beard, his hair low-down framing his dark face, looked like a savage from the wilds of New Guinea. Another, Santo Blanco, a secondary chief below Juan Tomas, has a straggling moustache curling over cruel projecting lips which rarely smile, while his fierce black eyes peering through his black thatch of hair, have a perpetual scowl. The monotonous sing-song chant accompanied by the soft roar of the surf added an indescribable eeriness and weirdness to the dark night.

123 We soon turned in as it was then eleven o'clock, and we all fell asleep lulled by the waves of the sea.

2: Kroeber E-5 (1930)1931 NU31 Seri NU31

789 Some shamans display their ability to hold live coals in their mouth.

Taboos

[88] 784 At first menstruation, the girl eats nothing (!) for 8 days, only drinking water. For 4 nights a *fiesta* is held for her, men and women dancing in a circle, anti-sunwise. She is outside the ring. Her head is not covered. San-pit roasting was unknown to the informant.

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Dances

535 [727] Besides the girl's puberty dance, the Seri also had a scalp dance. Only the frontal piece of the scalp was used. This was hung on a pole. Men (armed) and women danced together around it. If the scalp fell down, all would die.

Dances seen were solo on a plank laid over a shallow pit. Several singers sat by, beating or rattling anything convenient. Each song and dance lasted scarcely three minutes. The tempo is fast. The step is a quick double shuffle with alternate feet. In one type, the dancer held to a stick with one hand, his body and hanging arm remaining as motionless as possible. Another type was without the stick, the dancer holding a gourd rattle and keeping his body bent forward somewhat.

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2:Davis & Dawson I-5 (1823-1948) 1945
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Sea turtle was still the staple meat, and with better boats and improved tools and tackle borrowed from the Mexicans, the living was becoming considerably less harsh along the shores. They then had nine boats for some two hundred people. One good boat could secure a living for five families, and they had well improved this minimum standard of living.

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The origin of the use of fire among the Seri's is unknown, but they have their own story of it. One day Chico Romero, present chief of the Seris (Fig. 19), made a fire drill out of a piece of dry driftwood and showed how to make a fire by turning the stick between the hands. In three or four minutes the fine dust became a glowing punk which, with the aid of some dry grass and the wind, was quickly fanned into a flame. He was then induced to tell the legend. He looked about and pointed to a little green and blue-bodied fly and said: "The gods sent this fly down from the sky to show us how to make fire. Notice when it lands. Did you not see

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[p. 265 (B)]

252 of nutritious material which was ground to powder on their stone ahsts, winnowed in shallow baskets and made into a meal or paste.

764 824 The abundant cacti of many species served several other functions in the domestic economy of the Seris. The thorny cholla whose insipid fruits were not fit to eat and whose spines were a constant threat to the unprotected bodies of the Seris, found one use, nevertheless, in the burial procedure. After a body was partly covered with earth in the three foot deep grave, it was densely overlaid with chollas before leveling, to discourage the coyotes from digging for the body.

396 824 The dry skeletons of the giant cacti provided the long, cylindrical poles used in knocking off ripe pitahayas as well as in all other instances in which a straight, slender pole was needed. Since the advent of the open boat in modern times, the cactus skeleton has come in for a new use, for after trituration between stone ahst and hupf, it was found to yield a satisfactory caulking compound when mixed with sea-lion oil.

312 824 The barrel cacti, *Ferocactus Wislizenii* and *F. Coulteri*, though ordinarily abundant on the Sonoran desert are rare in Seriland and practically absent from Isla Tiburon where they may easily have been exterminated by the improvident Seris during their centuries of occupancy on account of their recognized value as water providers on the wastelands over which the Seris so frequently ventured.

342 [132] 824 These Indians found housing no problem, for, living under a climate in which frost is rare and rain infrequent, they found little need for shelters except for protection against the blazing desert sun. Camps that were occupied for more than a day or two, however, usually saw the appearance of a group of crude sun shelters. These were usually made of long, flexible ocotillo branches, *Fouquieria splendens*, stuck in the sand and fashioned into an arched framework over which a more or less complete covering of brush was piled. If, by the sea, a windbreak were desired, the brush top and siding were usually augmented by the addition of several empty turtle shells.

262 824 On the delta plain of the Rio Sonora, the mesquite, *Prosopis juliflora*, grows in remarkable luxuriance, these gnarled, spiny trees forming an almost continuous open forest 20-40 feet high. Its fruit, consisting of small, hard beans borne in slender, woody pods forms a concentrated, starchy food that the Seris found highly nutritious if not appetizing. In late summer when all fresh vegetable food had withered and disappeared, provided the turtle fisheries had not yet attracted them back to their island, they often spent [252] some weeks gathering the beans and grinding them into a meal which was eaten as a watery atole or as a paste mixed with sea-lion oil. The more straggly and thorny cat's claw mesquite, *Acacia Greggii*, and the ironwood, *Olneya tesota*, also yielded woody beans in limited quantity.

[208] In the deeper gorges of the mountains the Seris found *Guaiacum Coulteri* yielding a berry of medicinal properties and also *Jacquinia pungens* which produced a nut, edible when not quite ripe, and forming a favorite rattle-[534] bead when dry.

Along sandy washes, particularly on the lower flood plain of the llano grows a low, shrubby weed, *Hymenoclea monogyra*. Although during times of drought it shrinks to stunted tussocks, after periods of heavy rain its flourishing fens produce abundant seeds eaten both by the beasts of the plain and formerly by the Seris.

385 [199] Before the advent of the tin can and the cardboard carton, basketry was an important handicraft among these Indians

[Text continues on p. 138--Analyst]

wear ceremonial feathers as did our western Indians. I saw no skin or cutaneous disease, or evidence of tuberculosis or of trachoma---the curse of our Indians.

One boy-child of five years was a handsome child---fat, round, sturdy, with roving great black eyes, large thick lips, a picture of perfect health. He was almost naked. His hair was done in a pigtail with a red string braided into it. His face like all the others was dirty, but he waded into the shallow water with a short spear and I saw him catch two crabs with his little harpoon. The water did not bother his face.

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439 little gods I traded some muslin, a harmonica and some *panoche*. For
123 native hair brushes, I traded three fine-tooth combs for catching *piojos*, or lice, easier. I gave each woman a little round mirror and they were greatly pleased.

To the old Chief I presented a good pocket knife and a mirror. For the bow I traded a spark lighter. By striking the edge of a small wheel with milled edge it strikes a spark from a small flint and lights a wick.

123 We asked for a dance, and the Seris, using the bow and striking
635 sticks for music, the slender girl jumped up and down on a flat piece
[534] of tin which served, instead, of a turtle shell and also served for
[252] baking flour cakes upon also. A while before, Louis had seen a woman
[415] wash her head and that of a child in the chamber pot, empty the water and then cook in it.

After the girl had danced a while on the tin, old Manual Encina pushed her away and hopped on himself and did the double-shuffle for half an hour, after which we left for our camp.

197 The language of the Seris is the most difficult and peculiar I
194 have ever heard. It is spoken deep in the throat with the mouth open and sounds like no other language I have ever heard except that there are some sounds like Papago.

439 Even before breakfast of the next day we were still trading with
123 the Indians, and in an hour or so I possessed nearly everything they had except their rags. They seemed happy and contented and postponed their trip to Hermosillo. I left some stuff with Louis Thomson to be traded later for bows and arrows, Pelican skin dresses and baby cradles.

We then arranged our loads, said *Adios* to the Seris, and left for Hermosillo, where we arrived without accident about six-thirty p.m. The sun was very hot and the road heavy and the sun glaring, and we were all very tired when we reached town. I stored my stuff with Mr. Marks at Hotel Cohen, and will crate it before leaving for Yaqui River.

123 Before leaving the Seri Chief I told him that whenever he saw
202 this sign---Circle Bar D and left hand below it, it was me---their friend, and not to shoot at me. He said he would tell all the Seris, and I left him my card with the same sign on it. When will I see him again!

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• 535 was in full swing. A young girl, Rosa, dragged out a turtle shell and
123 standing on it began to dance. This dance consisted of stepping up and down quickly with each foot alternately, and this stamping, barefooted, emitted a hollow sound. Every once in a while I let out an
[126] Indian yell which pleased the Seris very much. For two hours they had a real swell time. We took one flashlight of the proceeding.

[342] Each family was in their hut, which afforded very slight shelter
[342] as they were only partially roofed over and the sides were broken
[334] down in places. The huts were all adjoining and each had a little
[341] campfire, which did not give much illumination, so the dancing was in semi-darkness.

{text continues on p. 163]

535 semi-darkness.
123 Soon two little boys joined the dance, stepping up and down in the sand. Lighted only by the flickering flames of the driftwood fires on the shores of this mysterious and dreaded isle, the soft murmur of the sea as a refrain to the wild chanting, the weird circling of glittering eyes, and wild dark faces, presented a scene of uncanny and savage fascination witnessed by white men probably for the first time.

[533] After each stanza there was a short rest. The singing was similar to most other tribal chanting.

582 Bob made the remark that the girl was old enough to be broken in
586 by the old Chief. I said, "How?"
622

He said, when a girl thirteen or fourteen has her menses, the
583 Chief takes her and goes through the family act. This is called
[830] 'breaking her in'. She is then eligible for marriage. A young man desiring marriage has to purchase the girl by giving the father a boat or rifle, both being necessary to the Seri's existence and pro-
535 tection. At the wedding they have sort of a fiesta and much mescal is drunk, which properly solemnizes a wedding.

844 When a girl has a baby it usually comes very naturally and easily,
845 but I remember one girl's first baby was three days in coming, and she suffered a great deal. This was on a subsequent trip. She was staying with many of her people on the mainland and someone asked them if they didn't want a doctor or other help. They said: No, they had one. It was a Medicine Man who chanted over the girl and dug hollows in the sand to fit her heels into. He said that the legs had to be kept apart. This was all he did. But ordinarily there is no trouble, and if a baby is born at noon the mother is up and doing, and cooks supper
[543] for her lord and master. The men treat their wives with kindness and each shares with the other any delicacy.

442 In Seriland domestic duties are reversed from the usual Indian
[303] methods. The men get the water and the women get the wood. This con-
[402] sists mostly of driftwood gathered along the shore, and it is a picturesque sight to see a string of women and girls bringing in loads of wood in baskets on their heads at sunset.

622 There are no plural marriages, but sometimes when a Chief is old,
595 or rather when his wife is old and can have no more babies, he can take a younger woman as his wife. The present Chief is getting old now, almost too old to break in the girls, so they may get a younger man. This might be called the perquisites of office. He takes the cream.

932 They hunt lice in the head and eat them. This is said to increase
825 the amorous desires. The penis of the male turtle is cut out and dried. This is pounded and pulverized and placed in the food of the women. This is said to create a desire for a man and the family act.

648 123 friend of his from Guaymas, although only the upper part of the sail was visible. This greatly frightened the women who began packing to escape to the interior. They thought they were friends of ours and it was a plan to have them land. Bob proposed to go out and meet them, and if possible get provisions. With the Chief and two other Seris, Bob and his brother, leaving the firearms behind, hoisted the sail and headed for the mouth of the bay.

When they reached the Infernillo the sloop veered away, its crew being afraid of being killed by the Seri. There were six men and boys and they mustered all the rifles and stood ready to fight. They had just had trouble three days before at San Estevan. At last the wind veered and they had to stop and Bob waved his cap. Finally they got close enough to talk, and then came on board and secured some provisions---a little coffee, sugar, fresh onions, tomatoes and rice, and a little flour for the Chief. They had a fair wind back and returned about dusk.

123 At night everybody was happy. I had gathered two pails of oysters that are exposed on the rocks at low tide and I had built a fire over them so they would open readily, and then had cut them out. We made a sort of stew then, enough to go around the crowd.

123 534 [535] After supper the Indians gave a dance, a very weird affair. I have seen nearly all the musical instruments used by the Indians of the Southwest and Mexico in their ceremonial dances, but the Seris were the first tribe I had ever seen use the bow and arrow as a musical instrument. A six-foot bow with a tightly stretched bowstring of twisted sinew was held, back down, on two inverted bowl baskets by one of three men, all of whom struck the string with arrows. This [533] emitted a musical baritone note like the vibration of a piano wire, in perfect rhythm to the weird chanting of the three musicians, singing a wild plaintive air.

535 123 The dancer, Manuel Encina, a grim old boy, facing the orchestra, mounted the back of a turtle shell resting over a hollow in the sand, as a resonator, with a long staff held in his right hand to steady him, and gave one of the prettiest exhibitions of the double shuffle on the rounded top of an oily old turtle shell that I have ever seen. At the end of each *canto* there was a rest, and then they went at it again. This lasted two hours, and was lighted by a feeble camp fire and moon and was danced on the shore.

123 Before daybreak the following morning we arose, loaded the boat, and then the Indians brought a lot of things, besides three or four rifles. Then two young Indians jumped in. We were so crowded that we could not move. The two Indians and two of our men used paddles as we were too crowded to row. There were seven men besides all the junk, and the boat was so loaded and so cranky there was imminent danger of capsizing. At the least movement she would dip to the edge of her

439 little gods I traded some muslin, a harmonica and some *panoche*. For
123 native hair brushes, I traded three fine-tooth combs for catching *piojos*, or lice, easier. I gave each woman a little round mirror and they were greatly pleased.

To the old Chief I presented a good pocket knife and a mirror. For the bow I traded a spark lighter. By striking the edge of a small wheel with milled edge it strikes a spark from a small flint and lights a wick.

123 We asked for a dance, and the Seris, using the bow and striking
• 535 sticks for music, the slender girl jumped up and down on a flat piece
[534] of tin which served, instead, of a turtle shell and also served for
[252] baking flour cakes upon also. A while before, Louis had seen a woman
[415] wash her head and that of a child in the chamber pot, empty the water and then cook in it.

After the girl had danced a while on the tin, old Manual Encina pushed her away and hopped on himself and did the double-shuffle for half an hour, after which we left for our camp.

197 The language of the Seris is the most difficult and peculiar I
194 have ever heard. It is spoken deep in the throat with the mouth open and sounds like no other language I have ever heard except that there are some sounds like Papago.

439 Even before breakfast of the next day we were still trading with
123 the Indians, and in an hour or so I possessed nearly everything they had except their rags. They seemed happy and contented and postponed their trip to Hermosillo. I left some stuff with Louis Thomson to be traded later for bows and arrows, Pelican skin dresses and baby cradles.

We then arranged our loads, said *Adios* to the Seris, and left for Hermosillo, where we arrived without accident about six-thirty p.m. The sun was very hot and the road heavy and the sun glaring, and we were all very tired when we reached town. I stored my stuff with Mr. Marks at Hotel Cohen, and will crate it before leaving for Yaqui River.

123 Before leaving the Seri Chief I told him that whenever he saw
202 this sign---Circle Bar D and left hand below it, it was me---their friend, and not to shoot at me. He said he would tell all the Seris, and I left him my card with the same sign on it. When will I see him again!

123 Clustered near this well were brush windbreaks joined together, divided
[36] by brush partitions all open on one side. Here were gathered several
[37] Seri families. There was no such thing as privacy or seclusion.
[342]

As soon as we stopped and unloaded we were immediately surrounded by a curious, half-starved mob of forty men, women and children, about fifteen to twenty children. All dirty, all ragged, all hungry. Some of them I recognized: others were new to me.

While preparing and eating our supper this motley crowd formed a circle about us and hungrily watched every mouthful. We gave them a little food and an orange all around, and they finally left. By that time we had also finished our bread and coffee and followed to the brush shelters.

• 535 A dance was immediately started. A place was hollowed in the sand,
123 a few short planks placed over it, and the dance was on. Music was
[533] furnished by men tapping on an inverted basket and chanting. Only one man danced at a time. Sand was thrown over the planks and the Indian danced a shuffle, scraping his bare feet on the boards. He held a staff in his right hand and danced to a song called in Spanish *El*
[37] *Toro*. Later on other dancers performed, then gave us the *venado* (deer) dance, taught them by the Yaquis.

This dancer represents a timid deer, hopping up and down to the time of a rattle held in the right hand, and the chanting of the singers. The *venado* dancers stooped over frequently, turning first to one side and then the other to look behind. Manuel Encina was the *venado* and Chico Romero, a very large young Seri, acted the part of a coyote, crawling and jumping on all fours and barking and every once in a while biting the calf or thigh of the *venado*, then jumping back and barking. It was acted with great realism, and the onlookers, especially the children, enjoyed it immensely.

A wilder, more barbaric scene was probably seldom witnessed in America than this gathering of Seris on the shores of the Gulf of California, dancing the *venado*. The camp fire threw a flickering light over dark fierce faces with low foreheads and frowsy unkempt hair.
[302] One man, Luis Torres, the head "ship carpenter" with a moustache and chin beard, his hair low-down framing his dark face, looked like a savage from the wilds of New Guinea. Another, Santo Blanco, a secondary chief below Juan Tomas, has a straggling moustache curling over cruel projecting lips which rarely smile, while his fierce black eyes peering through his black thatch of hair, have a perpetual scowl. The monotonous sing-song chant accompanied by the soft roar of the surf added an indescribable eeriness and weirdness to the dark night.

123 We soon turned in as it was then eleven o'clock, and we all fell asleep lulled by the waves of the sea.

2: Kroeber E-5 (1930)1931 NU31 Seri NU31

February 28, 1930, which the informant (correctly) declared to be the first of a new moon. He also said it was eXno'issa't, with which he began his list. This would roughly equate moon 10 with March, as per the list; but when asked about the edible "seeds" of the eelgrass, he stated that these were due next month.

Unfortunately, the informant who stated that there were six "months" in the year was not questioned further. He may have referred to a calendar of six seasons like that of the Lower Californians.

The upper large star in Orion (Betelgeuze) is an antelope; the three of the belt, mountain-sheep; the three of the hilt, an arrow; Sirius, a dog following the sheep.

The Pleiades, kmâ'mk, are a woman (xmâm, kmâm) with children, who came outdoors to urinate.

Ursa Major is a sahuaro or pitahaya fruit-gathering crook, a pole with a bar diagonally across the end.

Kwe'pituX, quail (*codorniz*, qwe'pt) is a constellation.

Suxmi'ka, a man carrying a harpoon (*lanza*), may be Scorpio.

There are constellations Jackrabbit (ẽ'), Buzzard (nâ'pXe), and kẽ'to, according to the calendar. These rise before dawn about March 1. Clouded skies prevented their being seen several mornings. A few days later, at 6 a. m. (7 a. m. Mexican time), Altair was visible well above the horizon; this may be Buzzard — compare Luiseño Buzzard-Altair.

Polaris was pointed out in answer to the question if there was a star that did not move.

The sickle of Leo was not recognized (Walapai-Havasupai, hand).

Of these, Orion-Mountain-sheep, Ursa-crook, Pole-carrier-Scorpio (?), Buzzard-Altair occur among Yuman tribes as far away as Dieguẽño, Walapai, Havasupai.

Myth Fragments

1.

People were born in a cane, the Seri in one joint, the Mexicans, Americans, Chinese in others, separate from each other. God (Dios, Yos) came along here from south, then went east (?), setting signal smokes; the Seri alone did not come to him, therefore have nothing.

2.

Coyote was trying to catch ducks. As he jumped, they flew away and he landed in the moon, where he is visible now.

3.

Death was caused by Coyote and Kontẽ'tXiat (*pinacate*, an insect that stinks, turns his black belly up, dung-beetle?). Coyote

2: Kroeber E-5 (1930) 1931 NU31 Seri NU31

wanted people to die so he could eat their bodies; Pinacate because men stepped on him. Then Coyote killed his own son (daughter?), and people began to die. 539

4.

Fire is from the fly, who made it by rubbing his hands together, as he still does (*fide* R. Thomson).

5.

A man wanted to find the house of "Dios," who was the Sun. He went to ask Moon. Moon sent him on, but he could not find it, and returned. Moon played the musical bow (kăpə̀xa''ĕt) to call all the birds, but they could not tell him. He played again and one more came, CaXa'pniX ke''ĕt, a little duck, who took the man and showed him the way, in a field, with the house in a corner, and showed him the door. The man went in. Sun had a pretty daughter. The man wanted to marry her, she was willing, but Sun would not allow it. He played (cards!) with the man, for each other's bodies. Sun won. He kept the man in his house. But in the morning when Sun went his rounds, the man escaped with the girl into the brush.

Of these tales, the first, except for the cane concept, is a rationalization, evidently post-Caucasian; the third probably finds its nearest analogues in central California; the fourth and fifth are characteristic of the Yuman tribes and southern California Shoshoneans.

Episodes apparently unknown to the Seri of today are: earth diving; frog eating the excrement of the god who dies; vagina dentata.

Shamanism

A "doctor" or shaman, kŏ'tĕ, becomes such by going to a "cave" in the mountains. This is solid rock, but he paints a sign or mark on it, it opens, and he enters. The "santo" or spirit inside, seakotkme'k·e, "going about in the brush," may or may not help him; if so, he strikes the man and enters his body. Through this the shaman can cure; because of the spirit in him, he can see the cause of the disease in a patient's body, "as if he had spectacles on." The spirit is not visible to others, nor does he talk from the shaman's body. 756

The shaman cures by putting his hands on the sick part; he circles them like a tube, puts his mouth on them, and says cho, cho, cho. He does not suck out any object. The informant was startled when told how grasshoppers, etc. were extracted by sucking shamans elsewhere; he volunteered later that the idea frightened him. There is no special treatment for rattlesnake bite. [755]

Most old men have more or less shamanistic power.

A shaman is paid a knife, a bow, four arrows, five pesos, or any such amount for curing. Killing of unsuccessful shamans was denied.

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Society

583 Marriage is monogamous. The wife is bought, in spite of the [595] poverty of the Seri. Santa Blanco paid 150 pesos in property for his wife. Chico Romero, a widower, paid more for his, a widow, "because she had three daughters, and a family with daughters is rich" (in expectation of bride prices).

591 The wife goes to live with the husband. A young couple lives 562 with the young man's parents, perhaps in an annex to the house. "The man commands." Chico was emphatic on this point, and repeated that when his son married he would live with him, not with the girl's relatives. Both he and Santo have step-sons-in-law as well as daughters-in-law living with them, but this is because they are chief and boat-owner respectively; (and the sons-in-law are young).

833 Copulation was said to take place immediately on marriage. McGee's statement of a period of continence being cited as the custom of a foreign tribe, the informant obviously wondered and laughed. [843] Intercourse goes on during pregnancy; but not for some months after birth, for fear of a new pregnancy, which would be injurious to the child. A good man respects his wife at all times and does not constantly pursue her.

144 No half-breeds were seen, and the Seri declare they are free of 164 venereal disease.

551 Nothing could be elicited from the informant as to anything like 614 the group-inherited names of lineages, or clans, of the Yuman tribes.

768 When a woman dies, the widower may give the children to his dead wife's parents to raise. This is the only item learned that might point to McGee's "matriarchate"; but the informant may have been thinking of particular cases. His son lives with him, though he lost the boy's mother.

582 Cross-cousin marriage is as prohibited as that of parallel cousins. This is in accord with the sibling terminology for all cousins; but in view of the present small number of the tribe, the rule must work difficulty.

[587] A man does not marry his dead wife's sister. Apparently he may not. Nor is there levirate. The informant volunteered the question if marriage with step-daughters was permitted by other peoples. Being told of the Navaho custom, he seemed shocked.

606 Neither husband nor wife looks at or addresses either parent-183 in-law. In the isolated, small-group life of the Seri, this rule can hardly be adhered to with complete rigor, and its conspicuous carrying out was not observed; but then everything in their behavior is casual, informal, and slovenly.

607 The kinship system as recorded contains a note as to a woman not addressing her younger sister's husband by kinship term except

2: Kroeber E-5 (1930) 1931 NU31 Seri NU31

in endearment when drunk. This may apply also to other siblings-in-law. 607

Younger siblings (? and other relatives) may say nothing obscene before the older, out of respect for them; but the older talk freely before the younger. This applies to both men and women. Otherwise there seems to be little prudery; the informant recited the names of the private parts before his wife and children, and she indifferently repeated them after him in confirmation. 593 834

There is no teknonymy. 551

The dead are buried. Cremation of the body seemed unknown to the informant. All property of the dead person is burned or destroyed. His balsa was burned; modern boats are not, because they "belong to the government," which furnishes the lumber. The house is abandoned and a new one built a short distance away. The name of the dead is not spoken. 176 [422]

Kinship

The Seri kinship system is distinguished by three general features: the large number of terms; the strong tendency to terms reciprocal in meaning; and the distinction made between older and younger siblings of nearer relatives if they are of the same sex. All of these are characteristic Yuman traits. 601

The number of terms obtained is 50; which number might have been increased if step-relatives, great-grandparents, great-uncle-aunts, siblings of siblings-in-law, spouses of uncles-aunts, and spouses had been inquired for. However, the informant seemed to feel that the list was exhausted with the set obtained; before that, he pursued the subject of his own accord. Fifty is an unusually large number of kinship names in any language; the more so, since there are no cousin terms. The 12 siblings-in-law terms—a quite extraordinary number—swell the total.

Conceptually reciprocal terms dominate the system except in the sibling class. The informant soon realized this principle. Some of the reciprocals are derivatives; others are not; self-reciprocals are lacking. This last fact helps increase the size of the system.

The distinction between older and younger siblings of the same (but not of the opposite) sex as nearer relatives is consistently carried out for uncles-aunts and spouses' siblings (or siblings' spouses).

ôi	**father**	**reciprocals iaâ'k (man's son), ôq man's daughter)**	
o'l·a	**mother**	**rec. iq/t**	**(woman's child)**
o'p·âc	**father's father**	**rec. ik-o'pâc**	**(man's son's child)**
omâo	**father's mother**	**rec. oka'sak**	**(woman's son's chd.)**
ô'âo	**mother's father**	**rec. iqâoi**	**(man's dtr.'s child)**
ôkt	**mother's mother**	**rec. iqaq**	**(woman's dtr.'s chd.)**

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the vessel to Guaymas. With the aid of a group of Yaqui, some of these women were said to have been permitted to go to Hermosillo and eventually to return to their home on Tiburon. Others of their group are said to have remained near Guaymas. The women who returned to Tiburon reported that the San Esteban women and children were put aboard another ship which sailed southward.

BANDS I, III, AND IV

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As opposition from the Papago and government forces increased, the members of Band I were forced to seek refuge on Tiburon Island. The mainland members of Band III (subdivisions 11 and 12) were also forced, especially during the Encinas Wars, to flee to Tiburon. There the combined forces of Bands I, III, and IV sought to cope with the military expeditions sent out through the years to exterminate them. Tiburon Island is an adverse battlefield for the uninitiated; some expeditions were turned back due to lack of potable water or because of failure to make contact with the enemy in the mountainous terrain. Some expeditions did encounter the Seri, however, and many natives were either killed or captured.

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Through the years, then, these military encounters, along with smallpox and measles epidemics, were responsible for reducing the Seri tribe to a small remnant. The band and clan systems lost their functional relevance as the people continued to live together for mutual protection. Shortly after the turn of the century, the expeditions and raids had practically ceased.

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SIGNIFICANCE OF BANDS TODAY

With the dissolution of the band system, the rule of descent shifted from patrilineal to bilateral, and the rule of residence shifted from patrilocal to neolocal.

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Although the substance of the band system is no longer a reality, the concept of land ownership still remains. A young Seri of today may choose to be associated with either the i?iziiting of his father or that of his mother. He is said to inherit part ownership of the area. It is recalled by one informant that in former times ownership of a mountain was especially important. Sometimes ownership of a mountain was included as part payment for a bride. Thus a person might 'own' a mountain in a subdivision other than his own.

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A custom exists even today whereby a person names his dog after a mountain or other geographical point located in his subdivision. Although the person may re-use the name, each dog so named must be of the same sex as the first.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

614 earlier paragraphs (pp. 164–169); these symbols evidently represent an
[302] exclusively maternal organization into clans consecrated to sole tutelaries. The tutelaries, or totems, together with the clan names and all personal designations connected with the totems, are highly esoteric, and were not ascertained save in the few cases mentioned above.[1]

593 It should be observed that the identification of kindred by the alien observer is difficult and somewhat uncertain, since the relationships recognized in Seri society are not equivalent to those customary among Caucasians. It was found especially difficult to identify the husband
[582] of the jacal, partly because he is commonly incongruously younger (and hence relatively smaller) than the mistress, and partly because of the undignified position of outer guard into which he is forced by the tribal etiquette. Moreover, his connection with the house is veiled by the absence of authority over both children and domestic affairs, though he exercises such authority freely (within the customary limits) in the
[842] jacales of his female relatives. There is, indeed, some question as to the clear recognition of paternity; certainly the females have no term
601 for "my father", i. e., the term is the same as that for "my mother", *em*, though the males distinguish the maternal ancestor by a suffixed syllable (*e*="my father"; *e-ta* or *i'-tah*="my mother"), which seems to be a magnificative or an intensificative element. It is noteworthy that the kinship terminology is strikingly meager; also that while the records suggest various significant points, the material is hardly rich enough to warrant complete synthesis of the consanguineal system.

421 While the burden of the more permanent property pertains to the women, there is a decided differentiation of labor with a concomitant vesting of certain property in the warriors—the distinctively masculine chattels comprising arrows, quivers, bows, turtle-harpoons, etc. There are indications that the balsas, too, are regarded as masculine property. The impermanent possessions—water, food, etc—seem to be the common property of men, women, and children, except in so far as the
[264] right is regulated by regimentation; for the privileges of eating and drinking are enjoyed in the order of seniority. In the reckoning of
● 554 seniority, the chief (who is comonly such in virtue of his position as
602 nominal elder brother of a prolific dame) ranks first, and is followed by other warriors in an order affected in an undetermined way by conjugal relations as well as by their prowess or sagacity (the equivalents of age in primitive philosophy) down to an undetermined point—apparently fixed by puberty; then comes the clanmother, followed by her daughters in the order of nominal age, which is affected by the status of spouses and the number of living offspring; finally come the children, practically in the order of their strength (which also is deemed an equivalent of age), though the girls—especially those

[121] [1] The chief object of the 1895 expedition was to pursue the inquiries concerning social organization, totems, etc.; but, as mentioned elsewhere, this object was defeated by the troublous history of the tribe during the earlier part of 1895, and the subsequent revival and intensification of their animosity toward aliens.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

approaching nubility—receive some advantage through the connivance of the matrons. To a considerable extent in the matter of sustentation, and to a dominant degree in the matter of apparceling, the distribution of values is affected by a highly significant (though by no means peculiar) humanitarian notion of inherent individual rights—i. e., every member of the family or clan is entitled to necessary food and raiment, and it is the duty of every other person to see that the need is supplied. The stress of this duty is graded partly by proximity (so that, other things equal, it begins with the nearest person), but chiefly by standing and responsibility in the group (which again are reckoned as equivalents of age), whereby it becomes the business of the first at the feast to see that enough is left to supply all below him; and this duty passes down the line in such wise as to protect the interests of the helpless infant, and even of the tribal good-for-naught or hanger-on, who may gather crumbs and lick bones within limits fixed by the tribal consensus. Beyond these limits lies outlawry; and this status arises and passes into the tribal recognition in various ways: Kolusio was outlawed for consociating with aliens, and Mashem narrowly missed the same fate at several stages of his career; the would-be grooms who fail in their moral tests are ostracized and at least semioutlawed, and range about like rogue elephants, approved targets for any arrow, until they perish through the multiplied risks of solitude, or until some brilliant opportunity for display of prowess or generosity brings reinstatement; deformed offspring are classed as outside the human pale, even when the deformity is deemed rather by occult associations than by physical features; abnormal and persistent indolence, too serious for scorn and ostracism to cure, may also outpass the tribal toleration; and, as indicated by Mashem's guarded expressions and slight additional data, disease, mental aberration, and decrepitude are allied with indolence and deemed sufficient reason for excluding the persistently helpless from the tribal solidarity, and hence from recognized humanity—and the fate of the outlaw, even if nothing more severe than abandonment in the desert, is usually sure and swift. The entire customs of outlawry among the Seri are singularly like those of gregarious animals, including especially kine and swine in domestication. Now, studied equity in the distribution of necessaries might seem to be allied to thrift; but it is noteworthy that this is not so among the Seri, who take thought for one another but not for the morrow, who seem to have no conception of storage (save an incipient one in connection with water and the repulsive notion underlying the "second harvest"), and who habitually gorge everything in sight until their stomachs and gullets are packed—and then waste the fragments.

The division of labor which affects proprietary interests is studiedly affected in turn by the militant habit of the tribe and by the frequent decimation of the warriors. In general, the adult males limit their work to fighting and fishing, with occasional excursions into the hunt

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

CHIEFSHIP

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The unformulated tribal laws of the Seri are intimately connected with leadership, which is, in turn, largely a reflection of personal characteristics; so that the tribal organization is about as variable as that of the practically autonomous herds of cattle ranging the Sonoran plains adjacent to Seriland. Indeed, just as the stock-clans enjoy a precedence on pasturage and at waterholes, determined by the valor and strength of the bulls by which they are led, so the Seri clans appear to be graded by the prowess of their masculine leaders, combined with the sortilegic success of the leaders' consorts; while, just as the leadership of the cattle shifts from band to band as the years go by, according to the fairly equal hazard of natural selection, so the clan dynasties of the human group rise, flourish, and decline in an endless succession shaped by the chances of birth and survival under a capricious environment, by the fate of battles internecine and external, and by various other factors. The instability of the Seri organization is demonstrated by the tribal changes recorded in history, as well as by the vicissitudes within the memory of Señor Encinas and others. At the beginning of the records the Upanguayma were already exiled from Seriland proper [175] and apparently suffering from raids of their collinguals; within a century the Guayma, also, were expatriated and nearly annihilated; then, in the early part of the present century, the Tepoka were extruded and (after a series of wars in active progress in Hardy's time) forced far up the coast to one of the poorest habitats ever occupied by any folk. So, too, throughout the Encinas régime the internal dissensions continued whenever the clans were not combined against aliens; and the veteran pioneer has seen much intratribal strife, attended by the rise and passing of many chiefs, both acknowledged and pretended, and often exercising chiefly prerogatives two or three at a time. This instability grows largely out of the fact that the essential unit is the clan, and that the tribe is nothing more than a lax aggregation; and it is measurably explained by the crude customs accompanying the choice of leaders.

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As already noted, the clan organization is maternal, and the clan-mother is the central figure of the group; but the executive power resides in her brothers in the order of seniority—i. e., while the personal arrangement of the group is maternal, the appellate administration is fraternal. So far as could be ascertained, the form of government is clearly discriminable from that commonly styled avuncular; for, in the first place, the minor administration accompanying the control of property invests the elderwomen with exceptional legislative and judicative powers, while, in the second place, there are no old men (by reason of the militant habit), so that the reverence for age so assiduously cultivated in primitive life extends to matrons much more than to men. [888]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

101 and Mode, after the manner characteristic of primitive thought;[1] so
196 that it may perhaps be translated "Our-Great-(or Strong-)Kind-Now-Here". The combination of the two syllables affords a characteristically colloidal connotation of concepts, common enough in primitive use, but not expressible by any single term of modern language; in a descriptive way the complete term might be interpreted as "Our-Living-Ancient-Strongkind-Elderwomen-Now-Here," while with the utmost elision the interpretation could hardly be reduced beyond "Our-Great-Motherfolk-Here" without fatal loss of original signification. It should be noted that the designation is made to cover the animals of Seriland (at least the sole tutelaries of the tribe) and fire as well as the human folk.

101 The proper tribe name is of no small interest as an index to primi-
562 tive thought, and as an illustration of an early stage in linguistic development. It is significant, too, as an expression of the matronymic organization, and of the leading rôle played by the clanmothers in the simple legislative and judicative affairs of the tribe; and it is especially significant as an indication of the intimate association of fire and life in primitive thought.

101 The designation "Seri", with its several variants, is undoubtedly an alien appellation, and neither Mashém nor Kolusio could throw light on its origin or meaning, though they did not apparently regard it as opprobrious. Peñafiel describes it as an Opata term; and Pimentel's Opata vocabulary[2] (extracted from the grammar and dictionary compiled by Padre Natal Lombardo) indicates its meaning satisfactorily, albeit without special reference to the tribe. The key term in this vocabulary is "*Sérrái*, velocidad de la persona que corre." The accent over the first vowel serves to indicate prolongation, so that term and definition may be rendered, literally, *se-errái*, speed of the person who runs. Analysis of the term shows that the essential factor or root is that introduced elsewhere in the same vocabulary as "*Erv*, llegar." Now, "llegar" is a protean and undifferentiated Spanish verb neuter, without satisfactory English equivalent; it may be interpreted as arrive, reach, attain, fetch, endure, continue, accomplish, suffice, ascend, or mount to, while as a verb active and verb reflective its equivalents are approach, join, proceed a little distance, unite, etc; it may be said to imply movement or process with a centripetal connotation—i. e., a connotation antithetic to that of the expressive irregular verb "ir" in its protean forms, including the ubiquitous and ever present "vamos" (an American slang equivalent of the Castilian verb "llegar" in certain of its phases is the strong interjectory phrase, "get together"). The prefix *se* is merely an intensive, running not merely through the Opata, but throughout various tongues of the Piman stock. In his extensive vocabulary of the Pima and Papago Indians of Arizona (1871),[3] Captain

[1] Cf. The Beginning of Mathematics, in the American Anthropologist, new series, vol. 1, 1898, p. 664.
[2] Vocabulario Manual de la Lengua Opata, por Francisco Pimentel, Boletin de la Sociedad Mexicana de Geografía y Estadística, tomo v, 1862, pp. 287–333.
[3] In the archives of the Bureau of American Ethnology.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

blood counts as nothing in the establishment and maintenance of the clan organization. Thus the females alone are the blood-carriers of the clans; they alone require ready and certain identification in order that their institutional theory and practice may be maintained; and hence they alone need to become bearers of the sacred blood-standards. The warriors belong to the tribe, and are distinguished by luxuriantly flowing hair, by the up-stepping movement from which the people derive their appellation, by their unique archery attitude, and by their dark skin-color; the boys count for little until they enter the warrior class; but on the females devolves the duty of defining and maintaining the several streams of blood on which the rigidly guarded tribal integrity depends.[1] Undoubtedly the blood-markings play an important rôle in courtship and marriage, but too little is known of the esoteric life of the tribe to permit this rôle to be traced.

In brief, the Seri face-painting would seem to be essentially *zoösematic*, or symbolic of zoic tutelaries, and to signify subspecific (or subvarietal) characteristics maintained by the clan organization and kept prominent by the militant habit of the tribe; at the same time it is noteworthy that the purely symbolic motive is accompanied by a nascent decorative tendency, displayed by the individual refinement of form and color in the symbol proper to each of the groups.

DECORATION IN GENERAL

Aside from the face-painting there is a conspicuous dearth of decoration or tangible symbolism among the Seri.

The symbolic or decorative modification of the physique would seem to be limited to two classes of mutilations, of which one was observed at Costa Rica in 1894 while the other is apparently obsolete. The observed corporeal modification is the absence of medial superior incisors of the females, in consequence of forcible removal at a period not definitely ascertained. The interpreter at Costa Rica was uncommunicative on the subject; Don Pascual opined that the mutilation formed part of an elaborate puberty ceremonial, and this opinion would seem to be corroborated by the condition of the cranium of an immature female examined by Dr Hrdlička; but since the half-dozen adult maidens at the rancho in 1894 were free from the mutilation while all the wives bore its gruesome trace, it would seem more probable that the custom is connected with marriage. Whatever the period of the infliction, Mashém's guarded expressions seemed to indicate that it was a mark of physical inferiority; and this suggestion, interpreted in the light of the Seri use of teeth as weapons of offense and defense, would seem to indicate that the mutilation is at once the badge of corporeal inferiority and a means of maintaining the physical superiority of the males—of course in that theoretically fiducial but actually forceful way characteristic of primitive culture.

[1] The essentially reactive nature of this law and custom is set forth passim, p. 204.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

relation may be considered to begin in the animal realm with organisms adapted to environment through physiologic processes, and to end in that realm of enlightened humanity in which mind molds environment through complete nature-conquest. In the serial scale so defined the various primitive tribes and more advanced peoples may be arranged in the order of mental power or culture-status; when the same arrangement will express in inverse order the relative closeness with which the several tribal minds reflect their environments. It follows that the lowly minds and craft of the Seri reflect their distinctive environment with exceeding, perhaps unparalleled, closeness, because of their very lowliness; it follows, too, that any other equally lowly folk imported into the region and perfectly wonted to it by generations of experience would equally reflect the physical features of the region in their craft and in their thinking; it follows, also, that if the Seri were transported into any other district of equally distinctive physical features, they would gradually adapt themselves to the new environment—though with some added intelligence, and hence with diminished closeness, as is the way of demotic development—in such manner that their craft and thinking would reflect its features. In a more general way it follows that those similarities in culture, or activital coincidences, which have impressed the ethnologic students of the world (notably Powell and Brinton), are normal and inevitable in primitive culture and of diminishing prominence with cultural advancement.

Social Organization

Among the Seri, as among many other aboriginal tribes, the social relations are largely esoteric; moreover, in this, as in other savage groups, the social laws are not codified, nor even definitely formulated, but exist mainly as mere habits of action arising in instinct and sanctioned by usage; so that the tribesmen could not define the law even if they would. Accordingly the Seri socialry[1] is to be ascertained only by patient observation of conduct under varying circumstances. Unfortunately, the opportunities for such observation have been too meager to warrant extended description, or anything more, indeed, than brief notice of salient points.

Clans and Totems

The most noticeable social fact revealed about the Seri rancherias is the prominence of the females, especially the elder women, in the management of everyday affairs. The matrons erect the jacales without help from men or boys; they carry the meager belongings of the family and dispose them about the habitation in conformity with general custom and immediate convenience; and after the household is prepared, the men approach and range themselves about, apparently in a definite

[1] A convenient term proposed by Patten.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

362 372 order, the matron's eldest brother coming first, the younger brothers next, and finally the husband, who squats in, or outside of, the open end of the bower. According to Mashém's iterated explanations, which were corroborated by several elderwomen (notably the clanmother known to the Mexicans as Jesusa María) and verified by observation of the family movements, the house and its contents belong exclusively to the matron, though her brothers are entitled to places within it whenever they wish; while the husband has neither title nor fixed place, "because he belongs to another house"—though, as a matter of fact, he is frequently at or in the hut of his spouse, where he ordinarily occupies the outermost place in the group and acts as a sort of outer guard or sentinel. Conformably to their proprietary position, the matrons have chief, if not sole, voice in extending and removing the rancheria; and such questions as that of the placement of a new jacal are discussed animatedly among them and finally decided by the dictum of the eldest in the group. The importance of the function thus exercised by the women has long been noted at Costa Rica and other points on the Seri frontier, for the rancherías are located and the initial jacal erected commonly by a solitary matron, sometimes by two or three aged dames; around this nucleus other matrons and their children gather in the course of a day or two; while it is usually three or four days, and sometimes a week, before the brothers and husbands skulk singly or in small bands into the new rancheria.

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Quite similar is the regimentation of the family groups as indicated by the correlative privileges and duties as to placement, as well as the reciprocal rights of command and the requirements of obedience. Ordinarily (especially when the men are not about) the elderwoman of the jacal exercises unlimited privileges as to placement of both persons and property, locating the abat, the bedding, the fire (if any), and other possessions at will, and assigning positions to the members of her family, the nubile girls receiving especial attention; she is also the arbiter of disputes, the distributor of food, etc; but in case of tumult, especially when children from other jacales are present, she may invoke the authority of the clanmother, whose powers in the rancheria are analogous to those of the younger matrons in their own jacales. Even when the men are present they take little part in the regulation of personal conduct, but tacitly accept the decision of matron or clanmother; yet in emergencies any of the women are ready to appeal for aid in the execution of their will to a brother (preferably the elder brother) of the family, or, if need be great, to the brothers of the clanmother. So far as was observed, and so far as could be ascertained through informants, these appeals are always for executive and never for legislative or judicative cooperation; but various general facts indicate that in times of stress—in the heat of the chase, in the warpath-craze, etc—the men hustle themselves into the initiative, while the women drop into an inferior legislative place. As an illustration of the ordination in some-

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1: McGee E-5 (1894-1895)1898 NU31 Seri NU2

As an illustration of the ordination in some 129
what unusual circumstances, it may be noted that when the "Seri 562
belle" (Candelaria) refused to pose for a photograph she was supported 626
by the clanmother (Juana María) until the latter was placated by presents; and that when the belle refused to obey the mother's command—to the vociferous scandal of the entire group—Juana María appealed to Señor Encinas, as the conqueror of the tribe and hence as the virtual head of both rancho and rancheria. And when a younger Seri maiden (plate XXV) similarly refused to pose, and in like manner disobeyed her mother (again to the general disgust), the latter appealed to Mashém; when he, after first exacting additional presents for both girl and mother and a double amount for himself, put hands on the recalcitrant demoiselle and forced her into the pose required, despite the shrinking and tremulous terror perceptible even in the picture.

Commonly the regimentation of family, clan, and larger group appears 592
to be indicated approximately by the placement assumed spontaneously in the idle lounging of peace and plenty. A typical placement of a small group is illustrated in plate XIV. Here the family are assembled outside the jacal, but in the relative positions which would be assumed within. The matron (a Red Pelican woman) squats in easy reach of her few and squalid possessions; on her left, i. e., in the group-background and place of honor, sits the elderwoman of the rancheria (a Turtle); then comes the daughter of the family, followed by two girl-child guests of the group, the three occupying positions pertaining to chiefs or elder brothers or, in their absence, to daughters; opposite the matron sits a younger brother,[1] whose wife is a Turtle woman (daughter of the dame in the place of honor) and matron of another jacal. A few feet behind this brother (just outside the limits of the photograph reproduced, though shown on the duplicate negative) squats the husband, with his adze to the group and face toward the direction of natural approach; while the place belonging to the sons of the family on the matron's right is temporarily occupied by a White Pelican girl, together with a dog, notable in the local pack for largely imported blood and correspondingly docile disposition. The place for the babe, were there one in the family, would be on the heap of odds and ends behind the matron. As in this group so in most others, the place of the sons is vacant; for the boys are at once the most restless and the most lawless members of the tribe—indeed, the striplings seem often to ignore [858] the maternal injunctions and even to evade the rarely uttered avuncular [882] orders, so that their movements are practically free, except in so far as they are themselves regimented or graded by strength and fleetness and success in hunting.

The raison d'être of the proprietorship and regimentation reflected in 302
the everyday customs is satisfactorily indicated by that totemic feature 614
of the social organization revealed in the face-painting described in

[1] This man was one of those involved in the Robinson butchery on Tiburon Island a few months before the picture was taken; and he was one of those executed or transported for the affair during the interval between the 1894 and 1895 expeditions.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

462 ing field; though by far the greater part of their time is spent in listless lounging or heedless slumber under the incidental guard of roaming youths and toiling women. The matrons are the real workers in the tribal hive; they are normally alert and active, passing from one simple task to another, gathering flotsam food along the beach or preparing edibles in the shadow of the jacal, with an eye ever on material possessions and children; they frequently join in hunting excursions of considerable extent; they are the chief manufacturers of apparel, utensils, and tools; and the scions of Castilian caballeros are not infrequently staggered at the sight of half a dozen Seri women "milling" a band of horses, and at intervals leaping on one to kill it with their hands. The masculine drones are the more petted and courted by reason of their fewness, for during a century or two, at least, the women [162] [562] have far outnumbered their consorts—a disproportion doubtless tending in some respects toward the disintegration of the clan system and, reciprocally, toward the firmer union of the tribe.

[756] One of the most noteworthy extensions of feminine functions among the Seri is toward shamanism. So far as could be ascertained from Mashém and the associated matrons at Costa Rica, it is such baldrams as Juana María who concoct the arrow "poison", compound both necromantic medicines and curative simples, cast spells on men and things, and even fabricate the stone arrowpoints and counterfeit cartridges; though unhappily the data are neither so full nor so decisive as desirable.[1]

562 623 Conformably with their prominence in proprietary affairs, the Seri matrons seem to exercise formal legislative and judicative functions; for not only do they hold their own councils for the arrangement of the domestic business of the rancherías, but they also participate prominently in the tribal councils (as explained by Mashém), and play important rôles in carrying out the decisions of such councils—as when they cooperate with war parties as decoys, or journey across their bounding desert to spy out the land of the enemy.

614 On the whole, it would appear that the clan organization of the Seri conforms closely with that characteristic of savagery elsewhere, especially among the American aborigines. The social unit is the maternal clan, organized in theory and faith in homage of a beast-god, though defined practically by the ocular consanguinity of birth from a common line of mothers; yet the several units are pretty definitely welded into [619] a tribal aggregate by common feelings, identical interests, and conjugal ties. The most distinctive features brought out by the incomplete 562 investigation are the somewhat exceptional manifestation of property-right in the females, the singularly strong sense of maternal relation, and the apparent prominence of females in shamanistic practices as well as in the tribal councils.

[1] The agency of the women in applying the arrow "poison" was noted by Hardy; cf. p. 288.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

CHIEFSHIP

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1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

condition characterized by absence of property and thrift-sense; while its most essential concomitant is extratribal antipathy too bitter to permit toleration of alien blood, or even of alien presence save under the constraint of superior force.

MORTUARY CUSTOMS

The prevailing opinion among the better informed Caucasian neighbors of the Seri is that the tribesmen display an inhuman indifference to their dead; and this opinion is one of the factors—combining with current notions as to cannibalism and arrow-poisoning and beastlike toothing in battle—involved in the widespread feeling that the tribesmen are to be accounted as mongrel and uncanny monsters rather than human beings.

The opinion that the Seri neglect their dead on occasion would seem to rest on a considerable body of evidence; Mendoza's record of the numberless neglected corpses of warriors polluting the air and poisoning the streams of Cerro Prieto in 1757 would seem to be unusual only in its fulness; and Señor Encinas, albeit so conservative as to repudiate the reputed anthropophagy and to recognize better qualities among the folk than any contemporary, declares that they are utterly negligent of their dead, save that when the bodies lie near rancherías heaps of brambles are thrown over them to bar—and thus to lessen the disturbance from—prowling coyotes. Quite indubitable, too, is the specific testimony of vaqueros to the effect that Seri raiders overtaken by the Draconian penalty of the frontier merely lie where they fall, even when this is well within reach of the tribesmen, Don Andrés Noriega's verification of his boast (ante, p. 113) being an instance in point. On the other hand stands the conspicuous fact (unknown to the frontiersman) that well marked cemeteries adjoin some of the rancherías of interior Seriland. The sum of the somewhat discrepant evidence accords with a characteristically unsatisfactory statement by Mashém, to the effect that the mourning ceremonies are important only in connection with women—i. e., matrons—because "the woman is just like the family" ("la muger es como la familia"); and this intimation, in turn, is corroborated by the single known instance of inhumation in Seriland, as well as by certain indirect indications connected with the scatophagic customs (ante, p. 213). On the whole it seems certain that the mortuary ceremonies attain their highest development in connection with females, the recognized blood-bearers and legislators of the tribe.

The special dignification of females in respect to funerary rites is without precise parallel among other American aborigines, so far as is known, but is not without analogues in the shape of (presumptive) vestiges of a former magnification of matrons in the mortuary customs of certain tribes. The vestiges are especially clear among the Iroquoian Indians, whose aboriginal society coincided with that of the

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

Seri at various points; witness the following passage from the Onondaga mourning ritual, as collected and translated by Hewitt:

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Now, moreover, again, another thing, indeed, our voices come forth to utter; and is it not that that we say, that far yonder the Hoyaner [chief of highest grade] who labored for us so well is falling away as falls a tree? So, moreover, it is these things that he bears away with him—this file of mat-carriers, warriors all, visible and present here; also this file of those who customarily dance the corn-dances [the women]—they go prosperously. And alas! How utterly calamitous is that thing that occurs when the body of this woman falls! For, verily, far yonder in the length of the file will the file of our grandchildren be removed! These our grandchildren who run hither and thither in sport, these our grandchildren who by creeping drag themselves about in the dust, these our grandchildren whose bodies are slung to cradle-boards, and even those of them whose faces are looking hitherward as they come under the ground.[1]

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The identifiable cemeteries of Seriland are few and small—much less populous than might be expected of a tribe numbering several hundreds for centuries, and able to maintain well-worn trails threading all parts of their rugged domain. Three graves were noted near the abandoned rancheria at Pozo Escalante; one was observed near a jacal skeleton at Barranca Salina; five or six were made out doubtfully on a low spur adjacent to Punta Antigualla; another was found near the rancheria midway thence to Punta Ygnacio; still another was doubtfully identified hard by a ruinous jacal just where the foothills of Sierra Seri descend to the plain stretching toward Punta Miguel; and this distribution may be deemed representative. A scant half-dozen perceptible graves were observed near the considerable rancheria of Punta Narragansett, which was numerously inhabited during the Dewey surveys of 1873; one was found adjoining the old jacal near Campo Navidad; but none were discovered in connection with the extensive rancheria on Rada Ballena. The largest known cemetery occupies the triangular point of shrub-dotted plain pushing out toward the site of the old rancheria at the base of Punta Tormenta; it comprises perhaps a score of evidently ancient graves, while two newer ones were found on the pebble bar beyond the jacales. When near the pebbly beaches the graves are marked by heaps of pebbles and small cobbles, commonly about the size of those used as hupfs, these cairns being 3 or 4 feet long, two-thirds as wide, and seldom over 12 or 15 inches in height; and most of the cairns are accompanied and enlarged by piles (ranging from a peck to a bushel) of the scatophagic shells already noted. The graves remote from pebbly beaches are marked by heaps of cholla stems and branches, rudely thatched with miscellaneous brambles roughly pinned

[1] MS in the archives of the Bureau of American Ethnology. A somewhat more obscure version was recorded by Hale in "The Iroquois Book Rites": "Now, there is another thing we say, we younger brothers. He who has worked for us has gone afar off; and he also will in time take with him all these—the whole body of warriors and also the whole body of women—they will go with him. But it is still harder when the woman shall die, because with her the line is lost. And also the grandchildren and the little ones who are running around—these he will take away; and also those that are creeping on the ground, and also those that are on the cradle-boards; all these he will take away with him." (Brinton's Library of Aboriginal American Literature, number vi, 1885, pp. 141-142.)

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

but as the vicarious and visible exponent of an ever-immanent beast-god—the clan tutelary; her appeals to her brothers for administrative aid are precisely parallel to her intuitive passage from zoomimkry into the field of mechanical chance defined by protolithic implements; and the appeal, like the execution of the law either by herself or by her brothers, is controlled and regulated in absolute deference to the zoic pantheon. Thus, the inchoate tribal laws, expressed in habitual lines of action and modes of thought, are by no means conscious products of human wisdom, but are confidently imputed to a superhuman wisdom on the part of myth-magnified beasts of a mystical olden time; and, similarly, the power of executing these laws is by no means cognized as conscious human faculty, but is faithfully imputed to supernal potencies of mythical monsters. Essentially, therefore, the tribal law is putatively *zoocratic;* and the social organization may justly be classed as a putative *zoocracy.*

To prevent possible confusion, it may be desirable to note specifically that the Seri government is not matriarchal in any proper sense. As pointed out elsewhere, matriarchy is not (at least among the American aborigines) an antecedent of patriarchy, but a correlative of that form of government; and it would be especially erroneous and misleading to designate as matriarchal a tribe like the Seri, whose chiefs and subchiefs (i. e., appellate clan-administratives) are invariably masculine. Neither would it be just, despite the dominance of matrons in legislative and judicative matters, to regard the tribal government as a gynecocracy, such as have been noted in various parts of North America—e. g., in Sonora, according to a current tradition as to the origin of the name of the province, and among the Pomo Indians of California, according to Cronise as interpreted by Powers;[1] for the actual control is exercised by the warrior brothers, while the ideal control is vested in that zoic pantheon of which the matrons are putative mouthpieces. Physically and practically the Seri government is an adelphiarchy, as already indicated; but in the minds of the tribesmen themselves it is an inchoate theocracy putatively headed by a pantheon of animate monsters, whose prelates are personified in the painted clan-mothers.

Summarily, then, the Seri are zoosematic in esthetic, zoömimic in technic, zootheistic in faith, and putatively zoocratic in government, while even the Seri tongue is so largely mimetic or onomatopoetic in form as to accord with the industries and institutions; and in view of the intimate interrelations between the several lines of activity, it would seem preferable to determine the culture-status from the coincident testimony of all the lines, but feasible to measure it in terms of any one or more of these activital lines.

Now, on comparing the characteristics of the Seri with those of other known tribes of North America, many resemblances and a few differ-

[1] Tribes of California, pp. 180-181.

2: Kroeber E-5 (1930)1931 NU31 Seri NU31

Society

583 Marriage is monogamous. The wife is bought, in spite of the
[515] poverty of the Seri. Santa Blanco paid 150 pesos in property for his wife. Chico Romero, a widower, paid more for his, a widow, "because she had three daughters, and a family with daughters is rich" (in expectation of bride prices).

591 The wife goes to live with the husband. A young couple lives
562 with the young man's parents, perhaps in an annex to the house. "The man commands." Chico was emphatic on this point, and repeated that when his son married he would live with him, not with the girl's relatives. Both he and Santo have step-sons-in-law as well as daughters-in-law living with them, but this is because they are chief and boat-owner respectively; (and the sons-in-law are young).

833 Copulation was said to take place immediately on marriage. McGee's statement of a period of continence being cited as the custom of a foreign tribe, the informant obviously wondered and laughed. Intercourse goes on during pregnancy; but not for some months
[843] after birth, for fear of a new pregnancy, which would be injurious to the child. A good man respects his wife at all times and does not constantly pursue her.

144 No half-breeds were seen, and the Seri declare they are free of
164 venereal disease.

551 Nothing could be elicited from the informant as to anything like
614 the group-inherited names of lineages, or clans, of the Yuman tribes.

When a woman dies, the widower may give the children to his
768 dead wife's parents to raise. This is the only item learned that might point to McGee's "matriarchate"; but the informant may have been thinking of particular cases. His son lives with him, though he lost the boy's mother.

582 Cross-cousin marriage is as prohibited as that of parallel cousins. This is in accord with the sibling terminology for all cousins; but in view of the present small number of the tribe, the rule must work difficulty.

A man does not marry his dead wife's sister. Apparently he
[587] may not. Nor is there levirate. The informant volunteered the question if marriage with step-daughters was permitted by other peoples. Being told of the Navaho custom, he seemed shocked.

606 Neither husband nor wife looks at or addresses either parent-
183 in-law. In the isolated, small-group life of the Seri, this rule can hardly be adhered to with complete rigor, and its conspicuous carrying out was not observed; but then everything in their behavior is casual, informal, and slovenly.

607 The kinship system as recorded contains a note as to a woman not addressing her younger sister's husband by kinship term except

Malkin F-5 (1953-1955)1962 NU31 Seri NU31

*825 grounds. On the other hand, sometimes absence of a bird, the ibis for example, from Desemboque has been explained by lack of suitable mud.

Another sort of explanation for the presence or absence of a bird in a locality has been the presence or absence of fresh water. This was true of the dove which is said to be found near fresh water (for example in the Desemboque arroyo) which it drinks. This observation is not entirely amiss. Regardless of how far from fresh water the dove will nest, it does like to congregate near it. Still another explanation has been offered for the woodpecker and the humming-bird and the osprey. The humming-bird, they say, is rare where there are no trees. (This in view of its nesting habits and its feeding habits is not surprising.) The woodpecker, they think, must have a sahuaro to live in (quite correct) and this is why it is absent from the region of Infernillo where there are no sahuaros. The osprey, they say, also likes to live more in areas where there are sahuaros because it nests on the dry ones.

Parental Function

Here such meagre data as are available show that according to the informants rearing of the young among the birds is entirely the female's preoccupation and that the male has nothing to do with it. They repeatedly emphasized that "young do not know the father" or that "they are fed only by the mother." This hardly reflects the situation in nature, at least for a great many birds and especially for the song birds. But there is in the Seris, evidently, a streak of belief in the uselessness and uncooperativeness of the male in such matters. This belief is met up with time and again in many groups of animals, and probably represents a conventional attitude, not tempered by observational evidence.

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Dangerous Birds

*825 With the exception of the eagle, no bird is considered dangerous and the eagle, who is supposed to be able to lift and attack a man, earns its reputation only on hearsay.

[P. 21 B]

Bancroft E-S (1953-1955)1962 NU31 Seri NU31

*825 ence of feather. Uncertainty about the bat then is significant, considering the combination of traits. Other criteria may also be employed. Crabs are distinguished from some of the other marine crustaceans by their hairiness. Differences among the insects are suggested by general shape, hairiness and habitat although also certain features of behaviour sometimes suggested affinity.

Distinctions made within the groups coincide on the whole with the natural groupings, at least for the more conspicuous forms. Hence, comes the breakdown of fishes into two major categories: fishes proper on one hand, and mantas and sharks on the other, snakes and lizards among the reptiles and mammals proper and Cetaceans among the mammals. In a way the Seris' greatest talents appear to be in their ability to recognize the reptilians and amphibians. Here they confused only two species: the two small inconspicuous Utas.

[182] As for the ability to identify an animal, it is directly related to its economic importance and relative degree of frequency in the territory, as one may well expect.

[824] A movement represents the basic difference between animals and plants to the Seris. This is why a sponge is considered a plant while sessile molluscs are animals.

Sexing

Three tendencies distinguishing sexes run through the entire gamut of the animal forms, through all the classes except in the birds: the males are larger, darker and more brightly colored than are the females. These tendencies the Seris may combine in different ways. In the reptiles it is color pattern rather than size that suggests to them the male animal and while the male snakes tend to be darker than the females, in the lizards they tended to indicate the prevalence of the bright color in the males.

Then also in several groups very specific diagnostic traits are employed, as a rule in form of all sorts of extra appendages which are supposed to decorate the males. This is interesting, because it suggests the presence of such extra structures in the males rather than in the females, and, as has been seen from the text, these structures are often attributed to the males regardless of whether or not they really exist in them. The femoral ridge in the male lizards is an especially good illustration of this principle.

[182] There is also a suggestion that in one instance at least the Seris transpose their own social situation on the animals. The bees they claim have "chiefs" and these "chiefs" are males and they are also larger. Here socio-anthropomorphic interpretation is very clear.

But as indicated in the text, the sexing criteria differ often in different groups and it is only fair to show that birds represent an exception to the three major tendencies. The birds have sexes all right but the Seris cannot tell them apart. This requires no further commentary if we reflect why the Seris must think that way.

[182] [562] Finally, there is one more interesting point: [P. 55 A]

9:Malkin E-5 (1953-1955)1962 NU31 Seri NU31

no temperamental differences between the sexes can be detected which would only suggest that here the Seris do not introduce the interpretations from their own social situations, because they do have very clear cut ideas of the temperamental differences between men and women.

Age

Here aboriginal knowledge is virtually non-existant nor have the Seris made much effort to try a guess. There are hints that sometimes they associate the length of life of smaller animals with the season, obviously because these disappear for the cold season. Another feeble tendency was for the older informants to suggest greater longevity of an animal than it was customary for the younger informants. Finally, what little knowledge there was, it was still perceptibly greater for the reptiles than for almost any other class and this is quite in line with the general state and complexity of the Seri knowledge of the natural history of these creatures.

Size and Weight

Here occupational influences are overwhelming. The weight of fishes and mammals was on the whole correctly estimated — this associated with the economic importance of these animals. Same features in the reptiles came out only so-so on the general scale and here, surprisingly, not too well on the economically important marine turtles. A rule of thumb is applied (usually incorrectly anyway) to the birds while the remainder of animal groups is covered by gross ignorance and disinterest in this respect.

Development

In general Seri knowledge of the mammalian development is far ahead of the rest of the animals and progressively becomes more and more obscure with the decrease in size. Within this range, specific ideas differ and often are associated with the particular group of mammals. One classic example is fishes which they divide into the viviporous and oviporous with sharks and mantas in the first category and the rest of the fishes in the second. The distinctions between the egg laying animals and those that are born alive run pretty much through the entire kingdom. Insects are the sole exception here but this is largely because of the lamentable lack of knowledge by comparison with the other animals.

Sequential development generally also runs through all of the groups. The belief in the time sequences is so striking that it covers even such groups as the fishes, for here the details of the mating sequences are not understood and, according to the Seris, there must be a time lag between mating and the delivery of the eggs by the female. At other times, such sequences are expressed in another sort of cultural fiction. I have in mind the birds where one month each elapses between the delivery of the eggs, hatching out of the young and the flight of the nestlings.

Knowledge of the young litters or the number of eggs laid by the birds or the oviporous reptiles

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

597 While the lieutenant attached no significance to the painting, the
648 procedure would seem to have been a ceremonial adoption, such as might, for example, be used in connection with a confederate clan. The description of the painting is sufficiently explicit to identify the totem with that of the Turtle clan, represented by the clanmother and the daughter of the clan at Costa Rica in 1894 (plates XVIII and XXIV); but it is noteworthy that the salutation with which the ceremony terminated, and which may be rendered "Captain-Brother of the Sharks", would seem to identify the totem with the shark rather than the turtle.[1]

The second case of adoption (if so it may be styled) was that of Señor Encinas, after his bloodiest battle, in which nearly all of the Seri warriors were left on the field. In this case there was no ceremony, or at least none remembered by the beneficiary; he was merely informed by a delegation of aged dames that thenceforth he would be regarded as a stronger and more invulnerable chief (shaman) than any member of the tribe, and hence as the tribal leader.

173 The third instance is still less definite, though it seems to be trust-
563 worthy. There is a widespread tradition throughout Sonora that in the course of a brush between a band of Papago hunters and a marauding bunch of Seri warriors in the mountains southeast of Cieneguilla
727 twenty-five or thirty years ago, a Papago maiden was captured and carried off to Tiburon; and that for some years thereafter—i. e., until the Papago had taken ample blood-vengeance—the intertribal animosity was exceptionally bitter. No wholly satisfactory basis for the traditions could be found among the Papago, though some of the silences of the old men were suggestive; nor was the tradition fully credited by Señor Encinas, despite its deep lodgment in the minds of some of his yoemanry. When Mashém was interrogated on different occasions, he merely shook his head in stolid silence; but when the device was adopted of inquiring the number of Papago children brought into the tribe through this woman he responded promptly with a snort of scorn, and followed this with the explanation that she never had children, and could not because she was an alien slave. The explanation was corroborated by clanmother Juana María and other matrons, with sundry expressions of contemptuous disapproval of the inquiry and scorn of the very idea that aliens could fructify within the tribe. Later, the ice being broken, Mashém intimated that the woman had recently died of old age and its consequences—doubtless as an entrant. On the whole, the direct testimony would seem to substantiate the tradition, and to supplement it with the short and simple annals of a spouseless and childless life (incredible of other tribes, but consistent

[124] [773] [1] This identification may possibly be correct; the coalescence of the totem with the turtle was shaped through unwilling and perhaps misleading responses made by Mashém to inquiries in 1894—these responses denoting a sea monster which in the beginning helped the Ancient of Pellicane to make the world by pushing from below, and which is now very good food—a description apparently fitting the turtle more closely than the other animal.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

with the customs of the Seri), endured for many years and ending at last in unpitied death.

Collectively the cases seem to define a germ, rather than a mature custom, of adoption. In the first case a benefactor (by means regarded as magical) was formally inducted into the reigning family; in the second case the conquering hero (through what were again regarded as magical means) was less formally recognized and venerated, even worshiped, as an all-powerful shaman; while in the third case a representative of the doughtiest alien tribe was enslaved, probably with motives akin to those expressed in the carrying of chargeless guns, the making of imitation machetes, and other fetishistic devices. Except in the first instance there is no indication of consistent custom; but since the entire history of the tribe clearly contradicts regulated adoption of aliens (and indeed affords no other example), it must be inferred that any such custom is intratribal rather than intertribal.

MARRIAGE

The most striking and significant social facts discovered among the Seri relate to marriage customs.

As noted repeatedly elsewhere, the tribal population is preponderantly feminine, so that polygyny naturally prevails; the number of wives reaches three or possibly four, averaging about two, though the younger warriors commonly have but one, and there are always a number of spouseless (widowed) dames but no single men of marriageable age. So far as could be ascertained, no special formalities attend the taking of supernumerary wives, who are usually widowed sisters of the first spouse; it seems to be practically a family affair, governed by considerations of convenience rather than established regulations—an irregularity combining with other facts to suggest that polygyny is incidental, and perhaps of comparatively recent origin.

The primary mating of the Seri is attended by observances so elaborate as to show that marriage is one of the profoundest sacraments of the tribe, penetrating the innermost recesses of tribal thought, and interwoven with the essential fibers of tribal existence. Few if any other peoples devote such anxious care to their mating as do the Seri;[1] and among no other known tribe or folk is the moral aspect of conjugal union so rigorously guarded by collective action and individual devotion.

The initial movement toward formal marriage seems to be somewhat indefinite (or perhaps, rather, spontaneous); according to Mashem it may be made either by the prospective groom or else by his father, though not directly by the maiden or her kinswomen. In any event the prerequisites for the union are provisionally determined in the suitor's family; these relate to the suitability of age, the propriety of

[1] Perhaps the closest parallel in this respect is that found in the elaborate marriage regulations prevailing among the Australian aborigines, as described by Spencer and Gillen, Walter E. Roth, and other modern observers.

[90 cont.]

361 population. There is an obvious separation there between the
●563 Seri and the yori, or non-Seri, with manifest differences in cultural patterns.

The yori occupy an extensive area per person; their homes are quite distant from one another, and four families in conjunction occupy a belt of land of about 100 by 50 meters.

361 The Seri are grouped by families, inhabiting minute squares of from one and a half to two meters to a side. The yori
182 feeling of prestige, based on the territorial expanse of their prop-
361 erty, contrasts with the feeling of security based on personal
511 contact that dominates many aspects of Seri life; the small size of the Seri habitation indicates, not a low standard of living, but a distinct [91] concept of comfort, according to which the Seri, having all the desert to live in, like the yori, confine themselves to the limits that personal contact permits.

In January, 1952, there were 35 dwellings, with an aver-
592 age of 4.6 persons in each, those lodging four, five, and six persons frankly predominating. Each three or four more closely related families occupied contiguous homes, forming relatively separate conjunctions by themselves, which we might call
596 macrofamilies.

The family is the basic Seri institution, which is manifest in all aspects of life: it is the center of production, co-operation, the division of labor, education, diversion, government, etc.

582 Going beyond the family and macrofamily organization,
619 we have a tribal structure based on the generalized exchange (2)
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2. Lévy Strauss, Les Structures élémentaires de la Parenté [Elementary Kinship Structures], Paris, 1949.

of members for concluding marriage, by which all the Seri are actually linked by consanguinity or affinity. One is almost able to include all the members of the tribe on a single genealogical chart, systematically excluding only some few outsiders who have penetrated the group.

582 This situation, which would make one think of a primitive

7: Marroquin E-5 (1955) 1957 NU31 Seri NU31

Geographical Distribution

The Seri Indians live in two small Indian villages on the coast of the Gulf of California, State of Sonora, Desemboque and Punta Chueca. From there they frequently go to Iala Tiburón in the Gulf of California. 131 [484]

Approximately 35 Seri families live in Desemboque and 16 in Punta Chueca. Only in the first of these two places are there five "yori" (mestizo) families. 162 [563]

Sanitary Problems

The Seris have no defense against certain diseases which, like measles and flu, they acquire in their relations with the "yoris"; these diseases cause many deaths among the Indians. According to the an- 164 731 [751]

[291] [854] [302]

Seri Indian woman of Desemboque, Sonora. *Photo Henriette Yurchenco.*

cient Seri Chico Romero, last Seri Governor, there was a great smallpox epidemic there about 1897 which caused the death of a third of the tribe which was living in Costa Rica, a small ranch on the coast of Sonora.

In 1955 measles appeared among the Seris, with a great number of victims, children and adults; the actions of the rural teacher Leo Sandoval, the Linguistic Eduardo Mosser and of the sanitation authorities of Hermosillo, succeeded in keeping the mortality rate down; nevertheless, the number of deaths reached 5% of the total native population. [165] [744]

175 if they were as hungry then as they are today, they would not stop to
648 spike a man up preparatory to serving him. Their only tools then were
266 rocks to use as hammers and hoop iron for knives, and these are in
114 universal use today.

[412] There is no doubt that the men were killed, but I think these mining men purposely exaggerated their findings, if any.

648 There is no doubt that the Seris were brave fighters, treacherous
721 murderers, sparing neither men, women or children on their raids,
727 killing ruthlessly. But there is one charge which cannot be brought against them, which cannot be said of many tribes north of the border. So far as I could find out, they never tortured nor scalped.

648 The Seris never took prisoners and they never inter-married with
721 other tribes, so their strain is pure.

727 There was one exception. Sixty or seventy years ago, the Seri
583 Chief Coyote Iguana and his band of warriors held up the stage between Hermosillo and Guaymas, and killed all except a handsome Spanish girl of the better class. This girl, Coyote Iguana made his wife and by her raised a family. One granddaughter still survived in 1924, and while more attractive than the general run of Seri, her complexion was fully as dark.

600 The Seris, Ishmaelites among the native tribes of Mexico---the most fascinating Indians in North America!

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123 *Reception Committee, Tiburon Island - 1935*

115 On the twenty-fifth of April, nineteen twenty-two, I engaged the services of Roberto Thompson, who with his father and grandfather

[text continues on p. 149]

five-gallon cans full. They were fastened one each end of a *palanca*, or shoulder pole, and thus brought to camp. If anyone thinks this is easy they should try it over rocky, uneven, sandy, stony ground, dodging thorny vegetation at every step. 123

The colors of the mountains were mostly red of volcanic character, with great streaks of yellow and pink, deeply cut with side canyons and sharp ridges, all similar to other desert ranges. [133]

The men caught a few crabs and gathered clams in the afternoon, which helped out our larder. One of them told about his wife being shot. He said they had a big fiesta and during the drunk, a Seri shot at his head. He happened to be stooping alongside his wife and the bullet buried itself in his wife's thigh. We could feel it through her clothes.

A good many years ago when stages ran between Nogales and Guaymas, the Seris held up the stage, killed the men and captured one Mexican girl. She was brought here and made the wife of one of the chiefs, Coyote Iguana, and she bore children. Some years later her brothers came here to induce her to return, but she refused, saying that she was ashamed to go back and she had children here. About fifteen years ago in a battle with the Papagos, two of her sons were killed. 648 727 563

The Papagos have taken toll of many Seris, these hunted Indians who are such fascinating and ingenious companions, whether they are harpooning turtle or packing water through the thorny wastes. 648

372 516 291

Seris making fire (with fire drill) - Island of Tiburon

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Maria Jesusa - Great grand-daughter of Lola Casanova and Coyote Iguana. She is self-conscious and embarrassed to face the white man's magic box for the first time. Her face is decorated in blue, in a typical Seri design. Her features are more regular and attractive than the pure Seri and her clothing shows more taste and pride than her half sisters. Taken at La Cruz, island of Tiburon---E.H.D.

BAND V

642 These people were apparently hunters, gatherers, and fishermen. It is said that they speared fish from the shore since they did not use balsas. They too apparently raided the ranches. Their warring nature has already been discussed; it resulted in the acquisition of few friends. However, several marriages between members of this band and members of subdivision 2 of Band III are said to have occurred.

BAND VI

The members of Band VI lived on San Esteban Island and were the most primitive of the tribe. They lived in huts made of driftwood and in caves and made extensive use of the balsa. Although they did not have the bow and arrow, they did become expert in the use of the spear. The people depended mainly on a seafood, iguana, and maguey diet.

621 Perhaps it was due to the confined living space on the small 628 island with the accompanying lack of fresh water that relations 578 between the four subdivisions were precarious and fights broke out frequently. The Seri today stress the fact that the members of this band were impetuous and unpredictable.

642 Their relations with the other bands were generally good however. Seri from Band III were free to visit San Esteban where they were well treated.

The San Esteban people seldom traveled to the mainland, and, since they spoke no Spanish, it is probable that they made no peaceful contact with non-Seri groups.

642 COLLAPSE OF THE BAND SYSTEM

628 Internal strife in the Seri tribe was probably a major factor 578 in the establishment of the band system. External strife was a 648 major factor in its downfall.

Reference has been made to the plundering, killings and rustling of cattle to which certain of the bands were dedicated. The concern of the Sonora government was aroused, and steps were taken to crush the rebellious groups. According to the present-day Seri, military action by army units and rancher outfits against the various bands resulted in the near-destruction of the whole tribe.[11]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

approaching nubility—receive some advantage through the connivance of the matrons. To a considerable extent in the matter of sustentation, and to a dominant degree in the matter of apparelling, the distribution of values is affected by a highly significant (though by no means peculiar) humanitarian notion of inherent individual rights—i. e., every member of the family or clan is entitled to necessary food and raiment, and it is the duty of every other person to see that the need is supplied. The stress of this duty is graded partly by proximity (so that, other things equal, it begins with the nearest person), but chiefly by standing and responsibility in the group (which again are reckoned as equivalents of age), whereby it becomes the business of the first at the feast to see that enough is left to supply all below him; and this duty passes down the line in such wise as to protect the interests of the helpless infant, and even of the tribal good-for-naught or hanger on, who may gather crumbs and lick bones within limits fixed by the tribal consensus. Beyond these limits lies outlawry; and this status arises and passes into the tribal recognition in various ways: Kolusio was outlawed for consorting with aliens, and Mashem narrowly missed the same fate at several stages of his career; the would-be grooms who fail in their moral tests are ostracized and at least semioutlawed, and range about like rogue elephants, approved targets for any arrow, until they perish through the multiplied risks of solitude, or until some brilliant opportunity for display of prowess or generosity brings reinstatement; deformed offspring are classed as outside the human pale, even when the deformity is deemed rather by occult associations than by physical features; abnormal and persistent indolence, too serious for scorn and ostracism to cure, may also outpass the tribal toleration; and, as indicated by Mashem's guarded expressions and slight additional data, disease, mental aberration, and decrepitude are allied with indolence and deemed sufficient reason for excluding the persistently helpless from the tribal solidarity, and hence from recognized humanity—and the fate of the outlaw, even if nothing more severe than abandonment in the desert, is usually sure and swift. The entire customs of outlawry among the Seri are singularly like those of gregarious animals, including especially kine and swine in domestication. Now, studied equity in the distribution of necessaries might seem to be allied to thrift; but it is noteworthy that this is not so among the Seri, who take thought for one another but not for the morrow, who seem to have no conception of storage (save an incipient one in connection with water and the repulsive notion underlying the "second harvest"), and who habitually gorge everything in sight until their stomachs and gullets are packed—and then waste the fragments.

The division of labor which affects proprietary interests is undoubtedly affected in turn by the militant habit of the tribe and by the frequent decimation of the warriors. In general, the adult males limit their work to fighting and fishing, with occasional excursions into the hunt

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

614 Classed with respect to major administration, therefore, the clan may be regarded as an informal *adelphiarchy* (*ἀδελφός* and *ἄρχος*) or *adelphocracy* (*ἀδελφός* and *κρατός*). It has none of the elements of the patriarchy, since male lineage is not recognized, and can not be classed as a matriarchy, since the clanmother is administratively subordinate to her brothers; while the avunculate functions are apparently inchoate and indirect, i. e., exercised only through or in conjunction with the clanmother. In short, the clan is ordinated or regimented in ostensible accordance with physical power, though the real faculty is confused (after the fashion of primitive thinking generally) with mystical faculties, imputed largely on magical grounds but partly on grounds of age-reverence, etc. Now, when two or more clans combine, the basis on 578 which the common chiefship is determined is similar to that determining the clan leadership; at the outset three factors enter, viz, (1) the 614 seniority of the clans in the accepted tribal mythology (2) the prowess 643 of the respective clan leaders (always weighed in conjunction with the [756] shamanistic potency of their consorts), and (3) the numerical strength of the respective clans; but practically, so far as can be judged from all available information, the choice really reflects physical force, since in case of doubt the strongest and bravest man becomes the chief by virtue of his strength and bravery, while the strongest clan finds fair ground for claiming seniority in the very fact of its strength. Naturally disputes arise in the adjustment of the several relations; and in the actual analysis in council, the dispute is commonly reduced to a contest between gods and men, i. e., between the claims for mystical and magical potencies on the one hand and the claims of brawn and bone on the other hand, so that strength wins, unless omens or prodigies turn the scale—which happens often enough to keep the subjective and the objective elements in fairly equal balance. Sometimes the contests are quickly settled; again they last for months, during which the tribe struggles under its weight of Cerberus heads; and repeatedly the disputes have ended in the annihilation of clans, or even in the tribal fissions attested by the recorded and traditional history of the Serian family.

643 The chiefship once determined, the leader bends all energies toward maintaining the position by which he is dignified and his clan exalted. He recognizes his responsibility for the welfare of the tribe—not only for success in battle and food-getting, but for stilling storms at sea, protecting the aguajes from the drought-demons, and securing all other benefits, both physical and magical; he must be aggressive yet cautious on the warpath, fleet and enduring in retreat, indomitable in the chase, bold but not reckless on the balsa, and above all panoplied and favored by the shadowy potencies of air and earth and waters; he must be the local and lowly Admirable Crichton, and his never-neglected watchword must be *noblesse oblige*. His practical devices for maintaining prestige are many and diverse; it is commonly the chief who carries the sym-

642 621 618 714 [186] [406]

The third specification states that a kin group, to constitute a clan, must exhibit actual social integration. Murdock stresses the necessity of observing a positive group sentiment, such as would be manifested by organized collective activities or group functions, before the group can be characterized as a clan. An essential feature of this group sentiment is the inclusion of the wife as an integral member of her husband's kin group.

621 618 [628] [622] [701] [583] [406]

This sort of social integration was indeed exhibited by the Seri kin group of each subdivision. It was, in fact, fostered by the isolation brought about by the inhabitants' reservation of hunting and fishing rights for themselves. Tension existed between certain subdivisions and, since there was no chief, the oldest capable male organized and led the fighting force of the clan. In times of need, the members of the group united to give mutual assistance. The groom-to-be could expect material aid from his fellow clan members in the payment of the bride price. Mutual assistance was given in the fulfillment of puberty ceremony and burial obligations. The men cooperated in their hunting and fishing expeditions. The women of the clan, including the in-married spouses, cooperated in the gathering and sharing of food. Everyone could attend the various fiestas. It is said that in the performance of these collective activities, close harmony generally prevailed.

BAND INTERNAL AND EXTERNAL RELATIONS

642 619 578 [648]

The division of the Seri tribe into bands was likely brought about through internal strife. During the period of band history known to the present-day Seri,[5] however, serious skirmishes seem to have been fought predominantly with non-Seri groups.[6]

Band I

642 621 628 578 [721] [648]

Band I internal relations appear to have been relatively peaceful. The inhabitants of subdivisions 1, 2, 3, 4, and 5 were fishermen as well as hunters and gatherers, whereas the people of subdivision 6 preferred to subsist on gathered food and wild game. Also, the members of Band I robbed cattle and horses, which pursuit brought reprisals from the Mexican ranchers. There was apparently considerable social intercourse among the six subdivisions, even to the extent that hunting rights of one were sometimes granted to inhabitants of a neighboring section.

Trouble developed when some members of Band I speared fish within the domain of Band V. Here also bitter fighting broke out, and any semblance of peaceful co-existence between the two groups was destroyed.

578 642 621

Except for the occurrence of several battles, relations between Bands I and III were peaceful.

Relations with non-Seri groups were not always peaceful. For many years the members of Band I were on friendly terms with the Papago; they often camped together and even intermarried. Due to a misunderstanding,[10] fighting erupted between the two groups and many people were killed in the years which followed. 642 648

BAND II

The external relations of Band II were decidedly turbulent. Although their primary base of operations was a coastal area, the people did not use the ocean as a source of food. They preferred beef and horse meat which was easily acquired by stealing animals from ranches. Here again the wrath of the ranchers and the government was incurred. [262] [721]

A small group of Yaqui eventually joined Band II and intermarried with them. The Seri claim that the Yaqui induced the warriors of this band to assault travelers on the road between Hermosillo and Guaymas. Coyote Iguana, who according to Seri tradition captured Lola Casanova, was of this band. This activity soon brought retribution from the government. Later, dissension arose between these Seri and the Yaqui. [582]

The enmity and strife that occurred between Bands II and V were mentioned above.

BAND III

642 578 628 621

The history of the internal relations of this band on Tiburon Island seems to have been marked by periods of violence. Battles between subdivisions sometimes occurred; however, they were usually short-lived and soon forgotten. A major struggle once occurred when a shaman named *ʔapetla* "the invincible one" and warriors from subdivision 4 made repeated raids upon the neighboring subdivisions and killed many. Eventually, his enemies overcame their fear and destroyed the killer. [721]

642 648 721

Although the inhabitants of Band III were hunters, gatherers, and fishermen, they began to rob cattle once they became established on the mainland. They too incurred the wrath of ranchers and the government.

BAND IV

642 621 628

Since the members of this band were, by choice, inhabiting an inland area of Tiburon Island, they lived in relative isolation as hunters and gatherers. Their primary contacts were with members of Band III with whom they intermarried. [361] [582]

BAND V

These people were apparently hunters, gatherers, and fishermen. It is said that they speared fish from the shore since they did not use *balsas*. They too apparently raided the ranches. Their warring nature has already been discussed; it resulted in the acquisition of few friends. However, several marriages between members of this band and members of subdivision 2 of Band III are said to have occurred.

BAND VI

The members of Band VI lived on San Esteban Island and were the most primitive of the tribe. They lived in huts made of driftwood and in caves and made extensive use of the balsa. Although they did not have the bow and arrow, they did become expert in the use of the spear. The people depended mainly on a seafood, iguana, and maguey diet.

Perhaps it was due to the confined living space on the small island with the accompanying lack of fresh water that relations between the four subdivisions were precarious and fights broke out frequently. The Seri today stress the fact that the members of this band were impetuous and unpredictable.

Their relations with the other bands were generally good however. Seri from Band III were free to visit San Esteban where they were well treated.

The San Esteban people seldom traveled to the mainland, and, since they spoke no Spanish, it is probable that they made no peaceful contact with non-Seri groups.

COLLAPSE OF THE BAND SYSTEM

Internal strife in the Seri tribe was probably a major factor in the establishment of the band system. External strife was a major factor in its downfall.

Reference has been made to the plundering, killings and rustling of cattle to which certain of the bands were dedicated. The concern of the Sonora government was aroused, and steps were taken to crush the rebellious groups. According to the present-day Seri, military action by army units and rancher outfits against the various bands resulted in the near-destruction of the whole tribe.[11]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

with the customs of the Seri), endured for many years and ending at last in unpitied death.

Collectively the cases seem to define a germ, rather than a mature custom, of adoption. In the first case a benefactor (by means regarded as magical) was formally inducted into the reigning family; in the second case the conquering hero (through what were again regarded as magical means) was less formally recognized and venerated, even worshiped, as an all-powerful shaman; while in the third case a representative of the doughtiest alien tribe was enslaved, probably with motives akin to those expressed in the carrying of chargeless guns, the making of imitation machetes, and other fetishistic devices. Except in the first instance there is no indication of consistent custom; but since the entire history of the tribe clearly contradicts regulated adoption of aliens (and indeed affords no other example), it must be inferred that any such custom is intratribal rather than intertribal.

MARRIAGE

The most striking and significant social facts discovered among the Seri relate to marriage customs.

As noted repeatedly elsewhere, the tribal population is preponderantly feminine, so that polygyny naturally prevails; the number of wives reaches three or possibly four, averaging about two, though the younger warriors commonly have but one, and there are always a number of spouseless (widowed) dames but no single men of marriageable age. So far as could be ascertained, no special formalities attend the taking of supernumerary wives, who are usually widowed sisters of the first spouse; it seems to be practically a family affair, governed by considerations of convenience rather than established regulations—an irregularity combining with other facts to suggest that polygyny is incidental, and perhaps of comparatively recent origin.

The primary mating of the Seri is attended by observances so elaborate as to show that marriage is one of the profoundest sacraments of the tribe, penetrating the innermost recesses of tribal thought, and interwoven with the essential fibers of tribal existence. Few if any other peoples devote such anxious care to their mating as do the Seri;[1] and among no other known tribe or folk is the moral aspect of conjugal union so rigorously guarded by collective action and individual devotion.

The initial movement toward formal marriage seems to be somewhat indefinite (or perhaps, rather, spontaneous); according to Mashém it may be made either by the prospective groom or else by his father, though not directly by the maiden or her kinswomen. In any event the prerequisites for the union are provisionally determined in the suitor's family; these relate to the suitability of age, the propriety of

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1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

thus they agree, she shall go along with him as betrothed, but he is not to have any knowledge of her till the utmost payment is discharged; all which is punctually observed. Thus they lie together under one covering for several months, and the woman remains the same as she was when she first came to him.[1]

This record also is peculiarly pertinent, partly in that it practically corroborates the Seri testimony, but chiefly in that it indicates definite transition toward a higher culture-plane in which the primitive material test is at least partially replaced by a commutation in goods or their equivalents.

On reducing the marital customs of the Seri to conventional terms, the more prominent features are found to be (1) strict clan exogamy and (2) absolute tribal endogamy, together with (3) theoretical or constructive monogamy, coupled with (4) vague traces of polyandry, and (5) an apparently superficial polygyny, as well as (6) total absence of purchase or capture of either spouse.

On reviewing the customs in the light of their influence on the everyday life of the tribe, certain features stand out conspicuously: (1) Perhaps the most striking feature is the collective character of the function; for while the movement originates in personal inclination on the part of the suitor and is shaped by personal inclination on the part of the maiden, all manifestations of inclination are open and public (at least to the elders of the two clans involved), while the personal sentiments on both sides are completely subordinated to the public interests of clans and tribe as weighed and decided by the matronly lawgivers and adelphiarchal administratives. Thus neither man nor maid mates for themself, but both love and move in the tribal interests and along the lines laid down by the tribal leaders. (2) As a corollary or a complement (according to the viewpoint) to the collectivity of the mating, the next most striking feature is the formal or legal aspect of the union; for the entire affair, from inception to consummation, is rigorously regulated by precedents and usages handed down from an immemorial past. Thus the roots of young affection are not destroyed but rather cultivated, though the burgeoning vine and the outreaching tendrils are trained to a social structure shaped in ages gone and kept in the olden form by unbroken tradition. (3) A collateral feature of the customs is the necessary reaction of the requirements on individual character of both groom and bride; for the would-be warrior-spouse is compelled to display high qualities of physical and moral manhood on pain of ostracism and outlawry, so that his passions of ambition and affection are at once stimulated to the highest degree, while the maiden's pride of blood and possession and her sense of regnant responsibility are fostered to the utmost. The brief preliminary courtship and the long probationary mating mark an era of intensification in two lives at their most impressionable stage; and if there be

[1] The History of Carolina, etc, by John Lawson (1714), reprint of 1860, pp. 362-363. Attention was called to this passage by Mr James Mooney.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

614 earlier paragraphs (pp. 164–169); these symbols evidently represent an
[302] exclusively maternal organization into clans consecrated to sole tutelaries. The tutelaries, or totems, together with the clan names and all personal designations connected with the totems, are highly esoteric, and were not ascertained save in the few cases mentioned above.[1]

It should be observed that the identification of kindred by the alien
593 observer is difficult and somewhat uncertain, since the relationships recognized in Seri society are not equivalent to those customary among Caucasians. It was found especially difficult to identify the husband
● [582] of the jacal, partly because he is commonly incongruously younger (and hence relatively smaller) than the mistress, and partly because of the undignified position of outer guard into which he is forced by the tribal etiquette. Moreover, his connection with the house is veiled by the absence of authority over both children and domestic affairs, though he exercises such authority freely (within the customary limits) in the
[842] jacales of his female relatives. There is, indeed, some question as to the clear recognition of paternity; certainly the females have no term
601 for "my father", i. e., the term is the same as that for "my mother", *em*, though the males distinguish the maternal ancestor by a suffixed syllable (*e*="my father"; *e-ta* or *i'-tah*="my mother"), which seems to be a magnificative or an intensificative element. It is noteworthy that the kinship terminology is strikingly meager; also that while the records suggest various significant points, the material is hardly rich enough to warrant complete synthesis of the consanguineal system.

While the burden of the more permanent property pertains to the
42 women, there is a decided differentiation of labor with a concomitant vesting of certain property in the warriors—the distinctively masculine chattels comprising arrows, quivers, bows, turtle-harpoons, etc. There are indications that the balsas, too, are regarded as masculine property. The impermanent possessions—water, food, etc—seem to be the common property of men, women, and children, except in so far as the
[264] right is regulated by regimentation; for the privileges of eating and drinking are enjoyed in the order of seniority. In the reckoning of
554 seniority, the chief (who is comonly such in virtue of his position as
602 nominal elder brother of a prolific dame) ranks first, and is followed by other warriors in an order affected in an undetermined way by conjugal relations as well as by their prowess or sagacity (the equivalents of age in primitive philosophy) down to an undetermined point—apparently fixed by puberty; then comes the clanmother, followed by her daughters in the order of nominal age, which is affected by the status of spouses and the number of living offspring; finally come the children, practically in the order of their strength (which also is deemed an equivalent of age), though the girls—especially those

[121] [1] The chief object of the 1895 expedition was to pursue the inquiries concerning social organization, totems, etc.; but, as mentioned elsewhere, this object was defeated by the troublous history of the tribe during the earlier part of 1895, and the consequent revival and intensification of their animosity toward aliens.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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584 [582] the clan relation, etc; for no stripling may seriously contemplate matrimony until he has entered manhood (apparently corresponding with the warrior class), nor can he mate in his own totem, though all other clans of the tribe are apparently open to him; while the maiden must have passed (apparently by a considerable time) her puberty feast. In any event, too, the proposal is formally conveyed by the elderwoman of the suitor's family to the maiden's clanmother, when it is duly pondered, first by this dame and her daughter matrons; and later (if the proposal is entertained) it is deliberated and discussed at length by the matrons of the two clans involved, who commonly hold repeated councils for the purpose. At an undetermined stage and to an undetermined degree the maiden herself is consulted; certainly she holds the power of veto, ostensible if not actual. Pending the deliberations the maiden receives special consideration and enjoys various dignities; if circumstances favor, her kinswomen erect a jacal for her; and even if circumstances are adverse, she is outfitted with a pelican robe of six or eight pelts and other matronly requisites. When all parties concerned are eventually satisfied a probationary marriage is arranged, and the groom leaves his clan and attaches himself to that of the bride. Two essential conditions—one of material character and the other moral—are involved in this probationary union; in the first place, the groom must become the provider for, and the protector of, the entire family of the bride, including the dependent children and such cripples and invalids as may be tolerated by the tribe—i. e., he must display and exercise skill in turtle-fishing, strength in the chase, subtlety in warfare, and all other physical qualities of competent manhood. This relation, with the attendant obligations, holds for a year, i. e., a round of the seasons. During the same period the groom shares the jacal and sleeping robe provided for the prospective matron by her kinswomen, not as privileged spouse, but merely as a protecting companion; and throughout this probationary term he is compelled to maintain continence—i. e., he must display the most indubitable proofs of moral force. During this period the always dignified position occupied by the daughter of the family culminates; she is the observed of all observers, the subject of gossip among matrons and warriors alike, the recipient of frequent tokens from designing sisters with an eye to shares of her spouse's spoils, and the receiver of material supplies measuring the competence of the would-be husband; through his energy she is enabled to dispense largess with lavish hand, and thus to dignify her clan and honor her spouse in the most effective way known to primitive life; and at the same time she enjoys the immeasurable moral stimulus of realizing that she is the arbiter of the fate of a man who becomes warrior or outcast at her bidding, and through him of the future of two clans—i. e., she is raised to a responsibility in both personal and tribal affairs which, albeit temporary, is hardly lower than that of the warrior-chief. In tribal theory the moral test measures

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1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

time they agree, she shall go along with him as betrothed, but he is not to have any knowledge of her till the utmost payment is discharged; all which is punctually observed. Thus they lie together under one covering for several months, and the woman remains the same as she was when she first came to him.[1]

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2: Kroeber E-5 (1930)1931 NU31 Seri NU31

Society

583 Marriage is monogamous. The wife is bought, in spite of the
[595] poverty of the Seri. Santa Blanco paid 150 pesos in property for his wife. Chico Romero, a widower, paid more for his, a widow, "because she had three daughters, and a family with daughters is rich" (in expectation of bride prices).

591 The wife goes to live with the husband. A young couple lives
562 with the young man's parents, perhaps in an annex to the house. "The man commands." Chico was emphatic on this point, and repeated that when his son married he would live with him, not with the girl's relatives. Both he and Santo have step-sons-in-law as well as daughters-in-law living with them, but this is because they are chief and boat-owner respectively; (and the sons-in-law are young).

833 Copulation was said to take place immediately on marriage.
McGee's statement of a period of continence being cited as the custom of a foreign tribe, the informant obviously wondered and laughed.
[843] Intercourse goes on during pregnancy; but not for some months after birth, for fear of a new pregnancy, which would be injurious to the child. A good man respects his wife at all times and does not constantly pursue her.

144 No half-breeds were seen, and the Seri declare they are free of
164 venereal disease.

551 Nothing could be elicited from the informant as to anything like
614 the group-inherited names of lineages, or clans, of the Yuman tribes.

768 When a woman dies, the widower may give the children to his dead wife's parents to raise. This is the only item learned that might point to McGee's "matriarchate"; but the informant may have been thinking of particular cases. His son lives with him, though he lost the boy's mother.

582 Cross-cousin marriage is as prohibited as that of parallel cousins.
This is in accord with the sibling terminology for all cousins; but in view of the present small number of the tribe, the rule must work difficulty.

[587] A man does not marry his dead wife's sister. Apparently he may not. Nor is there levirate. The informant volunteered the question if marriage with step-daughters was permitted by other peoples. Being told of the Navaho custom, he seemed shocked.

606 Neither husband nor wife looks at or addresses either parent-
183 in-law. In the isolated, small-group life of the Seri, this rule can hardly be adhered to with complete rigor, and its conspicuous carrying out was not observed; but then everything in their behavior is casual, informal, and slovenly.

607 The kinship system as recorded contains a note as to a woman not addressing her younger sister's husband by kinship term except

[90 cont.]

361 population. There is an obvious separation there between the
563 Seri and the yori, or non-Seri, with manifest differences in cultural patterns.

The yori occupy an extensive area per person; their homes are quite distant from one another, and four families in conjunction occupy a belt of land of about 100 by 50 meters.

361 The Seri are grouped by families, inhabiting minute squares of from one and a half to two meters to a side. The yori
182 feeling of prestige, based on the territorial expanse of their prop-
361 erty, contrasts with the feeling of security based on personal
511 contact that dominates many aspects of Seri life; the small size of the Seri habitation indicates, not a low standard of living, but a distinct [91] concept of comfort, according to which the Seri, having all the desert to live in, like the yori, confine themselves to the limits that personal contact permits.

In January, 1952, there were 35 dwellings, with an aver-
592 age of 4.6 persons in each, those lodging four, five, and six persons frankly predominating. Each three or four more closely related families occupied contiguous homes, forming relatively separate conjunctions by themselves, which we might call
596 macrofamilies.

The family is the basic Seri institution, which is manifest in all aspects of life: it is the center of production, co-operation, the division of labor, education, diversion, government, etc.

582 Going beyond the family and macrofamily organization,
619 we have a tribal structure based on the generalized exchange (2)
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2. Lévy Strauss, Les Structures élémentaires de la Parenté [Elementary Kinship Structures], Paris, 1949.

of members for concluding marriage, by which all the Seri are actually linked by consanguinity or affinity. One is almost able to include all the members of the tribe on a single genealogical chart, systematically excluding only some few outsiders who have penetrated the group.

582 This situation, which would make one think of a primitive

[91 cont.]

582 promiscuity of gatherers corroborative of the ideas of Morgan, is very far from being simple, tending more to confirm the ideas of Kirchoff regarding the greater restriction and regulation of marital relations in societies having a rudimentary economy. In all Seri marriages close consanguineous relatives seem to be avoided. More precisely, a classification of relatives is established, from which only one group can provide a spouse. To differentiate the Seri system from clan systems and marital classes, in which each member belongs to a fixed class in relation to all the other members, in this system the classification varies with respect to the position of each person, that is to say, it is a true system of kinship. The factors of sex, polarity, generation, relative age, affinity, and consanguinity are involved in it, acting to deny or permit the possibility of marriage. Perhaps because of the small size of the Seri group, only within which are marriages concluded, the kinship system results in a clear identification of all persons by terms that are functions of marital relationships: approximately 50 per cent are excluded for being of the [92] same sex; 30 per cent for being of a distinct generation (very few aged or very young); the consanguineous relatives close to the affinal relatives and married persons are also excluded, leaving only so many persons as possible mates, a situation that is reflected in the kinship terminology.

582 [837] [836] It is not that sexual relations may be prohibited, for there is relative freedom in extramarital, including premuptial, sexual relations, but the "marriage" association, sanctioned by the society and for which there is strong community pressure, has the limitations mentioned. And it tends to be realized, in spite of the disadvantages of the disappearance of sexual liberty, avoidance of near affinal relatives, and the economic obligations that begin upon the conclusion of the marriage.

156 155 With regard to individual development, this social structure is of such nature that it has well integrated cultural elements that create a very special personality, characterized by improvidence, emotional instability, inconstancy, and feelings of security, dispossession, and dependence.

535 semi-darkness.
123 Soon two little boys joined the dance, stepping up and down in the sand. Lighted only by the flickering flames of the driftwood fires on the shores of this mysterious and dreaded isle, the soft murmur of the sea as a refrain to the wild chanting, the weird circling of glittering eyes, and wild dark faces, presented a scene of uncanny and savage fascination witnessed by white men probably for the first time.

[533] After each stanza there was a short rest. The singing was similar to most other tribal chanting.

582 836 622 Bob made the remark that the girl was old enough to be broken in by the old Chief. I said, "How?"

583 [838] He said, when a girl thirteen or fourteen has her menses, the Chief takes her and goes through the family act. This is called 'breaking her in'. She is then eligible for marriage. A young man desiring marriage has to purchase the girl by giving the father a boat or rifle, both being necessary to the Seri's existence and protection. At the wedding they have sort of a fiesta and much mescal is drunk, which properly solemnizes a wedding.

844 845 When a girl has a baby it usually comes very naturally and easily, but I remember one girl's first baby was three days in coming, and she suffered a great deal. This was on a subsequent trip. She was staying with many of her people on the mainland and someone asked them if they didn't want a doctor or other help. They said: No, they had one. It was a Medicine Man who chanted over the girl and dug hollows in the sand to fit her heels into. He said that the legs had to be kept apart. This was all he did. But ordinarily there is no trouble, and if a baby is born at noon the mother is up and doing, and cooks supper for her lord and master. The men treat their wives with kindness and each shares with the other any delicacy.

462 [383] [482] In Seriland domestic duties are reversed from the usual Indian methods. The men get the water and the women get the wood. This consists mostly of driftwood gathered along the shore, and it is a picturesque sight to see a string of women and girls bringing in loads of wood in baskets on their heads at sunset.

622 595 There are no plural marriages, but sometimes when a Chief is old, or rather when his wife is old and can have no more babies, he can take a younger woman as his wife. The present Chief is getting old now, almost too old to break in the girls, so they may get a younger man. This might be called the perquisites of office. He takes the cream.

832 825 They hunt lice in the head and eat them. This is said to increase the amorous desires. The penis of the male turtle is cut out and dried. This is pounded and pulverized and placed in the food of the women. This is said to create a desire for a man and the family act.

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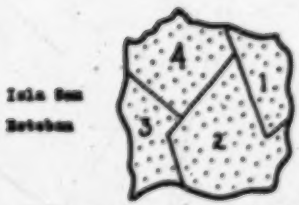

FIG. 5. Subdivisions of Band VI

BAND SOCIAL STRUCTURE

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The social structure of the bands can be properly understood only in relation to the social structure of their smaller units, the i?iziitang. The kin group which resided in and dominated each such subdivision constituted a clan.[8] This group conforms to Murdock's three major specifications for clan designation.[9]

Murdock's first specification states that a kin group, to constitute a clan, must be based explicitly on a unilinear rule of descent. The kin group of each Seri band subdivision was based on patrilineal descent. An individual was closely associated with the group of kinsmen of his subdivision, all of whom were related to him through males only. The father was the head of his household. For example, he assumed leadership in marriage negotiations. Upon his death, the eldest son took his place.

[611]
[592]

The second specification states that such a kin group must have residential unity. Seri marriages were exogamous with respect to the subdivision,[7] and the rule of residence was patrilocal. The domicile was set up near the home of the groom's parents.

[582]
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Except for the occurrence of several battles, relations between Bands I and III were peaceful.

Relations with non-Seri groups were not always peaceful. For many years the members of Band I were on friendly terms with the Papago; they often camped together and even intermarried. Due to a misunderstanding,[10] fighting erupted between the two groups and many people were killed in the years which followed.

Band II

The external relations of Band II were decidedly turbulent. Although their primary base of operations was a coastal area, the people did not use the ocean as a source of food. They preferred beef and horse meat which was easily acquired by stealing animals from ranches. Here again the wrath of the ranchers and the government was incurred.

A small group of Yaqui eventually joined Band II and intermarried with them. The Seri claim that the Yaqui induced the warriors of this band to assault travelers on the road between Hermosillo and Guaymas. Coyote Iguana, who according to Seri tradition captured Lola Casanova, was of this band. This activity soon brought retribution from the government. Later, dissension arose between these Seri and the Yaqui.

The enmity and strife that occurred between Bands II and V were mentioned above.

Band III

The history of the internal relations of this band on Tiburon Island seems to have been marked by periods of violence. Battles between subdivisions sometimes occurred; however, they were usually short-lived and soon forgotten. A major struggle once occurred when a shaman named *?apetla* "the invincible one" and warriors from subdivision 4 made repeated raids upon the neighboring subdivisions and killed many. Eventually, his enemies overcame their fear and destroyed the killer.

Although the inhabitants of Band III were hunters, gatherers, and fishermen, they began to rob cattle once they became established on the mainland. They too incurred the wrath of ranchers and the government.

Band IV

Since the members of this band were, by choice, inhabiting an inland area of Tiburon Island, they lived in relative isolation as hunters and gatherers. Their primary contacts were with members of Band III with whom they intermarried.

BAND V

642 These people were apparently hunters, gatherers, and fishermen. It is said that they speared fish from the shore since they [226] [501] [721] did not use balsas. They too apparently raided the ranches. Their warring nature has already been discussed; it resulted in the [582] [628] acquisition of few friends. However, several marriages between members of this band and members of subdivision 2 of Band III are said to have occurred.

BAND VI

[131] [347] [501] [411] [762] The members of Band VI lived on San Esteban Island and were the most primitive of the tribe. They lived in huts made of driftwood and in caves and made extensive use of the balsa. Although they did not have the bow and arrow, they did become expert in the use of the spear. The people depended mainly on a seafood, iguana, and maguey diet.

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642 [574] [628] Their relations with the other bands were generally good however. Seri from Band III were free to visit San Esteban where they were well treated.

[484] [191] [648] The San Esteban people seldom traveled to the mainland, and, since they spoke no Spanish, it is probable that they made no peaceful contact with non-Seri groups.

642 628 578 648 COLLAPSE OF THE BAND SYSTEM

Internal strife in the Seri tribe was probably a major factor in the establishment of the band system. External strife was a major factor in its downfall.

[021] Reference has been made to the plundering, killings and rustling of cattle to which certain of the bands were dedicated. The concern of the Sonora government was aroused, and steps were taken to crush the rebellious groups. According to the present-day Seri, military action by army units and rancher outfits against the various bands resulted in the near-destruction of the whole tribe.[11]

2: Kroeber E-5 (1930)1931 NU31 Seri NU31

Society

583 [595] Marriage is monogamous. The wife is bought, in spite of the poverty of the Seri. Santa Blanco paid 150 pesos in property for his wife. Chico Romero, a widower, paid more for his, a widow, "because she had three daughters, and a family with daughters is rich" (in expectation of bride prices).

591 562 The wife goes to live with the husband. A young couple lives with the young man's parents, perhaps in an annex to the house. "The man commands." Chico was emphatic on this point, and repeated that when his son married he would live with him, not with the girl's relatives. Both he and Santo have step-sons-in-law as well as daughters-in-law living with them, but this is because they are chief and boat-owner respectively; (and the sons-in-law are young).

833 [813] Copulation was said to take place immediately on marriage. McGee's statement of a period of continence being cited as the custom of a foreign tribe, the informant obviously wondered and laughed. Intercourse goes on during pregnancy; but not for some months after birth, for fear of a new pregnancy, which would be injurious to the child. A good man respects his wife at all times and does not constantly pursue her.

149 164 No half-breeds were seen, and the Seri declare they are free of venereal disease.

551 614 Nothing could be elicited from the informant as to anything like the group-inherited names of lineages, or clans, of the Yuman tribes.

768 When a woman dies, the widower may give the children to his dead wife's parents to raise. This is the only item learned that might point to McGee's "matriarchate"; but the informant may have been thinking of particular cases. His son lives with him, though he lost the boy's mother.

582 Cross-cousin marriage is as prohibited as that of parallel cousins. This is in accord with the sibling terminology for all cousins; but in view of the present small number of the tribe, the rule must work difficulty.

[587] A man does not marry his dead wife's sister. Apparently he may not. Nor is there levirate. The informant volunteered the question if marriage with step-daughters was permitted by other peoples. Being told of the Navaho custom, he seemed shocked.

606 183 Neither husband nor wife looks at or addresses either parent-in-law. In the isolated, small-group life of the Seri, this rule can hardly be adhered to with complete rigor, and its conspicuous carrying out was not observed; but then everything in their behavior is casual, informal, and slovenly.

607 The kinship system as recorded contains a note as to a woman not addressing her younger sister's husband by kinship term except

2: Kroeber E-5 (1930)1931 NU31 Seri NU31

As to the "total absence" (p. 285) of marriage purchase, whereas I found it, such purchase can hardly be believed to have originated wholly within the last 35 years, in view of its wide distribution in native America.

The whole matter of maternal lineages crystallised into totemic clans with matron rule (pp. 10-11, 167-8, 269 seq.) seems a fantasy. A careful reading of the passages in questions reveals how much McGee has built up on statements which he conscientiously admits to have been slender, probable only, and subject to possible misunderstanding. It must be remembered that in 1894 the matriarchate as original and primitive was still standard anthropological doctrine. At any rate, I got nothing suggesting even matrilineal reckoning in my indirect approaches to the subject, and explicit denials when it was directly presented.

That house-building may now and then be "accompanied by a chant" (p. 223) is possible, though it seems out of accord with the haphazard and shiftless methods of Seri work and the flimsy irregularity of their homes; but that the chant was "usually led by the eldest matron" seems more matriarchate.

That the Upanguayma, Guayma, and Tepoka were successively "extruded" (p. 75) would be correct if there were anything to show that the Seri were the parent stock of superior virtue, conservatism, and faithful attachment to their original habitat.

The statement (p. 11) that "kinship terms are strikingly scanty," made in the face of round-about and imperfect speech communications with the Seri, I cite only as an indication of the degree of McGee's readiness to fall back upon his preconceptions when facts became thin.

I did not note the absence of superior medial incisor teeth observed by McGee (p. 169) in married women. If a regular practise, its connection with the puberty rite would be a natural inference. But knocking out of teeth is a rare custom in America.

McGee's statements (pp. 196-7) that it is "undignified, if not wrong" to kill deer other than with the hands, and that jackrabbits are "customarily taken alive to camp," seem over-emphases. That a sense of sport or passing pride, or lack of weapons, now and then leads to such happenings, I do not doubt; but the Seri seem too practical and unromantic to exact rules on the point. I suspect that a youth who insisted on living up to them would soon be considered a vain bore. I may add that I saw a crippled wild duck hobble about the camp on Tiburon for two days, being played with occasionally by the children—without unusual roughness or unkindliness—and that finally it wandered to the water and gradually drifted off without notice being taken.

Face painting is construed by McGee as sematic of totemic line-

773 Before this it was day all the time, but then it became night and coyote only laughs at night. The black strings still hang about badger's neck."

It is strange to find, too, that a flood legend is traditional among the Seris. Chico said: "In the times of the ancients a great flood came, the ocean rose up and all the country of the Seris was under water except the top of Cerro Alto. There a few Seris gathered and were saved. Everyone else was drowned. To this day the top of Cerro Alto is covered with brush which the flood did not submerge. All Seri children are taught this flood tradition, and they must learn it by heart so as to teach their children and their grandchildren."

764 The death of a tribesman gives no cause for ceremony among the Seris, although the nearest relatives may customarily wail, sometimes [765] for months, morning and evening. The disposal of the bodies of the dead, is, however, of considerable interest. A hole about three feet deep is dug by means of large [412] clam shells and a cave is excavated for the head such that the earth will not touch it. The deceased Indian is wrapped in his own blanket and laid in the grave with the head to the East, face up. The body is covered and the grave is partly filled with earth, then covered with a layer of the spiniest of chollas and thorny brush, further filled, leveled and covered with another layer of chollas to discourage the coyotes from digging up the body. When the Seris are on the move, how- [766] ever, and grave-digging is too great a task, a body may simply be lifted high to the fork of a giant cactus and left there.

● 583 Marriage among the Seris is not so much a ceremony as it is the completion of a bar- 585 gain. Under ordinary circumstances, when a man buys a woman he strikes a bargain with the bride's parents and makes a down payment. Only after completion of the bargain does the woman go to live with the man, but even then payments do not cease but continue intermittently through life. Chico Romero, although "married" for fifteen years, gave his wife's father some paint that he had received in payment for guiding and 425 packing. It is also considered natural to 858 buy and sell children. One Seri, Santo

[p. 266 (B)]
[text continues on p. 267 (R)]

535 semi-darkness.
123 Soon two little boys joined the dance, stepping up and down in the sand. Lighted only by the flickering flames of the driftwood fires on the shores of this mysterious and dreaded isle, the soft murmur of the sea as a refrain to the wild chanting, the weird circling of glittering eyes, and wild dark faces, presented a scene of uncanny and savage fascination witnessed by white men probably for the first time.

[533] After each stanza there was a short rest. The singing was similar to most other tribal chanting.

582 Bob made the remark that the girl was old enough to be broken in
836 by the old Chief. I said, "How?"
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He said, when a girl thirteen or fourteen has her menses, the
• 583 Chief takes her and goes through the family act. This is called
[939] 'breaking her in'. She is then eligible for marriage. A young man desiring marriage has to purchase the girl by giving the father a boat or rifle, both being necessary to the Seri's existence and pro-
535 tection. At the wedding they have sort of a fiesta and much mescal is drunk, which properly solemnizes a wedding.

944 When a girl has a baby it usually comes very naturally and easily,
945 but I remember one girl's first baby was three days in coming, and she suffered a great deal. This was on a subsequent trip. She was staying with many of her people on the mainland and someone asked them if they didn't want a doctor or other help. They said: No, they had one. It was a Medicine Man who chanted over the girl and dug hollows in the sand to fit her heels into. He said that the legs had to be kept apart. This was all he did. But ordinarily there is no trouble, and if a baby is born at noon the mother is up and doing, and cooks supper
[543] for her lord and master. The men treat their wives with kindness and each shares with the other any delicacy.

462 In Seriland domestic duties are reversed from the usual Indian
[30] methods. The men get the water and the women get the wood. This con-
[482] sists mostly of driftwood gathered along the shore, and it is a picturesque sight to see a string of women and girls bringing in loads of wood in baskets on their heads at sunset.

622 There are no plural marriages, but sometimes when a Chief is old,
515 or rather when his wife is old and can have no more babies, he can take a younger woman as his wife. The present Chief is getting old now, almost too old to break in the girls, so they may get a younger man. This might be called the perquisites of office. He takes the cream.

932 They hunt lice in the head and eat them. This is said to increase
825 the amorous desires. The penis of the male turtle is cut out and dried. This is pounded and pulverized and placed in the food of the women. This is said to create a desire for a man and the family act.

123 but nothing happened.

123 622 [115] We reached Hermosillo at three in the afternoon, and as we landed Roberto and Sara met us, and Roberto embraced me. Then the Seri Indian Chief rushed up and fairly hugged me in his joy at seeing me again. A timid wild-looking Seri boy, of fifteen years of age, shyly shook hands with the *Americano*, while all the Mexican men and women, fully one hundred in number, looked on open-mouthed and wide-eyed, to see the Chief of the wildest and lowest of savage Indians in North America, rush up and embrace a white man.

We all climbed into Roberto's auto-truck, and my things were brought to Hotel Cohen, and then we all went to Roberto's home and stayed all the afternoon. He had just returned from the coast the day before, and Juan Tomas was determined to come also and greet me, and the boy---a nephew---hung on to the Chief, and finally Roberto said he would have to return on foot if he brought him. Juan Tomas said that made no difference. He would walk to the coast eighty or ninety miles, if only he could come.

[291] [302] He was probably seventy-five years old. He wore a hat, but his hair was straggly and he had a slight moustache. He wore shirt and trousers and a dirty kilt---remanent of the Pelican-skin-kilt---around his waist, and he was barefooted. The boy had a not unpleasant face, long wild hair, shirt, pants, and a cotton kilt reached to his knees. He, too, was barefooted.

I gave the Chief a knife, and the boy a red crayon and fifty cents. With the crayon he made a V on his kilt. He was very shy and always kept in a shadow, or in the background, and he spoke no Spanish although he knew the Spanish alphabet.

Sara showed some photographs and postcards in a baloptican in a dark room, and among them were pictures of some Seris and myself. These created much excitement with the Chief and the boy, and they jabbered together in the Seri language with animation. They recognized some of the subjects, their own people.

584 622 648 123 Juan Tomas is to be married soon to an elderly Seri dame, and we have been invited to attend the fiesta. He has been laying in the trousseau for the bride, and several gallons of mescal. A steer or burro will have to be provided, and all the fixin's and nothing will be left undone to make a very festive occasion. When asked to show us his gifts he reluctantly brought forth a package which he carefully unwrapped and disclosed eighteen yards of *manta*, two red pieces and one pink piece of Calico, some red handkerchiefs, and one box for painting the face. He carefully wrapped these up again and put them in the room set apart for him and the boy.

[609] [583] The woman he is to marry has no male relatives from whom she can be bought, so the Chief appointed a man and created him Uncle *pro-tempore*, and to him the Chief is going to give a rifle and a blanket as the purchase price. Pretty high!

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642 621 618 714 [186] [406]

The third specification states that a kin group, to constitute a clan, must exhibit actual social integration. Murdock stresses the necessity of observing a positive group sentiment, such as would be manifested by organized collective activities or group functions, before the group can be characterized as a clan. An essential feature of this group sentiment is the inclusion of the wife as an integral member of her husband's kin group.

621 618 [628] [622] [701] [583] [406]

This sort of social integration was indeed exhibited by the Seri kin group of each subdivision. It was, in fact, fostered by the isolation brought about by the inhabitants' reservation of hunting and fishing rights for themselves. Tension existed between certain subdivisions and, since there was no chief, the oldest capable male organized and led the fighting force of the clan. In times of need, the members of the group united to give mutual assistance. The groom-to-be could expect material aid from his fellow clan members in the payment of the bride price. Mutual assistance was given in the fulfillment of puberty ceremony and burial obligations. The men cooperated in their hunting and fishing expeditions. The women of the clan, including the in-married spouses, cooperated in the gathering and sharing of food. Everyone could attend the various fiestas. It is said that in the performance of these collective activities, close harmony generally prevailed.

BAND INTERNAL AND EXTERNAL RELATIONS

642 619 578 [548]

The division of the Seri tribe into bands was likely brought about through internal strife. During the period of band history known to the present-day Seri,[a] however, serious skirmishes seem to have been fought predominantly with non-Seri groups.[b]

Band I

642 621 628 578 [721] [348]

Band I internal relations appear to have been relatively peaceful. The inhabitants of subdivisions 1, 2, 3, 4, and 5 were fishermen as well as hunters and gatherers, whereas the people of subdivision 6 preferred to subsist on gathered food and wild game. Also, the members of Band I robbed cattle and horses, which pursuit brought reprisals from the Mexican ranchers. There was apparently considerable social intercourse among the six subdivisions, even to the extent that hunting rights of one were sometimes granted to inhabitants of a neighboring section.

Trouble developed when some members of Band I speared fish within the domain of Band V. Here also bitter fighting broke out, and any semblance of peaceful co-existence between the two groups was destroyed.

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the vessel to Guaymas. With the aid of a group of Yaqui, some of these women were said to have been permitted to go to Hermosillo and eventually to return to their home on Tiburon. Others of their group are said to have remained near Guaymas. The women who returned to Tiburon reported that the San Esteban women and children were put aboard another ship which sailed southward.

BANDS I, III, AND IV

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As opposition from the Papago and government forces increased, the members of Band I were forced to seek refuge on Tiburon Island. The mainland members of Band III (subdivisions 11 and 12) were also forced, especially during the Encinas Wars, to flee to Tiburon. There the combined forces of Bands I, III, and IV sought to cope with the military expeditions sent out through the years to exterminate them. Tiburon Island is an adverse battlefield for the uninitiated; some expeditions were turned back due to lack of potable water or because of failure to make contact with the enemy in the mountainous terrain. Some expeditions did encounter the Seri, however, and many natives were either killed or captured.

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Through the years, then, these military encounters, along with smallpox and measles epidemics, were responsible for reducing the Seri tribe to a small remnant. The band and clan systems lost their functional relevance as the people continued to live together for mutual protection. Shortly after the turn of the century, the expeditions and raids had practically ceased.

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SIGNIFICANCE OF BANDS TODAY

With the dissolution of the band system, the rule of descent shifted from patrilineal to bilateral, and the rule of residence shifted from patrilocal to neolocal.

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Although the substance of the band system is no longer a reality, the concept of land ownership still remains. A young Seri of today may choose to be associated with either the i?iziting of his father or that of his mother. He is said to inherit part ownership of the area. It is recalled by one informant that in former times ownership of a mountain was especially important. Sometimes ownership of a mountain was included as part payment for a bride. Thus a person might 'own' a mountain in a subdivision other than his own.

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A custom exists even today whereby a person names his dog after a mountain or other geographical point located in his subdivision. Although the person may re-use the name, each dog so named must be of the same sex as the first.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

with the customs of the Seri), endured for many years and ending at last in unpitied death.

Collectively the cases seem to define a germ, rather than a mature custom, of adoption. In the first case a benefactor (by means regarded as magical) was formally inducted into the reigning family; in the second case the conquering hero (through what were again regarded as magical means) was less formally recognized and venerated, even worshiped, as an all-powerful shaman; while in the third case a representative of the doughtiest alien tribe was enslaved, probably with motives akin to those expressed in the carrying of chargeless guns, the making of imitation machetes, and other fetishistic devices. Except in the first instance there is no indication of consistent custom; but since the entire history of the tribe clearly contradicts regulated adoption of aliens (and indeed affords no other example), it must be inferred that any such custom is intratribal rather than intertribal.

MARRIAGE

The most striking and significant social facts discovered among the Seri relate to marriage customs.

As noted repeatedly elsewhere, the tribal population is preponderantly feminine, so that polygyny naturally prevails; the number of wives reaches three or possibly four, averaging about two, though the younger warriors commonly have but one, and there are always a number of spouseless (widowed) dames but no single men of marriageable age. So far as could be ascertained, no special formalities attend the taking of supernumerary wives, who are usually widowed sisters of the first spouse; it seems to be practically a family affair, governed by considerations of convenience rather than established regulations—an irregularity combining with other facts to suggest that polygyny is incidental, and perhaps of comparatively recent origin.

The primary mating of the Seri is attended by observances so elaborate as to show that marriage is one of the profoundest sacraments of the tribe, penetrating the innermost recesses of tribal thought, and interwoven with the essential fibers of tribal existence. Few if any other peoples devote such anxious care to their mating as do the Seri;[1] and among no other known tribe or folk is the moral aspect of conjugal union so rigorously guarded by collective action and individual devotion.

The initial movement toward formal marriage seems to be somewhat indefinite (or perhaps, rather, spontaneous); according to Mashém it may be made either by the prospective groom or else by his father, though not directly by the maiden or her kinswomen. In any event the prerequisites for the union are provisionally determined in the suitor's family; these relate to the suitability of age, the propriety of

[1] Perhaps the closest parallel in this respect is that found in the elaborate marriage regulations prevailing among the Australian aborigines, as described by Spencer and Gillen, Walter E. Roth, and other modern observers.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

584 [582] the clan relation, etc; for no stripling may seriously contemplate matrimony until he has entered manhood (apparently corresponding with the warrior class), nor can he mate in his own totem, though all other clans of the tribe are apparently open to him; while the maiden must have passed (apparently by a considerable time) her puberty feast. In any event, too, the proposal is formally conveyed by the elderwoman of the suitor's family to the maiden's clanmother, when it is duly pondered, first by this dame and her daughter matrons; and later (if the proposal is entertained) it is deliberated and discussed at length by the matrons of the two clans involved, who commonly hold repeated councils for the purpose. At an undetermined stage and to an undetermined degree the maiden herself is consulted; certainly she holds the power of veto, ostensible if not actual. Pending the deliberations the maiden receives special consideration and enjoys various dignities; if circumstances favor, her kinswomen erect a jacal for her; and even if circumstances are adverse, she is outfitted with a pelican robe of six or eight pelts and other matronly requisites. When all parties concerned are eventually satisfied a probationary marriage is arranged, and the groom leaves his clan and attaches himself to that of the bride. Two essential conditions—one of material character and the other moral—are involved in this probationary union; in the first place, the groom must become the provider for, and the protector of, the entire family of the bride, including the dependent children and such cripples and invalids as may be tolerated by the tribe—i. e., he must display and exercise skill in turtle-fishing, strength in the chase, subtlety in warfare, and all other physical qualities of competent manhood. This relation, with the attendant obligations, holds for a year, i. e., a round of the seasons. During the same period the groom shares the jacal and sleeping robe provided for the prospective matron by her kinswomen, not as privileged spouse, but merely as a protecting companion; and throughout this probationary term he is compelled to maintain continence—i. e., he must display the most indubitable proofs of moral force. During this period the always dignified position occupied by the daughter of the family culminates; she is the observed of all observers, the subject of gossip among matrons and warriors alike, the recipient of frequent tokens from designing sisters with an eye to shares of her spouse's spoils, and the receiver of material supplies measuring the competence of the would-be husband; through his energy she is enabled to dispense largess with lavish hand, and thus to dignify her clan and honor her spouse in the most effective way known to primitive life; and at the same time she enjoys the immeasurable moral stimulus of realizing that she is the arbiter of the fate of a man who becomes warrior or outcast at her bidding, and through him of the future of two clans—i. e., she is raised to a responsibility in both personal and tribal affairs which, albeit temporary, is hardly lower than that of the warrior-chief. In tribal theory the moral test measures

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1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

time they agree, she shall go along with him as betrothed, but he is not to have any knowledge of her till the utmost payment is discharged; all which is punctually observed. Thus they lie together under one covering for several months, and the woman remains the same as she was when she first came to him.[1]

This record also is peculiarly pertinent, partly in that it practically corroborates the Seri testimony, but chiefly in that it indicates definite transition toward a higher culture-plane in which the primitive material test is at least partially replaced by a commutation in goods or their equivalents.

On reducing the marital customs of the Seri to conventional terms, the more prominent features are found to be (1) strict clan exogamy and (2) absolute tribal endogamy, together with (3) theoretical or constructive monogamy, coupled with (4) vague traces of polyandry, and (5) an apparently superficial polygyny, as well as (6) total absence of purchase or capture of either spouse.

On reviewing the customs in the light of their influence on the everyday life of the tribe, certain features stand out conspicuously: (1) Perhaps the most striking feature is the collective character of the function; for while the movement originates in personal inclination on the part of the suitor and is shaped by personal inclination on the part of the maiden, all manifestations of inclination are open and public (at least to the elders of the two clans involved), while the personal sentiments on both sides are completely subordinated to the public interests of clans and tribe as weighed and decided by the matronly lawgivers and adelphiarchal administratives. Thus neither man nor maid mates for themself, but both love and move in the tribal interests and along the lines laid down by the tribal leaders. (2) As a corollary or a complement (according to the viewpoint) to the collectivity of the mating, the next most striking feature is the formal or legal aspect of the union; for the entire affair, from inception to consummation, is rigorously regulated by precedents and usages handed down from an immemorial past. Thus the roots of young affection are not destroyed but rather cultivated, though the burgeoning vine and the outreaching tendrils are trained to a social structure shaped in ages gone and kept in the olden form by unbroken tradition. (3) A collateral feature of the customs is the necessary reaction of the requirements on individual character of both groom and bride; for the would-be warrior-spouse is compelled to display high qualities of physical and moral manhood on pain of ostracism and outlawry, so that his passions of ambition and affection are at once stimulated to the highest degree, while the maiden's pride of blood and possession and her sense of regnant responsibility are fostered to the utmost. The brief preliminary courtship and the long probationary mating mark an era of intensification in two lives at their most impressionable stage; and if there be

[1] The History of Carolina, etc, by John Lawson (1714), reprint of 1860, pp. 302-303. Attention was called to this passage by Mr James Mooney.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

584 585 aught in the simple yet puissant law of conjugal conation—that law whose motive underlies the world's song and story and all the pulsing progress of mankind as the inspiration of most men's work and most women's hopes—the vital intensity of this era passes down the line of blood-descent to the betterment of later generations. (4) Another collateral feature is the necessary reaction on clan and tribe; for not only [182] [166] does the individual character-making raise the average physique and morale of the group, but the carefully studied restraint of excessive individuality serves to strengthen still further the tribal bonds and to lift still higher the racial bar against aliens. The blackest crime in the Seri calendar is the toleration of alien blood; and no more effective device could be found for keeping alive the race-sense on which this canon depends than that virtually sacramental surveillance of sexual intimacy which Seri usage requires.[1]

000 On scanning the conventional classifications of human marriage in the light of the Seri customs, it becomes clear that these customs define a plane not hitherto recognized observationally. For convenience, this plane and the mode of marriage defining it may, in special allusion to the correlative race-sense, be styled *ethnogamy;* and the more systematic characters of this mode and plane of marriage may be outlined briefly:

1. The most conspicuous character of ethnogamic union, as manifested in the type tribe, is its absolute confinement to the consanguineal group. The breach of this limitation is hardly conceivable in the minds of the group, since aliens are not classed as human, nor even dignified as animals of the kinds deified in their lowly faith, but contemned as unclean and loathsome monsters; yet the infraction has a sort of theoretical place at the head of their calendar as an utterly intolerable crime. In respect to this character, ethnogamy corresponds fairly with the endogamy of McLennan, Spencer, and others, i. e., with the tribal endogamy of Powell.

2. A hardly less conspicuous character of ethnogamic union is the formality, or legality, accompanying and reflecting the collective nature of the function. In this respect ethnogamy is the direct antithesis of that hypothetical promiscuity postulated by Morgan and adopted by Spencer, Lubbock, Tylor, and others; and the customs of the type tribe go farther, perhaps, than any other example in verifying the alternative

[1] The remarkable race-sense of the tribe, with the conjugal conation in which it seems to rest, are discussed ante, pp. 149-161. There is nothing to indicate, and much to contradict, that the Seri are consciously engaged in stirpiculture; yet their social and tribal devices would seem to be no less effective in developing race-sense, with its concomitants, than were those of prehistoric men in developing the physical attributes of animal associates, such as the wool-bearing of the sheep, the egg-laying of the fowl, and the milk-giving of the cow; or the still more striking mental attributes, such as the servility of the horse, the fidelity of the dog, and the domesticity of the cat. All these attributes are artificial, though not consciously so in their producers, hardly even to modern users; they are by-products of long-continued breeding and coercion, commonly directed toward collateral ends (as when the horse was bred for speed, the dog for hunting, and the fowl and cat for beauty); and, similarly, the Seri race-sense would seem to be largely a by-product of faith-shaped customs designed primarily to propitiate or invoke supernal potencies—yet the collateral effect is not diminished because overlooked in the primary motive.

123 but nothing happened.

123 622 [116] We reached Hermosillo at three in the afternoon, and as we landed Roberto and Sara met us, and Roberto embraced me. Then the Seri Indian Chief rushed up and fairly hugged me in his joy at seeing me again. A timid wild-looking Seri boy, of fifteen years of age, shyly shook hands with the *Americano*, while all the Mexican men and women, fully one hundred in number, looked on open-mouthed and wide-eyed, to see the Chief of the wildest and lowest of savage Indians in North America, rush up and embrace a white man.

We all climbed into Roberto's auto-truck, and my things were brought to Hotel Cohen, and then we all went to Roberto's home and stayed all the afternoon. He had just returned from the coast the day before, and Juan Tomas was determined to come also and greet me, and the boy---a nephew---hung on to the Chief, and finally Roberto said he would have to return on foot if he brought him. Juan Tomas said that made no difference. He would walk to the coast eighty or ninety miles, if only he could come.

[291] [302] He was probably seventy-five years old. He wore a hat, but his hair was straggly and he had a slight moustache. He wore shirt and trousers and a dirty kilt---remanent of the Pelican-skin-kilt---around his waist, and he was barefooted. The boy had a not unpleasant face, long wild hair, shirt, pants, and a cotton kilt reached to his knees. He, too, was barefooted.

I gave the Chief a knife, and the boy a red crayon and fifty cents. With the crayon he made a V on his kilt. He was very shy and always kept in a shadow, or in the background, and he spoke no Spanish although he knew the Spanish alphabet.

Sara showed some photographs and postcards in a baloptican in a dark room, and among them were pictures of some Seris and myself. These created much excitement with the Chief and the boy, and they jabbered together in the Seri language with animation. They recognized some of the subjects, their own people.

584 622 648 123 Juan Tomas is to be married soon to an elderly Seri dame, and we have been invited to attend the fiesta. He has been laying in the trousseau for the bride, and several gallons of mescal. A steer or burro will have to be provided, and all the fixin's and nothing will be left undone to make a very festive occasion. When asked to show us his gifts he reluctantly brought forth a package which he carefully unwrapped and disclosed eighteen yards of *manta*, two red pieces and one pink piece of Calico, some red handkerchiefs, and one box for painting the face. He carefully wrapped these up again and put them in the room set apart for him and the boy.

[588] [589] The woman he is to marry has no male relatives from whom she can be bought, so the Chief appointed a man and created him Uncle *pro-tempore*, and to him the Chief is going to give a rifle and a blanket as the purchase price. Pretty high!

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

584 [582] the clan relation, etc; for no stripling may seriously contemplate matrimony until he has entered manhood (apparently corresponding with the warrior class), nor can he mate in his own totem, though all other clans of the tribe are apparently open to him; while the maiden must have passed (apparently by a considerable time) her puberty feast. In any event, too, the proposal is formally conveyed by the elderwoman of the suitor's family to the maiden's clanmother, when it is duly pondered, first by this dame and her daughter matrons; and later (if the proposal is entertained) it is deliberated and discussed at length by the matrons of the two clans involved, who commonly hold repeated councils for the purpose. At an undetermined stage and to an undetermined degree the maiden herself is consulted; certainly she holds the power of veto, ostensible if not actual. Pending the deliberations the maiden receives special consideration and enjoys various dignities; if circumstances favor, her kinswomen erect a jacal for her; and even if circumstances are adverse, she is outfitted with a pelican robe of six or eight pelts and other matronly requisites. When all parties concerned are eventually satisfied a probationary marriage is arranged, and the groom leaves his clan and attaches himself to that of the bride. 585 Two essential conditions—one of material character and the other moral—are involved in this probationary union; in the first place, the groom must become the provider for, and the protector of, the entire family of the bride, including the dependent children and such cripples and invalids as may be tolerated by the tribe—i. e., he must display and exercise skill in turtle-fishing, strength in the chase, subtlety in warfare, and all other physical qualities of competent manhood. This relation, with the attendant obligations, holds for a year, i. e., a round of the seasons. During the same period the groom shares the jacal and sleeping robe provided for the prospective matron by her kinswomen, not as privileged spouse, but merely as a protecting companion; and throughout this probationary term he is compelled to maintain continence—i. e., he must display the most indubitable proofs of moral force. During this period the always dignified position occupied by the daughter of the family culminates; she is the observed of all observers, the subject of gossip among matrons and warriors alike, the recipient of frequent tokens from designing sisters with an eye to shares of her spouse's spoils, and the receiver of material supplies measuring the competence of the would-be husband; through his energy she is enabled to dispense largess with lavish hand, and thus to dignify her clan and honor her spouse in the most effective way known to primitive life; and at the same time she enjoys the immeasurable moral stimulus of realizing that she is the arbiter of the fate of a man who becomes warrior or outcast at her bidding, and through him of the future of two clans—i. e., she is raised to a responsibility in both personal and tribal affairs which, albeit temporary, is hardly lower than that of the warrior-chief. In tribal theory the moral test measures

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

the character of the man; in very fact, it at the same time both measures and makes the character of the woman. Among other privileges bestowed on the bride during the probationary period are those of receiving the most intimate attentions from the clanfellows of the groom; and these are noteworthy as suggestions of a vestigial polyandry or adelphogamy. At the close of the year the probation ends in a feast provided by the probationer, who thereupon enters the bride's jacal as a perpetual guest of unlimited personal privileges (subject to tribal custom); while the bride passes from a half-wanton heyday into the duller routine of matronly existence.

These details were elicited at Costa Rica in 1894 through methodical inquiries made in connection with the linguistic collection. This collection was made with the cooperation of Señor Alvemar-Leon as Spanish-English interpreter, together with Mashém and (commonly) the clanmother known as Juana María. Usually quite a group of Seri matrons with two or three warriors were gathered about, and to these Mashém frequently appealed for advice and verification, while they constantly expressed approval or disapproval of questions and replies, as gathered through Mashém's words and mien, in such manner as to afford a fair index of their habitual thought—e. g., when the Seri vernacular for "twins" was obtained and the inquiry was extended (by normal association of ideas) to the term for "triplets", Mashém collapsed into moody silence while the rest of the group decamped incontinently with horror-stricken countenances—thereby suggesting cautious subsequent inquiry, and the discovery that triplets are deemed evil monsters and their production a capital crime. It was in one of the earlier conferences that the first intimations concerning the unusual marital customs were incidentally brought out; the Caucasian interpreter and bystanders were diverted by the naive reference to the moral test, but their expressions were hastily checked lest the native informants might be startled and rendered secretive; then, during two later conferences, when Mashém and several matrons were freely participating in the proceedings, the line of inquiry was so turned as to touch on various aspects of the marriage custom and bring out all essential features; so that much confidence is reposed in the accuracy of the details.[1] The confidence in the verity of the customs was such as not to be impaired seriously by the fact that no records of coincident moral tests were known in the voluminous literature of marriage and its concomitants; nor was it shaken by the still weightier fact that none of the experienced ethnologists to whom inquiries were addressed during ensuing months were acquainted with parallel customs—indeed the only shadow of corroboration thus obtained came in the form of references to the widespread requirement of continence in war and ceremonies.

[1] It may be observed that Kolonia, when visited in January, 1895, failed to corroborate the descriptions of Mashém and the matrons, but his failure occasioned little surprise for the reason that he had not lived with his tribe since early boyhood, and is equally unacquainted with ceremonies alive concerning the myths, ceremonies, and even the taboos of the tribe.

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time they agree, she shall go along with him as betrothed, but he is not to have any knowledge of her till the utmost payment is discharged; all which is punctually observed. Thus they lie together under one covering for several months, and the woman remains the same as she was when she first came to him.[1]

This record also is peculiarly pertinent, partly in that it practically corroborates the Seri testimony, but chiefly in that it indicates definite transition toward a higher culture-plane in which the primitive material test is at least partially replaced by a commutation in goods or their equivalents.

On reducing the marital customs of the Seri to conventional terms, the more prominent features are found to be (1) strict clan exogamy and (2) absolute tribal endogamy, together with (3) theoretical or constructive monogamy, coupled with (4) vague traces of polyandry, and (5) an apparently superficial polygyny, as well as (6) total absence of purchase or capture of either spouse.

On reviewing the customs in the light of their influence on the everyday life of the tribe, certain features stand out conspicuously: (1) Perhaps the most striking feature is the collective character of the function; for while the movement originates in personal inclination on the part of the suitor and is shaped by personal inclination on the part of the maiden, all manifestations of inclination are open and public (at least to the elders of the two clans involved), while the personal sentiments on both sides are completely subordinated to the public interests of clans and tribe as weighed and decided by the matronly lawgivers and adelphiarchal administratives. Thus neither man nor maid mates for themself, but both love and move in the tribal interests and along the lines laid down by the tribal leaders. (2) As a corollary or a complement (according to the viewpoint) to the collectivity of the mating, the next most striking feature is the formal or legal aspect of the union; for the entire affair, from inception to consummation, is rigorously regulated by precedents and usages handed down from an immemorial past. Thus the roots of young affection are not destroyed but rather cultivated, though the burgeoning vine and the outreaching tendrils are trained to a social structure shaped in ages gone and kept in the olden form by unbroken tradition. (3) A collateral feature of the customs is the necessary reaction of the requirements on individual character of both groom and bride; for the would-be warrior-spouse is compelled to display high qualities of physical and moral manhood on pain of ostracism and outlawry, so that his paramount ambition and affection are at once stimulated to the highest degree, while the maiden's pride of blood and possession and her sense of regnant responsibility are fostered to the utmost. The brief preliminary courtship and the long probationary mating mark an era of intensification in two lives at their most impressionable stage; and if there be

[1] The History of Carolina, etc., by John Lawson (1714), reprint of 1860, pp. 362-363. Attention was called to this passage by Mr James Mooney.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

584 ought in the simple yet puissant law of conjugal conation—that law
585 whose motive underlies the world's song and story and all the pulsing progress of mankind as the inspiration of most men's work and most women's hopes—the vital intensity of this era passes down the line of blood-descent to the betterment of later generations. (4) Another collateral feature is the necessary reaction on clan and tribe; for not only
[182] does the individual character-making raise the average physique and
[46] morale of the group, but the carefully studied restraint of excessive individuality serves to strengthen still further the tribal bonds and to lift still higher the racial bar against aliens. The blackest crime in the Seri calendar is the toleration of alien blood; and no more effective device could be found for keeping alive the race-sense on which this canon depends than that virtually sacramental surveillance of sexual intimacy which Seri usage requires.[1]

000 On scanning the conventional classifications of human marriage in the light of the Seri customs, it becomes clear that these customs define a plane not hitherto recognized observationally. For convenience, this plane and the mode of marriage defining it may, in special allusion to the correlative race-sense, be styled *ethnogamy;* and the more systematic characters of this mode and plane of marriage may be outlined briefly:

1. The most conspicuous character of ethnogamic union, as manifested in the type tribe, is its absolute confinement to the consanguineal group. The breach of this limitation is hardly conceivable in the minds of the group, since aliens are not classed as human, nor even dignified as animals of the kinds deified in their lowly faith, but contemned as unclean and loathsome monsters; yet the infraction has a sort of theoretical place at the head of their calendar as an utterly intolerable crime. In respect to this character, ethnogamy corresponds fairly with the endogamy of McLennan, Spencer, and others, i. e., with the tribal endogamy of Powell.

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773 Before this it was day all the time, but then it became night and coyote only laughs at night. The black strings still hang about badger's neck."

It is strange to find, too, that a flood legend is traditional among the Seris. Chico said: "In the times of the ancients a great flood came, the ocean rose up and all the country of the Seris was under water except the top of Cerro Alto. There a few Seris gathered and were saved. Everyone else was drowned. To this day the top of Cerro Alto is covered with brush which the flood did not submerge. All Seri children are taught this flood tradition, and they must learn it by heart so as to teach their children and their grandchildren."

764 The death of a tribesman gives no cause for ceremony among the Seris, although the [765] nearest relatives may customarily wail, sometimes for months, morning and evening. The disposal of the bodies of the dead, is, however, of considerable interest. A hole about [412] three feet deep is dug by means of large clam shells and a cave is excavated for the head such that the earth will not touch it. The deceased Indian is wrapped in his own blanket and laid in the grave with the head to the East, face up. The body is covered and the grave is partly filled with earth, then covered with a layer of the spiniest of chollas and thorny brush, further filled, leveled and covered with another layer of chollas to discourage the coyotes from digging up the body. When the Seris are on the move, how- [766] ever, and grave-digging is too great a task, a body may simply be lifted high to the fork of a giant cactus and left there.

583 Marriage among the Seris is not so much
585 a ceremony as it is the completion of a bargain. Under ordinary circumstances, when a man buys a woman he strikes a bargain with the bride's parents and makes a down payment. Only after completion of the bargain does the woman go to live with the man, but even then payments do not cease but continue intermittently through life. Chico Romero, although "married" for fifteen years, gave his wife's father some paint that he had received in payment for guiding and
425 packing. It is also considered natural to
858 buy and sell children. One Seri, Santo

[p. 266 (B)]
[text continues on p. 267 (B)]

535 semi-darkness.
123 Soon two little boys joined the dance, stepping up and down in the sand. Lighted only by the flickering flames of the driftwood fires on the shores of this mysterious and dreaded isle, the soft murmur of the sea as a refrain to the wild chanting, the weird circling of glittering eyes, and wild dark faces, presented a scene of uncanny and savage fascination witnessed by white men probably for the first time.

[539] After each stanza there was a short rest. The singing was similar to most other tribal chanting.

532 Bob made the remark that the girl was old enough to be broken in
836 by the old Chief. I said, "How?"
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He said, when a girl thirteen or fourteen has her menses, the
533 Chief takes her and goes through the family act. This is called
[929] 'breaking her in'. She is then eligible for marriage. A young man desiring marriage has to purchase the girl by giving the father a boat or rifle, both being necessary to the Seri's existence and pro-
535 tection. At the wedding they have sort of a fiesta and much mescal is drunk, which properly solemnizes a wedding.

944 When a girl has a baby it usually comes very naturally and easily,
846 but I remember one girl's first baby was three days in coming, and she suffered a great deal. This was on a subsequent trip. She was staying with many of her people on the mainland and someone asked them if they didn't want a doctor or other help. They said: No, they had one. It was a Medicine Man who chanted over the girl and dug hollows in the sand to fit her heels into. He said that the legs had to be kept apart. This was all he did. But ordinarily there is no trouble, and if a baby is born at noon the mother is up and doing, and cooks supper
[543] for her lord and master. The men treat their wives with kindness and each shares with the other any delicacy.

462 In Seriland domestic duties are reversed from the usual Indian
[383] methods. The men get the water and the women get the wood. This con-
[482] sists mostly of driftwood gathered along the shore, and it is a picturesque sight to see a string of women and girls bringing in loads of wood in baskets on their heads at sunset.

622 There are no plural marriages, but sometimes when a Chief is old,
515 or rather when his wife is old and can have no more babies, he can take a younger woman as his wife. The present Chief is getting old now, almost too old to break in the girls, so they may get a younger man. This might be called the perquisites of office. He takes the cream.

932 They hunt lice in the head and eat them. This is said to increase
825 the amorous desires. The penis of the male turtle is cut out and dried. This is pounded and pulverized and placed in the food of the women. This is said to create a desire for a man and the family act.

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Society

583 Marriage is monogamous. The wife is bought, in spite of the
[515] poverty of the Seri. Santa Blanco paid 150 pesos in property for his wife. Chico Romero, a widower, paid more for his, a widow, "because she had three daughters, and a family with daughters is rich" (in expectation of bride prices).

591 The wife goes to live with the husband. A young couple lives
562 with the young man's parents, perhaps in an annex to the house. "The man commands." Chico was emphatic on this point, and repeated that when his son married he would live with him, not with the girl's relatives. Both he and Santo have step-sons-in-law as well as daughters-in-law living with them, but this is because they are chief and boat-owner respectively; (and the sons-in-law are young).

833 Copulation was said to take place immediately on marriage.
McGee's statement of a period of continence being cited as the custom of a foreign tribe, the informant obviously wondered and laughed.
[843] Intercourse goes on during pregnancy; but not for some months after birth, for fear of a new pregnancy, which would be injurious to the child. A good man respects his wife at all times and does not constantly pursue her.

144 No half-breeds were seen, and the Seri declare they are free of
164 venereal disease.

551 Nothing could be elicited from the informant as to anything like
614 the group-inherited names of lineages, or clans, of the Yuman tribes.

When a woman dies, the widower may give the children to his
768 dead wife's parents to raise. This is the only item learned that might point to McGee's "matriarchate"; but the informant may have been thinking of particular cases. His son lives with him, though he lost the boy's mother.

582 Cross-cousin marriage is as prohibited as that of parallel cousins.
This is in accord with the sibling terminology for all cousins; but in view of the present small number of the tribe, the rule must work difficulty.

● [587] A man does not marry his dead wife's sister. Apparently he may not. Nor is there levirate. The informant volunteered the question if marriage with step-daughters was permitted by other peoples. Being told of the Navaho custom, he seemed shocked.

606 Neither husband nor wife looks at or addresses either parent-
183 in-law. In the isolated, small-group life of the Seri, this rule can hardly be adhered to with complete rigor, and its conspicuous carrying out was not observed; but then everything in their behavior is casual, informal, and slovenly.

607 The kinship system as recorded contains a note as to a woman
not addressing her younger sister's husband by kinship term except

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

with the customs of the Seri), endured for many years and ending at last in unpitied death. 173 563 727

Collectively the cases seem to define a germ, rather than a mature custom, of adoption. In the first case a benefactor (by means regarded as magical) was formally inducted into the reigning family; in the second case the conquering hero (through what were again regarded as magical means) was less formally recognized and venerated, even worshiped, as an all-powerful shaman; while in the third case a representative of the doughtiest alien tribe was enslaved, probably with motives akin to those expressed in the carrying of chargeless guns, the making of imitation machetes, and other fetishistic devices. Except in the first instance there is no indication of consistent custom; but since the entire history of the tribe clearly contradicts regulated adoption of aliens (and indeed affords no other example), it must be inferred that any such custom is intratribal rather than intertribal. 597 563

MARRIAGE

The most striking and significant social facts discovered among the Seri relate to marriage customs. 595

As noted repeatedly elsewhere, the tribal population is preponderantly feminine, so that polygyny naturally prevails; the number of wives reaches three or possibly four, averaging about two, though the younger warriors commonly have but one, and there are always a number of spouseless (widowed) dames but no single men of marriageable age. So far as could be ascertained, no special formalities attend the taking of supernumerary wives, who are usually widowed sisters of the first spouse; it seems to be practically a family affair, governed by considerations of convenience rather than established regulations—an irregularity combining with other facts to suggest that polygyny is incidental, and perhaps of comparatively recent origin. [589] [174]

The primary mating of the Seri is attended by observances so elaborate as to show that marriage is one of the profoundest sacraments of the tribe, penetrating the innermost recesses of tribal thought, and interwoven with the essential fibers of tribal existence. Few if any other peoples devote such anxious care to their mating as do the Seri;[1] and among no other known tribe or folk is the moral aspect of conjugal union so rigorously guarded by collective action and individual devotion. 581

The initial movement toward formal marriage seems to be somewhat indefinite (or perhaps, rather, spontaneous); according to Mashém it may be made either by the prospective groom or else by his father, though not directly by the maiden or her kinswomen. In any event the prerequisites for the union are provisionally determined in the suitor's family; these relate to the suitability of age, the propriety of 584 [582]

[1] Perhaps the closest parallel in this respect is that found in the elaborate marriage regulations prevailing among the Australian aborigines, as described by Spencer and Gillen, Walter E. Roth, and other modern observers.

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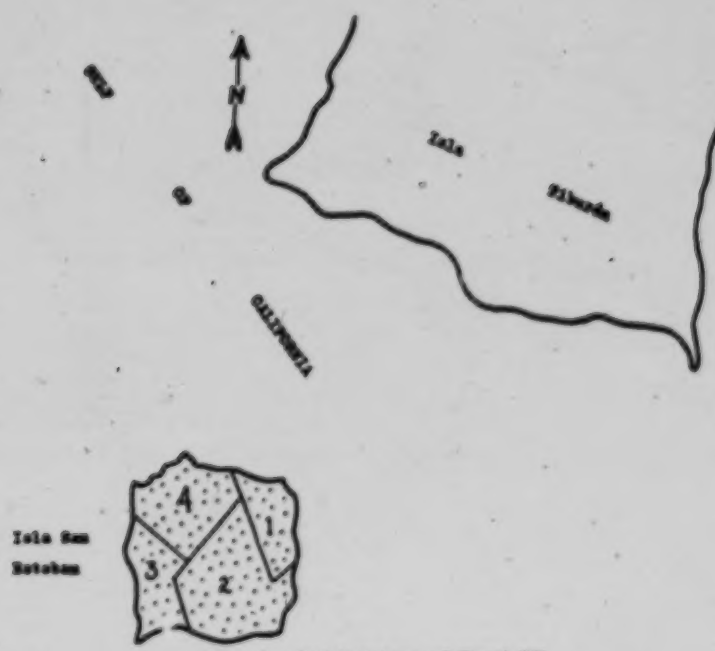

FIG. 5. Subdivisions of Band VI

BAND SOCIAL STRUCTURE

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The social structure of the bands can be properly understood only in relation to the social structure of their smaller units, the *i?iziitang*. The kin group which resided in and dominated each such subdivision constituted a clan.[5] This group conforms to Murdock's three major specifications for clan designation.[6]

Murdock's first specification states that a kin group, to constitute a clan, must be based explicitly on a unilinear rule of descent. The kin group of each Seri band subdivision was based on patrilineal descent. An individual was closely associated with the group of kinsmen of his subdivision, all of whom were related to him through males only. The father was the head of his household. For example, he assumed leadership in marriage negotiations. Upon his death, the eldest son took his place.

The second specification states that such a kin group must have residential unity. Seri marriages were exogamous with respect to the subdivision,[7] and the rule of residence was patrilocal. The domicile was set up near the home of the groom's parents.

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727 the vessel to Guaymas. With the aid of a group of Yaqui, some of these women were said to have been permitted to go to Hermosillo and eventually to return to their home on Tiburon. Others of their group are said to have remained near Guaymas. The women who returned to Tiburon reported that the San Esteban women and children were put aboard another ship which sailed southward.

BANDS I, III, AND IV

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72 As opposition from the Papago and government forces increased, the members of Band I were forced to seek refuge on Tiburon Island. The mainland members of Band III (subdivisions 11 and 12) were also forced, especially during the Encinas Wars, to flee to Tiburon. There the combined forces of Bands I, III, and IV sought to cope with the military expeditions sent out through the years to exterminate them. Tiburon Island is an adverse battlefield for the uninitiated; some expeditions were turned back due to lack of potable water or because of failure to make contact with the enemy in the mountainous terrain. Some expeditions did encounter the Seri, however, and many natives were either killed or captured.

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[618] Through the years, then, these military encounters, along with smallpox and measles epidemics, were responsible for reducing the Seri tribe to a small remnant. The band and clan systems lost their functional relevance as the people continued to live together for mutual protection. Shortly after the turn of the century, the expeditions and raids had practically ceased.

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●591 SIGNIFICANCE OF BANDS TODAY

With the dissolution of the band system, the rule of descent shifted from patrilineal to bilateral, and the rule of residence shifted from patrilocal to neolocal.

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[583] Although the substance of the band system is no longer a reality, the concept of land ownership still remains. A young Seri of today may choose to be associated with either the i?iriiting of his father or that of his mother. He is said to inherit part ownership of the area. It is recalled by one informant that in former times ownership of a mountain was especially important. Sometimes ownership of a mountain was included as part payment for a bride. Thus a person might 'own' a mountain in a subdivision other than his own.

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178 A custom exists even today whereby a person names his dog after a mountain or other geographical point located in his subdivision. Although the person may re-use the name, each dog so named must be of the same sex as the first.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

relation may be considered to begin in the animal realm with organisms adapted to environment through physiologic processes, and to end in that realm of enlightened humanity in which mind molds environment through complete nature-conquest. In the serial scale so defined the various primitive tribes and more advanced peoples may be arranged in the order of mental power or culture status; when the same arrangement will express in inverse order the relative closeness with which the several tribal minds reflect their environments. It follows that the lowly minds and craft of the Seri reflect their distinctive environment with exceeding, perhaps unparalleled, closeness, because of their very lowliness; it follows, too, that any other equally lowly folk imported into the region and perfectly wonted to it by generations of experience would equally reflect the physical features of the region in their craft and in their thinking; it follows, also, that if the Seri were transported into any other district of equally distinctive physical features, they would gradually adapt themselves to the new environment—though with some added intelligence, and hence with diminished closeness, as is the way of demotic development—in such manner that their craft and thinking would reflect its features. In a more general way it follows that those similarities in culture, or activital coincidences, which have impressed the ethnologic students of the world (notably Powell and Brinton), are normal and inevitable in primitive culture and of diminishing prominence with cultural advancement.

Social Organization

Among the Seri, as among many other aboriginal tribes, the social relations are largely esoteric; moreover, in this, as in other savage groups, the social laws are not codified, nor even definitely formulated, but exist mainly as mere habits of action arising in instinct and sanctioned by usage; so that the tribesmen could not define the law even if they would. Accordingly the Seri socialry[1] is to be ascertained only by patient observation of conduct under varying circumstances. Unfortunately, the opportunities for such observation have been too meager to warrant extended description, or anything more, indeed, than brief notice of salient points.

Clans and totems

The most noticeable social fact revealed about the Seri rancherias is the prominence of the females, especially the elder women, in the management of everyday affairs. The matrons erect the jacales without help from men or boys; they carry the meager belongings of the family and dispose them about the habitation in conformity with general custom and immediate convenience; and after the household is prepared, the men approach and range themselves about, apparently in a definite

[1] A convenient term proposed by Fulton.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU21

562 592 order, the matron's eldest brother coming first, the younger brothers next, and finally the husband, who squats in, or outside of, the open end of the bower. According to Mashém's iterated explanations, which were corroborated by several elderwomen (notably the clanmother known to the Mexicans as Juana María) and verified by observation of the family movements, the house and its contents belong exclusively to the matron, though her brothers are entitled to places within it whenever they wish; while the husband has neither title nor fixed place, "because he belongs to another house"—though, as a matter of fact, he is frequently at or in the hut of his spouse, where he normally occupies the outermost place in the group and acts as a sort of outer guard or sentinel. Conformably to their proprietary position, the matrons have chief, if not sole, voice in extending and removing the rancheria; and such questions as that of the placement of a new jacal are discussed animatedly among them and finally decided by the dictum of the eldest in the group. The importance of the function thus exercised by the women has long been noted at Costa Rica and other points on the Seri frontier, for the rancherias are located and the initial jacal erected commonly by a solitary matron, sometimes by two or three aged dames; around this nucleus other matrons and their children gather in the course of a day or two; while it is usually three or four days, and sometimes a week, before the brothers and husbands skulk singly or in small bands into the new rancheria.

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Quite similar is the regimentation of the family groups as indicated by the correlative privileges and duties as to placement, as well as the reciprocal rights of command and the requirements of obedience. Ordinarily (especially when the men are not about) the elderwoman of the jacal exercises unlimited privileges as to placement of both persons and property, locating the shot, the bedding, the fire (if any), and other possessions at will, and assigning positions to the members of her family, the nubile girls receiving especial attention; she is also the arbiter of disputes, the distributor of food, etc; but in case of tumult, especially when children from other jacales are present, she may invoke the authority of the clanmother, whose powers in the rancheria are analogous to those of the younger matrons in their own jacales. Even when the men are present they take little part in the regulation of personal conduct, but tacitly accept the decision of matron or clanmother; yet in emergencies any of the women are ready to appeal for aid in the execution of their will to a brother (preferably the elder brother) of the family, or, if need be great, to the brothers of the clanmother. So far as was observed, and so far as could be ascertained through informants, these appeals are always for executive and never for legislative or judicative cooperation; but various general facts indicate that in times of stress—in the heat of the chase, in the warpath-craze, etc—the men hustle themselves into the initiative, while the women drop into an inferior legislative place. As an illustration of the ordination in some-

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1: McGee E-5 (1894-1895) 1898 NUM Seri NUM

As an illustration of the ordination in some 129
what unusual circumstances, it may be noted that when the "Seri 562
belle" (Candelaria) refused to pose for a photograph she was supported 626
by the clanmother (Juana María) until the latter was placated by pres-
ents; and that when the belle refused to obey the mother's command—
to the vociferous scandal of the entire group—Juana María appealed
to Señor Encinas, as the conqueror of the tribe and hence as the virtual
head of both rancho and rancheria. And when a younger Seri maiden
(plate XXV) similarly refused to pose, and in like manner disobeyed her
mother (again to the general disgust), the latter appealed to Mashém;
when he, after first exacting additional presents for both girl and
mother and a double amount for himself, put hands on the recalcitrant
demoiselle and forced her into the pose required, despite the shrinking
and tremulous terror perceptible even in the picture.

Commonly the regimentation of family, clan, and larger group appears 592
to be indicated approximately by the placement assumed spontaneously
in the idle lounging of peace and plenty. A typical placement of a
small group is illustrated in plate XIV. Here the family are assembled
outside the jacal, but in the relative positions which would be assumed
within. The matron (a Red Pelican woman) squats in easy reach of
her few and squalid possessions; on her left, i. e., in the group back-
ground and place of honor, sits the elderwoman of the rancheria (a
Turtle); then comes the daughter of the family, followed by two girl-
child guests of the group, the three occupying positions pertaining to
chiefs or elder brothers or, in their absence, to daughters; opposite the
matron sits a younger brother,[1] whose wife is a Turtle woman (daughter
of the dame in the place of honor) and matron of another jacal. A
few feet behind this brother (just outside the limits of the photograph
reproduced, though shown on the duplicate negative) squats the hus-
band, with his side to the group and face toward the direction of natural
approach; while the place belonging to the sons of the family on the
matron's right is temporarily occupied by a White Pelican girl, together
with a dog, notable in the local pack for largely imported blood and
correspondingly docile disposition. The place for the babe, were there
one in the family, would be on the heap of odds and ends behind
the matron. As in this group so in most others, the place of the sons [858]
is vacant; for the boys are at once the most restless and the most law- [882]
less members of the tribe—indeed, the striplings seem often to ignore
the maternal injunctions and even to evade the rarely uttered avuncular
orders, so that their movements are practically free, except in so far as
they are themselves regimented or graded by strength and fleetness
and success in hunting.

The raison d'être of the proprietorship and regimentation reflected in 302
the everyday customs is satisfactorily indicated by that totemic feature 614
of the social organization revealed in the face-painting described in

[1] This man was one of those murdered in the Robinson butchery on Tiburon island a few months before the picture was taken; and he was one of those executed or transported for the affair during the temporal lull were the loss and toll expeditions.

614 hundred Seris at a time. They lived in maternal groups or clans in which the elder females were of great prominence in the management of everyday affairs. When, in 342 the wanderings of a family a new camp was decided upon, the elder matron usually [462] erected the jacal alone, without the aid of men or boys, gathering the long poles of the ocotillo or the branches of desert trees and fashioning them into an arched framework over which a covering of brush, and often later of turtle shells, served to give protection from the desert sun. After the household was prepared, she took her place within 361 easy reach of the meager and squalid family 592 possessions, and around this nucleus other matrons and their children gathered in the course of a day or two. It was usually three or four days, and sometimes a week, before the brothers and husbands came wandering in from their roving search for food to take their places at the new camp site.

482 From the turtle fishing camps on the chan-
312 nel, the nearest fresh water was at a distance

[p. 196(A)]

[90 cont.]

361 population. There is an obvious separation there between the
563 Seri and the yori, or non-Seri, with manifest differences in cultural patterns.

The yori occupy an extensive area per person; their homes are quite distant from one another, and four families in conjunction occupy a belt of land of about 100 by 50 meters.

361 The Seri are grouped by families, inhabiting minute squares of from one and a half to two meters to a side. The yori
182 feeling of prestige, based on the territorial expanse of their prop-
361 erty, contrasts with the feeling of security based on personal
511 contact that dominates many aspects of Seri life; the small size of the Seri habitation indicates, not a low standard of living, but a distinct [91] concept of comfort, according to which the Seri, having all the desert to live in, like the yori, confine themselves to the limits that personal contact permits.

In January, 1952, there were 35 dwellings, with an aver-
592 age of 4.6 persons in each, those lodging four, five, and six persons frankly predominating. Each three or four more closely related families occupied contiguous homes, forming relatively separate conjunctions by themselves, which we might call
596 macrofamilies.

The family is the basic Seri institution, which is manifest in all aspects of life: it is the center of production, co-operation, the division of labor, education, diversion, government, etc.

Going beyond the family and macrofamily organization,
582 619 621 we have a tribal structure based on the generalized exchange (2)

2. Lévy Strauss, Les Structures élémentaires de la Parenté [Elementary Kinship Structures], Paris, 1949.

of members for concluding marriage, by which all the Seri are actually linked by consanguinity or affinity. One is almost able to include all the members of the tribe on a single genealogical chart, systematically excluding only some few outsiders who have penetrated the group.

582 This situation, which would make one think of a primitive

123 handed to show their friendliness.

142 One was a young man with rather pleasant features, his braided
291 hair hanging below his shoulders. His name was Antonio Herrera. The
123 other was a wild-looking specimen called Ramon Blanco. His hair was a
[302] tangled mat with a short braid behind, suspicious black piercing eyes,
long sparse moustache and chin-beard hiding a broad cruel mouth. He
[311] wore the remnants of an old sweater, a short dirty kilt, or skirt,
nearly to his knees, a belt full of cartridges, mostly empty, and a
long knife in a rawhide scabbard.

123 The young man had been baptized and given a name by Roberto, who
[795] had acted as godfather or *patrona*, many years ago. He wore a hat,
[291] jacket, and pants of blue denim, and *guaraches*, or sandals of rawhide.

We shook hands all around and then they called and halloed in the
brush and soon three women and a lot of children, wild and half-
[415] clothed, filed into camp. The women were tall, gaunt, unkempt, ragged
[482] and barefooted, paying us not the slightest notice. They were bearing
[422] on their heads large baskets filled with all their earthly posses-
[850] sions---cooking ollas, scraps of cloth, pieces of turtle meat, bone
[231] brads, hair brushes, and odds and ends. They carried, also, an infant
or two wrapped in odd bits of rags. Several gaunt dogs followed in
their wake.

342 In all, three families came trailing in, removed their household
equipment from their heads and resumed their interrupted and primitive
[512] housekeeping. Each family occupied its apartment in the row of brush
shelters, separated from each other only by brush partitions with a
total lack of privacy. These shelters, always open to the sea, serve
as shade from the fierce rays of the sun, and also as windbreaks, but
[361] are no protection from infrequent rains. They are occupied only for a
brief period and then their nomadic tenants move on to fresh *cahuana*,
or sea turtle range.

123 Soon, a third man arrived while we were near the huts, Manuel
[42] Encina. He was a man of sixty-five, gray hair and mustache, seamed
features, and not evil looking. He was out of breath. He had gone for
water to the same water hole where we had been yesterday, struck our
tracks, had left his water cans and hurried back to warn his people.
He was greatly relieved to find friends.

Since he had gone for water, inquiry revealed there had been no
water in camp for two days, and six adults and one girl of thirteen
and six children were thirsty. We gladly gave them one of our five-
[225] gallon cans of water and they were very grateful. They had caught a
[262] sea turtle the day before and gave us some turtle steaks which looked
like beef or mutton.

312 As the camp was without water and we were running short, the young
482 man and Encina offered to get some. Each took a *palanca*, or short
123 shoulder pole with knotched ends, fitted empty five-gallon cans in

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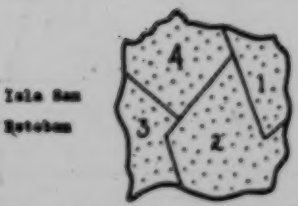

FIG. 5. Subdivisions of Band VI

BAND SOCIAL STRUCTURE

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The social structure of the bands can be properly understood only in relation to the social structure of their smaller units, the *i?iiitang*. The kin group which resided in and dominated each such subdivision constituted a clan.[6] This group conforms to Murdock's three major specifications for clan designation.[6]

Murdock's first specification states that a kin group, to constitute a clan, must be based explicitly on a unilinear rule of descent. The kin group of each Seri band subdivision was based on patrilineal descent. An individual was closely associated with the group of kinsmen of his subdivision, all of whom were related to him through males only. The father was the head of his household. For example, he assumed leadership in marriage negotiations. Upon his death, the eldest son took his place.

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The second specification states that such a kin group must have residential unity. Seri marriages were exogamous with respect to the subdivision,[7] and the rule of residence was patrilocal. The domicile was set up near the home of the groom's parents.

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1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

The painted designs vary among different individuals, but are fairly persistent for each. The prevailing design at Costa Rica in 1893 was that of the aged matron known as Juana Maria (plate XVIII), with variations in detail such as that exhibited by her unmarried daughter Candelaria (the Seri belle shown in plate XXIV); next in frequency were the designs, in white and red, exhibited by the matrons portrayed in plates XX and XXII. Other designs observed are indicated in plate XXVI. The variations in individual designs are apparently due either to varying care in the application of the paint or to the degree of obliteration by wear—e. g., the withered Juana Maria sometimes put on her design askew and was negligent of details, while the blooming Candelaria greatly elaborated the details of the pattern and carefully perfected the symmetry of the whole when preparing for her full-dress sitting before the camera (plate XXIV), so that her design was then gorgeous by contrast with the nearly obliterated blur of a half-hour before. The designs are renewed every few days, especially for ceremonious occasions, and hence are practically permanent.

When grouped in relation to their wearers, the designs are found to exhibit family connection. Thus, Juana Maria's design is repeated, with greater elaboration of detail and with a pair of supplementary marks, in that of her daughter Candelaria; the winged symbol of the Seri matron portrayed in plate XX is repeated with minor variations in that of her daughter, the Seri maiden pictured in plate XXV; while the symbols of the mother and infant daughter depicted in plate XV are essentially alike. It is noticeable, too, that in the nearly spontaneous arrangement of individuals in the group shown in plate XIII there is a tendency toward subgrouping by symbols; and it was constantly observed that the family groups gathered about particular jacales (such as that shown in plate XIV) displayed corresponding designs, though there were frequent visitors from neighboring jacales bearing other designs. Briefly, all the observed facts, as well as the supplementary information gained by inquiry, indicate that the designs are hereditary in the female line, but are susceptible of slight modification both in elaborateness of detail and in the addition of minor supplementary features.

The principal apparatus and materials used in the face-painting are illustrated in plate XXVII. The chief pigments are ocher, gypsum, and the rare mineral dumortierite; the ocher yields various shades of red, ranging from pink to brown; the gypsum affords the white used in most of the designs; while the dumortierite is the source of the slightly varying tints of blue. So far as was observed, the pigments are not blended by mixing, though there is some blending due to overlapping in application. The ocher is commonly extracted and transported as lumps of ocherous clay or ocherous gypsum (plate XXVII, figures 1 and 5), though it is sometimes reduced to powder and transported in bits of skin or rag, or in cylinders of cane (plate XXVII, figures 3 and 4); and it is

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

386 prepared by trituration with a pebble or rubbing with the fingers, usually in a shell cup. Sometimes the shell used for the purpose is the [412] valve of a *Cardium*, which serves indiscriminately as cup, spoon, skin-scraper, etc; but preference is apparently given to thick and strong shells, such as the wave-worn valve of *Chama* (?), shown in plate XXVII, figure 7, which are consecrated to the use and eventually buried [764] with the user, together with a supply of the paint (like that illustrated in the cane cylinder—figure 4—which was a mortuary sacrifice). The gypsum is usually carried in natural slabs or other fragments, perhaps rounded by wear (plate XXVII, figures 6 and 8); it is prepared by wetting and rubbing two pieces together, the larger being reduced to metate shape by the operation. The dumortierite was observed only in the form of a pencil made by pulverizing the substance and mixing with sufficient clay to give consistency. The several pigments are 302 applied wet by means of human-hair brushes kept for the purpose, the process occupying from half an hour to three or four hours for the more elaborate designs. So far as observed at Costa Rica in 1894, the paints were mixed in water only; but since painting outfits found on [386] Tiburon island in 1895 were smeared with grease, it is probable that either water or fats may serve for menstrua, at the convenience of the artists. Commonly the process of painting is measurably cooperative. The matron usually depicts her device on the faces of her daughters [593] up to the age of 12 or 15 years, when they learn to make the applications themselves; and frequently two or more women (usually those [47] with similar devices) work together in preparing and applying the pigments, each laying the paint on her own face and apparently guiding her hand partly by the sense of feeling and partly by suggestions from her coworkers; but Candelaria and some other of the younger women at Costa Rica frequently worked alone, aided by a mirror in the form of a shallow bowl of water set in the shadow while the brilliant desert glare fell full on the face.

317 The mines yielding the pigments were not located. The geologic conditions are such that the ochers are undoubtedly abundant; but it is probable that the gypsum is uncommon and confined to a remote locality or two, and that the dumortierite is rare and scanty here as elsewhere. The care with which the paints are preserved, prepared, and 386 applied, the fact that they are indispensable feminine appurtenances 435 even on the longest journeys, and their sacred rôle in the mortuary customs, all combine to indicate that they are among the most highly prized possessions of the people and by far the most precious of their minerals.

The sematic functions of the designs are esoteric, yet an inkling of 302 their meaning was obtained through Mashém, the interpreter at Costa 614 Rica in 1894; from his expressions it appears that the designs are sacred insignia of totemic character, serving to denote the clans of which the tribe is composed. But three clans were identified, and

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

614 earlier paragraphs (pp. 164–169); these symbols evidently represent an
[302] exclusively maternal organization into clans consecrated to zoic tutelaries. The tutelaries, or totems, together with the clan names and all personal designations connected with the totems, are highly esoteric, and were not ascertained save in the few cases mentioned above.[1]

It should be observed that the identification of kindred by the alien
● 593 observer is difficult and somewhat uncertain, since the relationships recognized in Seri sociality are not equivalent to those customary among Caucasians. It was found especially difficult to identify the husband
[582] of the jacal, partly because he is commonly incongruously younger (and hence relatively smaller) than the mistress, and partly because of the undignified position of outer guard into which he is forced by the tribal etiquette. Moreover, his connection with the house is veiled by the absence of authority over both children and domestic affairs, though he exercises such authority freely (within the customary limits) in the
[842] jacales of his female relatives. There is, indeed, some question as to the clear recognition of paternity; certainly the females have no term
601 for "my father", i. e., the term is the same as that for "my mother", *em*, though the males distinguish the maternal ancestor by a suffixed syllable (*e*="my father"; *e-ta* or *i-tah*="my mother"), which seems to be a magnificative or an intensificative element. It is noteworthy that the kinship terminology is strikingly meager; also that while the records suggest various significant points, the material is hardly rich enough to warrant complete synthesis of the consanguineal system.

While the burden of the more permanent property pertains to the
421 women, there is a decided differentiation of labor with a concomitant vesting of certain property in the warriors—the distinctively masculine chattels comprising arrows, quivers, bows, turtle-harpoons, etc. There are indications that the balsas, too, are regarded as masculine property. The impermanent possessions—water, food, etc—seem to be the common property of men, women, and children, except in so far as the
[264] right is regulated by regimentation; for the privileges of eating and drinking are enjoyed in the order of seniority. In the reckoning of
554 seniority, the chief (who is comonly such in virtue of his position as
602 nominal elder brother of a prolific dame) ranks first, and is followed by other warriors in an order affected in an undetermined way by conjugal relations as well as by their prowess or sagacity (the equivalents of age in primitive philosophy) down to an undetermined point—apparently fixed by puberty; then comes the clanmother, followed by her daughters in the order of nominal age, which is affected by the status of spouses and the number of living offspring; finally come the children, practically in the order of their strength (which also is deemed an equivalent of age), though the girls—especially those

[121] [1] The chief object of the 1895 expedition was to pursue the inquiries concerning social organization, totems, etc; but, as mentioned elsewhere, this object was defeated by the troublous history of the tribe during the earlier part of 1895, and the consequent revival and intensification of their animosity toward aliens.

2: Kroeber E-5 (1930) 1931 NU31 Seri NU31

in endearment when drunk. This may apply also to other siblings-in-law.

Younger siblings (? and other relatives) may say nothing obscene before the older, out of respect for them; but the older talk freely before the younger. This applies to both men and women. Otherwise there seems to be little prudery; the informant recited the names of the private parts before his wife and children, and she indifferently repeated them after him in confirmation.

There is no teknonymy.

The dead are buried. Cremation of the body seemed unknown to the informant. All property of the dead person is burned or destroyed. His balsa was burned; modern boats are not, because they "belong to the government," which furnishes the lumber. The house is abandoned and a new one built a short distance away. The name of the dead is not spoken.

Kinship

The Seri kinship system is distinguished by three general features: the large number of terms; the strong tendency to terms reciprocal in meaning; and the distinction made between older and younger siblings of nearer relatives if they are of the same sex. All of these are characteristic Yuman traits.

The number of terms obtained is 50; which number might have been increased if step-relatives, great-grandparents, great-uncle-aunts, siblings of siblings-in-law, spouses of uncles-aunts, and spouses had been inquired for. However, the informant seemed to feel that the list was exhausted with the set obtained; before that, he pursued the subject of his own accord. Fifty is an unusually large number of kinship names in any language; the more so, since there are no cousin terms. The 12 siblings-in-law terms—a quite extraordinary number—swell the total.

Conceptually reciprocal terms dominate the system except in the sibling class. The informant soon realized this principle. Some of the reciprocals are derivatives; others are not; self-reciprocals are lacking. This last fact helps increase the size of the system.

The distinction between older and younger siblings of the same (but not of the opposite) sex as nearer relatives is consistently carried out for uncles-aunts and spouses' siblings (or siblings' spouses).

ẽl	father	reciprocals	iẽ'k (man's son), ẽq man's daughter)
e't·e	mother	rec. iq'ẽt	(woman's child)
e'p·ẽe	father's father	rec. ik-e'pẽe	(man's son's child)
emẽe	father's mother	rec. eka'ẽak	(woman's son's chd.)
ẽ'ẽe	mother's father	rec. iqẽeí	(man's dtr.'s child)
ẽkt	mother's mother	rec. iqaq	(woman's dtr.'s chd.)

535 semi-darkness.
123 Soon two little boys joined the dance, stepping up and down in the sand. Lighted only by the flickering flames of the driftwood fires on the shores of this mysterious and dreaded isle, the soft murmur of the sea as a refrain to the wild chanting, the weird circling of glittering eyes, and wild dark faces, presented a scene of uncanny and savage fascination witnessed by white men probably for the first time.

[533] After each stanza there was a short rest. The singing was similar to most other tribal chanting.

582 836 622 Bob made the remark that the girl was old enough to be broken in by the old Chief. I said, "How?"

583 [839] He said, when a girl thirteen or fourteen has her menses, the Chief takes her and goes through the family act. This is called 'breaking her in'. She is then eligible for marriage. A young man desiring marriage has to purchase the girl by giving the father a boat or rifle, both being necessary to the Seri's existence and pro-
585 tection. At the wedding they have sort of a fiesta and much mescal is drunk, which properly solemnizes a wedding.

844 845 When a girl has a baby it usually comes very naturally and easily, but I remember one girl's first baby was three days in coming, and she suffered a great deal. This was on a subsequent trip. She was staying with many of her people on the mainland and someone asked them if they didn't want a doctor or other help. They said: No, they had one. It was a Medicine Man who chanted over the girl and dug hollows in the sand to fit her heels into. He said that the legs had to be kept apart. This was all he did. But ordinarily there is no trouble, and if a baby is born at noon the mother is up and doing, and cooks supper
• [543] for her lord and master. The men treat their wives with kindness and each shares with the other any delicacy.

462 [303] [482] In Seriland domestic duties are reversed from the usual Indian methods. The men get the water and the women get the wood. This consists mostly of driftwood gathered along the shore, and it is a picturesque sight to see a string of women and girls bringing in loads of wood in baskets on their heads at sunset.

622 595 There are no plural marriages, but sometimes when a Chief is old, or rather when his wife is old and can have no more babies, he can take a younger woman as his wife. The present Chief is getting old now, almost too old to break in the girls, so they may get a younger man. This might be called the perquisites of office. He takes the cream.

832 825 They hunt lice in the head and eat them. This is said to increase the amorous desires. The penis of the male turtle is cut out and dried. This is pounded and pulverized and placed in the food of the women. This is said to create a desire for a man and the family act.

000 search out an old fish head or Pelican bone. Discouraged, never!

123 223 We had intended going to Alcatraz *(Pelican Island)* and have the Indians secure more skins for us at night, but the wind was strong and not favorable, so the trip was put off. The Indians hold up torches of dry *pitahalla*, while another Indian knocks the Pelicans over the head.

123 224 Stan and three Indians started out for the *picachos* with rifles in a hunt for mountain lions and a *tigre* our Indian said he saw. They returned in the afternoon tired and hungry and carrying no game. Stan had mounted the highest peak, an almost perpendicular one, and dangerous climb.

123 593 One member of the hunting party, Santo Blanco *(Holy White)* which belies his name---as he is neither white nor holy---evidently didn't find his dinner waiting for him, and proceeded to beat up his poor wife. Perhaps she didn't expect him so soon or perhaps the larder was empty. At any rate, another woman, Luis Torres' wife, flew to her assistance and grabbed the rifle or stick and he cut her hand cruelly with his knife. She was brought whimpering to our camp, her poor thin hand dripping blood. One or two sympathizing women, crying softly, followed her.

I immediately put some flour over the cut and tore up strips of cotton goods and wrapped them round and round her hand, then pressed the veins to check the hemorrhage, and held her hand up. After fifteen or twenty minutes it ceased to drip, and an Indian brought me some mentholatum from my grip. I bathed her hand in salt water while she whimpered softly, put on the salve and re-wrapped her hand in clean goods and she returned to her camp. Her child picked up the discarded bloody clothes and took them to her.

123 Roberto had gone back for the things he had left, and at noon had returned with the car to Santa Cruz, intending to return by mule in the evening. He returned long after dark after five hours in the saddle. He had been bucked off once and lost in a jungle of timber, both down and standing for two hours. He was fenced inside this tangle, he said, finding it almost impossible to escape.

The mule was later to be tied up, rolled into the boat and taken to the Island for my use, so I would not get worn out walking and carrying food and water.

Again, we were lulled to sleep by the murmur of the sea.

On account of unfavorable conditions, we did not start in the boat the next morning, but fully expected to start the following morning. After breakfast we decided to give the Indians a feast. One Seri secured a five-gallon can three-quarters filled with water, and one by one I poured four cups of flour in it. I hesitated a moment and the Indian said "too much water," and all the crowd waited with bated breath. When I poured in an extra cup-full a great sigh of

[text continues on p. 200]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

bolic weapon, the counterfeit cartridge, the imitation machete, or other charm against alien power; it is usually he who wears the white man's hat or random garment in lieu of the deer or lion mask of earlier days; and during recent years his most-prized fetish, and one which practically insures the support of his fellows, is a written certificate of his chiefship from Señor Encinas, or, still better, from El Gobernador at Hermosillo. Yet he is a throneless and even homeless potentate, sojourning, like the rest of his fellows, in such jacales as his two or three or four wives may erect, wandering with season and sisterly whim, chased often by rumors of invasion or by fearsome dreams, and restrained by convention even from chiding his own children in his wives' jacales save through the intercession of female relatives. 643 [618]

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ADOPTION

One of the more important factors in demotic development among primitive peoples (probably second only to intertribal marriage in extending sympathy and unifying law) is adoption; and special efforts were made to obtain data relating to the subject. Direct inquiries were futile, the responses indicating that the entire subject is foreign to the thought of the tribe; but three sporadic and measurably incongruous examples of quasi adoption are worthy of record. 594 [124]

The most specific case is that of Lieutenant Hardy, who visited Isla Tiburon in 1826, and was fortunate in gaining the confidence of the tribe through successful medical treatment of the wife of the chief. On his second landing he was greeted with many expressions of gratitude, which were especially exuberant on the part of the daughter of the family (always a personage in Seri custom), who insisted on painting his face. He specifies: 597 648

> Not wishing to deny her the indulgence of this innocent frolic, I quietly suffered her to proceed. She mixed up part of a cake of blue color, which resembles ultramarine (and of which I have a specimen), in a small shell; in another, a white color, obtained by ground talc, and in a third was mixed a color obtained from the red flint-stone of the class which I before stated was to be found on Seal Island, and resembled cinnabar. With the assistance of a pointed stick the tender artist formed perpendicular narrow stripes down my cheeks and nose, at such distances apart as to admit of an equally narrow white line between them. With equal delicacy and skill the tops and bottoms of the white lines were finished off with a white spot. If the cartilage of my nose at the nostrils had been perforated so as to admit a small, round, white bone, five inches in length, tapering off at both ends and rigged something like a cross-jack yard, I might have been mistaken for a native of the island. As soon as the operation was finished, the whole party set up a roar of merry laughter, and called me "Hermano, Capitan Tiburow," being the very limited extent of their knowledge of Spanish.[1] [386] [302]

[1] Travels, p. 286.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

with the customs of the Seri), endured for many years and ending at last in unpitied death. 173 563 727

Collectively the cases seem to define a germ, rather than a mature custom, of adoption. In the first case a benefactor (by means regarded as magical) was formally inducted into the reigning family; in the second case the conquering hero (through what were again regarded as magical means) was less formally recognized and venerated, even worshiped, as an all-powerful shaman; while in the third case a representative of the doughtiest alien tribe was enslaved, probably with motives akin to those expressed in the carrying of chargeless guns, the making of imitation machetes, and other fetishistic devices. Except in the first instance there is no indication of consistent custom; but since the entire history of the tribe clearly contradicts regulated adoption of aliens (and indeed affords no other example), it must be inferred that any such custom is intratribal rather than intertribal. 597 563

MARRIAGE

The most striking and significant social facts discovered among the Seri relate to marriage customs. 595

As noted repeatedly elsewhere, the tribal population is preponderantly feminine, so that polygyny naturally prevails; the number of wives reaches three or possibly four, averaging about two, though the younger warriors commonly have but one, and there are always a number of spouseless (widowed) dames but no single men of marriageable age. So far as could be ascertained, no special formalities attend the taking of supernumerary wives, who are usually widowed sisters of the first spouse; it seems to be practically a family affair, governed by considerations of convenience rather than established regulations—an irregularity combining with other facts to suggest that polygyny is incidental, and perhaps of comparatively recent origin. [589] [174]

The primary mating of the Seri is attended by observances so elaborate as to show that marriage is one of the profoundest sacraments of the tribe, penetrating the innermost recesses of tribal thought, and interwoven with the essential fibers of tribal existence. Few if any other peoples devote such anxious care to their mating as do the Seri;[1] and among no other known tribe or folk is the moral aspect of conjugal union so rigorously guarded by collective action and individual devotion. 581

The initial movement toward formal marriage seems to be somewhat indefinite (or perhaps, rather, spontaneous); according to Mashém it may be made either by the prospective groom or else by his father, though not directly by the maiden or her kinswomen. In any event the prerequisites for the union are provisionally determined in the suitor's family; these relate to the suitability of age, the propriety of 584 [582]

[1] Perhaps the closest parallel in this respect is that found in the elaborate marriage regulations prevailing among the Australian aborigines, as described by Spencer and Gillen, Walter E. Roth, and other modern observers.

2: Kroeber E-5 (1930)1931 NU31 Seri NU31

Society

583 Marriage is monogamous. The wife is bought, in spite of the poverty of the Seri. Santa Blanco paid 150 pesos in property for [595] his wife. Chico Romero, a widower, paid more for his, a widow, "because she had three daughters, and a family with daughters is rich" (in expectation of bride prices).

591 The wife goes to live with the husband. A young couple lives with the young man's parents, perhaps in an annex to the house. 562 "The man commands." Chico was emphatic on this point, and repeated that when his son married he would live with him, not with the girl's relatives. Both he and Santo have step-sons-in-law as well as daughters-in-law living with them, but this is because they are chief and boat-owner respectively; (and the sons-in-law are young).

833 Copulation was said to take place immediately on marriage. McGee's statement of a period of continence being cited as the custom of a foreign tribe, the informant obviously wondered and laughed. Intercourse goes on during pregnancy; but not for some months [843] after birth, for fear of a new pregnancy, which would be injurious to the child. A good man respects his wife at all times and does not constantly pursue her.

144 No half-breeds were seen, and the Seri declare they are free of 164 venereal disease.

551 Nothing could be elicited from the informant as to anything like 614 the group-inherited names of lineages, or clans, of the Yuman tribes.

When a woman dies, the widower may give the children to his 768 dead wife's parents to raise. This is the only item learned that might point to McGee's "matriarchate"; but the informant may have been thinking of particular cases. His son lives with him, though he lost the boy's mother.

582 Cross-cousin marriage is as prohibited as that of parallel cousins. This is in accord with the sibling terminology for all cousins; but in view of the present small number of the tribe, the rule must work difficulty.

A man does not marry his dead wife's sister. Apparently he [587] may not. Nor is there levirate. The informant volunteered the question if marriage with step-daughters was permitted by other peoples. Being told of the Navaho custom, he seemed shocked.

606 Neither husband nor wife looks at or addresses either parent-183 in-law. In the isolated, small-group life of the Seri, this rule can hardly be adhered to with complete rigor, and its conspicuous carrying out was not observed; but then everything in their behavior is casual, informal, and slovenly.

607 The kinship system as recorded contains a note as to a woman not addressing her younger sister's husband by kinship term except

2: Kroeber E-5 (1930)1931 NU31 Seri NU31

to prepared defence or attack. The Seri mode of life and induced temperament must have led to many instabilities, with make-shifts often actually more in use, but finished or efficient types of artifact seemingly latent and sporadically emerging in the stream of their culture. Thus, the shell alongside the double-bladed paddle; plain baskets seen in use, but a series patterned in a definite style being produced as soon as their manufacture was profitable; unroofed and roofed houses. Similarly, the two-pointed fish-spear and olla carrying-net, which neither McGee nor I saw, but which may persist in memory in the culture ready for revival on occasion.

Somewhat similar, perhaps, is the status of polygyny, which prevailed in McGee's day (p. 279) a half generation after a disastrous war, but was not the rule, or was successfully disavowed, in earlier times and to-day.

Errors and Misconstructions

McGee dwells at length (pp. 152-156) on three strong trends of Seri life and culture: the pedestrian habit, accompanied by quite exceptional fleetness; a hand and tooth sense with corresponding absence of tool sense; and a race sense unalterably opposed to mixture with alien blood.

All the Sonora and Southwestern Indians were and largely still are fast and sustained long-distance travelers on foot. There is nothing to show that the Seri were superior to the others. The one time they remember having met the Papago in a foot-ball race, they were beaten. Yaqui warfare is a record of at least equal endurance and ability to evade superior civilized forces. In fact the faculties of the Yaqui are the more remarkable in that they have always been settled farmers and often moved in larger bodies. The incredible fleetness of the Seri was probably most manifest in mesquite thickets and on rocky ground. That they should outrun a horseman on an open plain is the sort of tale that one hears on every frontier and which the more intelligent frontiersman does not take seriously.

Hand and tooth sense was undoubtedly strong among the Seri. The same thing, especially as regards food, is reported for the Lower Californians. But the inference of lack of tool sense is erroneous. Knives are prized by the Seri, and, along with nails, axes, and the like, are handled with a direct, crude effectiveness. The crudity is due to the lack of standard, order, and interest in finish which pervades all Seri cultural manifestations and which rests ultimately on their essential isolation and self-sufficiency in an unusually forbidding environment. What a Seri is interested in is not a neat job but one that will substantially meet his immediate need. Their modern plank boats are weak in plan, badly joined, and always leaky; but they serve. A structurally stronger boat would probably profit noth-

535 semi-darkness.

123 Soon two little boys joined the dance, stepping up and down in the sand. Lighted only by the flickering flames of the driftwood fires on the shores of this mysterious and dreaded isle, the soft murmur of the sea as a refrain to the wild chanting, the weird circling of glittering eyes, and wild dark faces, presented a scene of uncanny and savage fascination witnessed by white men probably for the first time.

[533] After each stanza there was a short rest. The singing was similar to most other tribal chanting.

582 836 622 Bob made the remark that the girl was old enough to be broken in by the old Chief. I said, "How?"

583 [838] He said, when a girl thirteen or fourteen has her menses, the Chief takes her and goes through the family act. This is called 'breaking her in'. She is then eligible for marriage. A young man desiring marriage has to purchase the girl by giving the father a boat or rifle, both being necessary to the Seri's existence and protection. At the wedding they have sort of a fiesta and much mescal is drunk, which properly solemnizes a wedding.

585

944 945 When a girl has a baby it usually comes very naturally and easily, but I remember one girl's first baby was three days in coming, and she suffered a great deal. This was on a subsequent trip. She was staying with many of her people on the mainland and someone asked them if they didn't want a doctor or other help. They said: No, they had one. It was a Medicine Man who chanted over the girl and dug hollows in the sand to fit her heels into. He said that the legs had to be kept apart. This was all he did. But ordinarily there is no trouble, and if a baby is born at noon the mother is up and doing, and cooks supper for her lord and master. The men treat their wives with kindness and each shares with the other any delicacy.

[593]

462 [303] [482] In Seriland domestic duties are reversed from the usual Indian methods. The men get the water and the women get the wood. This consists mostly of driftwood gathered along the shore, and it is a picturesque sight to see a string of women and girls bringing in loads of wood in baskets on their heads at sunset.

622 595 There are no plural marriages, but sometimes when a Chief is old, or rather when his wife is old and can have no more babies, he can take a younger woman as his wife. The present Chief is getting old now, almost too old to break in the girls, so they may get a younger man. This might be called the perquisites of office. He takes the cream.

932 825 They hunt lice in the head and eat them. This is said to increase the amorous desires. The penis of the male turtle is cut out and dried. This is pounded and pulverized and placed in the food of the women. This is said to create a desire for a man and the family act.

622 Thus passed a very striking character among the primitive races of Sonora, Mexico. He was brave and fearless in battle; crafty, cautious, and cunning in attack; cruel and merciless to his enemies. He was rarely caught off his guard, and always managed to extricate himself and his men from difficult situations. He was quick to think and act, and was wise with the wisdom learned at first hand on desert and sea from a rugged nature, reluctant to give up her secrets. He was a master hand at *balsa* building, a good hunter, fisherman, harpooner of *cahuama* (sea turtle), a good surfman, a good gambler, and an expert [595] tracker. It was not unusual to possess two or three wives, but the old Chief, while married three times, had only one wife at a time. He was quite fond of the writer, and used to greet him with the true Mexican *abrazo*.

[123] It was in 1922 that I first met the grim old warrior on the shores of Tiburon, whither I had gone on a quest for the Museum of the American Indian, Heye Foundation, New York.

[142] He was very dark, of medium height, thick set, with a broad, deep chest, very muscular, with shaggy brows and deep set eyes which, even at that age, ninety years, burned like coals of fire, and were sus- [302] picious and wary. He wore a braided pigtail down his back which con- [290] tained a few gray hairs. For clothing, he wore a ragged shirt and an [411] old pair of overalls, with a short kilt hanging from a belt, through which stuck a long naked knife of hoop iron, ground on abrasive rocks and keen as a razor.

[291] From infancy to the grave, the freedom of his feet was never [484] hampered by shoes. Even at that advanced age, and until his last illness, he was perfectly able to care for himself, and follow his nomadic tribe on its devious trails along the coast and far in the interior. A walk of a hundred miles was not unusual. For ten rifle cartridges a Seri Indian once walked forty or fifty miles to deliver my message to Juan Tomas. From the time we first met, our friendship was never broken.

[90 cont.]

361 population. There is an obvious separation there between the
563 Seri and the yori, or non-Seri, with manifest differences in cultural patterns.

The yori occupy an extensive area per person; their homes are quite distant from one another, and four families in conjunction occupy a belt of land of about 100 by 50 meters.

361 The Seri are grouped by families, inhabiting minute squares of from one and a half to two meters to a side. The yori
182 feeling of prestige, based on the territorial expanse of their prop-
361 erty, contrasts with the feeling of security based on personal
511 contact that dominates many aspects of Seri life; the small size of the Seri habitation indicates, not a low standard of living, but a distinct [91] concept of comfort, according to which the Seri, having all the desert to live in, like the yori, confine themselves to the limits that personal contact permits.

In January, 1952, there were 35 dwellings, with an aver-
592 age of 4.6 persons in each, those lodging four, five, and six persons frankly predominating. Each three or four more closely related families occupied contiguous homes, forming relatively separate conjunctions by themselves, which we might call
●596 macrofamilies.

The family is the basic Seri institution, which is manifest in all aspects of life: it is the center of production, co-operation, the division of labor, education, diversion, government, etc.

582 Going beyond the family and macrofamily organization,
619 we have a tribal structure based on the generalized exchange (2)
621

2. Lévy Strauss, Les Structures élémentaires de la Parenté [Elementary Kinship Structures], Paris, 1949.

of members for concluding marriage, by which all the Seri are actually linked by consanguinity or affinity. One is almost able to include all the members of the tribe on a single genealogical chart, systematically excluding only some few outsiders who have penetrated the group.

582 This situation, which would make one think of a primitive

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

bolic weapon, the counterfeit cartridge, the imitation machete, or other charm against alien power; it is usually he who wears the white man's hat or random garment in lieu of the deer or lion mask of earlier days; and during recent years his most-prized fetish, and one which practically insures the support of his fellows, is a written certificate of his chiefship from Señor Encinas, or, still better, from El Gobernador at Hermosillo. Yet he is a throneless and even homeless potentate, sojourning, like the rest of his fellows, in such jacales as his two or three or four wives may erect, wandering with season and sisterly whim, chased often by rumors of invasion or by fearsome dreams, and restrained by convention even from chiding his own children in his wives' jacales save through the intercession of female relatives.

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ADOPTION

One of the more important factors in demotic development among primitive peoples (probably second only to intereian marriage in extending sympathy and unifying law) is adoption; and special efforts were made to obtain data relating to the subject. Direct inquiries were futile, the responses indicating that the entire subject is foreign to the thought of the tribe; but three sporadic and measurably incongruous examples of quasi adoption are worthy of record.

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The most specific case is that of Lieutenant Hardy, who visited Isla Tiburon in 1826, and was fortunate in gaining the confidence of the tribe through successful medical treatment of the wife of the chief. On his second landing he was greeted with many expressions of gratitude, which were especially exuberant on the part of the daughter of the family (always a personage in Seri custom), who insisted on painting his face. He specifies:

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[386] [302]

[1] Travels, p. 268.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

597 648 While the lieutenant attached no significance to the painting, the procedure would seem to have been a ceremonial adoption, such as might, for example, be used in connection with a confederate clan. The description of the painting is sufficiently explicit to identify the totem with that of the Turtle clan, represented by the clanmother and the daughter of the clan at Costa Rica in 1894 (plates XVIII and XXIV); but it is noteworthy that the salutation with which the ceremony terminated, and which may be rendered "Captain-Brother of the Sharks", would seem to identify the totem with the shark rather than the turtle.[1]

The second case of adoption (if so it may be styled) was that of Señor Encinas, after his bloodiest battle, in which nearly all of the Seri warriors were left on the field. In this case there was no ceremony, or at least none remembered by the beneficiary; he was merely informed by a delegation of aged dames that thenceforth he would be regarded as a stronger and more invulnerable chief (shaman) than any member of the tribe, and hence as the tribal leader.

173 563 727 The third instance is still less definite, though it seems to be trustworthy. There is a widespread tradition throughout Sonora that in the course of a brush between a band of Papago hunters and a marauding bunch of Seri warriors in the mountains southeast of Cieneguilla twenty-five or thirty years ago, a Papago maiden was captured and carried off to Tiburon; and that for some years thereafter—i. e., until the Papago had taken ample blood-vengeance—the intertribal animosity was exceptionally bitter. No wholly satisfactory basis for the traditions could be found among the Papago, though some of the silences of the old men were suggestive; nor was the tradition fully credited by Señor Encinas, despite its deep lodgment in the minds of some of his yoemanry. When Mashém was interrogated on different occasions, he merely shook his head in stolid silence; but when the device was adopted of inquiring the number of Papago children brought into the tribe through this woman he responded promptly with a snort of scorn, and followed this with the explanation that she never had children, and could not because she was an alien slave. The explanation was corroborated by clanmother Juana María and other matrons, with sundry expressions of contemptuous disapproval of the inquiry and scorn of the very idea that aliens could fructify within the tribe. Later, the ice being broken, Mashém intimated that the woman had recently died of old age and its consequences—doubtless as an outcast. On the whole, the direct testimony would seem to substantiate the tradition, and to supplement it with the short and simple annals of a spouseless and childless life (incredible of other tribes, but consistent

[124] [773] [1] This identification may possibly be correct; the collocation of the totem with the turtle was shaped through unwilling and perhaps misleading responses made by Mashém to inquiries in 1894—these responses denoting a sea monster which in the beginning helped the Ancient of Pellicans to make the world by pushing from below, and which is now very good food—a description apparently fitting the turtle more closely than the other animal.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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614 earlier paragraphs (pp. 164–169); these symbols evidently represent an
[302] exclusively maternal organization into clans consecrated to sole tutelaries. The tutelaries, or totems, together with the clan names and all personal designations connected with the totems, are highly esoteric, and were not ascertained save in the few cases mentioned above.[1]

593 It should be observed that the identification of kindred by the alien observer is difficult and somewhat uncertain, since the relationships recognized in Seri society are not equivalent to those customary among Caucasians. It was found especially difficult to identify the husband
[582] of the jacal, partly because he is commonly incongruously younger (and hence relatively smaller) than the mistress, and partly because of the undignified position of outer guard into which he is forced by the tribal etiquette. Moreover, his connection with the house is veiled by the absence of authority over both children and domestic affairs, though he exercises such authority freely (within the customary limits) in the
[842] jacales of his female relatives. There is, indeed, some question as to the clear recognition of paternity; certainly the females have no term
601 for "my father", i. e., the term is the same as that for "my mother", *em*, though the males distinguish the maternal ancestor by a suffixed syllable (*e*="my father"; *e-ta* or *i'-tah*="my mother"), which seems to be a magnificative or an intensificative element. It is noteworthy that the kinship terminology is strikingly meager; also that while the records suggest various significant points, the material is hardly rich enough to warrant complete synthesis of the consanguineal system.

421 While the burden of the more permanent property pertains to the women, there is a decided differentiation of labor with a concomitant vesting of certain property in the warriors—the distinctively masculine chattels comprising arrows, quivers, bows, turtle-harpoons, etc. There are indications that the balsas, too, are regarded as masculine property. The impermanent possessions—water, food, etc—seem to be the common property of men, women, and children, except in so far as the
[264] right is regulated by regimentation; for the privileges of eating and drinking are enjoyed in the order of seniority. In the reckoning of
554 seniority, the chief (who is comonly such in virtue of his position as
602 nominal elder brother of a prolific dame) ranks first, and is followed by other warriors in an order affected in an undetermined way by conjugal relations as well as by their prowess or sagacity (the equivalents of age in primitive philosophy) down to an undetermined point—apparently fixed by puberty; then comes the clanmother, followed by her daughters in the order of nominal age, which is affected by the status of spouses and the number of living offspring; finally come the children, practically in the order of their strength (which also is deemed an equivalent of age), though the girls—especially those

[121] [1] The chief object of the 1895 expedition was to pursue the inquiries concerning social organization, totems, etc; but, as mentioned elsewhere, this object was defeated by the troublous history of the tribe during the earlier part of 1895, and the consequent revival and intensification of their animosity toward aliens.

2: Kroeber E-5 (1930) 1931 NU31 Seri NU31

in endearment when drunk. This may apply also to other siblings-in-law. 607

Younger siblings (? and other relatives) may say nothing obscene before the older, out of respect for them; but the older talk freely before the younger. This applies to both men and women. Otherwise there seems to be little prudery; the informant recited the names of the private parts before his wife and children, and she indifferently repeated them after him in confirmation. 593 834

There is no teknonymy. 551

The dead are buried. Cremation of the body seemed unknown to the informant. All property of the dead person is burned or destroyed. His balsa was burned; modern boats are not, because they "belong to the government," which furnishes the lumber. The house is abandoned and a new one built a short distance away. The name of the dead is not spoken. 76 [422]

Kinship

The Seri kinship system is distinguished by three general features: the large number of terms; the strong tendency to terms reciprocal in meaning; and the distinction made between older and younger siblings of nearer relatives if they are of the same sex. All of these are characteristic Yuman traits. 601

The number of terms obtained is 50; which number might have been increased if step-relatives, great-grandparents, great-uncle-aunts, siblings of siblings-in-law, spouses of uncles-aunts, and spouses had been inquired for. However, the informant seemed to feel that the list was exhausted with the set obtained; before that, he pursued the subject of his own accord. Fifty is an unusually large number of kinship names in any language; the more so, since there are no cousin terms. The 12 siblings-in-law terms—a quite extraordinary number—swell the total.

Conceptually reciprocal terms dominate the system except in the sibling class. The informant soon realized this principle. Some of the reciprocals are derivatives; others are not; self-reciprocals are lacking. This last fact helps increase the size of the system.

The distinction between older and younger siblings of the same (but not of the opposite) sex as nearer relatives is consistently carried out for uncles-aunts and spouses' siblings (or siblings' spouses).

ôl	father	reciprocals	loâ'k (man's son), ôq man's daughter)
o't·a	mother	rec. lq/t	(woman's child)
o'p·âc	father's father	rec. ik-o'pâc	(man's son's child)
omôc	father's mother	rec. oka'nak	(woman's son's chd.)
ô'ôc	mother's father	rec. iqôci	(man's dtr.'s child)
ôkt	mother's mother	rec. iqnq	(woman's dtr.'s chd.)

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eeke	older brother (of man or woman)		
eXa"e	younger brother (of man or woman?)		
l'q·de	younger brother of woman	rec. 'lpák	(older sister of man)
huya'k	younger brother (reference, not address?)		
emya'k	younger brother (term of endearment, cuando contento)		
eh'"me	younger sister (of man)		
etke	older sister of woman	rec. lca'k	(yngr. sister of w.)
ema"dx	father's older brother	rec. ek-ma"k(x)	(man's y. br.'s child)
e'ite	father's younger br.	rec. ekó'tac (ekó'pac?)	(man's o. br.'s child)
a'yak	father's sister	rec. icôk	(woman's br.'s child)
etma"dx	mother's older sister	rec. etxema"d(x)	(woman's y. sis. ch.)
inta'k	mother's younger sis.	rec. epxac	(woman's o. sis. ch.)
exak	mother's brother	rec. e"ak	(man's sister's child)

All cousins, cross and parallel, are said to be brothers and sisters. The cases used as tests did not suffice to determine whether the names used depend on the respective ages of the cousins or of their parents.

eqêqt	man's parent-in-law	rec. iqaqa'm	(son-in-law)
iqe'pêc	woman's father in law	rec. iqa'mâc	(daughter-in-law)
iqêmêc	woman's mother in law		
iqe'mut	wife's brother	rec. eqtañqwa'l	(man's sis. husband)
eqmaXê'te	wife's older sister	rec. etmaXêm*	(wom. y. sis.'s husb.)
ika'ite	wife's younger sister	rec. imaqe'te	(wom. o. sis.'s husb.)
eqwaq	husband's sister	rec. ikôk	(wom.'s br.'s wife)
iqma"aX	hus.'s older brother	rec. eqmaXêt	(man's y. br.'s wife)
iqê'ite	hus.'s younger brother	rec. iqe'tac ha'ta	(man's o. br.'s wife)

* Term of endearment, when drunk; otherwise they do not speak.

171
601

There is no word for child's parent-in-law (consuegro).

That a man distinguishes his son and daughter but a woman calls them by a single term, is a Yuman trait.

The number of sibling terms is greater than among the Yumans. The Diegueño-Kamia agree with the majority of Californian tribes in having four terms: older and younger brother and sister. The Yuma and Mohave have three, older siblings being merged; the Papago, two.

Six uncle-aunt terms, allotted as among the Seri, prevail through southern California, including the Yuman tribes; also among Walapai-

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Havasupai. This therefore looks like a trait of Yuman origin. The Papago go farther, with eight terms. 171 601

The Seri habit of calling cross cousins siblings prevails through central and northern California alongside the trait of designating them by uncle-nephew terms. All southern California, including the Yuman tribes, has special cross cousin terms. The Walapai-Havasupai combine the last two methods.

As compared with the three Seri parent-in-law terms, the California Yumans have two, the Walapai-Havasupai one. The twelve Seri sibling-in-law terms are most nearly approached in California by the Yuman Kamia, with seven. The Yuma have five; the Mohave, like the majority of Californian tribes, three. The Walapai-Havasupai, like the Hopi and apparently the Pima-Papago, have reduced separate terms for both siblings-in-law and children-in-law to very few.

Calendar and Astronomy

One informant said there were 12 moons in the year; another, 6. The list obtained consists of 12. Of these, about 6 refer to seasonal events, especially those concerned with food; 6 to constellations. This type of calendar resembles that of the Walapai-Havasupai. 805 821

1. June, eko'ɬaX hi'caX, mesquite ripe.
2. July, antia'ɬa hi'caX, grass green, rains.
3. August, soxwe'mal or xacuxe'mal (cf. 7), (certain stars) not yet visible (before dawn); tunas.
4. September, hê'to-ya'o, (stars of that name) appear; cold begins.
5. October, e'-ya'o, constellation jackrabbit (e') rises in morning.
6. November, na'pXe-ya'o, constellation buzzard (nâ'pXe) appears (in morning).
7. December, xasoXwe'mal me'e (cf. 3; verified) (certain stars) not yet visible.
8. January, koyaXca'k, certain stars just begin to show; small sea-turtles appear.
9. February, koyaXa'ku, larger turtles appear.
10. March, eXno'lcen't hi'caX, eel-grass sea-weed (xno'ls) "appears." See below.
11. April, iqâ'tmu hi'caX, sharks (a'qât) come.
12. May, ema'mems hi'caX, pitahaya ripe (ema'm was given as ripe fruit of sahuaro, pitahaya, etc.)

Some of these names appear to be merely connotive of the events to which they refer. The seasonal happenings would probably be more truly placed if the calendar fell a fortnight to a month later, beginning in June-July or July instead of June. This would put the beginning at about the summer solstice, and might account for the statement that the "year" had six moons. The list was recorded on

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114 583 As to the "total absence" (p. 285) of marriage purchase, whereas I found it, such purchase can hardly be believed to have originated wholly within the last 35 years, in view of its wide distribution in native America.

114 614 The whole matter of maternal lineages crystallized into totemic clans with matron rule (pp. 10-11, 167-8, 269 seq.) seems a fantasy. A careful reading of the passages in questions reveals how much McGee has built up on statements which he conscientiously admits to have been slender, probable only, and subject to possible misunderstanding. It must be remembered that in 1894 the matriarchate as original and primitive was still standard anthropological doctrine. At any rate, I got nothing suggesting even matrilineal reckoning in my indirect approaches to the subject, and explicit denials when it was directly presented.

114 342 That house-building may now and then be "accompanied by a chant" (p. 223) is possible, though it seems out of accord with the haphazard and shiftless methods of Seri work and the flimsy irregularity of their homes; but that the chant was "usually led by the eldest matron" seems more matriarchate.

114 174 That the Upanguayma, Guayma, and Tepoka were successively "extruded" (p. 75) would be correct if there were anything to show that the Seri were the parent stock of superior virtue, conservatism, and faithful attachment to their original habitat.

114 601 The statement (p. 11) that "kinship terms are strikingly scanty," made in the face of round-about and imperfect speech communications with the Seri, I cite only as an indication of the degree of McGee's readiness to fall back upon his preconceptions when facts became thin.

114 304 I did not note the absence of superior medial incisor teeth observed by McGee (p. 169) in married women. If a regular practise, its connection with the puberty rite would be a natural inference. But knocking out of teeth is a rare custom in America.

114 224 McGee's statements (pp. 196-7) that it is "undignified, if not wrong" to kill deer other than with the hands, and that jackrabbits are "customarily taken alive to camp," seem over-emphases. That a sense of sport or passing pride, or lack of weapons, now and then leads to such happenings, I do not doubt; but the Seri seem too practical and unromantic to exact rules on the point. I suspect that a youth who insisted on living up to them would soon be considered a vain bore. I may add that I saw a crippled wild duck hobble about the camp on Tiburon for two days, being played with occasionally by the children—without unusual roughness or unkindliness—and that finally it wandered to the water and gradually drifted off without notice being taken.

114 302 614 Face painting is construed by McGee as sematic of totemic line-

[91 cont.]

582 promiscuity of gatherers corroborative of the ideas of Morgan, is very far from being simple, tending more to confirm the ideas of Kirchoff regarding the greater restriction and regulation of marital relations in societies having a rudimentary economy. In all Seri marriages close consanguineous relatives seem to be avoided. More precisely, a classification of relatives is estab-
582 lished, from which only one group can provide a spouse. To
621 differentiate the Seri system from clan systems and marital
●601 classes, in which each member belongs to a fixed class in relation to all the other members, in this system the classification varies with respect to the position of each person, that is to say, it is a true system of kinship. The factors of sex, polarity, generation, relative age, affinity, and consanguinity are involved in it, acting to deny or permit the possibility of marriage. Perhaps because of the small size of the Seri group, only within which are marriages concluded, the kinship system results in a clear identification of all persons by terms that are functions of marital relationships: approximately 50 per cent are excluded for being of the [92] same sex; 30 per cent for being of a distinct generation (very few aged or very young); the consanguineous relatives close to the affinal relatives and married persons are also excluded, leaving only so many persons as possible mates, a situation that is reflected in the kinship terminology.

582 It is not that sexual relations may be prohibited, for
[837] there is relative freedom in extramarital, including prenuptial,
[836] sexual relations, but the "marriage" association, sanctioned by the society and for which there is strong community pressure, has the limitations mentioned. And it tends to be realized, in spite of the disadvantages of the disappearance of sexual liberty, avoidance of near affinal relatives, and the economic obligations that begin upon the conclusion of the marriage.

156 With regard to individual development, this social struc-
155 ture is of such nature that it has well integrated cultural elements that create a very special personality, characterized by improvidence, emotional instability, inconstancy, and feelings of security, dispossession, and dependence.

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614 earlier paragraphs (pp. 164–169); these symbols evidently represent an
[302] exclusively maternal organization into clans consecrated to zoic tutelaries. The tutelaries, or totems, together with the clan names and all personal designations connected with the totems, are highly esoteric, and were not ascertained save in the few cases mentioned above.[1]

593 It should be observed that the identification of kindred by the alien observer is difficult and somewhat uncertain, since the relationships recognized in Seri society are not equivalent to those customary among Caucasians. It was found especially difficult to identify the husband
[582] of the jacal, partly because he is commonly incongruously younger (and hence relatively smaller) than the mistress, and partly because of the undignified position of outer guard into which he is forced by the tribal etiquette. Moreover, his connection with the house is veiled by the absence of authority over both children and domestic affairs, though he exercises such authority freely (within the customary limits) in the
[842] jacales of his female relatives. There is, indeed, some question as to the clear recognition of paternity; certainly the females have no term
601 for "my father", i. e., the term is the same as that for "my mother", *em*, though the males distinguish the maternal ancestor by a suffixed syllable (*e*="my father"; *e-ta* or *i'-tah*="my mother"), which seems to be a magnificative or an intensificative element. It is noteworthy that the kinship terminology is strikingly meager; also that while the records suggest various significant points, the material is hardly rich enough to warrant complete synthesis of the consanguineal system.

421 While the burden of the more permanent property pertains to the women, there is a decided differentiation of labor with a concomitant vesting of certain property in the warriors—the distinctively masculine chattels comprising arrows, quivers, bows, turtle-harpoons, etc. There are indications that the balsas, too, are regarded as masculine property. The impermanent possessions—water, food, etc—seem to be the common property of men, women, and children, except in so far as the
[264] right is regulated by regimentation; for the privileges of eating and drinking are enjoyed in the order of seniority. In the reckoning of
554 seniority, the chief (who is comonly such in virtue of his position as
602 nominal elder brother of a prolific dame) ranks first, and is followed by other warriors in an order affected in an undetermined way by conjugal relations as well as by their prowess or sagacity (the equivalents of age in primitive philosophy) down to an undetermined point—apparently fixed by puberty; then comes the clanmother, followed by her daughters in the order of nominal age, which is affected by the status of spouses and the number of living offspring; finally come the children, practically in the order of their strength (which also is deemed an equivalent of age), though the girls—especially those

[121] [1] The chief object of the 1895 expedition was to pursue the inquiries concerning social organization, totems, etc; but, as mentioned elsewhere, this object was defeated by the troublous history of the tribe during the earlier part of 1895, and the consequent revival and intensification of their animosity toward aliens.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

approaching nubility—receive some advantage through the connivance of the matrons. To a considerable extent in the matter of sustentation, and to a dominant degree in the matter of apparreling, the distribution of values is affected by a highly significant (though by no means peculiar) humanitarian notion of inherent individual rights—i. e., every member of the family or clan is entitled to necessary food and raiment, and it is the duty of every other person to see that the need is supplied. The stress of this duty is graded partly by proximity (so that, other things equal, it begins with the nearest person), but chiefly by standing and responsibility in the group (which again are reckoned as equivalents of age, whereby it becomes the business of the first at the feast to see that enough is left to supply all below him; and this duty passes down the line in such wise as to protect the interests of the helpless infant, and even of the tribal good-for-naught or hanger on, who may gather crumbs and lick bones within limits fixed by the tribal consensus. Beyond these limits lies outlawry; and this status arises and passes into the tribal recognition in various ways: Kolusio was outlawed for consorting with aliens, and Mashem narrowly missed the same fate at several stages of his career; the would-be grooms who fail in their moral tests are ostracized and at least semioutlawed, and range about like rogue elephants, approved targets for any arrow, until they perish through the multiplied risks of solitude, or until some brilliant opportunity for display of prowess or generosity brings reinstatement; deformed offspring are classed as outside the human pale, even when the deformity is deemed father by occult associations than by physical features; abnormal and persistent indolence, too serious for scorn and ostracism to cure, may also outpass the tribal toleration; and, as indicated by Mashem's guarded expressions and slight additional data, disease, mental aberration, and decrepitude are allied with indolence and deemed sufficient reason for excluding the persistently helpless from the tribal solidarity, and hence from recognized humanity—and the fate of the outlaw, even if nothing more severe than abandonment in the desert, is usually sure and swift. The entire customs of outlawry among the Seri are singularly like those of gregarious animals, including especially kine and swine in domestication. Now, studied equity in the distribution of necessaries might seem to be allied to thrift; but it is noteworthy that this is not so among the Seri, who take thought for one another but not for the morrow, who seem to have no conception of storage (save an incipient one in connection with water and the repulsive notion underlying the "second harvest"), and who habitually gorge everything in sight until their stomachs and gullets are packed—and then waste the fragments.

The division of labor which affects proprietary interests is undoubtedly affected in turn by the militant habit of the tribe and by the frequent decimation of the warriors. In general, the adult males limit their work to fighting and fishing, with occasional excursions into the hunt

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Society

583 Marriage is monogamous. The wife is bought, in spite of the
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591 The wife goes to live with the husband. A young couple lives
562 with the young man's parents, perhaps in an annex to the house. "The man commands." Chico was emphatic on this point, and repeated that when his son married he would live with him, not with the girl's relatives. Both he and Santo have step-sons-in-law as well as daughters-in-law living with them, but this is because they are chief and boat-owner respectively; (and the sons-in-law are young).

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McGee's statement of a period of continence being cited as the custom of a foreign tribe, the informant obviously wondered and laughed.
[843] Intercourse goes on during pregnancy; but not for some months after birth, for fear of a new pregnancy, which would be injurious to the child. A good man respects his wife at all times and does not constantly pursue her.

144 No half-breeds were seen, and the Seri declare they are free of
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551 Nothing could be elicited from the informant as to anything like
614 the group-inherited names of lineages, or clans, of the Yuman tribes.

768 When a woman dies, the widower may give the children to his dead wife's parents to raise. This is the only item learned that might point to McGee's "matriarchate"; but the informant may have been thinking of particular cases. His son lives with him, though he lost the boy's mother.

582 Cross-cousin marriage is as prohibited as that of parallel cousins. This is in accord with the sibling terminology for all cousins; but in view of the present small number of the tribe, the rule must work difficulty.

[587] A man does not marry his dead wife's sister. Apparently he may not. Nor is there levirate. The informant volunteered the question if marriage with step-daughters was permitted by other peoples. Being told of the Navaho custom, he seemed shocked.

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183 in-law. In the isolated, small-group life of the Seri, this rule can hardly be adhered to with complete rigor, and its conspicuous carrying out was not observed; but then everything in their behavior is casual, informal, and slovenly.

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in endearment when drunk. This may apply also to other siblings-in-law.

Younger siblings (? and other relatives) may say nothing obscene before the older, out of respect for them; but the older talk freely before the younger. This applies to both men and women. Otherwise there seems to be little prudery; the informant recited the names of the private parts before his wife and children, and she indifferently repeated them after him in confirmation.

There is no teknonymy.

The dead are buried. Cremation of the body seemed unknown to the informant. All property of the dead person is burned or destroyed. His balsa was burned; modern boats are not, because they "belong to the government," which furnishes the lumber. The house is abandoned and a new one built a short distance away. The name of the dead is not spoken.

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emẽc	father's mother	rec. eka'nak	(woman's son's chd.)
ẽ'ẽc	mother's father	rec. iqẽci	(man's dtr.'s child)
ẽkt	mother's mother	rec. iqaq	(woman's dtr.'s chd.)

123 but nothing happened.

123 622 [116] We reached Hermosillo at three in the afternoon, and as we landed Roberto and Sara met us, and Roberto embraced me. Then the Seri Indian Chief rushed up and fairly hugged me in his joy at seeing me again. A timid wild-looking Seri boy, of fifteen years of age, shyly shook hands with the *Americano*, while all the Mexican men and women, fully one hundred in number, looked on open-mouthed and wide-eyed, to see the Chief of the wildest and lowest of savage Indians in North America, rush up and embrace a white man.

We all climbed into Roberto's auto-truck, and my things were brought to Hotel Cohan, and then we all went to Roberto's home and stayed all the afternoon. He had just returned from the coast the day before, and Juan Tomas was determined to come also and greet me, and the boy---a nephew---hung on to the Chief, and finally Roberto said he would have to return on foot if he brought him. Juan Tomas said that made no difference. He would walk to the coast eighty or ninety miles, if only he could come.

[291] [302] He was probably seventy-five years old. He wore a hat, but his hair was straggly and he had a slight moustache. He wore shirt and trousers and a dirty kilt---remanent of the Pelican-skin-kilt---around his waist, and he was barefooted. The boy had a not unpleasant face, long wild hair, shirt, pants, and a cotton kilt reached to his knees. He, too, was barefooted.

I gave the Chief a knife, and the boy a red crayon and fifty cents. With the crayon he made a V on his kilt. He was very shy and always kept in a shadow, or in the background, and he spoke no Spanish although he knew the Spanish alphabet.

Sara showed some photographs and postcards in a baloptican in a dark room, and among them were pictures of some Seris and myself. These created much excitement with the Chief and the boy, and they jabbered together in the Seri language with animation. They recognized some of the subjects, their own people.

584 622 648 123 Juan Tomas is to be married soon to an elderly Seri dame, and we have been invited to attend the fiesta. He has been laying in the trousseau for the bride, and several gallons of mescal. A steer or burro will have to be provided, and all the fixin's and nothing will be left undone to make a very festive occasion. When asked to show us his gifts he reluctantly brought forth a package which he carefully unwrapped and disclosed eighteen yards of *manta*, two red pieces and one pink piece of Calico, some red handkerchiefs, and one box for painting the face. He carefully wrapped these up again and put them in the room set apart for him and the boy.

[608] [583] The woman he is to marry has no male relatives from whom she can be bought, so the Chief appointed a man and created him Uncle *pro-tempore*, and to him the Chief is going to give a rifle and a blanket as the purchase price. Pretty high!

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impaired than their fear-born veneration evaporated, and their native antipathy reappeared in original virulence. The 1894 party was fortunate in successfully treating a sick wife of sub-chief Mashém, and subsequently spent days in the rancherías, distributing gifts to old and young in a manner unprecedented in their experience and making liberal exchanges for such small possessions as they wished to spare; yet, with a single possible exception, they succeeded in bringing no more human expression to any Seri face or eye than curiosity, avidity for food, studied indifference, and shrouded or snarling disgust. Among themselves they were fairly cheerful, and the families were unobtrusively affectionate; yet the cheerfulness was always chilled and often banished by the approach of an alien. The Sonorenses generally hold the Seri in indescribably deep dread as uncanny and savage monsters lying beyond the human pale; while the reciprocal feeling on the part of the Seri toward Caucasians, and still more toward Indian aliens, seems akin to that of the average man toward the rattlesnake, which he flees or slays without pause for thought—it seems nothing less than intuitive and involuntary loathing. The Seri antipathy is at once deepened into an obsession and crystallized into a cult; the highest virtue in their calendar is the shedding of alien blood; and their normal impulse on meeting an alien is to kill unless deterred by fear, to flee if the way is clear, and to fawn treacherously for better opportunity if neither natural course lies open.

Concordantly with their primary characteristic, the Seri have avoided ethnic and demotic union beyond the narrow limits of their own kindred; and even of these they seem to have cast out parts, annihilating the Guayma and Upangnayma, displacing and nearly destroying the Tepoka, and outlawing individuals and (apparently) small groups. The earlier chronicles indicate that the Jesuit missionaries, and after them the Franciscan friars and the secular officials, sought to scatter the tribe by both cajolery and coercion, and endeavored to divide families by restraint of women and children and by banishment of wives; there are loose traditions, too, of the capture and enslavement of Indian and Caucasian women in Seriland; yet the great fact remains that not a single mixed-blood Seri is known to exist, and that no more than two of the blood (Kolusio and perhaps one other) now live voluntarily beyond the territorial and consanguineal confines of the tribe. The romantic story of a white slave and ancestress of a Seri clan, sometimes diffused through pernicious reportorial activity, is without shadow of proof or probability; the tradition of the captivity of a Papago belle was corroborated, albeit indefinitely, by Mashém's naive admission that an alien woman was once kept as a slave to a childless death due to her inaptitude for long wanderings; and there is not a single known fact indicating even so much as miscibility of the Seri blood with that of other varieties of the genus *Homo*. Naturally the presumption of miscibility holds in the absence of direct evidence; yet the presumption

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

412 rubbing face-paint, for bruising woody tissue to aid in breaking ocatilla poles for house-frames or mesquite roots for harpoons (both afterward finished by firing), and on occasion for weapons; and this many-functioned tool is initially but a wave-worn pebble, is artificially shaped only by the wear of use, and is incontinently discarded when sharp edges are produced by use or fortuitous fracture. The hupf is supplemented chiefly by the simple perforator of mandible or bone or fire-hardened wood; and these two primitive implements, together with mollusean shells in natural condition, apparently serve as the primary tools for all the mechanical operations of the tribe.

726 The dearth of tools and the absence not only of knives but of knife-sense among the Seri illumine those traditions of Seri fighting made tangible by the teeth-torn arm of Jesus Omada; for they explain the alleged recourse of the Seri warriors to nature's weapons, used in the centripetal fashion characteristic of nascent intelligence.

186 The Seri are distinguished by another trait hardly less striking than the pedestrian habit, and even more conspicuous than the tooth-and-nail habit with the correlative absence of tool-sense; the trait is not tangible enough for ready definition or description in terms (of course because so unusual as not to have bred words for its expression), but is akin to—or, more properly, an exceeding intensification of—race-pride in all its protean manifestations; it may be called *race-sense*. Like other primitive folk, the Seri are self-centered (or egocentric) in individual thought, i. e., they habitually think of the extraneous phenomena of their little universe with reference to self, as in the labyrinth of consanguineal relationship extending and ramifying from the speaker; furthermore, they typify primitive culture in their collective thinking, which is tribe-centered (or ethnocentric), i. e., they view extraneous things, especially those of animate nature, with reference to the tribe, like all those lowly folk who denote themselves by the most dignified terms in their vocabulary and designate aliens by opprobrious epithets; but the Seri surpass most, if not all, other tribes in dignifying themselves and derogating contemporary aliens. Concordantly with this habitual sentiment, they glory in their strength and swiftness, and are inordinately proud of their fine figures and excessively vain of their luxuriant locks—indeed, they seem to exalt their own bodies and their own kind well toward, if not beyond, the verge of inchoate deification. The obverse of the same sentiment appears in the hereditary hate and horror of aliens attested by their history, by their persistent blood-thirst, and by the rigorous marriage regulations adapted to the maintenance of tribal purity; for just as their highest virtue is the shedding of alien blood, so is their blackest crime the transmission of their own blood into alien channels. The potency of the sentiment is established by the unparalleled isolation of the tribe after centuries of contact with Caucasians, by their irreducible love of native soil, by their implacable animosity toward invaders, and by

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1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

their rigorously maintained purity of blood; it is manifested in their commonplace conduct by a singular combination of hauteur and servility, forbidding association with aliens on terms of equality. The entire group at Costa Rica in 1894 were on good behavior, partly, no doubt, for profit, partly because they were at peace bought by bloodshed; yet they kept an impassable gulf between themselves and the Caucasians, and a still wider chasm against the Papago and Yaqui. They came to the tanque, usually in groups, rarely alone, always alert; especially when alone or in twos or threes, they moved slowly and stealthily in their peculiar collected and up-stepping gait, often stopping, always glancing furtively with roving eyes, and bearing a curious air of self-repression—as of the camp-prowling coyote who seems to hold down his instinctively bristling mane by voluntary effort. And the visitor to their rancheria sent a wave of influence before as his approach was noted; laughter ceased, languor disappeared, and a forced, yet sullen, amiability took their place, though the children and females edged away; if he appeared unexpectedly or came too close, the children and younger adults simply flitted like young partridges, while the elders stiffened rigidly, with bristling brows and everting lips and purpling eyes, perhaps accompanied by harsh gutturization—indeed the curiously canine snarl and growl, often evoked by the stranger unintentionally, betrayed the bitterness of Seri antipathy toward even the most tolerable aliens. Every human is panoplied in a personality, perhaps intangible but none the less real, which repels undue approach and fixes limits to familiarity on the part of strangers, friends, kinsmen, and mates, according to their respective degrees of mutually elective affinity; but the Seri are so close to each other and so far from all others that they are collectively panoplied against extra-tribal personalties even as are antipathetic animals against each other—and the Seri can no more control the involuntary snarl and growl at the approach of the alien than can the hunting-dog at sight or smell of the timber-wolf.

While the highly developed traits represented by pedestrian habit and hand-and-tooth habit and segregative habit expressing race-sense are conspicuous during exercise, each carries an equally well-marked obverse. Thus, while the Seri are known as runners par excellence in a region of runners, and were named by aboriginal neighbors from their spryness of movement, they have been no less notorious among the Caucasian settlers of two generations for unparalleled laziness—for a lethargic sloth beyond that of sluggish ox and somnolent swine, which was an irritating marvel to the patient padres of the eighteenth century, and is today a byword in the even-tempered Land of Mañana; concordantly the sinewy hands and muscular jaws are noticeably inert during the intervals between intense functionings, are practically free from the spontaneous or nervous movements of habitually busy persons, and contribute by their immobility to the air of indolence or languor which

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

131 especially as they are reflected in the primitive minds of the local tribe; and careful study of the habits and history of the Seri shows that the dangerous strait has been a potent factor in preserving tribal existence and perpetuating tribal integrity. Naturally the factor operates through
502 navigation; for it is by means of this art that the tribesmen are able to
609 avoid or to repel the rare invaders of either mainland or insular portions of their province, the overland pioneers from the east being stopped by the strait and the maritime explorers from south and west being unable to maintain themselves long about the stormy shores and never outfitted for pushing far toward the mainland retreats and strongholds; while by means of their light and simple craft the Seri were able to retreat or to advance across the strait as readily as over the adjacent lands to which they were wonted by the experience of generations. In their minds, indeed, El Infiernillo is the nucleus of their province. So the Seri were among the lowliest learners of that lesson of highest statecraft, that lands are not divided but united by intervening sea; and their ill-formulated and provincial notions are of much significance in their bearing on autochthonous habits and habitats.

501 The water craft of which the Seri make so good use is a balsa, made of three bundles of carrizal or cane lashed together alongside, measuring barely 4 feet abeam, 1½ feet in depth, and some 30 feet in length over all. A fine specimen (except for a slight injury at one end) is shown in plan and profile in plate XXXI. It was obtained near Boca Infierno in 1895, partly towed and partly paddled thence to Embarcadero Andrade, wagoned laboriously across Desierto Encinas and on to Hermosillo, conveyed in an iron-sheathed box on two gondolas of the narrow-gage Ferrocarril de Sonora to the international frontier, and finally freighted to the United States National Museum, where (in the Mall just outside the building) the photographs reproduced in the plate were taken.

396 The manufacture of the balsa has never been seen by Caucasian eyes, but the processes are safely inferred from the structure, whose testimony is corroborated in part by Mashém's imperfect descriptions. The first step is the gathering of the carrizal from one of the patches growing about the three or four permanent fresh waters of Seriland, the canes being carefully selected for straightness, symmetry, and uniformity in size; these are then denuded of leaves and tassels, tied in bundles of convenient size (one seen on Tiburon contained 40 or 50 canes), and carried to the shore. In actual construction the canes are laid butt to butt, but overlapping 2 or 3 feet, the overlap being shifted this way and that with successive additions, so that the aggregate length of overlapping in the bundle reaches 10 or 12 feet—i. e., the full length of the body of the finished craft. The growing bundle is wrapped from time to time with lashings of mesquite root or maguey fiber, and kept in cylindrical form by constant rolling and by means of the lashing; though the cord used for the purpose is so slender as to do little more than serve the purposes

2: Kroeber E-5 (1930) 1931 NU31 Seri NU31

[p.3]

THE SERI

By A. L. KROEBER, *University of California*

INTRODUCTION

The present paper is the first product of field studies made between January and March, 1930, in Arizona, Sonora, and Sinaloa, under a joint expedition of the Southwest Museum, Los Angeles, and the University of California. The financial contribution of the University was the gift of Mrs. Ethel W. Crocker. While the purpose of the trip was to define rather than solve problems, the following pages contain part of the positive observations obtained.

The Seri, who live on Tiburon Island, Sonora, in the Gulf of California, are often considered the wildest and most primitive tribe surviving in North America. They owe this repute partly to McGee's monograph about them, in the Seventeenth Annual Report of the Bureau of American Ethnology. It is easy to read between the lines of this description that McGee leaned toward a romantic and imaginative interpretation of the Seri. Also, his actual contacts with the people themselves were brief, and hampered by imperfect communication. Moreover, the Seri have been for three hundred years in contact with Spaniards and Mexicans, part of the time even under direct mission control. It therefore seems doubtful whether their backwardness could be the result wholly of preserved primitiveness, and may not rather be attributable to a recalcitrant degeneration. In order to answer this question, and to place Seri culture at least tentatively among the other tribal cultures of the Southwest instead of leaving is as an unexplained and lurid abnormality, a brief visit to them was undertaken.

The success of this visit was due wholly to Sr. Roberto Thomson of Hermosillo and Rancho San Rafael, who is now the Mexican Government's *Jefe de Vigilancia* for the Seris, and in effect what in the United States would be known as Indian Agent for the tribe. He has protected and befriended them, kept them in turn in bounds, and secured some governmental assistance for them, under which they are making a beginning of adaptation to the modern world. At any rate, the mutual raidings and killings have stopped, and the Seri, though still very suspicious of most of the neighboring settlers and of strangers, look upon Sr. Thomson as their protector and friend. Without his introduction and experience, many less data could have been collected in a longer stay.

The Seri now live wholly on Tiburon Island. I was with them six days, half of them on the island. This is about as long a time as McGee spent with them—all of it at the cattle ranch of Costa Rica. McGee also explored the island and its camps at some length, but without encountering any Seri, who eluded his party.

Inasmuch as Mr. Edward H. Davis of Mesa Grande, California, has three times visited Tiburon to form an ethnological collection for the Museum of the American Indian, Heye Foundation, I attempted no examination of Seri material or economic culture, which Mr.

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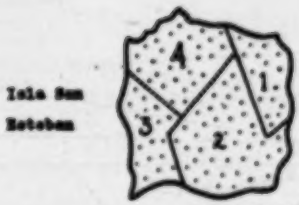

FIG. 5. Subdivisions of Band VI

BAND SOCIAL STRUCTURE

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The social structure of the bands can be properly understood only in relation to the social structure of their smaller units, the i?iziitang. The kin group which resided in and dominated each such subdivision constituted a clan.[5] This group conforms to Murdock's three major specifications for clan designation.[6]

Murdock's first specification states that a kin group, to constitute a clan, must be based explicitly on a unilinear rule of descent. The kin group of each Seri band subdivision was based on patrilineal descent. An individual was closely associated with the group of kinsmen of his subdivision, all of whom were related to him through males only. The father was the head of his household. For example, he assumed leadership in marriage negotiations. Upon his death, the eldest son took his place.

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The second specification states that such a kin group must have residential unity. Seri marriages were exogamous with respect to the subdivision,[7] and the rule of residence was patrilocal. The domicile was set up near the home of the groom's parents.

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the vessel to Guaymas. With the aid of a group of Yaqui, some of these women were said to have been permitted to go to Hermosillo and eventually to return to their home on Tiburon. Others of their group are said to have remained near Guaymas. The women who returned to Tiburon reported that the San Esteban women and children were put aboard another ship which sailed southward.

BANDS I, III, AND IV

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As opposition from the Papago and government forces increased, the members of Band I were forced to seek refuge on Tiburon Island. The mainland members of Band III (subdivisions 11 and 12) were also forced, especially during the Encinas Wars, to flee to Tiburon. There the combined forces of Bands I, III, and IV sought to cope with the military expeditions sent out through the years to exterminate them. Tiburon Island is an adverse battlefield for the uninitiated; some expeditions were turned back due to lack of potable water or because of failure to make contact with the enemy in the mountainous terrain. Some expeditions did encounter the Seri, however, and many natives were either killed or captured.

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Through the years, then, these military encounters, along with smallpox and measles epidemics, were responsible for reducing the Seri tribe to a small remnant. The band and clan systems lost their functional relevance as the people continued to live together for mutual protection. Shortly after the turn of the century, the expeditions and raids had practically ceased.

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SIGNIFICANCE OF BANDS TODAY

With the dissolution of the band system, the rule of descent shifted from patrilineal to bilateral, and the rule of residence shifted from patrilocal to neolocal.

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Although the substance of the band system is no longer a reality, the concept of land ownership still remains. A young Seri of today may choose to be associated with either the i?iziiting of his father or that of his mother. He is said to inherit part ownership of the area. It is recalled by one informant that in former times ownership of a mountain was especially important. Sometimes ownership of a mountain was included as part payment for a bride. Thus a person might 'own' a mountain in a subdivision other than his own.

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A custom exists even today whereby a person names his dog after a mountain or other geographical point located in his subdivision. Although the person may re-use the name, each dog so named must be of the same sex as the first.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

386 prepared by trituration with a pebble or rubbing with the fingers, usually in a shell cup. Sometimes the shell used for the purpose is the [412] valve of a *Cardium*, which serves indiscriminately as cup, spoon, skin-scraper, etc; but preference is apparently given to thick and strong shells, such as the wave-worn valve of *Chama* (?), shown in plate XXVII, figure 7, which are consecrated to the use and eventually buried [764] with the user, together with a supply of the paint (like that illustrated in the cane cylinder—figure 4—which was a mortuary sacrifice). The gypsum is usually carried in natural slabs or other fragments, perhaps rounded by wear (plate XXVII, figures 6 and 8); it is prepared by wetting and rubbing two pieces together, the larger being reduced to metate shape by the operation. The dumortierite was observed only in the form of a pencil made by pulverizing the substance and mixing with sufficient clay to give consistency. The several pigments are 302 applied wet by means of human-hair brushes kept for the purpose, the process occupying from half an hour to three or four hours for the more elaborate designs. So far as observed at Costa Rica in 1894, the paints were mixed in water only; but since painting outfits found on [386] Tiburon island in 1895 were smeared with grease, it is probable that either water or fats may serve for menstrua, at the convenience of the artists. Commonly the process of painting is measurably cooperative. [593] The matron usually depicts her device on the faces of her daughters up to the age of 12 or 15 years, when they learn to make the applications themselves; and frequently two or more women (usually those [476] with similar devices) work together in preparing and applying the pigments, each laying the paint on her own face and apparently guiding her hand partly by the sense of feeling and partly by suggestions from her coworkers; but Candelaria and some other of the younger women at Costa Rica frequently worked alone, aided by a mirror in the form of a shallow bowl of water set in the shadow while the brilliant desert glare fell full on the face.

317 The mines yielding the pigments were not located. The geologic conditions are such that the ochers are undoubtedly abundant; but it is probable that the gypsum is uncommon and confined to a remote locality or two, and that the dumortierite is rare and scanty here as elsewhere. The care with which the paints are preserved, prepared, and 386 applied, the fact that they are indispensable feminine appurtenances 435 even on the longest journeys, and their sacred rôle in the mortuary customs, all combine to indicate that they are among the most highly prized possessions of the people and by far the most precious of their minerals.

The sematic functions of the designs are esoteric, yet an inkling of 302 their meaning was obtained through Mashém, the interpreter at Costa 614 Rica in 1894; from his expressions it appears that the designs are sacred insignia of totemic character, serving to denote the clans of which the tribe is composed. But three clans were identified, and

1: McGee E-5 (1394-1895)1978 NU31 Seri 4031

these only with some uncertainty, viz, the Turtle clan,[1] denoted by the symbols of Juana Maria (plate XVIII) and Candelaria (plate XXIV and the upper left figure in plate XXVI); the Pelican clan, denoted by the designs of two typical matrons (plates XX and XXII) and a typical maiden (plate XXV), and probably also by those of the medio-lateral figures in plate XXVI; and (still less certainly) the Rattlesnake clan, denoted by the symbol of the lower left figure in this plate. The special sematic values of the colors also are esoteric, and were not ascertained; even in the case of the simple pelican design, the difference in meaning between the solid red pattern of one group and the similar pattern of white in another group was successfully concealed. So, too, the significance of the various subordinate or supplementary devices—the distinct border-line shown in plate XX, the lower cheek devices in plate XXIV, the separate chin mark in plate XXV, the fetish-like symbols on the lower cheeks in the lower left figure of plate XXVI, etc—eluded inquiry; while some of the minor features of both form and color were sufficiently variable in the devices borne by different faces of the same family, and even in successive paintings of the same face, to suggest some individual freedom in carrying out the detail of the generally uniform designs.

The telic functions, or ultimate purposes, of the face-painting are also esoteric, though not beyond the reach of inference from the sematic functions, coupled with general facts of zoic and primitive human customs. Even at first sight the painted devices bring to mind the directive markings of lower animals defined by Professor Todd[2] and interpreted by Ernest Seton-Thompson;[3] and in view of the implacably militant habit of the Seri it would seem evident that the artificial devices are, at least in their primary aspect, analogous to the natural markings. On analyzing the directive markings of animals, it is convenient to divide them into two classes, distinguished by special function, usual placement, and general relation to animal economy: the first class serve primarily to guide flight in such manner as to permit ready reassembling of the flock; they are usually posterior, as in rabbit, white-tail deer, antelope, and various birds; and they primarily signify inimical relations to alien organisms, with functional exercise under stress of fear. The second class of markings serve primarily for mutual identification of approaching individuals; as comports with this function, they are usually facial, or at least anterior; and their functional exercise is normally connected with peaceful association—though the strongly emphasized facial symbols of the males doubtless

[1] This tutelary may be the shark: it was described as a water monster instrumental in the creation and good for food, but the identification is not beyond doubt. Cf. p. 278.

[2] American Naturalist, vol. XXII, 1888, pp. 201-207.

[3] Wild Animals I Have Known, 1898, p. 119; Century Magazine, vol. LIX, 1900, pp. 654-660. In his lectures, Mr Seton-Thompson extends his interpretations to anterior as well as to posterior markings, especially the conspicuous and persistent facial features of deer, antelope, mongrel (or ancestral) dog, etc. Such facial markings seem especially characteristic of gregarious animals; and they are peculiarly significant as social symbols rather than as mere beacons for guidance in flight.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

302 blazon forth the alternative meanings of preference for peace or readiness for strife, like the calumet tomahawk of the Sioux warrior (as interpreted by Cushing). So the directive markings of the first class are substantially beacons of danger and fear, while those of the second are just as essentially standards of safety and confidence; and they may properly be designated as *beacon-markings* and *standard-markings*, respectively.[1] On seriating the two classes in terms of development, it is at once found that the beacon-markings are in large measure connected with excursive movement and are centrifugal in effect, while the standard-markings are connected mainly with incursive movement and are centripetal in effect; at the same time the latter express not only the higher intelligence, but also the greater degree of that conjustment which forms the basis of collective organization; so that the latter unquestionably represents the higher developmental stage. Now, the primary functions of these directive markings of the higher grade—signalization (or attentionization) and identification—correspond precisely with paramount needs of the alien-hating and clan-loving Seri; so that careful analysis would seem fully to justify the casual impression of functional similitude between the Seri face-painting and the directive markings of social animals.

While the first survey establishes a certain analogy between the primitive face-painting and the standard-markings of animals, an important disparity is noted when the survey is extended to individuals; for among beasts and birds the standards are usually the more conspicuously displayed by the males, while the paint devices of the Seri are confined to the females. A suggestion pointing toward explanation of this disparity is readily found in the seriation of developmental stages marked by (1) the fear-born beacon-markings, (2) the confidence-speaking standard-markings, and (3) the painted symbols; for the artificial devices coincide with an immeasurably advanced mental development, with concomitant advance in safety and peace on the one hand and in artificializing weapons on the other hand. This suggestion alone fails to explain the disparity fully, yet it raises another, growing out of the great social advancement connected with the mental development—i. e., the effect of the distinctively demotic organization of 302 the human genus as represented by the Seri people. On considering 614 this organization, it is found strictly maternal: the tribe is made up of clans defined by consanguinity reckoned only in the female line; each clan is headed by an elderwoman, and comprises a hierarchy of daughters, granddaughters, and (sometimes) great-granddaughters, collectively incarnating that purity of uncontaminated blood which is the pride of the tribe; and this female element is supplemented by a masculine element in the persons of brothers, who may be war-chiefs or shamans, and may hence dominate the movements of groups, but whose

[1] The fundamental distinction is here valid by reason of the structural combination of functions, as on the catalogs "chrysanthemum" interpreted by Seton-Thompson.

I: McGee E-5 (1894-1895)1898 NU31 Seri NU31

blood counts as nothing in the establishment and maintenance of the clan organization. Thus the females alone are the blood-carriers of the clans; they alone require ready and certain identification in order that their institutional theory and practice may be maintained; and hence they alone need to become bearers of the sacred blood-standards. The warriors belong to the tribe, and are distinguished by luxuriantly flowing hair, by the up-stepping movement from which the people derive their appellation, by their unique archery attitude, and by their dark skin-color; the boys count for little until they enter the warrior class; but on the females devolves the duty of defining and maintaining the several streams of blood on which the rigidly guarded tribal integrity depends.[1] Undoubtedly the blood-markings play an important rôle in courtship and marriage, but too little is known of the esoteric life of the tribe to permit this rôle to be traced.

In brief, the Seri face-painting would seem to be essentially *zoosematic*, or symbolic of zoic tutelaries, and to signify subspecific (or subvarietal) characteristics maintained by the clan organization and kept prominent by the militant habit of the tribe; at the same time it is noteworthy that the purely symbolic motive is accompanied by a nascent decorative tendency, displayed by the individual refinement of form and color in the symbol proper to each of the groups.

DECORATION IN GENERAL.

Aside from the face-painting there is a conspicuous dearth of decoration or tangible symbolism among the Seri.

The symbolic or decorative modification of the physique would seem to be limited to two classes of mutilations, of which one was observed at Costa Rica in 1894 while the other is apparently obsolete. The observed corporeal modification is the absence of medial superior incisors of the females, in consequence of forcible removal at a period not definitely ascertained. The interpreter at Costa Rica was uncommunicative on the subject; Don Pascual opined that the mutilation formed part of an elaborate puberty ceremonial, and this opinion would seem to be corroborated by the condition of the cranium of an immature female examined by Dr Hrdlička; but since the half-dozen adult maidens at the rancho in 1894 were free from the mutilation while all the wives bore its gruesome trace, it would seem more probable that the custom is connected with marriage. Whatever the period of the infliction, Mashém's guarded expressions seemed to indicate that it was a mark of physical inferiority; and this suggestion, interpreted in the light of the Seri use of teeth as weapons of offense and defense, would seem to indicate that the mutilation is at once the badge of corporeal inferiority and a means of maintaining the physical superiority of the males—of course in that theoretically fiducial but actually forceful way characteristic of primitive culture.

[1] The essentially sacerdotal nature of Seri law and custom is set forth postea, p. 194.

l: McGee E-5 (1894-1895)1898 NU31 Seri NU31

562 592 order, the matron's eldest brother coming first, the younger brothers next, and finally the husband, who squats in, or outside of, the open end of the bower. According to Mashém's iterated explanations, which were corroborated by several elderwomen (notably the clanmother [423] known to the Mexicans as Juana María) and verified by observation of the family movements, the house and its contents belong exclusively to the matron, though her brothers are entitled to places within it whenever they wish; while the husband has neither title nor fixed place, "because he belongs to another house"—though, as a matter of fact, he is frequently at or in the hut of his spouse, where he normally occupies the outermost place in the group and acts as a sort of outer guard or sentinel. Conformably to their proprietary position, the matrons have chief, if not sole, voice in extending and removing the rancheria; and such questions as that of the placement of a new jacal are discussed animatedly among them and finally decided by the dictum of the eldest in the group. The importance of the function thus exercised by the women has long been noted at Costa Rica and other points on the Seri frontier, for the rancherías are located and the initial jacal erected commonly by a solitary matron, sometimes by two or three aged dames; around this nucleus other matrons and their children gather in the course of a day or two; while it is usually three or four days, and sometimes a week, before the brothers and husbands skulk singly or in small bands into the new rancheria.

Quite similar is the regimentation of the family groups as indicated by the correlative privileges and duties as to placement, as well as the reciprocal rights of command and the requirements of obedience. Ordinarily (especially when the men are not about) the elderwoman of the jacal exercises unlimited privileges as to placement of both persons and property, locating the ahst, the bedding, the fire (if any), and other possessions at will, and assigning positions to the members of her family, the nubile girls receiving especial attention; she is also the arbiter of disputes, the distributor of food, etc; but in case of tumult, especially when children from other jacales are present, she may invoke the author- [614] ity of the clanmother, whose powers in the rancheria are analogous to those of the younger matrons in their own jacales. Even when the men are present they take little part in the regulation of personal conduct, but tacitly accept the decision of matron or clanmother; yet in emergencies any of the women are ready to appeal for aid in the execution of their will to a brother (preferably the elder brother) of the family, or, if need be great, to the brothers of the clanmother. So far as was observed, and so far as could be ascertained through informants, these appeals are always for executive and never for legislative or judicative cooperation; but various general facts indicate that in times of stress—in the heat of the chase, in the warpath-craze, etc—the men bestir themselves into the initiative, while the women drop into an inferior legislative place. As an illustration of the ordination in some-

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1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

As an illustration of the ordination in some 128
what unusual circumstances, it may be noted that when the "Seri 562
belle" (Candelaria) refused to pose for a photograph she was supported 626
by the clanmother (Juana Maria) until the latter was placated by presents; and that when the belle refused to obey the mother's command—to the vociferous scandal of the entire group—Juana Maria appealed to Señor Encinas, as the conqueror of the tribe and hence as the virtual head of both rancho and ranchería. And when a younger Seri maiden (plate XXV) similarly refused to pose, and in like manner disobeyed her mother (again to the general disgust), the latter appealed to Mashém; when he, after first exacting additional presents for both girl and mother and a double amount for himself, put hands on the recalcitrant demoiselle and forced her into the pose required, despite the shrinking and tremulous terror perceptible even in the picture.

Commonly the regimentation of family, clan, and larger group appears 592
to be indicated approximately by the placement assumed spontaneously in the idle lounging of peace and plenty. A typical placement of a small group is illustrated in plate XIV. Here the family are assembled outside the jacal, but in the relative positions which would be assumed within. The matron (a Red Pelican woman) squats in easy reach of her few and squalid possessions; on her left, i. e., in the group-background and place of honor, sits the elderwoman of the ranchería (a Turtle); then comes the daughter of the family, followed by two girl-child guests of the group, the three occupying positions pertaining to chiefs or elder brothers or, in their absence, to daughters; opposite the matron sits a younger brother,[1] whose wife is a Turtle woman (daughter of the dame in the place of honor) and matron of another jacal. A few feet behind this brother (just outside the limits of the photograph reproduced, though shown on the duplicate negative) squats the husband, with his side to the group and face toward the direction of natural approach; while the place belonging to the sons of the family on the matron's right is temporarily occupied by a White Pelican girl, together with a dog, notable in the local pack for largely imported blood and correspondingly docile disposition. The place for the babe, were there one in the family, would be on the heap of odds and ends behind the matron. As in this group so in most others, the place of the sons [858]
is vacant; for the boys are at once the most restless and the most law- [882]
less members of the tribe—indeed, the striplings seem often to ignore the maternal injunctions and even to evade the rarely uttered avuncular orders, so that their movements are practically free, except in so far as they are themselves regimented or graded by strength and fleetness and success in hunting.

The raison d'être of the proprietorship and regimentation reflected in 302
the everyday customs is satisfactorily indicated by that totemic feature 614
of the social organization revealed in the face-painting described in

[1] This man was one of those involved in the Robinson butchery on Tiburon island a few months before the picture was taken; and he was one of those executed or transported for the affair during the interval between the 1894 and 1895 expeditions.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

614 [302] earlier paragraphs (pp. 164–169); these symbols evidently represent an exclusively maternal organization into clans consecrated to zoic tutelaries. The tutelaries, or totems, together with the clan names and all personal designations connected with the totems, are highly esoteric, and were not ascertained save in the few cases mentioned above.[1]

593 It should be observed that the identification of kindred by the alien observer is difficult and somewhat uncertain, since the relationships recognized in Seri society are not equivalent to those customary among Caucasians. It was found especially difficult to identify the husband [582] of the jacal, partly because he is commonly incongruously younger (and hence relatively smaller) than the mistress, and partly because of the undignified position of outer guard into which he is forced by the tribal etiquette. Moreover, his connection with the house is veiled by the absence of authority over both children and domestic affairs, though he exercises such authority freely (within the customary limits) in the jacales of his female relatives. There is, indeed, some question as to [842] the clear recognition of paternity; certainly the females have no term 601 for "my father", i. e., the term is the same as that for "my mother", *em*, though the males distinguish the maternal ancestor by a suffixed syllable (*e*="my father"; *e-ta* or *i'-tah*="my mother"), which seems to be a magnificative or an intensificative element. It is noteworthy that the kinship terminology is strikingly meager; also that while the records suggest various significant points, the material is hardly rich enough to warrant complete synthesis of the consanguineal system.

421 While the burden of the more permanent property pertains to the women, there is a decided differentiation of labor with a concomitant vesting of certain property in the warriors—the distinctively masculine chattels comprising arrows, quivers, bows, turtle-harpoons, etc. There are indications that the balsas, too, are regarded as masculine property. The impermanent possessions—water, food, etc—seem to be the common property of men, women, and children, except in so far as the [264] right is regulated by regimentation; for the privileges of eating and drinking are enjoyed in the order of seniority. In the reckoning of 554 seniority, the chief (who is comonly such in virtue of his position as 602 nominal elder brother of a prolific dame) ranks first, and is followed by other warriors in an order affected in an undetermined way by conjugal relations as well as by their prowess or sagacity (the equivalents of age in primitive philosophy) down to an undetermined point—apparently fixed by puberty; then comes the clanmother, followed by her daughters in the order of nominal age, which is affected by the status of spouses and the number of living offspring; finally come the children, practically in the order of their strength (which also is deemed an equivalent of age), though the girls—especially those

[121] [1] The chief object of the 1895 expedition was to pursue the inquiries concerning social organization, totems, etc; but, as mentioned elsewhere, this object was defeated by the troublous history of the tribe during the earlier part of 1895, and the consequent revival and intensification of their animosity toward aliens.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

462 ing field; though by far the greater part of their time is spent in listless lounging or heedless slumber under the incidental guard of roaming youths and toiling women. The matrons are the real workers in the tribal hive; they are normally alert and active, passing from one simple task to another, gathering flotsam food along the beach or preparing edibles in the shadow of the jacal, with an eye ever on material possessions and children; they frequently join in hunting excursions of considerable extent; they are the chief manufacturers of apparel, utensils, and tools; and the scions of Castilian caballeros are not infrequently staggered at the sight of half a dozen Seri women "milling" a band of horses, and at intervals leaping on one to kill it with their hupfs. The masculine drones are the more petted and courted by reason of their fewness, for during a century or two, at least, the women [162] [562] have far outnumbered their consorts—a disproportion doubtless tending in some respects toward the disintegration of the clan system and, reciprocally, toward the firmer union of the tribe.

One of the most noteworthy extensions of feminine functions among [756] the Seri is toward shamanism. So far as could be ascertained from Mashém and the associated matrons at Costa Rica, it is such beldams as Juana María who concoct the arrow "poison", compound both necromantic medicines and curative simples, cast spells on men and things, and even fabricate the stone arrowpoints and counterfeit cartridges; though unhappily the data are neither so full nor so decisive as desirable.[1]

562 Conformably with their prominence in proprietary affairs, the Seri 623 matrons seem to exercise formal legislative and judicative functions; for not only do they hold their own councils for the arrangement of the domestic business of the rancherías, but they also participate prominently in the tribal councils (as explained by Mashém), and play important rôles in carrying out the decisions of such councils—as when they cooperate with war parties as decoys, or journey across their bounding desert to spy out the land of the enemy.

614 On the whole, it would appear that the clan organization of the Seri conforms closely with that characteristic of savagery elsewhere, especially among the American aborigines. The social unit is the maternal clan, organized in theory and faith in homage of a beast-god, though defined practically by the ocular consanguinity of birth from a common line of mothers; yet the several units are pretty definitely welded into [619] a tribal aggregate by common feelings, identical interests, and conjugal ties. The most distinctive features brought out by the incomplete 562 investigation are the somewhat exceptional manifestation of property-right in the females, the singularly strong sense of maternal relation, and the apparent prominence of females in shamanistic practices as well as in the tribal councils.

[1] The agency of the women in applying the arrow "poison" was noted by Hardy; cf. p. 256.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

CHIEFSHIP

The unformulated tribal laws of the Seri are intimately connected with leadership, which is, in turn, largely a reflection of personal characteristics; so that the tribal organization is about as variable as that of the practically autonomous herds of cattle ranging the Sonoran plains adjacent to Seriland. Indeed, just as the stock-clans enjoy a precedence on pasturage and at waterholes, determined by the valor and strength of the bulls by which they are led, so the Seri clans appear to be graded by the prowess of their masculine leaders, combined with the sortilegic success of the leaders' consorts; while, just as the leadership of the cattle shifts from band to band as the years go by, according to the fairly equal hazard of natural selection, so the clan dynasties of the human group rise, flourish, and decline in an endless succession shaped by the chances of birth and survival under a capricious environment, by the fate of battles internecine and external, and by various other factors. The instability of the Seri organization is demonstrated by the tribal changes recorded in history, as well as by the vicissitudes within the memory of Señor Encinas and others. At the beginning of the records the Upanguayma were already exiled from Seriland proper and apparently suffering from raids of their collinguals; within a century the Guayma, also, were expatriated and nearly annihilated; then, in the early part of the present century, the Tepoka were extruded and (after a series of wars in active progress in Hardy's time) forced far up the coast to one of the poorest habitats ever occupied by any folk. So, too, throughout the Encinas régime the internal dissensions continued whenever the clans were not combined against aliens; and the veteran pioneer has seen much intratribal strife, attended by the rise and passing of many chiefs, both acknowledged and pretended, and often exercising chiefly prerogatives two or three at a time. This instability grows largely out of the fact that the essential unit is the clan, and that the tribe is nothing more than a lax aggregation; and it is measurably explained by the crude customs accompanying the choice of leaders.

As already noted, the clan organization is maternal, and the clan-mother is the central figure of the group; but the executive power resides in her brothers in the order of seniority—i. e., while the personal arrangement of the group is maternal, the appellate administration is fraternal. So far as could be ascertained, the form of government is clearly discriminable from that commonly styled *avunculár*; for, in the first place, the minor administration accompanying the control of property invests the elderwomen with exceptional legislative and judicative powers, while, in the second place, there are no old men (by reason of the militant habit), so that the reverence for age so assiduously cultivated in primitive life extends to matrons much more than to men.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

614 Classed with respect to major administration, therefore, the clan may be regarded as an informal *adelphiarchy* (*ἀδελφός* and *ἄρχος*) or *adelphocracy* (*ἀδελφός* and *κρατός*). It has none of the elements of the patriarchy, since male lineage is not recognized, and can not be classed as a matriarchy, since the clanmother is administratively subordinate to her brothers; while the avuncular functions are apparently inchoate and indirect, i. e., exercised only through or in conjunction with the clanmother. In short, the clan is ordinated or regimented in ostensible accordance with physical power, though the real faculty is confused (after the fashion of primitive thinking generally) with mystical faculties, imputed largely on magical grounds but partly on grounds of age-reverence, etc. Now, when two or more clans combine, the basis on 578 which the common chiefship is determined is similar to that determin- 614 ing the clan leadership; at the outset three factors enter, viz, (1) the 643 seniority of the clans in the accepted tribal mythology (2) the prowess [756] of the respective clan leaders (always weighed in conjunction with the shamanistic potency of their consorts), and (3) the numerical strength of the respective clans; but practically, so far as can be judged from all available information, the choice really reflects physical force, since in case of doubt the strongest and bravest man becomes the oldest by virtue of his strength and bravery, while the strongest clan finds fair ground for claiming seniority in the very fact of its strength. Naturally disputes arise in the adjustment of the several relations; and in the actual analysis in council, the dispute is commonly reduced to a contest between gods and men, i. e., between the claims for mystical and magical potencies on the one hand and the claims of brawn and bone on the other hand, so that strength wins, unless omens or prodigies turn the scale—which happens often enough to keep the subjective and the objective elements in fairly equal balance. Sometimes the contests are quickly settled; again they last for months, during which the tribe struggles under its weight of Cerberus heads; and repeatedly the disputes have ended in the annihilation of clans, or even in the tribal fissions attested by the recorded and traditional history of the Serian family.

643 The chiefship once determined, the leader bends all energies toward maintaining the position by which he is dignified and his clan exalted. He recognizes his responsibility for the welfare of the tribe—not only for success in battle and food-getting, but for stilling storms at sea, protecting the agnajes from the drought-demons, and securing all other benefits, both physical and magical; he must be aggressive yet cautious on the warpath, fleet and enduring in retreat, indomitable in the chase, bold but not reckless on the balsa, and above all panoplied and favored by the shadowy potencies of air and earth and waters; he must be the local and lowly Admirable Crichton, and his never-neglected watchword must be *noblesse oblige*. His practical devices for maintaining prestige are many and diverse; it is commonly the chief who carries the sym-

2: Kroeber E-5 (1930)1931 NU31 Seri NU31

Society

583 Marriage is monogamous. The wife is bought, in spite of the
[595] poverty of the Seri. Santa Blanco paid 150 pesos in property for his wife. Chico Romero, a widower, paid more for his, a widow, "because she had three daughters, and a family with daughters is rich" (in expectation of bride prices).

591 The wife goes to live with the husband. A young couple lives
562 with the young man's parents, perhaps in an annex to the house. "The man commands." Chico was emphatic on this point, and repeated that when his son married he would live with him, not with the girl's relatives. Both he and Santo have step-sons-in-law as well as daughters-in-law living with them, but this is because they are chief and boat-owner respectively; (and the sons-in-law are young).

833 Copulation was said to take place immediately on marriage.
McGee's statement of a period of continence being cited as the custom of a foreign tribe, the informant obviously wondered and laughed.
[843] Intercourse goes on during pregnancy; but not for some months after birth, for fear of a new pregnancy, which would be injurious to the child. A good man respects his wife at all times and does not constantly pursue her.

144 No half-breeds were seen, and the Seri declare they are free of
164 venereal disease.

551 Nothing could be elicited from the informant as to anything like
614 the group-inherited names of lineages, or clans, of the Yuman tribes.

When a woman dies, the widower may give the children to his
768 dead wife's parents to raise. This is the only item learned that might point to McGee's "matriarchate"; but the informant may have been thinking of particular cases. His son lives with him, though he lost the boy's mother.

582 Cross-cousin marriage is as prohibited as that of parallel cousins.
This is in accord with the sibling terminology for all cousins; but in view of the present small number of the tribe, the rule must work difficulty.

[587] A man does not marry his dead wife's sister. Apparently he may not. Nor is there levirate. The informant volunteered the question if marriage with step-daughters was permitted by other peoples. Being told of the Navaho custom, he seemed shocked.

606 Neither husband nor wife looks at or addresses either parent-
183 in-law. In the isolated, small-group life of the Seri, this rule can hardly be adhered to with complete rigor, and its conspicuous carrying out was not observed; but then everything in their behavior is casual, informal, and slovenly.

607 The kinship system as recorded contains a note as to a woman
not addressing her younger sister's husband by kinship term except

2: Kroeber E-5 (1930)1931 NU31 Seri NU31

114 583 As to the "total absence" (p. 285) of marriage purchase, whereas I found it, such purchase can hardly be believed to have originated wholly within the last 35 years, in view of its wide distribution in native America.

114 614 The whole matter of maternal lineages crystallized into totemic clans with matron rule (pp. 10-11, 167-8, 269 seq.) seems a fantasy. A careful reading of the passages in questions reveals how much McGee has built up on statements which he conscientiously admits to have been slender, probable only, and subject to possible misunderstanding. It must be remembered that in 1894 the matriarchate as original and primitive was still standard anthropological doctrine. At any rate, I got nothing suggesting even matrilineal reckoning in my indirect approaches to the subject, and explicit denials when it was directly presented.

114 342 That house-building may now and then be "accompanied by a chant" (p. 223) is possible, though it seems out of accord with the haphazard and shiftless methods of Seri work and the flimsy irregularity of their homes; but that the chant was "usually led by the eldest matron" seems more matriarchate.

114 174 That the Upanguayma, Guayma, and Tepoka were successively "extruded" (p. 75) would be correct if there were anything to show that the Seri were the parent stock of superior virtue, conservatism, and faithful attachment to their original habitat.

114 601 The statement (p. 11) that "kinship terms are strikingly scanty," made in the face of round-about and imperfect speech communications with the Seri, I cite only as an indication of the degree of McGee's readiness to fall back upon his preconceptions when facts became thin.

114 304 I did not note the absence of superior medial incisor teeth observed by McGee (p. 169) in married women. If a regular practise, its connection with the puberty rite would be a natural inference. But knocking out of teeth is a rare custom in America.

114 224 McGee's statements (pp. 196-7) that it is "undignified, if not wrong" to kill deer other than with the hands, and that jackrabbits are "customarily taken alive to camp," seem over-emphases. That a sense of sport or passing pride, or lack of weapons, now and then leads to such happenings, I do not doubt; but the Seri seem too practical and unromantic to exact rules on the point. I suspect that a youth who insisted on living up to them would soon be considered a vain bore. I may add that I saw a crippled wild duck hobble about the camp on Tiburon for two days, being played with occasionally by the children—without unusual roughness or unkindliness—and that finally it wandered to the water and gradually drifted off without notice being taken.

114 302 614 Face painting is construed by McGee as sematic of totemic line-

2: Kroeber E-5 (1930) 1931 NU31 Seri NU31

ages (pp. 164-167), and Hardy's story of his being painted is interpreted as ceremonial adoption (pp. 277-8). My conviction is that the Seri paint primarily for adornment, and that further significance is either secondary or absent. When I reached the island and about thirty people, including visitors from other settlements, were gathered to receive and inspect me, all the younger women and one or two adolescent boys were freshly and very neatly painted. After all, their ragged cast-off civilized garments were nothing to make a show with on a state occasion. In former times, the everyday-wear pelican robes would not have served much better. The ocher red, dumortierite blue, and gypsum white pigments however gave a chance for decoration and display. Three days later, when our party was an old story, some of the faces still carried paint, but it was worn, defaced, and bedraggled. It seems unlikely that people should greet strangers by decorating themselves with representations of lineage totems which they at the same time denied or tried to conceal from their knowledge. The construal of Hardy's painting as an adoption-rite rests on the same blood-kin interpretation. It was probably nothing more than an act of friendliness tinged with the simple humor of which the Seri have a strong sense.

Face painting in fact seems to be the chief if not only purely aesthetic expression of Seri culture, their mode of life and psycho-physiological habits being such as almost to prohibit any other form of art. In this painting, on the other hand, they have achieved a high degree of stylization and taste. The designs I saw were throughout in the manner illustrated by McGee in his plates 13-16, 18, 20, 22, 24-26.

Ethnographically, the interest of this style lies in its similarity to the river Yuman face paintings. The Seri first of all specialize on a horizontal bar across the nose and cheeks, immediately below the eyes; in addition to this, there may be vertical elements dependent over the cheeks. The design deliberately breaks across the natural lines of the face in such a way as to orient itself with reference to the eyes without touching them. Bordering or enclosing of the eyes is avoided; neither are planes like the cheeks, forehead, or chin felt as fields to be filled in with decoration. The fundamental plan attacks the face at once drastically and subtly. That the style has both feeling and rigor is shown by the fact that none of the endless variations of color and design detail depart much from the basic scheme. That this scheme is old is shown by Hardy's description of a century ago. It is a true art of high order within its narrow compass.

The Mohave paintings[9] are somewhat freer and more variable, but also less classical or chaste stylistically. The transverse element

[9] Kroeber, Handbook, BAE-B 78, figs. 80-82, 1925. With the Mohave, contrary to the Seri, the vertical elements predominate over the horizontal. The Gila Pima style (Russell, pl. 38), and the Havasupai (Spier, AMNH-AP 29:198, 1928), are also related.

3:Davis & Dawson E-5 (1923-1940) 1945
NU31 Seri NU31

225 channel separating their island habitations
501 from those on the mainland.

In pre-Columbian times the turtle fisheries
614 of the channel must have supported several

[p. 195(c)]

614 hundred Seris at a time. They lived in maternal groups or clans in which the elder females were of great prominence in the management of everyday affairs. When, in 342 the wanderings of a family a new camp was [462] decided upon, the elder matron usually erected the jacal alone, without the aid of men or boys, gathering the long poles of the ocotillo or the branches of desert trees and fashioning them into an arched framework over which a covering of brush, and often later of turtle shells, served to give protection from the desert sun. After the household was prepared, she took her place within 361 easy reach of the meager and squalid family 592 possessions, and around this nucleus other matrons and their children gathered in the course of a day or two. It was usually three or four days, and sometimes a week, before the brothers and husbands came wandering in from their roving search for food to take their places at the new camp site.

482 From the turtle fishing camps on the chan-
312 nel, the nearest fresh water was at a distance

[p. 196(A)]

3:Davis & Dawson F-5 (1922-1940) 1945
NU31 Seri NU31

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FIG. 10. SERI BELLE
WEARING A PAINTED DESIGN SUCH AS FORMERLY WAS INDICATIVE OF THE BLOOD LINE OF A GIVEN CLAN.

264 hut, the rotting flesh and cartilage of its noisome interior to be explored and mouthed by the toddling children or gnawed by the cringing coyote-curs attached to the rancheria.

223 At certain seasons or when deemed propitious by the elders of the family, a pelican harvest was planned. Isla Tasne, some fifteen miles from Tiburon Island, is the haunt and breeding ground of the pelican that served not only as a valuable food supply for the Seris, but also as the chief source of apparel. At such seasons temporary rancherias were set up on the shores of Bahia Kino, and when conditions were favorable, or when hunger prompted them, the balsas [502] would be launched in the evening toward Isla Tasne, the women of the party lying prone on the cane bundles and propelling the craft by paddling with their hands or with large hatchet clam shells. Reaching the island after dark, the balsas were left in charge of the women while the men and older boys, armed with clubs, crept up over the slippery, guano-covered rocks to rush on [264] the roosting fowls and slaughter them. The

[p. 179(B)]

222 forests of giant cacti (Fig. 9) provide during this season an unlimited supply of "pitahayas" toward which the tribespeople customarily moved to accomplish the annual harvest. The fruits were readily knocked down by means of long poles and, when ripe, the spines were easily brushed off, leaving a luscious pulp as big as a fig. During the height of the season all the clans withdrew from the coast and gave their undivided attention to the collection and consumption of the cactus fruit, gorging tremendous quantities for weeks until waning supply and cloying appetite drove them back to the more severe hunt for turtle and pelican.

252 262 514 Perhaps the only germ of thriftiness in the Seris is shown by a peculiar custom with respect to the pitahayas. The fruits, eaten in such enormous quantity, were imperfectly digested, the hard-coated seeds particularly passing through the body unchanged. Using [415] large seashells, the feces containing these seeds were collected and preserved with some [251] care. Thus, when the harvest of fresh fruits was over, there remained a hoard of these dry, nutritious discharges which were ground on the stone abst, winnowed in a shallow basket and made into a meal to be eaten, either dry, as a watery atole, or mixed with turtle grease to form a thick paste.

614 Although the Seri's omnipresent problems of food-getting and of personal subsistence have been of particular interest, the lost social customs of the tribe deserve a moment's attention. Before the death of all [161] but a few of the 2,000-3,000 Seris at the hands of invading Spaniard and Mexican, the tribe consisted of a number of conspicuous maternal clans, each of which was presided over by a zoic tutelary such as the Pelican, the Turtle, the Rattlesnake, or the Badger. The totemic symbols denoting the 302 various beast-gods and incidentally indicat- 386 ing the blood-carriers of clans dedicated to 614 them, consisted of elaborate designs painted upon the face (Fig. 10). In accord with their savagery in which the social organization was based on blood kinship reckoned in the female line, under ordinary circumstances, the faces only of the females were painted. Colored minerals pounded to powder afforded the pigments for the paint-

[p. 201(A)]

3:Davis & Dawson E-5 (1922-1940) 1945
NU31 Seri NU31

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[853]

FIG. 12. SERI MOTHER AND BABE

SERI MOTHERS COMMONLY HAVE TOO MUCH MILK AND FREQUENTLY RELIEVE THEMSELVES BY SUCKLING AN ORPHANED PUPPY OR SOMETIMES EVEN A BABY PIG.

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ing, and were carried in cane tubes. The paints were carefully prepared, applied, and preserved, and, as indispensable feminine accompaniments even on the longest journeys, were among the most highly prized of the people's possessions. The importance of the face-painting custom, established in the old tribal life, remained strong even as the slaughter of the warring tribe progressed

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[p. 201(B)]

3:Davis & Downs E-5 (1922-1949) 1945
NU31 Seri NU31

302 614 and the maternal clans disappeared. Today, with the entire tribe numbering no more than 150 persons, the meaning of the painted symbols has become vague and meaningless with respect to the nonexistent clans, yet the custom persists, now largely for personal adornment, and even a male tribesman may sometimes be seen squatting before little dishes of pigments, peering into a ten cent store mirror as he carefully applies the colors (Fig. 11).

649 Had it not been for the Seris' intolerance of aliens they might today constitute a numerous and thriving people, or at least have been absorbed by the polyglot Mexican popu-

[p. 202 (A)]

11: Moser L-5 (1956-1961) 1963
NU31 Seri NU31

SERI BANDS

EDWARD MOSER

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ABSTRACT

In previous publications on the Seri, frequent reference to distinct Seri groups points to historical tribal divisions at some level. Recent research among the Seri has determined the former existence of six bands which included three dialect groups. Three of the bands were subdivided into clans. These six bands, whose formation may have been caused largely by internal struggles, were eventually crushed and reduced to a single group by the devastation brought about by external conflict.

INTRODUCTION

The Seri tribe is located in Mexico along the coast of Sonora between Bahia Kino and Puerto Libertad, and on Tiburon Island (Fig. 1). Today it consists of approximately two hundred and eighty persons who call themselves *kongkaak*[1] "the people." Although at one time it was comprised of six distinct bands (Fig. 2), the tribe has now lost its band organization. However, much of the late history of these now-defunct tribal units remains vivid in the minds of the Seri. The purpose of this paper is to present some of the salient features of these former bands, to discuss certain interrelations between them, and to recount the Seri version of the disintegration of the band system.[2]

Three published studies on the Seri should be mentioned.[3] Of these, the reports by Kroeber and by Griffen are the more reliable. All three investigators mention tribal divisions which Griffen rightly designates as bands.

BANDS

BAND I *xika ʔai kkoii* "they who live toward the true wind"

This group is commonly referred to in the literature as the Tepoca or Salinero. As shown on Fig. 1, they inhabited an area which extended from a point slightly north of Puerto Lobos to Punta Tepopa on the south. The territory extended inland, encompassing the general area delimited by the San Ignacio River.

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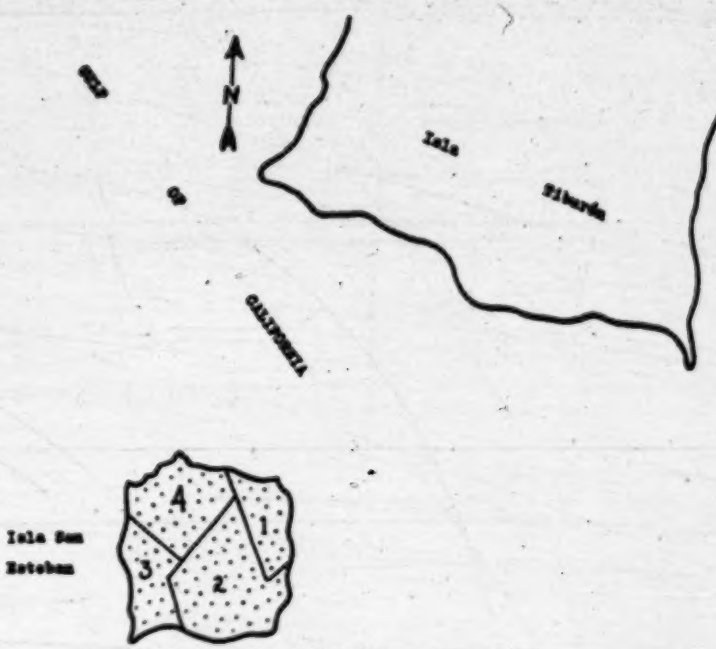

FIG. 5. Subdivisions of Band VI

BAND SOCIAL STRUCTURE

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The social structure of the bands can be properly understood only in relation to the social structure of their smaller units, the *i?iziitang*. The kin group which resided in and dominated each such subdivision constituted a clan.[5] This group conforms to Murdock's three major specifications for clan designation.[6]

Murdock's first specification states that a kin group, to constitute a clan, must be based explicitly on a unilinear rule of descent. The kin group of each Seri band subdivision was based on patrilineal descent. An individual was closely associated with the group of kinsmen of his subdivision, all of whom were related to him through males only. The father was the head of his household. For example, he assumed leadership in marriage negotiations. Upon his death, the eldest son took his place.

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The second specification states that such a kin group must have residential unity. Seri marriages were exogamous with respect to the subdivision,[7] and the rule of residence was patrilocal. The domicile was set up near the home of the groom's parents.

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642 621 618 714 [786] [406]

The third specification states that a kin group, to constitute a clan, must exhibit actual social integration. Murdock stresses the necessity of observing a positive group sentiment, such as would be manifested by organized collective activities or group functions, before the group can be characterized as a clan. An essential feature of this group sentiment is the inclusion of the wife as an integral member of her husband's kin group.

621 618 [628] [622] [701] [583] [406]

This sort of social integration was indeed exhibited by the Seri kin group of each subdivision. It was, in fact, fostered by the isolation brought about by the inhabitants' reservation of hunting and fishing rights for themselves. Tension existed between certain subdivisions and, since there was no chief, the oldest capable male organized and led the fighting force of the clan. In times of need, the members of the group united to give mutual assistance. The groom-to-be could expect material aid from his fellow clan members in the payment of the bride price. Mutual assistance was given in the fulfillment of puberty ceremony and burial obligations. The men cooperated in their hunting and fishing expeditions. The women of the clan, including the in-married spouses, cooperated in the gathering and sharing of food. Everyone could attend the various fiestas. It is said that in the performance of these collective activities, close harmony generally prevailed.

BAND INTERNAL AND EXTERNAL RELATIONS

642 619 578 [648]

The division of the Seri tribe into bands was likely brought about through internal strife. During the period of band history known to the present-day Seri,[8] however, serious skirmishes seem to have been fought predominantly with non-Seri groups.[9]

Band I

642 621 628 578 [721] [648]

Band I internal relations appear to have been relatively peaceful. The inhabitants of subdivisions 1, 2, 3, 4, and 5 were fishermen as well as hunters and gatherers, whereas the people of subdivision 6 preferred to subsist on gathered food and wild game. Also, the members of Band I robbed cattle and horses, which pursuit brought reprisals from the Mexican ranchers. There was apparently considerable social intercourse among the six subdivisions, even to the extent that hunting rights of one were sometimes granted to inhabitants of a neighboring section.

Trouble developed when some members of Band I speared fish within the domain of Band V. Here also bitter fighting broke out, and any semblance of peaceful co-existence between the two groups was destroyed.

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the vessel to Guaymas. With the aid of a group of Yaqui, some of these women were said to have been permitted to go to Hermosillo and eventually to return to their home on Tiburon. Others of their group are said to have remained near Guaymas. The women who returned to Tiburon reported that the San Esteban women and children were put aboard another ship which sailed southward.

BANDS I, III, AND IV

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As opposition from the Papago and government forces increased, the members of Band I were forced to seek refuge on Tiburon Island. The mainland members of Band III (subdivisions 11 and 12) were also forced, especially during the Encinas Wars, to flee to Tiburon. There the combined forces of Bands I, III, and IV sought to cope with the military expeditions sent out through the years to exterminate them. Tiburon Island is an adverse battlefield for the uninitiated; some expeditions were turned back due to lack of potable water or because of failure to make contact with the enemy in the mountainous terrain. Some expeditions did encounter the Seri, however, and many natives were either killed or captured.

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Through the years, then, these military encounters, along with smallpox and measles epidemics, were responsible for reducing the Seri tribe to a small remnant. The band and clan systems lost their functional relevance as the people continued to live together for mutual protection. Shortly after the turn of the century, the expeditions and raids had practically ceased.

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SIGNIFICANCE OF BANDS TODAY

With the dissolution of the band system, the rule of descent shifted from patrilineal to bilateral, and the rule of residence shifted from patrilocal to neolocal.

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Although the substance of the band system is no longer a reality, the concept of land ownership still remains. A young Seri of today may choose to be associated with either the i?iziting of his father or that of his mother. He is said to inherit part ownership of the area. It is recalled by one informant that in former times ownership of a mountain was especially important. Sometimes ownership of a mountain was included as part payment for a bride. Thus a person might 'own' a mountain in a subdivision other than his own.

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A custom exists even today whereby a person names his dog after a mountain or other geographical point located in his subdivision. Although the person may re-use the name, each dog so named must be of the same sex as the first.

so named must be of the same sex as the first. The significance of land ownership needs further investigation.

Many of the Seri still prefer, when possible, to live in their chosen band area. Sometimes a person, when he is approaching death, will ask to be taken to his own i?iziiting, where he can die and be buried in the area of his choice.

NOTES

1. Due to printing limitations, stress on Seri words has been omitted, and several orthographic symbol changes have been made for this paper. The phonetic values of the symbols used are the following: *p* is voiceless labial stop; *t* is vl. dental stop; *k* is vl. velar stop; *?* is glottal stop; *f* is vl. labial flat spirant; *w* is vl. labial grooved-rounded spirant; *s* is vl. alveolar spirant; *x* is vl. alveo-palatal spirant; *l* is vl. lateral spirant; *h* is vl. velar spirant; *x* is vl. back velar spirant; *m* is labial nasal; *n* is dental nasal; *ng* is velar nasal; *y* is palatal semivowel; *i* is a high close front vowel; *e* is a low close front vowel; *a* is a low open central vowel; *o* is a mid close back vowel.

2. These data were compiled during field trips to the Seri camps during the years 1956-61, the studies being carried out under the auspices of the Summer Institute of Linguistics. The principal informant was R. Herrera T. whose information was checked with and supplemented by nine of the older members of the tribe. I am indebted to my colleague, David Thomas, who read an earlier draft of this paper and made helpful suggestions.

3. 1) W. J. McGee, "The Seri Indians," *Bureau of American Ethnology, Annual Report*, No. 17, Part 1. Washington, 1898. 2) A. L. Kroeber, "The Seri," *Southwest Museum Papers*, No. 6. Los Angeles, 1931. 3) W. B. Griffen, "Notes on Seri Indian Culture, Sonora, Mexico," *Latin American Monograph Series*, No. 10, Gainesville, 1959.

4. It will be noted that between subdivision 3 and 4 on Fig. 3 there is an unnumbered area, the status of which is uncertain.

5. Kroeber states that McGee's concept of Seri maternal lineages crystallized into totemic clans with matron rule seem a fantasy. In Kroeber's opinion, "The Seri may never have had sibs or clans; but the fact that they appear to lack them now is no positive evidence that they were without them three centuries ago. Shifts of residence, contraction of territory, shrinkage of numbers, amalgamation of distinct bands, may well have obliterated much of such social fabric as they once possessed."

Griffen discusses the nature of the former Seri bands and states, "they may have been patrilineal and exogamous. The criteria . . . that Julian Steward has exposited for the formation of exogamous, patrilineal bands . . . are and presumably would have been met formerly in the Seri habitat." Griffen lists other aspects of this type of band which are also verified to some extent by his data. From reading his material, it is obvious that he suspects the existence of clans at some earlier period. He emphasizes the need for further investigation.

6. G. P. Murdock, *Social Structure*, Macmillan Co., New York, 1949.

7. Marriages were usually contracted within the band.

8. As Kroeber points out, their memory likely covers only the latter part of the period of Spanish contacts.

9. The Seri recall nothing of Seri-Pima contacts and little of Seri-Apache relations.

10. The story is related that one day some Seri entered a cave where they found several Papago jugs filled with seeds. Being hungry, the people ate the seeds and left some arrows as token payment. The Seri say that the Papago apparently believed the arrows were intended as an insult. Fighting broke out soon afterward.

11. The Seri concept of the band annihilations is seen to be in contradiction to McGee's statement (p. 132): "Concordantly with their primary characteristic, the Seri have avoided ethnic and demotic union beyond the narrow limits of their own kindred; and even of these they seem to have cast out parts, annihilating the Guaymi and Upanguayma, displacing and nearly destroying the Tepoka, and outlawing individuals and (apparently) small groups."

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

462 ing field; though by far the greater part of their time is spent in listless lounging or heedless slumber under the incidental guard of roaming youths and toiling women. The matrons are the real workers in the tribal hive; they are normally alert and active, passing from one simple task to another, gathering flotsam food along the beach or preparing edibles in the shadow of the jacal, with an eye ever on material possessions and children; they frequently join in hunting excursions of considerable extent; they are the chief manufacturers of apparel, utensils, and tools; and the scions of Castilian caballeros are not infrequently staggered at the sight of half a dozen Seri women "milling" a band of horses, and at intervals leaping on one to kill it with their hupfa. The masculine drones are the more petted and courted by reason of their fewness, for during a century or two, at least, the women have far outnumbered their consorts—a disproportion doubtless tending in some respects toward the disintegration of the clan system and, reciprocally, toward the firmer union of the tribe.

[162] [562]

One of the most noteworthy extensions of feminine functions among the Seri is toward shamanism. So far as could be ascertained from Mashém and the associated matrons at Costa Rica, it is such beldams as Juana María who concoct the arrow "poison", compound both necromantic medicines and curative simples, cast spells on men and things, and even fabricate the stone arrowpoints and counterfeit cartridges; though unhappily the data are neither so full nor so decisive as desirable.[1]

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562 623 Conformably with their prominence in proprietary affairs, the Seri matrons seem to exercise formal legislative and judicative functions; for not only do they hold their own councils for the arrangement of the domestic business of the rancherías, but they also participate prominently in the tribal councils (as explained by Mashém), and play important rôles in carrying out the decisions of such councils—as when they cooperate with war parties as decoys, or journey across their bounding desert to spy out the land of the enemy.

614 On the whole, it would appear that the clan organization of the Seri conforms closely with that characteristic of savagery elsewhere, especially among the American aborigines. The social unit is the maternal clan, organized in theory and faith in homage of a beast-god, though defined practically by the ocular consanguinity of birth from a common line of mothers; yet the several units are pretty definitely welded into a tribal aggregate by common feelings, identical interests, and conjugal ties. The most distinctive features brought out by the incomplete investigation are the somewhat exceptional manifestation of property-right in the females, the singularly strong sense of maternal relation, and the apparent prominence of females in shamanistic practices as well as in the tribal councils.

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[1] The agency of the women in applying the arrow "poison" was noted by Hardy; cf. p. 224.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

CHIEFSHIP

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The unformulated tribal laws of the Seri are intimately connected with leadership, which is, in turn, largely a reflection of personal characteristics; so that the tribal organization is about as variable as that of the practically autonomous herds of cattle ranging the Sonoran plains adjacent to Seriland. Indeed, just as the stock-clans enjoy a precedence on pasturage and at waterholes, determined by the valor and strength of the bulls by which they are led, so the Seri clans appear to be graded by the prowess of their masculine leaders, combined with the sortilegic success of the leaders' consorts; while, just as the leadership of the cattle shifts from band to band as the years go by, according to the fairly equal hazard of natural selection, so the clan dynasties of the human group rise, flourish, and decline in an endless succession shaped by the chances of birth and survival under a capricious environment, by the fate of battles internecine and external, and by various other factors. The instability of the Seri organization is demonstrated by the tribal changes recorded in history, as well as by the vicissitudes within the memory of Señor Encinas and others. At the beginning of the records the Upangnayma were already exiled from Seriland proper [175] and apparently suffering from raids of their collinguals; within a century the Guayma, also, were expatriated and nearly annihilated; then, in the early part of the present century, the Tepoka were extruded and (after a series of wars in active progress in Hardy's time) forced far up the coast to one of the poorest habitats ever occupied by any folk. So, too, throughout the Encinas régime the internal dissensions continued whenever the clans were not combined against aliens; and the veteran pioneer has seen much intratribal strife, attended by the rise and passing of many chiefs, both acknowledged and pretended, and often exercising chiefly prerogatives two or three at a time. This instability grows largely out of the fact that the essential unit is the clan, and that the tribe is nothing more than a lax aggregation; and it is measurably explained by the crude customs accompanying the choice of leaders.

562 614

As already noted, the clan organization is maternal, and the clan-mother is the central figure of the group; but the executive power resides in her brothers in the order of seniority—i. e., while the personal arrangement of the group is maternal, the appellate administration is fraternal. So far as could be ascertained, the form of government is clearly discriminable from that commonly styled avuncular; for, in the first place, the minor administration accompanying the control of property invests the elderwomen with exceptional legislative and judicative powers, while, in the second place, there are no old men (by reason of the militant habit), so that the reverence for age so assiduously cultivated in primitive life extends to matrons much more than to men. [889]

2: Kroeber E-5 (1930) 1931 NU31 Seri NU31

NEW DATA

Informants' Attitude

Most of my information was obtained from Chico Romero, the present official chief, a man of about 38. Santo Blanco and one or two other men contributed occasionally. Sr. Thomson was present most of the time and aided materially, both in encouraging the Seri and in helping to formulate questions suitably to their experience and comprehension. For instance, he repeatedly cleared up points in the kinship system by applying his knowledge of the actual relationship of Seri individuals, or their acquaintance with his relatives, to frame concrete cases, real or hypothetical, for which a denomination was then readily given. Without this aid, the system could not have been obtained with either reasonable surety or correctness. So far as possible, direct questions were replaced by giving to the Seri accounts of customs attributed to the Cocopa, of whose existence they know, and suggesting comparisons, in which they proved interested. On the whole, their attitude was friendly, coöperative, and appeared unsecretive. Concealment may be so automatic a habit with them that they practice it without giving a sign; but I had the constant impression that they told little about their religion because they knew little, and not from any skilfully concealed reluctance. Still, all negative statements must be regarded as only tentative when secured in a brief time through an imperfect medium of communication from informants not accustomed to mental exertion.

Historical Tradition

There were formerly four tribes, according to the informant: to the East, the Seris, at Pueblo de los Seris (the ex-mission, across the river from Hermosillo); to the West, the Tiburónes, on the island; to the North, at Tepoca, the Xeka'aikö'ye; to the South, at Tastiota, the Antepké'itaX or Tastioteños. Too many died at Pueblo Seris, so they joined the Tiburones. They fought the northern and southern groups. Sixty (or 68) Seri-Tiburones once went to Tepoca to kill a man and his two sons. They made marks and stuck a knife in the trail to cause them to stop. Then they shot them. The women and children were captured, taken to the island and kept, the women first being abused by the whole party. The informant's son José Manuel (13) had a Tepoca maternal grandmother; that is, the informant, now about 38, married the daughter of a Tepoca woman. (This would put the incident hardly earlier than 1860 or later than 1890.) Similarly, there is Tastioteño blood among the present Seri. The dialects of the several tribes are said to have been distinct, though allied.

It is evident that these memories cover only the last part of the period of Spanish contacts.

[89 cont.]

000 abundant flying and, especially, marine fauna.

For a modern technology, their region has great resources,
511 but for the culture of the Seri it is frankly inhospitable. The standard of living is exceedingly low, as is proclaimed by natives and foreigners and as is demonstrated by the illnesses and hunger that weaken the population.

[90] The Seri truly form part of our Western society, in
226 so far as they catch fish, with fishhooks and motorboats, to sell
439 in the markets of Hermosillo, Nogales, and Tucson, and they
[177] obtain payments in national specie and coin. The part that
182 they form, however, has its own internal structure, which regulates the relations with the environment and among its mem-
[161] bers, even though a group of 218 persons, which suffers severe alterations in percentages from disasters like the sinking of a boat or strokes of good luck like the establishment of a prosperous fishing camp, is almost insignificant for the nation.

Most probably they have never been much more numerous, and they must not have had great cohesion in the past, a situation explicable in view of their nomadic gathering economy.
621 Toward the close of the 18th century they were divided into bands, of which it is known that the most important were the Guaymas, Upanguaymas, Tepocas, Tiburones, and Salineros.
[648] They banded together at various times in order to defend themselves and to attack the nuclei of Mexicans of the zone, achieving combined action, but without effective political unity.

● 619 At present they seem to form a single group without marked subdivisions, although they recognize affiliations like that of "Tiburones," "half-Papago," etc., which appear to have little real classificatory significance.

184 There is great uniformity: they speak a single language
619 incomprehensible to the rest of humanity; they have a relatively uniform culture, and there is tribal unification for matters involving sexual exchange.

361 The most obvious relations are spatial; they have important settlements that sprung up around the fishing establishments and are more or less permanently occupied. Of these, "El Desemboque," close to the mouth of a river from which they have been displaced, is the most important, with 80 per cent of the Seri

[90 cont.]

361 population. There is an obvious separation there between the
563 Seri and the yori, or non-Seri, with manifest differences in cultural patterns.

The yori occupy an extensive area per person; their homes are quite distant from one another, and four families in conjunction occupy a belt of land of about 100 by 50 meters.

361 The Seri are grouped by families, inhabiting minute squares of from one and a half to two meters to a side. The yori
182 feeling of prestige, based on the territorial expanse of their prop-
361 erty, contrasts with the feeling of security based on personal
511 contact that dominates many aspects of Seri life; the small size of the Seri habitation indicates, not a low standard of living, but a distinct [91] concept of comfort, according to which the Seri, having all the desert to live in, like the yori, confine themselves to the limits that personal contact permits.

In January, 1952, there were 35 dwellings, with an aver-
592 age of 4.6 persons in each, those lodging four, five, and six persons frankly predominating. Each three or four more closely related families occupied contiguous homes, forming relatively separate conjunctions by themselves, which we might call
596 macrofamilies.

The family is the basic Seri institution, which is manifest in all aspects of life: it is the center of production, co-operation, the division of labor, education, diversion, government, etc.

582 Going beyond the family and macrofamily organization,
● 619 we have a tribal structure based on the generalized exchange (2)
621

2. Lévy Strauss, Les Structures élémentaires de la Parenté [Elementary Kinship Structures], Paris, 1949.

of members for concluding marriage, by which all the Seri are actually linked by consanguinity or affinity. One is almost able to include all the members of the tribe on a single genealogical chart, systematically excluding only some few outsiders who have penetrated the group.

582 This situation, which would make one think of a primitive

● 619

/For information on the organization of the Seri into bands, see category 642./

642 621 618 114 [186] [476]

The third specification states that a kin group, to constitute a clan, must exhibit actual social integration. Murdock stresses the necessity of observing a positive group sentiment, such as would be manifested by organized collective activities or group functions, before the group can be characterized as a clan. An essential feature of this group sentiment is the inclusion of the wife as an integral member of her husband's kin group.

621 618 [628] [622] [701] [583] [476]

This sort of social integration was indeed exhibited by the Seri kin group of each subdivision. It was, in fact, fostered by the isolation brought about by the inhabitants' reservation of hunting and fishing rights for themselves. Tension existed between certain subdivisions and, since there was no chief, the oldest capable male organized and led the fighting force of the clan. In times of need, the members of the group united to give mutual assistance. The groom-to-be could expect material aid from his fellow clan members in the payment of the bride price. Mutual assistance was given in the fulfillment of puberty ceremony and burial obligations. The men cooperated in their hunting and fishing expeditions. The women of the clan, including the in-married spouses, cooperated in the gathering and sharing of food. Everyone could attend the various fiestas. It is said that in the performance of these collective activities, close harmony generally prevailed.

BAND INTERNAL AND EXTERNAL RELATIONS

642 619 578 [648]

The division of the Seri tribe into bands was likely brought about through internal strife. During the period of band history known to the present-day Seri,[8] however, serious skirmishes seem to have been fought predominantly with non-Seri groups.[9]

Band I

642 621 628 578 [721] [648]

Band I internal relations appear to have been relatively peaceful. The inhabitants of subdivisions 1, 2, 3, 4, and 5 were fishermen as well as hunters and gatherers, whereas the people of subdivision 6 preferred to subsist on gathered food and wild game. Also, the members of Band I robbed cattle and horses, which pursuit brought reprisals from the Mexican ranchers. There was apparently considerable social intercourse among the six subdivisions, even to the extent that hunting rights of one were sometimes granted to inhabitants of a neighboring section.

Trouble developed when some members of Band I speared fish within the domain of Band V. Here also bitter fighting broke out, and any semblance of peaceful co-existence between the two groups was destroyed.

Davis & Dawson E-5 (1923-1940) 1945
NU31 Serl NU31

425 Blanco, whose son was only sixteen years
458 old, bought outright for him a little girl of
six years.

When contracts for fish were secured by
621 the Mexicans from American markets in

[p. 267(B)]

3:Davis & Dawson E-5 (1922-1940) 1945
NU31 Seri NU31

621 about 1932–3, the exploitation of the teeming waters of the Gulf was rapid, and the village of Kino suddenly appeared on the bay by that name where there had been nothing but Seri jacals before. Today there

[p. 267(c)]

[text continues on p. 268(B)]

3:Davis & Dawson E-5 (1922-1940) 1965
MU31 Seri MU31

●621 are four or five hundred people there, more during the peak of the season, and some fifty or more wattle and daub shacks arranged without plan or order, facing at every angle, but all near the beach on which the fishing boats land and are pulled up on shore. Refrigerated trucks carry fifteen to twenty-five tons of fish away daily during the height of the season, mostly the huge endemic totuava (Fig. 21). These great fish are dragged from the boats and lined up on the shore, where the heads are chopped off and the entrails are pulled out and left to be carried away by the tides or consumed by hundreds of [131] scavenger gulls of the beach. A quarter mile north of Kino is the present-day Seri village where nearly all the Seris now live semi-permanently because of the easy money and [439] living. They have their own boats, fish a little for profit, and also bake the discarded [262] fish heads for food. The Seri dwellings are now scarcely inferior to many of the wattle 342 and daub shacks of the Mexicans. Indeed, many of the Mexican shacks are built by [439] Seris in exchange for manta cloth or food.

[p. 268(B)]

[89 cont.]

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For a modern technology, their region has great resources,
511 but for the culture of the Seri it is frankly inhospitable. The standard of living is exceedingly low, as is proclaimed by natives and foreigners and as is demonstrated by the illnesses and hunger that weaken the population.

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[90 cont.]

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The family is the basic Seri institution, which is manifest in all aspects of life: it is the center of production, co-operation, the division of labor, education, diversion, government, etc.

582 Going beyond the family and macrofamily organization,
619 we have a tribal structure based on the generalized exchange (2)
●621

2. Lévy Strauss, Les Structures élémentaires de la Parenté [Elementary Kinship Structures], Paris, 1949.

of members for concluding marriage, by which all the Seri are actually linked by consanguinity or affinity. One is almost able to include all the members of the tribe on a single genealogical chart, systematically excluding only some few outsiders who have penetrated the group.

582 This situation, which would make one think of a primitive

[91 cont.]

582 promiscuity of gatherers corroborative of the ideas of Morgan, is very far from being simple, tending more to confirm the ideas of Kirchoff regarding the greater restriction and regulation of marital relations in societies having a rudimentary economy. In all Seri marriages close consanguineous relatives seem to be avoided. More precisely, a classification of relatives is estab-
582 lished, from which only one group can provide a spouse. To
● 621 differentiate the Seri system from clan systems and marital
601 classes, in which each member belongs to a fixed class in relation to all the other members, in this system the classification varies with respect to the position of each person, that is to say, it is a true system of kinship. The factors of sex, polarity, generation, relative age, affinity, and consanguinity are involved in it, acting to deny or permit the possibility of marriage. Perhaps because of the small size of the Seri group, only within which are marriages concluded, the kinship system results in a clear identification of all persons by terms that are functions of marital relationships: approximately 50 per cent are excluded for being of the [92] same sex; 30 per cent for being of a distinct generation (very few aged or very young); the consanguineous relatives close to the affinal relatives and married persons are also excluded, leaving only so many persons as possible mates, a situation that is reflected in the kinship terminology.

582 It is not that sexual relations may be prohibited, for
[837] there is relative freedom in extramarital, including prenuptial,
[836] sexual relations, but the "marriage" association, sanctioned by the society and for which there is strong community pressure, has the limitations mentioned. And it tends to be realized, in spite of the disadvantages of the disappearance of sexual liberty, avoidance of near affinal relatives, and the economic obligations that begin upon the conclusion of the marriage.

156 With regard to individual development, this social struc-
155 ture is of such nature that it has well integrated cultural elements that create a very special personality, characterized by improvidence, emotional instability, inconstancy, and feelings of security, dispossession, and dependence.

11: Moser L-5 (1956-1961) 1963
NU31 Seri NU31

SERI BANDS

EDWARD MOSER

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Mr. Moser, of the Summer Institute of Linguistics, holds a Master's degree in Linguistics from the University of Pennsylvania. He has been doing research on the Seri language during trips to Sonora since 1952.

ABSTRACT

105 621 642 614 [178] In previous publications on the Seri, frequent reference to distinct Seri groups points to historical tribal divisions at some level. Recent research among the Seri has determined the former existence of six bands which included three dialect groups. Three of the bands were subdivided into clans. These six bands, whose formation may have been caused largely by internal struggles, were eventually crushed and reduced to a single group by the devastation brought about by external conflict.

INTRODUCTION

101 131 [161] 178 621 642 121 621 642 The Seri tribe is located in Mexico along the coast of Sonora between Bahia Kino and Puerto Libertad, and on Tiburon Island (Fig. 1). Today it consists of approximately two hundred and eighty persons who call themselves *kongkaak*[1] "the people." Although at one time it was comprised of six distinct bands (Fig. 2), the tribe has now lost its band organization. However, much of the late history of these now-defunct tribal units remains vivid in the minds of the Seri. The purpose of this paper is to present some of the salient features of these former bands, to discuss certain interrelations between them, and to recount the Seri version of the disintegration of the band system.[2]

114 Three published studies on the Seri should be mentioned.[3] Of these, the reports by Kroeber and by Griffen are the more reliable. All three investigators mention tribal divisions which Griffen rightly designates as bands.

BANDS

642 101 131 BAND I *xika ?ai kkoii* "they who live toward the true wind"

This group is commonly referred to in the literature as the Tepoca or Salinero. As shown on Fig. 1, they inhabited an area which extended from a point slightly north of Puerto Lobos to Punta Tepopa on the south. The territory extended inland, encompassing the general area delimited by the San Ignacio River.

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[194]
[193]

Dialect 3 was spoken by Band VI. This dialect, which is also extinct, is described by the informants as musical and is referred to as "singing talk." Expressions which are recalled are characterized by sharp pitch contours and heavy stress. Several grammatical constructions from this dialect have been found to contain morphemes unknown to present-day speakers.

The elicitable utterances and expressions of dialects 2 and 3 appear to employ the same segmental phonemes as present-day Seri.

BAND SUBDIVISIONS

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Three of the six bands were subdivided. The territorial subdivisions of those three, Bands I, III, and VI are shown on Figs. 3-5.

Band I

Band I became divided into six groups, each group occupying a subdivision of the band territory. Each such subdivision was called an *i?iziiting*. The name of the most prominent camp in each *i?iziiting* was generally used also as the name of that subdivision. The names of these subdivisions are;[4]

zaah ?akaila	"(arrows) shot at the cliff"
pailk ?aokwot	"driftwood huts"
xpano ?ax	"fresh water in the sea"
?aasixp	"white mesquite"
?axwoli?om	"place of clams"
xapoya?	"sea lion . . ."

Band III

This band became subdivided into fifteen groups, named as follows;

?ah?ax	"whichever water"
kiazin	"long and narrow"
sakpatix	"_____"
?aank	"clam (species of)"
?atkisa	"rotten testicle"
taih it	"willow trunk"
inoo?kw kixax	"rattling stone bay"
xnitzk	"facing the wind"
takata	"_____"
?eeme	"camp"
?ast ?ax	"stone point (of arrow)"
sosnitaa	"in front of Alcatraz Island"
xoxaokl	"the large ones"
kail iti ktamkw	"men of the dry lake bed"
?ax ipak	"the other side of the water"

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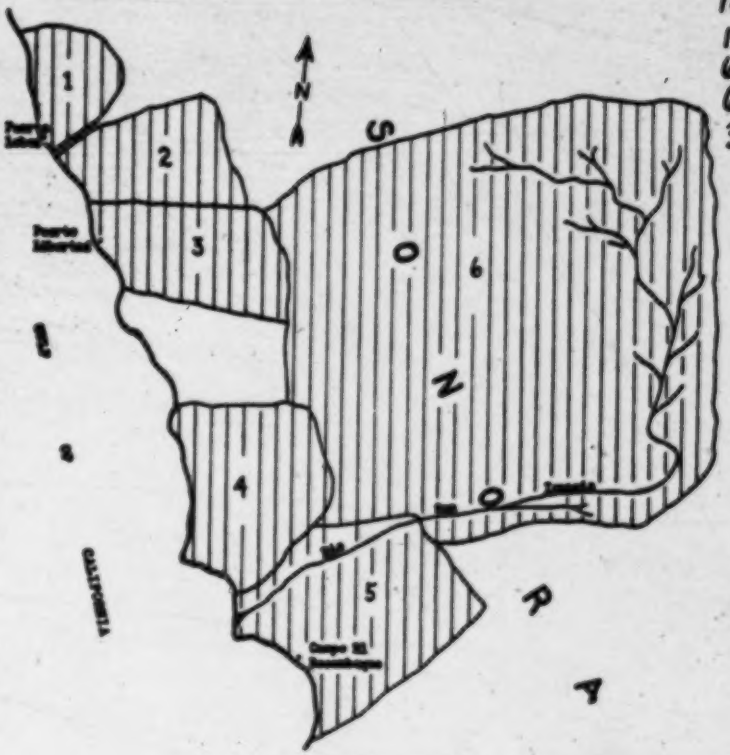

FIG. 3. Subdivisions of Band I

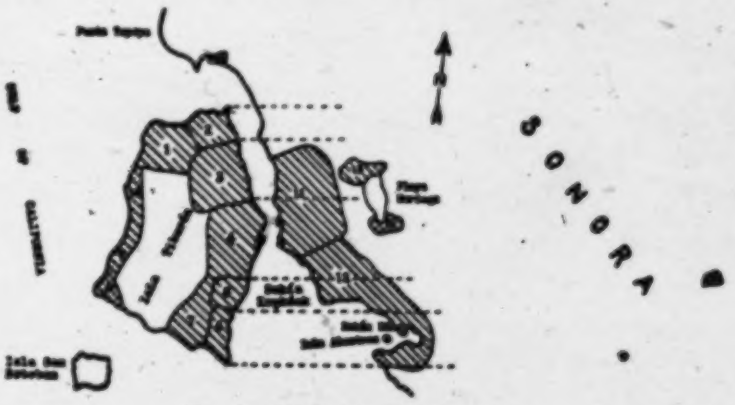

FIG. 4. Subdivisions of Band III

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621 Little information could be elicited about subdivisions 7, 8, 9, and 10. The reason for this might be that Band VI was slow in [169] [688] abandoning those coastal areas (if it actually did inhabit them) as it was being displaced by Bands III and IV.

621 The Seri say that long ago several men, called *ʔant iʔakimhoh* 642 "they who explain the land," came to Tiburon Island and told the 173 people along the eastern shore that they owned also a corre- 425 sponding strip of land on the mainland. Thus the inhabitants of 167 subdivisions 2, 3, 4, 5, and 6 laid claim to the coastal areas directly across the channel from them as shown by the dotted lines on Fig. 4. They assumed that their new territories extended inland [822] to include as much terrain as they chose to claim. At first the people went to their mainland areas primarily to gather cactus fruit. Eventually some of them remained on the mainland and established subdivisions 11 and 12. This establishment superseded the claims of the five Tiburon Island subdivisions to their main- [101] land territories. Although the mainland subdivisions 11 and 12 formed, in some respects, a separate band in their own right, they retained their name, *taʔeowkw kongkaak* "the people of Tiburon Island." Eventually this group returned to Tiburon.

621 Of subdivisions 13 and 14 which are shown on Fig. 4, very 642 little is known. The people of subdivision 13 inhabited an area 131 encompassing the northern end of the dry lake, La Playa Noriega [829] (San Bartolo). Some of the Seri believe that these people were [172] giants. Although in this area I have found clay figurines and other [173] artifacts common to abandoned camps elsewhere, the Seri do not know the names of the camps of this subdivision. Subdivision 14 occupied the area surrounding the southern end of the same dry lake.

Subdivision 15 occupied the general area which is now Villa de Seris, a settlement on the southern edge of Hermosillo. As [167] Hermosillo grew, it became increasingly difficult for these Seri to maintain their customary way of life, and they eventually returned to Tiburon Island.

642 BAND VI

621 Band VI became divided into four subdivisions, the names of 101 which are:

ɤnitom	"_____"
pahii	"flint"
kofte okl ifa	"large iguana peninsula"
koiih	"tubular"

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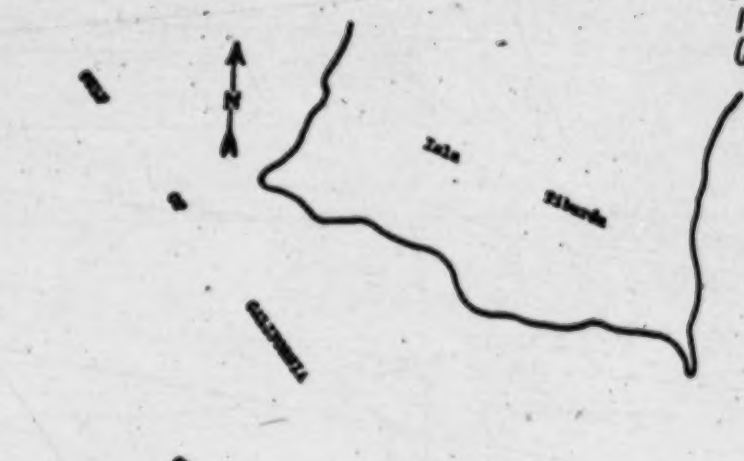

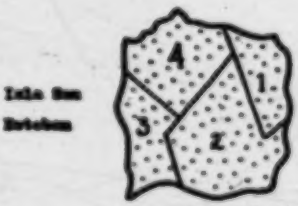

FIG. 8. Subdivisions of Band VI

BAND SOCIAL STRUCTURE

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The social structure of the bands can be properly understood only in relation to the social structure of their smaller units, the i?iziitaxag. The kin group which resided in and dominated each such subdivision constituted a clan.[5] This group conforms to Murdock's three major specifications for clan designation.[6]

Murdock's first specification states that a kin group, to constitute a clan, must be based explicitly on a unilinear rule of descent. The kin group of each Seri band subdivision was based on patrilineal descent. An individual was closely associated with the group of kinsmen of his subdivision, all of whom were related to him through males only. The father was the head of his household. For example, he assumed leadership in marriage negotiations. Upon his death, the eldest son took his place.

[611]
[592]

The second specification states that such a kin group must have residential unity. Seri marriages were exogamous with respect to the subdivision,[7] and the rule of residence was patrilocal. The domicile was set up near the home of the groom's parents.

[582]
[591]

642 621 418 714 [186] [406]

The third specification states that a kin group, to constitute a clan, must exhibit actual social integration. Murdock stresses the necessity of observing a positive group sentiment, such as would be manifested by organized collective activities or group functions, before the group can be characterized as a clan. An essential feature of this group sentiment is the inclusion of the wife as an integral member of her husband's kin group.

621 618 [628] [622] [701] [583] [406]

This sort of social integration was indeed exhibited by the Seri kin group of each subdivision. It was, in fact, fostered by the isolation brought about by the inhabitants' reservation of hunting and fishing rights for themselves. Tension existed between certain subdivisions and, since there was no chief, the oldest capable male organized and led the fighting force of the clan. In times of need, the members of the group united to give mutual assistance. The groom-to-be could expect material aid from his fellow clan members in the payment of the bride price. Mutual assistance was given in the fulfillment of puberty ceremony and burial obligations. The men cooperated in their hunting and fishing expeditions. The women of the clan, including the in-married spouses, cooperated in the gathering and sharing of food. Everyone could attend the various fiestas. It is said that in the performance of these collective activities, close harmony generally prevailed.

BAND INTERNAL AND EXTERNAL RELATIONS

642 619 578 [648]

The division of the Seri tribe into bands was likely brought about through internal strife. During the period of band history known to the present-day Seri,[8] however, serious skirmishes seem to have been fought predominantly with non-Seri groups.[9]

BAND I

642 621 628 578 [721] [648]

Band I internal relations appear to have been relatively peaceful. The inhabitants of subdivisions 1, 2, 3, 4, and 5 were fishermen as well as hunters and gatherers, whereas the people of subdivision 6 preferred to subsist on gathered food and wild game. Also, the members of Band I robbed cattle and horses, which pursuit brought reprisals from the Mexican ranchers. There was apparently considerable social intercourse among the six subdivisions, even to the extent that hunting rights of one were sometimes granted to inhabitants of a neighboring section.

Trouble developed when some members of Band I speared fish within the domain of Band V. Here also bitter fighting broke out, and any semblance of peaceful co-existence between the two groups was destroyed.

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Except for the occurrence of several battles, relations between Bands I and III were peaceful.

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Relations with non-Seri groups were not always peaceful. For many years the members of Band I were on friendly terms with the Papago; they often camped together and even intermarried. Due to a misunderstanding,[10] fighting erupted between the two groups and many people were killed in the years which followed.

BAND II

The external relations of Band II were decidedly turbulent. Although their primary base of operations was a coastal area, the people did not use the ocean as a source of food. They preferred beef and horse meat which was easily acquired by stealing animals from ranches. Here again the wrath of the ranchers and the government was incurred.

[262]
[721]

A small group of Yaqui eventually joined Band II and intermarried with them. The Seri claim that the Yaqui induced the warriors of this band to assault travelers on the road between Hermosillo and Guaymas. Coyote Iguana, who according to Seri tradition captured Lola Casanova, was of this band. This activity soon brought retribution from the government. Later, dissension arose between these Seri and the Yaqui.

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The enmity and strife that occurred between Bands II and V were mentioned above.

BAND III

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The history of the internal relations of this band on Tiburon Island seems to have been marked by periods of violence. Battles between subdivisions sometimes occurred; however, they were usually short-lived and soon forgotten. A major struggle once occurred when a shaman named *?apetla* "the invincible one" and warriors from subdivision 4 made repeated raids upon the neighboring subdivisions and killed many. Eventually, his enemies overcame their fear and destroyed the killer.

[721]

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Although the inhabitants of Band III were hunters, gatherers, and fishermen, they began to rob cattle once they became established on the mainland. They too incurred the wrath of ranchers and the government.

BAND IV

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Since the members of this band were, by choice, inhabiting an inland area of Tiburon Island, they lived in relative isolation as hunters and gatherers. Their primary contacts were with members of Band III with whom they intermarried.

[361]
[582]

Band V

642 These people were apparently hunters, gatherers, and fishermen. It is said that they speared fish from the shore since they did not use balsas. They too apparently raided the ranches. Their warring nature has already been discussed; it resulted in the acquisition of few friends. However, several marriages between members of this band and members of subdivision 2 of Band III are said to have occurred.

Band VI

The members of Band VI lived on San Esteban Island and were the most primitive of the tribe. They lived in huts made of driftwood and in caves and made extensive use of the balsa. Although they did not have the bow and arrow, they did become expert in the use of the spear. The people depended mainly on a seafood, iguana, and maguey diet.

Perhaps it was due to the confined living space on the small island with the accompanying lack of fresh water that relations between the four subdivisions were precarious and fights broke out frequently. The Seri today stress the fact that the members of this band were impetuous and unpredictable.

642 Their relations with the other bands were generally good however. Seri from Band III were free to visit San Esteban where they were well treated.

The San Esteban people seldom traveled to the mainland, and, since they spoke no Spanish, it is probable that they made no peaceful contact with non-Seri groups.

COLLAPSE OF THE BAND SYSTEM

642 628 578 648 Internal strife in the Seri tribe was probably a major factor in the establishment of the band system. External strife was a major factor in its downfall.

Reference has been made to the plundering, killings and rustling of cattle to which certain of the bands were dedicated. The concern of the Sonora government was aroused, and steps were taken to crush the rebellious groups. According to the present-day Seri, military action by army units and rancher outfits against the various bands resulted in the near-destruction of the whole tribe.[11]

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the vessel to Guaymas. With the aid of a group of Yaqui, some of these women were said to have been permitted to go to Hermosillo and eventually to return to their home on Tiburon. Others of their group are said to have remained near Guaymas. The women who returned to Tiburon reported that the San Esteban women and children were put aboard another ship which sailed southward.

BANDS I, III, AND IV

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As opposition from the Papago and government forces increased, the members of Band I were forced to seek refuge on Tiburon Island. The mainland members of Band III (subdivisions 11 and 12) were also forced, especially during the Encinas Wars, to flee to Tiburon. There the combined forces of Bands I, III, and IV sought to cope with the military expeditions sent out through the years to exterminate them. Tiburon Island is an adverse battlefield for the uninitiated; some expeditions were turned back due to lack of potable water or because of failure to make contact with the enemy in the mountainous terrain. Some expeditions did encounter the Seri, however, and many natives were either killed or captured.

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[161]
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Through the years, then, these military encounters, along with smallpox and measles epidemics, were responsible for reducing the Seri tribe to a small remnant. The band and clan systems lost their functional relevance as the people continued to live together for mutual protection. Shortly after the turn of the century, the expeditions and raids had practically ceased.

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SIGNIFICANCE OF BANDS TODAY

With the dissolution of the band system, the rule of descent shifted from patrilineal to bilateral, and the rule of residence shifted from patrilocal to neolocal.

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[428]
[583]

Although the substance of the band system is no longer a reality, the concept of land ownership still remains. A young Seri of today may choose to be associated with either the i?iriiting of his father or that of his mother. He is said to inherit part ownership of the area. It is recalled by one informant that in former times ownership of a mountain was especially important. Sometimes ownership of a mountain was included as part payment for a bride. Thus a person might 'own' a mountain in a subdivision other than his own.

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A custom exists even today whereby a person names his dog after a mountain or other geographical point located in his subdivision. Although the person may re-use the name, each dog so named must be of the same sex as the first.

so named must be of the same sex as the first. The significance of land ownership needs further investigation.

Many of the Seri still prefer, when possible, to live in their chosen band area. Sometimes a person, when he is approaching death, will ask to be taken to his own i?iziiting, where he can die and be buried in the area of his choice.

NOTES

1. Due to printing limitations, stress on Seri words has been omitted, and several orthographic symbol changes have been made for this paper. The phonetic values of the symbols used are the following: p is voiceless labial stop; t is vl. dental stop; k is vl. velar stop; ? is glottal stop; ƒ is vl. labial flat spirant; ʍ is vl. labial grooved-rounded spirant; s is vl. alveolar spirant; z is vl. alveo-palatal spirant; l is vl. lateral spirant; ĥ is vl. velar spirant; x is vl. back velar spirant; m is labial nasal; n is dental nasal; ng is velar nasal; y is palatal semivowel; i is a high close front vowel; e is a low close front vowel; a is a low open central vowel; o is a mid close back vowel.

2. These data were compiled during field trips to the Seri camps during the years 1956-61, the studies being carried out under the auspices of the Summer Institute of Linguistics. The principal informant was R. Herrera T. whose information was checked with and supplemented by nine of the older members of the tribe. I am indebted to my colleague, David Thomas, who read an earlier draft of this paper and made helpful suggestions.

3. 1) W. J. McGee, "The Seri Indians," *Bureau of American Ethnology, Annual Report*, No. 17, Part 1. Washington, 1898. 2) A. L. Kroeber, "The Seri," *Southwest Museum Papers*, No. 6. Los Angeles, 1931. 3) W. B. Griffen, "Notes on Seri Indian Culture, Sonora, Mexico," *Latin American Monograph Series*, No. 10. Gainesville, 1959.

4. It will be noted that between subdivision 3 and 4 on Fig. 3 there is an unnumbered area, the status of which is uncertain.

5. Kroeber states that McGee's concept of Seri maternal lineages crystallized into totemic clans with matron rule seem a fantasy. In Kroeber's opinion, "The Seri may never have had sibs or clans; but the fact that they appear to lack them now is no positive evidence that they were without them three centuries ago. Shifts of residence, contraction of territory, shrinkage of numbers, amalgamation of distinct bands, may well have obliterated much of such social fabric as they once possessed."

Griffen discusses the nature of the former Seri bands and states, "they may have been patrilineal and exogamous. The criteria . . . that Julian Steward has exposited for the formation of exogamous, patrilineal bands . . . are and presumably would have been met formerly in the Seri habitat." Griffen lists other aspects of this type of band which are also verified to some extent by his data. From reading his material, it is obvious that he suspects the existence of clans at some earlier period. He emphasizes the need for further investigation.

6. G. P. Murdock, *Social Structure*, Macmillan Co., New York, 1949.

7. Marriages were usually contracted within the band.

8. As Kroeber points out, their memory likely covers only the latter part of the period of Spanish contacts.

9. The Seri recall nothing of Seri-Pima contacts and little of Seri-Apache relations.

10. The story is related that one day some Seri entered a cave where they found several Papago jugs filled with seeds. Being hungry, the people ate the seeds and left some arrows as token payment. The Seri say that the Papago apparently believed the arrows were intended as an insult. Fighting broke out soon afterward.

11. The Seri concept of the band annihilations is seen to be in contradiction to McGee's statement (p. 132): "Concordantly with their primary characteristic, the Seri have avoided ethnic and demotic union beyond the narrow limits of their own kindred; and even of these they seem to have cast out parts, annihilating the Guayma and Upanguayma, displacing and nearly destroying the Tepoka, and outlawing individuals and (apparently) small groups."

535 semi-darkness.
123 Soon two little boys joined the dance, stepping up and down in the sand. Lighted only by the flickering flames of the driftwood fires on the shores of this mysterious and dreaded isle, the soft murmur of the sea as a refrain to the wild chanting, the weird circling of glittering eyes, and wild dark faces, presented a scene of uncanny and savage fascination witnessed by white men probably for the first time.

[533] After each stanza there was a short rest. The singing was similar to most other tribal chanting.

582 836 622 Bob made the remark that the girl was old enough to be broken in by the old Chief. I said, "How?"

583 [939] He said, when a girl thirteen or fourteen has her menses, the Chief takes her and goes through the family act. This is called 'breaking her in'. She is then eligible for marriage. A young man desiring marriage has to purchase the girl by giving the father a boat or rifle, both being necessary to the Seri's existence and protection. At the wedding they have sort of a fiesta and much mescal is drunk, which properly solemnizes a wedding.

944 845 When a girl has a baby it usually comes very naturally and easily, but I remember one girl's first baby was three days in coming, and she suffered a great deal. This was on a subsequent trip. She was staying with many of her people on the mainland and someone asked them if they didn't want a doctor or other help. They said: No, they had one. It was a Medicine Man who chanted over the girl and dug hollows in the sand to fit her heels into. He said that the legs had to be kept apart. This was all he did. But ordinarily there is no trouble, and if a baby is born at noon the mother is up and doing, and cooks supper [543] for her lord and master. The men treat their wives with kindness and each shares with the other any delicacy.

462 [343] [482] In Seriland domestic duties are reversed from the usual Indian methods. The men get the water and the women get the wood. This consists mostly of driftwood gathered along the shore, and it is a picturesque sight to see a string of women and girls bringing in loads of wood in baskets on their heads at sunset.

622 595 There are no plural marriages, but sometimes when a Chief is old, or rather when his wife is old and can have no more babies, he can take a younger woman as his wife. The present Chief is getting old now, almost too old to break in the girls, so they may get a younger man. This might be called the perquisites of office. He takes the cream.

932 825 They hunt lice in the head and eat them. This is said to increase the amorous desires. The penis of the male turtle is cut out and dried. This is pounded and pulverized and placed in the food of the women. This is said to create a desire for a man and the family act.

123 [282] It was a beautiful morning in early May, and the water was still as a pond, reflecting all the sunrise tints like a mirror. After a breakfast of clams and broth, bread and sand and bronco tea, we made a big smoke and were answered by a similar smoke two miles off, so we knew our friends were on the way.

123 482 [415] In one hour they began trailing in, the women each with a load on her head, walking graceful and erect. On one head was an inverted turtle shell containing nearly all the family belongings done up in rags. On the top was the most precious belonging of all---the rifle. The man carried two or three ollas and other things on a shoulder stick. Everything necessary for their home was carried on their heads.

123 Soon the Indian Blanco was seen paddling in his *balsa;* he also had a load and had paddled all the way from Ironwood camp against wind and sometimes tide. As they were all very thirsty we gave them water around. They immediately went to the shore as it was low tide, and began gathering small oysters from the rocks. Soon each woman returned with a half bushel of them on her head.

About three o'clock and for an hour or so thereafter, Antonio Herrera, the Chief's son Chico, the old Chief Juan Tomas, two other men and one woman, came drifting into camp with their dogs. Each one was loaded with things. They were a pretty wild looking bunch. There was very little food and little water for so many.

648 731 The Chief said that a day or two before, some of his men had a fight with some sailors (Mexicans) on the Island of San Estevan four or five miles off the south west corner of Tiburon. Nobody was killed, but the two boats, the wealth of the Island, had drifted away and were lost, leaving eight men marooned on the Island. They had gone there to gather *sescal* to make drink to celebrate a wedding to come off soon. Three men were five days without water. They sent up frantic smoke signals every day. At last they were seen, and help went for them in the only remaining boat on the Island. They were rescued.

648 484 123 The Chief and his men and women, with us, are going to Hermosille ninety miles afoot with all their belongings to ask the Government for food and help.

142 [622] The Chief looks to be seventy years old, a grim dark-skinned individual with a thin fringe of hair on his upper lip, broad nose, wide nostrils, small black eyes. He is well-built and erect. None of those that I have seen so far have any fat. They are lean and sinewy. [302] The young men are of large build, high cheek bones, some with hair on [291] their lips, their long black hair braided; sometimes with a strand of red worsted. All were either barefooted or wore sandals. I saw one pair of sandals made out of turtle hide; another of burro hide.

648 123 When the Chief arrived, the sail of a vessel was seen over the beach. Bob recognized it as belonging to a launch of a Yaqui Indian

[text continues on p 180]

123 but nothing happened.

123 622 [116] We reached Hermosillo at three in the afternoon, and as we landed Roberto and Sara met us, and Roberto embraced me. Then the Seri Indian Chief rushed up and fairly hugged me in his joy at seeing me again. A timid wild-looking Seri boy, of fifteen years of age, shyly shook hands with the *Americano*, while all the Mexican men and women, fully one hundred in number, looked on open-mouthed and wide-eyed, to see the Chief of the wildest and lowest of savage Indians in North America, rush up and embrace a white man.

We all climbed into Roberto's auto-truck, and my things were brought to Hotel Cohen, and then we all went to Roberto's home and stayed all the afternoon. He had just returned from the coast the day before, and Juan Tomas was determined to come also and greet me, and the boy---a nephew---hung on to the Chief, and finally Roberto said he would have to return on foot if he brought him. Juan Tomas said that made no difference. He would walk to the coast eighty or ninety miles, if only he could come.

[291] [302] He was probably seventy-five years old. He wore a hat, but his hair was straggly and he had a slight moustache. He wore shirt and trousers and a dirty kilt---remanent of the Pelican-skin-kilt---around his waist, and he was barefooted. The boy had a not unpleasant face, long wild hair, shirt, pants, and a cotton kilt reached to his knees. He, too, was barefooted.

I gave the Chief a knife, and the boy a red crayon and fifty cents. With the crayon he made a V on his kilt. He was very shy and always kept in a shadow, or in the background, and he spoke no Spanish although he knew the Spanish alphabet.

Sara showed some photographs and postcards in a baloptican in a dark room, and among them were pictures of some Seris and myself. These created much excitement with the Chief and the boy, and they jabbered together in the Seri language with animation. They recognized some of the subjects, their own people.

584 622 648 123 Juan Tomas is to be married soon to an elderly Seri dame, and we have been invited to attend the fiesta. He has been laying in the trousseau for the bride, and several gallons of mescal. A steer or burro will have to be provided, and all the fixin's and nothing will be left undone to make a very festive occasion. When asked to show us his gifts he reluctantly brought forth a package which he carefully unwrapped and disclosed eighteen yards of *manta*, two red pieces and one pink piece of Calico, some red handkerchiefs, and one box for painting the face. He carefully wrapped these up again and put them in the room set apart for him and the boy.

[508] [523] The woman he is to marry has no male relatives from whom she can be bought, so the Chief appointed a man and created him Uncle *pro-tempore*, and to him the Chief is going to give a rifle and a blanket as the purchase price. Pretty high!

10: Davis E-5 (1922-ca. 1939) 1965 NU31 Seri NU31

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Juan Tomas - Chief of Seris, 1922

War Chief of the Seris

622 765 There is sorrow and mourning on that little known island in the Gulf of California, Tiburon.

[164] During the last few years, many of the Seri tribesmen have succumbed to influenza and pneumonia, and many a night has the weird and melancholy wailing for the dead mingled with the soft lapping of the waters of the Gulf on the shores of that lovely desert isle.

But now a universal grief has overtaken the remnants of a once powerful and warlike tribe---Juan Tomas (*Pih-tan-aohe*, "Very Brave" in his own language)---the old War Chief of the Seris, is no more. He has fought a last and losing battle. For a month, maybe for several months, the women will wail and lament, and around the tribal camp fires, for many a night, the Seris will tell of his exploits and miraculous escapes, as they told Roberto Thomson, their friend and advisor.

[164] The old Chief died on the shores of Kino Bay opposite Alcatraz Island, probably of pneumonia.

There was no soft mattress to lie upon, no pillow to rest his head, and no roof to shelter him from sun or storm. His bed was the sand of the sea shore; his canopy, the blue heavens above, and his [163] requiem, the solemn beating of the surf on the shore. His last words were to his grand-nephews to inherit the *Sierra de las Tinajas*, and he asked the Indians and his *Yori* (Mexican) friends to protect his nephews and the mountains.

622 764 His body was wrapped in an old *serape*, fastened around by rope of native fibre. His grave was dug with paddles from the canoes, four and one-half feet deep in the sand hills near the sea. He was placed in the grave with his head to the north, face up, with the carapace of a sea turtle covering his head. Amid much lamentation and mourning, the grave was partially filled, and then a heavy layer of *cholla* cactus spread over. The grave was then filled and mounded up and covered with *chollas*, *mesquite*, shells, and thorny growths, and also a five-gallon can. The cactus spines were to discourage coyotes.

622 Thus passed a very striking character among the primitive races of Sonora, Mexico. He was brave and fearless in battle; crafty, cautious, and cunning in attack; cruel and merciless to his enemies. He was rarely caught off his guard, and always managed to extricate himself and his men from difficult situations. He was quick to think and act, and was wise with the wisdom learned at first hand on desert and sea from a rugged nature, reluctant to give up her secrets. He was a master hand at *balsa* building, a good hunter, fisherman, harpooner of *cahuama* (sea turtle), a good surfman, a good gambler, and an expert tracker. It was not unusual to possess two or three wives, but the old Chief, while married three times, had only one wife at a time. He was quite fond of the writer, and used to greet him with the true Mexican *abrazo*.

[575]

[123] It was in 1922 that I first met the grim old warrior on the shores of Tiburon, whither I had gone on a quest for the Museum of the American Indian, Heye Foundation, New York.

[142] He was very dark, of medium height, thick set, with a broad, deep chest, very muscular, with shaggy brows and deep set eyes which, even at that age, ninety years, burned like coals of fire, and were suspicious and wary. He wore a braided pigtail down his back which contained a few gray hairs. For clothing, he wore a ragged shirt and an old pair of overalls, with a short kilt hanging from a belt, through which stuck a long naked knife of hoop iron, ground on abrasive rocks and keen as a razor.

[302] [290] [411]

[291] From infancy to the grave, the freedom of his feet was never hampered by shoes. Even at that advanced age, and until his last illness, he was perfectly able to care for himself, and follow his nomadic tribe on its devious trails along the coast and far in the interior. A walk of a hundred miles was not unusual. For ten rifle cartridges a Seri Indian once walked forty or fifty miles to deliver my message to Juan Tomas. From the time we first met, our friendship was never broken.

[484]

642 621 618 714 [186] [476]

The third specification states that a kin group, to constitute a clan, must exhibit actual social integration. Murdock stresses the necessity of observing a positive group sentiment, such as would be manifested by organized collective activities or group functions, before the group can be characterized as a clan. An essential feature of this group sentiment is the inclusion of the wife as an integral member of her husband's kin group.

621 618 [628] [622] [701] [583] [476]

This sort of social integration was indeed exhibited by the Seri kin group of each subdivision. It was, in fact, fostered by the isolation brought about by the inhabitants' reservation of hunting and fishing rights for themselves. Tension existed between certain subdivisions and, since there was no chief, the oldest capable male organized and led the fighting force of the clan. In times of need, the members of the group united to give mutual assistance. The groom-to-be could expect material aid from his fellow clan members in the payment of the bride price. Mutual assistance was given in the fulfillment of puberty ceremony and burial obligations. The men cooperated in their hunting and fishing expeditions. The women of the clan, including the in-married spouses, cooperated in the gathering and sharing of food. Everyone could attend the various fiestas. It is said that in the performance of these collective activities, close harmony generally prevailed.

BAND INTERNAL AND EXTERNAL RELATIONS

642 619 578 [648]

The division of the Seri tribe into bands was likely brought about through internal strife. During the period of band history known to the present-day Seri,[8] however, serious skirmishes seem to have been fought predominantly with non-Seri groups.[9]

Band I

642 621 628 578 [721] [648]

Band I internal relations appear to have been relatively peaceful. The inhabitants of subdivisions 1, 2, 3, 4, and 5 were fishermen as well as hunters and gatherers, whereas the people of subdivision 6 preferred to subsist on gathered food and wild game. Also, the members of Band I robbed cattle and horses, which pursuit brought reprisals from the Mexican ranchers. There was apparently considerable social intercourse among the six subdivisions, even to the extent that hunting rights of one were sometimes granted to inhabitants of a neighboring section.

Trouble developed when some members of Band I speared fish within the domain of Band V. Here also bitter fighting broke out, and any semblance of peaceful co-existence between the two groups was destroyed.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

462 ing field; though by far the greater part of their time is spent in listless lounging or heedless slumber under the incidental guard of roaming youths and toiling women. The matrons are the real workers in the tribal hive; they are normally alert and active, passing from one simple task to another, gathering flotsam food along the beach or preparing edibles in the shadow of the jacal, with an eye ever on material possessions and children; they frequently join in hunting excursions of considerable extent; they are the chief manufacturers of apparel, utensils, and tools; and the scions of Castilian caballeros are not infrequently staggered at the sight of half a dozen Seri women "milling" a band of horses, and at intervals leaping on one to kill it with their hands. The masculine drones are the more petted and courted by reason of their fewness, for during a century or two, at least, the women [162] [562] have far outnumbered their consorts—a disproportion doubtless tending in some respects toward the disintegration of the clan system and, reciprocally, toward the firmer union of the tribe.

One of the most noteworthy extensions of feminine functions among [756] the Seri is toward shamanism. So far as could be ascertained from Mashém and the associated matrons at Costa Rica, it is such beldams as Juana María who concoct the arrow "poison", compound both necromantic medicines and curative simples, cast spells on men and things, and even fabricate the stone arrowpoints and counterfeit cartridges; though unhappily the data are neither so full nor so decisive as desirable.[1]

562 Conformably with their prominence in proprietary affairs, the Seri 623 matrons seem to exercise formal legislative and judicative functions; for not only do they hold their own councils for the arrangement of the domestic business of the rancherías, but they also participate prominently in the tribal councils (as explained by Mashém), and play important rôles in carrying out the decisions of such councils—as when they cooperate with war parties as decoys, or journey across their bounding desert to spy out the land of the enemy.

614 On the whole, it would appear that the clan organization of the Seri conforms closely with that characteristic of savagery elsewhere, especially among the American aborigines. The social unit is the maternal clan, organized in theory and faith in homage of a beast-god, though defined practically by the ocular consanguinity of birth from a common line of mothers; yet the several units are pretty definitely welded into [649] a tribal aggregate by common feelings, identical interests, and conjugal ties. The most distinctive features brought out by the incomplete 562 investigation are the somewhat exceptional manifestation of property-right in the females, the singularly strong sense of maternal relation, and the apparent prominence of females in shamanistic practices as well as in the tribal councils.

[1] The agency of the women in applying the arrow "poison" was noted by Hardy; cf. p. 256.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

As an illustration of the ordination in some 129
what unusual circumstances, it may be noted that when the "Seri 562
belle" (Candelaria) refused to pose for a photograph she was supported 626
by the clanmother (Juana María) until the latter was placated by presents; and that when the belle refused to obey the mother's command—to the vociferous scandal of the entire group—Juana María appealed to Señor Encinas, as the conqueror of the tribe and hence as the virtual head of both rancho and rancheria. And when a younger Seri maiden (plate XXV) similarly refused to pose, and in like manner disobeyed her mother (again to the general disgust), the latter appealed to Mashém; when he, after first exacting additional presents for both girl and mother and a double amount for himself, put hands on the recalcitrant demoiselle and forced her into the pose required, despite the shrinking and tremulous terror perceptible even in the picture

Commonly the regimentation of family, clan, and larger group appears 592
to be indicated approximately by the placement assumed spontaneously in the idle lounging of peace and plenty. A typical placement of a small group is illustrated in plate XIV. Here the family are assembled outside the jacal, but in the relative positions which would be assumed within. The matron (a Red Pelican woman) squats in easy reach of her few and squalid possessions; on her left, i. e., in the group-background and place of honor, sits the elderwoman of the rancheria (a Turtle); then comes the daughter of the family, followed by two girl-child guests of the group, the three occupying positions pertaining to chiefs or elder brothers or, in their absence, to daughters; opposite the matron sits a younger brother,[1] whose wife is a Turtle woman (daughter of the dame in the place of honor) and matron of another jacal. A few feet behind this brother (just outside the limits of the photograph reproduced, though shown on the duplicate negative) squats the husband, with his side to the group and face toward the direction of natural approach; while the place belonging to the sons of the family on the matron's right is temporarily occupied by a White Pelican girl, together with a dog, notable in the local pack for largely imported blood and correspondingly docile disposition. The place for the babe, were there one in the family, would be on the heap of odds and ends behind the matron. As in this group so in most others, the place of the sons is vacant; for the boys are at once the most restless and the most lawless members of the tribe—indeed, the striplings seem often to ignore [858] the maternal injunctions and even to evade the rarely uttered avuncular [882] orders, so that their movements are practically free, except in so far as they are themselves regimented or graded by strength and fleetness and success in hunting.

The raison d'être of the proprietorship and regimentation reflected in 302
the everyday customs is satisfactorily indicated by that totemic feature 614
of the social organization revealed in the face-painting described in

[1] This man was one of those involved in the Robinson butchery on Tiburon island a few months before the picture was taken; and he was one of those executed or transported for the affair during the interval between the 1895 and 1895 expeditions.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

approaching nubility—receive some advantage through the connivance of the matrons. To a considerable extent in the matter of sustentation, and to a dominant degree in the matter of apparreling, the distribution of values is affected by a highly significant (though by no means peculiar) humanitarian notion of inherent individual rights—i. e., every member of the family or clan is entitled to necessary food and raiment, and it is the duty of every other person to see that the need is supplied. The stress of this duty is graded partly by proximity (so that, other things equal, it begins with the nearest person), but chiefly by standing and responsibility in the group (which again are reckoned as equivalents of age), whereby it becomes the business of the first at the feast to see that enough is left to supply all below him; and this duty passes down the line in such wise as to protect the interests of the helpless infant, and even of the tribal good-for-naught or hanger on, who may gather crumbs and lick bones within limits fixed by the tribal consensus. Beyond these limits lies outlawry; and this status arises and passes into the tribal recognition in various ways: Kolusio was outlawed for consociating with aliens, and Mashem narrowly missed the same fate at several stages of his career; the would-be grooms who fail in their moral tests are ostracized and at least semioutlawed, and range about like rogue elephants, approved targets for any arrow, until they perish through the multiplied risks of solitude, or until some brilliant opportunity for display of prowess or generosity brings reinstatement; deformed offspring are classed as outside the human pale, even when the deformity is deemed rather by occult associations than by physical features; abnormal and persistent indolence, too serious for scorn and ostracism to cure, may also outpass the tribal toleration; and, as indicated by Mashem's guarded expressions and slight additional data, disease, mental aberration, and decrepitude are allied with indolence and deemed sufficient reason for excluding the persistently helpless from the tribal solidarity, and hence from recognized humanity—and the fate of the outlaw, even if nothing more severe than abandonment in the desert, is usually sure and swift. The entire customs of outlawry among the Seri are singularly like those of gregarious animals, including especially kine and swine in domestication. Now, studied equity in the distribution of necessaries might seem to be allied to thrift; but it is noteworthy that this is not so among the Seri, who take thought for one another but not for the morrow, who seem to have no conception of storage (save an incipient one in connection with water and the repulsive notion underlying the "second harvest"), and who habitually gorge everything in sight until their stomachs and gullets are packed—and then waste the fragments.

The division of labor which affects proprietary interests is undoubtedly affected in turn by the militant habit of the tribe and by the frequent decimation of the warriors. In general, the adult males limit their work to fighting and fishing, with occasional excursions into the hunt

642 BAND II *xika xnai kkoii* "they who live toward the south wind"
101 This group is commonly referred to as the Tastioteño. These
131 people roamed the coastal area from Guaymas to Bahia Kino.

BAND III *ta?eowkw kongkaak* "the people of Tiburon Island"

This band is referred to in the literature as the Seri or Tiburones. At one time their territory included only the northern and eastern coasts of Tiburon Island. Later it was extended to include the whole coastal strip of the mainland directly opposite the island.

BAND IV *?eno kongkaak* "the people of the desert"

The area this band occupied in the center of Tiburon Island is shown in Fig. 2.

642 BAND V *xnaamotat* "they who came from the direction of the
131 south wind"
173 The Seri believe that this band came originally from a region
● 628 south of Guaymas. It may have been the Upanguayma group
[101] mentioned in the literature. Its members came in contact with the members of Band II with whom they resided, apparently for a period of years. Whether the *xnaamotat* were Seri or non-Seri,
[99] I have been unable to ascertain. Since no informant suggests that this group spoke another language besides Seri, it seems reasonable to believe that it was simply a distinct dialect group.

642 The *xnaamotat* were a belligerent people and, after fighting
628 broke out between them and the members of Band II, they
721 traveled northward. Eventually they established themselves on
[131] the relatively small coastal strip located east of Punta Tepopa as shown in Fig. 2.

642 BAND VI *xika ?ast ano koii* "they who live in the mountains"
[101] This group, which has been recognized previously only by
[131] Griffen, inhabited San Esteban Island. It laid claim also to the greater part of the coast on the southern end of Tiburon Island. One informant stated that in earlier times this band had ranged over all of Tiburon Island except for the northern two-thirds of the eastern coast, but that they were slowly pushed southward by the movements of other groups.

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621 Little information could be elicited about subdivisions 7, 8, 9, and 10. The reason for this might be that Band VI was slow in
[169] abandoning those coastal areas (if it actually did inhabit them)
[628] as it was being displaced by Bands III and IV.

621 The Seri say that long ago several men, called *?ant i?akimhoh* "they who explain the land," came to Tiburon Island and told the
642 people along the eastern shore that they owned also a corre-
173 sponding strip of land on the mainland. Thus the inhabitants of
425 subdivisions 2, 3, 4, 5, and 6 laid claim to the coastal areas directly
167 across the channel from them as shown by the dotted lines on Fig. 4. They assumed that their new territories extended inland
[222] to include as much terrain as they chose to claim. At first the people went to their mainland areas primarily to gather cactus fruit. Eventually some of them remained on the mainland and established subdivisions 11 and 12. This establishment superseded the claims of the five Tiburon Island subdivisions to their main-
[101] land territories. Although the mainland subdivisions 11 and 12 formed, in some respects, a separate band in their own right, they retained their name, *ta?eowkw kongkaak* "the people of Tiburon Island." Eventually this group returned to Tiburon.

621 Of subdivisions 13 and 14 which are shown on Fig. 4, very
642 little is known. The people of subdivision 13 inhabited an area
131 encompassing the northern end of the dry lake, La Playa Noriega
[829] (San Bartolo). Some of the Seri believe that these people were
[172] giants. Although in this area I have found clay figurines and other
[173] artifacts common to abandoned camps elsewhere, the Seri do not know the names of the camps of this subdivision. Subdivision 14 occupied the area surrounding the southern end of the same dry lake.

Subdivision 15 occupied the general area which is now Villa de Seris, a settlement on the southern edge of Hermosillo. As
[167] Hermosillo grew, it became increasingly difficult for these Seri to maintain their customary way of life, and they eventually returned to Tiburon Island.

642 BAND VI
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101 Band VI became divided into four subdivisions, the names of which are:

xnitom	"_____"
pahii	"flint"
kofte oki ifa	"large iguana peninsula"
koiih	"tubular"

642 621 618 714 [186] [406]

The third specification states that a kin group, to constitute a clan, must exhibit actual social integration. Murdock stresses the necessity of observing a positive group sentiment, such as would be manifested by organized collective activities or group functions, before the group can be characterized as a clan. An essential feature of this group sentiment is the inclusion of the wife as an integral member of her husband's kin group.

621 618 [628] [622] [701] [583] [406]

This sort of social integration was indeed exhibited by the Seri kin group of each subdivision. It was, in fact, fostered by the isolation brought about by the inhabitants' reservation of hunting and fishing rights for themselves. Tension existed between certain subdivisions and, since there was no chief, the oldest capable male organized and led the fighting force of the clan. In times of need, the members of the group united to give mutual assistance. The groom-to-be could expect material aid from his fellow clan members in the payment of the bride price. Mutual assistance was given in the fulfillment of puberty ceremony and burial obligations. The men cooperated in their hunting and fishing expeditions. The women of the clan, including the in-married spouses, cooperated in the gathering and sharing of food. Everyone could attend the various fiestas. It is said that in the performance of these collective activities, close harmony generally prevailed.

642 619 578 [648]

BAND INTERNAL AND EXTERNAL RELATIONS

The division of the Seri tribe into bands was likely brought about through internal strife. During the period of band history known to the present-day Seri,[8] however, serious skirmishes seem to have been fought predominantly with non-Seri groups.[9]

Band I

642 621 628 578 [721] [648]

Band I internal relations appear to have been relatively peaceful. The inhabitants of subdivisions 1, 2, 3, 4, and 5 were fishermen as well as hunters and gatherers, whereas the people of subdivision 6 preferred to subsist on gathered food and wild game. Also, the members of Band I robbed cattle and horses, which pursuit brought reprisals from the Mexican ranchers. There was apparently considerable social intercourse among the six subdivisions, even to the extent that hunting rights of one were sometimes granted to inhabitants of a neighboring section.

Trouble developed when some members of Band I speared fish within the domain of Band V. Here also bitter fighting broke out, and any semblance of peaceful co-existence between the two groups was destroyed.

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Except for the occurrence of several battles, relations between Bands I and III were peaceful.

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Relations with non-Seri groups were not always peaceful. For many years the members of Band I were on friendly terms with the Papago; they often camped together and even intermarried. Due to a misunderstanding,[10] fighting erupted between the two groups and many people were killed in the years which followed.

BAND II

[262]
[721]

The external relations of Band II were decidedly turbulent. Although their primary base of operations was a coastal area, the people did not use the ocean as a source of food. They preferred beef and horse meat which was easily acquired by stealing animals from ranches. Here again the wrath of the ranchers and the government was incurred.

[582]

A small group of Yaqui eventually joined Band II and intermarried with them. The Seri claim that the Yaqui induced the warriors of this band to assault travelers on the road between Hermosillo and Guaymas. Coyote Iguana, who according to Seri tradition captured Lola Casanova, was of this band. This activity soon brought retribution from the government. Later, dissension arose between these Seri and the Yaqui.

The enmity and strife that occurred between Bands II and V were mentioned above.

BAND III

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The history of the internal relations of this band on Tiburon Island seems to have been marked by periods of violence. Battles between subdivisions sometimes occurred; however, they were usually short-lived and soon forgotten. A major struggle once occurred when a shaman named *?apetla* "the invincible one" and warriors from subdivision 4 made repeated raids upon the neighboring subdivisions and killed many. Eventually, his enemies overcame their fear and destroyed the killer.

[721]

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Although the inhabitants of Band III were hunters, gatherers, and fishermen, they began to rob cattle once they became established on the mainland. They too incurred the wrath of ranchers and the government.

BAND IV

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Since the members of this band were, by choice, inhabiting an inland area of Tiburon Island, they lived in relative isolation as hunters and gatherers. Their primary contacts were with members of Band III with whom they intermarried.

[361]
[582]

BAND V

642 These people were apparently hunters, gatherers, and fishermen. It is said that they speared fish from the shore since they did not use *balsas*. They too apparently raided the ranches. Their warring nature has already been discussed; it resulted in the acquisition of few friends. However, several marriages between members of this band and members of subdivision 2 of Band III are said to have occurred.

BAND VI

The members of Band VI lived on San Esteban Island and were the most primitive of the tribe. They lived in huts made of driftwood and in caves and made extensive use of the *balsa*. Although they did not have the bow and arrow, they did become expert in the use of the spear. The people depended mainly on a seafood, iguana, and maguey diet.

621 628 578 Perhaps it was due to the confined living space on the small island with the accompanying lack of fresh water that relations between the four subdivisions were precarious and fights broke out frequently. The Seri today stress the fact that the members of this band were impetuous and unpredictable.

642 Their relations with the other bands were generally good however. Seri from Band III were free to visit San Esteban where they were well treated.

The San Esteban people seldom traveled to the mainland, and, since they spoke no Spanish, it is probable that they made no peaceful contact with non-Seri groups.

COLLAPSE OF THE BAND SYSTEM

642 628 578 648 Internal strife in the Seri tribe was probably a major factor in the establishment of the band system. External strife was a major factor in its downfall.

Reference has been made to the plundering, killings and rustling of cattle to which certain of the bands were dedicated. The concern of the Sonora government was aroused, and steps were taken to crush the rebellious groups. According to the present-day Seri, military action by army units and rancher outfits against the various bands resulted in the near-destruction of the whole tribe.[11]

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Band V

It was stated above that this band fought with Band II and then with Band I. Since Band V was likely killing cattle, they also may have been harassed by soldiers. Eventually Band V abandoned its territory near Punta Tepopa and headed south along the coast to a camp near present-day Bahia Kino. From this camp the entire group disappeared and was never seen again by members of the other bands. The Seri of today believe that Band V either traveled inland or was destroyed by a non-Seri force.

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[115]

Band II

These people were rustlers and marauders. Government intervention in the situation was inevitable. The Seri recount the following final encounter between this group and the government forces.

The entire remaining membership of Band II was hiding out in a nearly inaccessible swamp thicket at Bahia Kino. Knowing that an armed force of soldiers and ranchers was searching for them, the people left their camp to seek safety elsewhere. Almost immediately they were attacked by the superior armed force which proceeded to wipe out the whole group. A youth who had avoided capture is said to have reported the affair to the Seri on Tiburon Island. This event may have occurred during the Encinas Wars fought from 1855 to 1865.

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Band VI

The members of this band on San Esteban Island were little interested in the mainland and did not participate in the raids on man and livestock there. Nevertheless, they were to share in the severe punishment meted out to the bands guilty of multitudinous depredations.

Sometime after the massacre of Band II, a ship arrived at San Esteban, and many of the people were induced to go aboard. The rest of the inhabitants followed the ship to a camp on the eastern side of Tiburon Island where they were to receive gifts. As the people congregated, they were herded into a stone corral. Apparently, some of the San Esteban men were killed at this time. The rest of them, along with the women and children, were taken to Santa Rosa point on the mainland. Here, the Seri say, more of the men were killed. The remaining men were strung together by wire and led away, never to return.

The San Esteban women and children, along with some Tiburon Island women and children (of Band III), were taken in

so named must be of the same sex as the first. The significance of land ownership needs further investigation.

Many of the Seri still prefer, when possible, to live in their chosen band area. Sometimes a person, when he is approaching death, will ask to be taken to his own i?iziitng, where he can die and be buried in the area of his choice.

NOTES

1. Due to printing limitations, stress on Seri words has been omitted, and several orthographic symbol changes have been made for this paper. The phonetic values of the symbols used are the following: p is voiceless labial stop; t is vl. dental stop; k is vl. velar stop; ? is glottal stop; ƚ is vl. labial flat spirant; ʋ is vl. labial grooved-rounded spirant; s is vl. alveolar spirant; z is vl. alveo-palatal spirant; ɬ is vl. lateral spirant; h is vl. velar spirant; x is vl. back velar spirant; m is labial nasal; n is dental nasal; ŋ is velar nasal; y is palatal semivowel; i is a high close front vowel; e is a low close front vowel; a is a low open central vowel; o is a mid close back vowel.

2. These data were compiled during field trips to the Seri camps during the years 1956-61, the studies being carried out under the auspices of the Summer Institute of Linguistics. The principal informant was R. Herrera T. whose information was checked with and supplemented by nine of the older members of the tribe. I am indebted to my colleague, David Thomas, who read an earlier draft of this paper and made helpful suggestions.

3. 1) W. J. McGee, "The Seri Indians," *Bureau of American Ethnology, Annual Report*, No. 17, Part 1. Washington, 1898. 2) A. L. Kroeber, "The Seri," *Southwest Museum Papers*, No. 6, Los Angeles, 1931. 3) W. B. Griffen, "Notes on Seri Indian Culture, Sonora, Mexico," *Latin American Monograph Series*, No. 10, Gainesville, 1959.

4. It will be noted that between subdivision 3 and 4 on Fig. 3 there is an unnumbered area, the status of which is uncertain.

5. Kroeber states that McGee's concept of Seri maternal lineages crystallized into totemic clans with matron rule seem a fantasy. In Kroeber's opinion, "The Seri may never have had sibs or clans; but the fact that they appear to lack them now is no positive evidence that they were without them three centuries ago. Shifts of residence, contraction of territory, shrinkage of numbers, amalgamation of distinct bands, may well have obliterated much of such social fabric as they once possessed."

Griffen discusses the nature of the former Seri bands and states, "they may have been patrilineal and exogamous. The criteria . . . that Julian Steward has exposited for the formation of exogamous, patrilineal bands . . . are and presumably would have been met formerly in the Seri habitat." Griffen lists other aspects of this type of band which are also verified to some extent by his data. From reading his material, it is obvious that he suspects the existence of clans at some earlier period. He emphasizes the need for further investigation.

6. G. P. Murdock, *Social Structure*, Macmillan Co., New York, 1949.

7. Marriages were usually contracted within the band.

8. As Kroeber points out, their memory likely covers only the latter part of the period of Spanish contacts.

9. The Seri recall nothing of Seri-Pima contacts and little of Seri-Apache relations.

10. The story is related that one day some Seri entered a cave where they found several Papago jugs filled with seeds. Being hungry, the people ate the seeds and left some arrows as token payment. The Seri say that the Papago apparently believed the arrows were intended as an insult. Fighting broke out soon afterward.

11. The Seri concept of the band annihilations is seen to be in contradiction to McGee's statement (p. 132): "Concordantly with their primary characteristic, the Seri have avoided ethnic and demotic union beyond the narrow limits of their own kindred; and even of these they seem to have cast out parts, annihilating the Guayma and Upanguayma, displacing and nearly destroying the Tepoka, and outlawing individuals and (apparently) small groups."

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

but as the vicarious and visible exponent of an ever-immanent beast-god—the clan tutelary; her appeals to her brothers for administrative aid are precisely parallel to her intuitive passage from zoomimicry into the field of mechanical chance defined by protolithic implements; and the appeal, like the execution of the law either by herself or by her brothers, is controlled and regulated in absolute deference to the zoic pantheon. Thus, the inchoate tribal laws, expressed in habitual lines of action and modes of thought, are by no means conscious products of human wisdom, but are confidently imputed to a superhuman wisdom on the part of myth-magnified beasts of a mystical olden time; and, similarly, the power of executing these laws is by no means cognized as conscious human faculty, but is faithfully imputed to supernal potencies of mythical monsters. Essentially, therefore, the tribal law is putatively *zoocratic;* and the social organization may justly be classed as a putative *zoocracy.*

To prevent possible confusion, it may be desirable to note specifically that the Seri government is not matriarchal in any proper sense. As pointed out elsewhere, matriarchy is not (at least among the American aborigines) an antecedent of patriarchy, but a correlative of that form of government; and it would be especially erroneous and misleading to designate as matriarchal a tribe like the Seri, whose chiefs and subchiefs (i. e., appellate clan-administratives) are invariably masculine. Neither would it be just, despite the dominance of matrons in legislative and judicative matters, to regard the tribal government as a gynecocracy, such as have been noted in various parts of North America—e. g., in Sonora, according to a current tradition as to the origin of the name of the province, and among the Pomo Indians of California, according to Cronise as interpreted by Powers;[1] for the actual control is exercised by the warrior brothers, while the ideal control is vested in that zoic pantheon of which the matrons are putative mouthpieces. Physically and practically the Seri government is an adelphiarchy, as already indicated; but in the minds of the tribesmen themselves it is an inchoate theocracy putatively headed by a pantheon of animate monsters, whose prelates are personified in the painted clan-mothers.

Summarily, then, the Seri are zoosematic in esthetic, zoömimic in technic, zootheistic in faith, and putatively zoocratic in government, while even the Seri tongue is so largely mimetic or onomatopoetic in form as to accord with the industries and institutions; and in view of the intimate interrelations between the several lines of activity, it would seem preferable to determine the culture status from the coincident testimony of all the lines, but feasible to measure it in terms of any one or more of these activital lines.

Now, on comparing the characteristics of the Seri with those of other known tribes of North America, many resemblances and a few differ-

[1] Tribes of California, pp. 180–181.

11: Moser L-5 (1956-1961) 1963
NU31 Seri NU31

SERI BANDS

EDWARD MOSER

114

Mr. Moser, of the Summer Institute of Linguistics, holds a Master's degree in Linguistics from the University of Pennsylvania. He has been doing research on the Seri language during trips to Sonora since 1953.

ABSTRACT

105 621 642 614 [78]

In previous publications on the Seri, frequent reference to distinct Seri groups points to historical tribal divisions at some level. Recent research among the Seri has determined the former existence of six bands which included three dialect groups. Three of the bands were subdivided into clans. These six bands, whose formation may have been caused largely by internal struggles, were eventually crushed and reduced to a single group by the devastation brought about by external conflict.

INTRODUCTION

101 131 [161] 178 621 642 121 621 642

The Seri tribe is located in Mexico along the coast of Sonora between Bahia Kino and Puerto Libertad, and on Tiburon Island (Fig. 1). Today it consists of approximately two hundred and eighty persons who call themselves *kongkaak*[1] "the people." Although at one time it was comprised of six distinct bands (Fig. 2), the tribe has now lost its band organization. However, much of the late history of these now-defunct tribal units remains vivid in the minds of the Seri. The purpose of this paper is to present some of the salient features of these former bands, to discuss certain interrelations between them, and to recount the Seri version of the disintegration of the band system.[2]

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Three published studies on the Seri should be mentioned.[3] Of these, the reports by Kroeber and by Griffen are the more reliable. All three investigators mention tribal divisions which Griffen rightly designates as bands.

BANDS

642 101 131

BAND I *xika ?ai kkoii* "they who live toward the true wind"

This group is commonly referred to in the literature as the Tepoca or Salinero. As shown on Fig. 1, they inhabited an area which extended from a point slightly north of Puerto Lobos to Punta Tepopa on the south. The territory extended inland, encompassing the general area delimited by the San Ignacio River.

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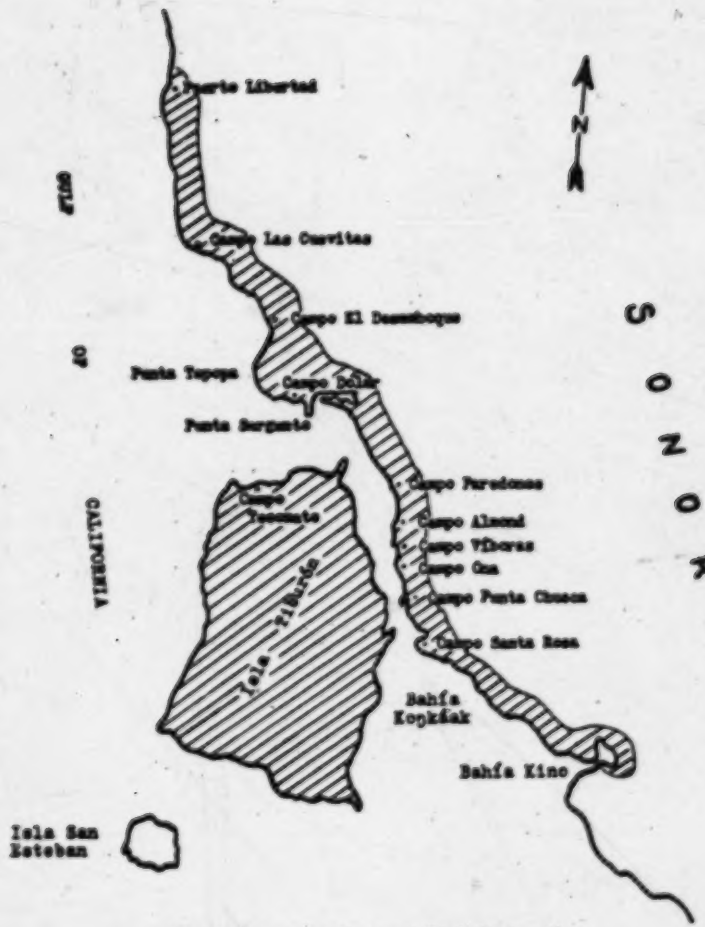

Fig. 1. Area of Present Seri Occupation

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One descendant of this band states that long ago his ancestors wandered north from the region of Guaymas. Eventually, they established land rights to the coastal area extending from Campo Ona on the south to Puerto Lobos on the north. Before long, however, they relinquished claim to the area between Campo Ona and Punta Tepopa. [173] [67] [425]

It is to be understood, of course, that groups from this band, as well as groups from other bands, at times ranged far afield from their respective territories. Band I, for instance, had campsites as far north as the mouth of the Colorado River. [484]

642 BAND II *xika xnai kkoii* "they who live toward the south wind"

101 131 This group is commonly referred to as the Tastioteño. These people roamed the coastal area from Guaymas to Bahía Kino.

BAND III *ta?eowkw kongkaak* "the people of Tiburon Island"

This band is referred to in the literature as the Seri or Tiburones. At one time their territory included only the northern and eastern coasts of Tiburon Island. Later it was extended to include the whole coastal strip of the mainland directly opposite the island.

BAND IV *?eno kongkaak* "the people of the desert"

The area this band occupied in the center of Tiburon Island is shown in Fig. 2.

642 131 173 628 [101] [197] BAND V *xnaamotat* "they who came from the direction of the south wind"

The Seri believe that this band came originally from a region south of Guaymas. It may have been the Upanguayma group mentioned in the literature. Its members came in contact with the members of Band II with whom they resided, apparently for a period of years. Whether the *xnaamotat* were Seri or non-Seri, I have been unable to ascertain. Since no informant suggests that this group spoke another language besides Seri, it seems reasonable to believe that it was simply a distinct dialect group.

642 628 721 [131] The *xnaamotat* were a belligerent people and, after fighting broke out between them and the members of Band II, they traveled northward. Eventually they established themselves on the relatively small coastal strip located east of Punta Tepopa as shown in Fig. 2.

642 BAND VI *xika ?ast ano koii* "they who live in the mountains"

[101] [131] This group, which has been recognized previously only by Griffen, inhabited San Esteban Island. It laid claim also to the greater part of the coast on the southern end of Tiburon Island. One informant stated that in earlier times this band had ranged over all of Tiburon Island except for the northern two-thirds of the eastern coast, but that they were slowly pushed southward by the movements of other groups.

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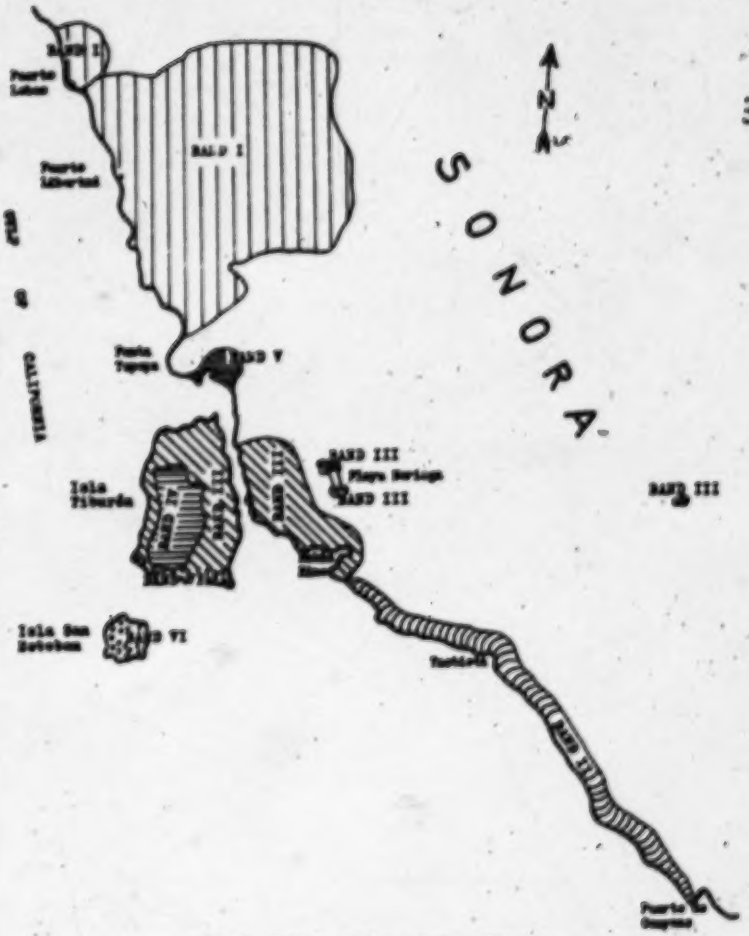

Fig. 2. Distribution of Seri Bands

DIALECTS

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The existence in former times of three distinct but mutually intelligible dialects seems evident.

Dialect 1 was spoken by Bands I, II, III, and IV. Any diversity of speech among these four bands seems to have been confined to word formation. The Seri language of today is derived largely from this dialect. [192]

Dialect 2 was spoken by Band V. This dialect is extinct and only scanty data on it can be gathered. From a number of expressions gathered, it appears that the dialect was characterized by extreme intonational contours. [194]

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Dialect 3 was spoken by Band VI. This dialect, which is also extinct, is described by the informants as musical and is referred to as "singing talk." Expressions which are recalled are characterized by sharp pitch contours and heavy stress. Several grammatical constructions from this dialect have been found to contain morphemes unknown to present-day speakers.

The elicitable utterances and expressions of dialects 2 and 3 appear to employ the same segmental phonemes as present-day Seri.

BAND SUBDIVISIONS

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Three of the six bands were subdivided. The territorial subdivisions of those three, Bands I, III, and VI are shown on Figs. 3-5.

Band I

Band I became divided into six groups, each group occupying a subdivision of the band territory. Each such subdivision was called an *i?iziiting*. The name of the most prominent camp in each *i?iziiting* was generally used also as the name of that subdivision. The names of these subdivisions are;[4]

zaah ?akaila	"(arrows) shot at the cliff"
paiik ?aokwot	"driftwood huts"
xpano ?ax	"fresh water in the sea"
?aasixp	"white mesquite"
?axwii?om	"place of clams"
xapoya?	"sea lion . . ."

Band III

This band became subdivided into fifteen groups, named as follows;

?ah?ax	"whichever water"
kiazin	"long and narrow"
sakpatix	"_____"
?aank	"clam (species of)"
?atkisa	"rotten testicle"
taih it	"willow trunk"
inoo?kw kixax	"rattling stone bay"
xnitzk	"facing the wind"
takata	"_____"
?eeme	"camp"
?ast ?ax	"stone point (of arrow)"
sosnitaa	"in front of Alcatraz Island"
xoxaokl	"the large ones"
kail iti ktamkw	"men of the dry lake bed"
?ax ipak	"the other side of the water"

11: Moser L-5 (1956-1961) 1963
NU31 Seri NU31

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FIG. 3. Subdivisions of Band I

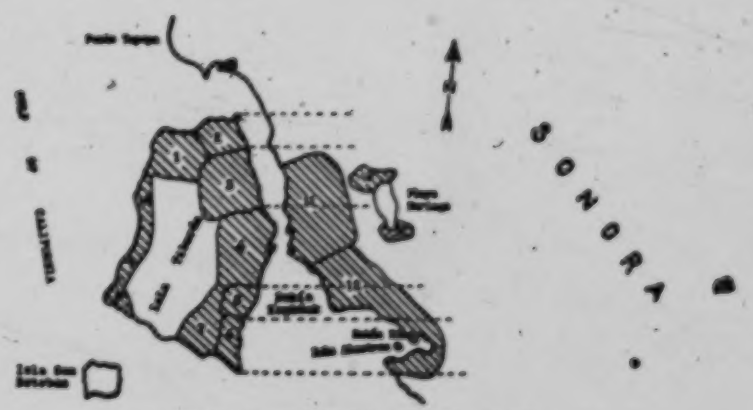

FIG. 4. Subdivisions of Band III

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621 Little information could be elicited about subdivisions 7, 8,
9, and 10. The reason for this might be that Band VI was slow in
[167] abandoning those coastal areas (if it actually did inhabit them)
[608] as it was being displaced by Bands III and IV.

621 The Seri say that long ago several men, called *?ant i?akimhoh*
642 "they who explain the land," came to Tiburon Island and told the
173 people along the eastern shore that they owned also a corre-
425 sponding strip of land on the mainland. Thus the inhabitants of
167 subdivisions 2, 3, 4, 5, and 6 laid claim to the coastal areas directly
across the channel from them as shown by the dotted lines on
Fig. 4. They assumed that their new territories extended inland
[922] to include as much terrain as they chose to claim. At first the
people went to their mainland areas primarily to gather cactus
fruit. Eventually some of them remained on the mainland and
established subdivisions 11 and 12. This establishment superseded
the claims of the five Tiburon Island subdivisions to their main-
[101] land territories. Although the mainland subdivisions 11 and 12
formed, in some respects, a separate band in their own right, they
retained their name, *ta?eowkw kongkaak* "the people of Tiburon
Island." Eventually this group returned to Tiburon.

621 Of subdivisions 13 and 14 which are shown on Fig. 4, very
642 little is known. The people of subdivision 13 inhabited an area
131 encompassing the northern end of the dry lake, La Playa Noriega
[829] (San Bartolo). Some of the Seri believe that these people were
[172] giants. Although in this area I have found clay figurines and other
[173] artifacts common to abandoned camps elsewhere, the Seri do not
know the names of the camps of this subdivision. Subdivision 14
occupied the area surrounding the southern end of the same dry
lake.

Subdivision 15 occupied the general area which is now Villa
[167] de Seris, a settlement on the southern edge of Hermosillo. As
Hermosillo grew, it became increasingly difficult for these Seri
to maintain their customary way of life, and they eventually
returned to Tiburon Island.

642 BAND VI
621 Band VI became divided into four subdivisions, the names of
101 which are:

xnitom	"_____"
pahii	"flint"
kofte oki ifa	"large iguana peninsula"
koiih	"tubular"

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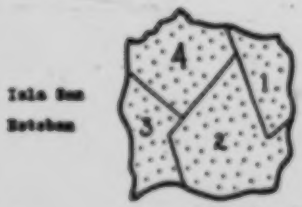

FIG. 5. Subdivisions of Band VI

BAND SOCIAL STRUCTURE

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The social structure of the bands can be properly understood only in relation to the social structure of their smaller units, the i?iiitang. The kin group which resided in and dominated each such subdivision constituted a clan.[5] This group conforms to Murdock's three major specifications for clan designation.[6]

Murdock's first specification states that a kin group, to constitute a clan, must be based explicitly on a unilinear rule of descent. The kin group of each Seri band subdivision was based on patrilineal descent. An individual was closely associated with the group of kinsmen of his subdivision, all of whom were related to him through males only. The father was the head of his household. For example, he assumed leadership in marriage negotiations. Upon his death, the eldest son took his place.

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The second specification states that such a kin group must have residential unity. Seri marriages were exogamous with respect to the subdivision,[7] and the rule of residence was patrilocal. The domicile was set up near the home of the groom's parents.

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642 621 418 714 [186] [476]

The third specification states that a kin group, to constitute a clan, must exhibit actual social integration. Murdock stresses the necessity of observing a positive group sentiment, such as would be manifested by organized collective activities or group functions, before the group can be characterized as a clan. An essential feature of this group sentiment is the inclusion of the wife as an integral member of her husband's kin group.

621 618 [628] [622] [701] [583] [476]

This sort of social integration was indeed exhibited by the Seri kin group of each subdivision. It was, in fact, fostered by the isolation brought about by the inhabitants' reservation of hunting and fishing rights for themselves. Tension existed between certain subdivisions and, since there was no chief, the oldest capable male organized and led the fighting force of the clan. In times of need, the members of the group united to give mutual assistance. The groom-to-be could expect material aid from his fellow clan members in the payment of the bride price. Mutual assistance was given in the fulfillment of puberty ceremony and burial obligations. The men cooperated in their hunting and fishing expeditions. The women of the clan, including the in-married spouses, cooperated in the gathering and sharing of food. Everyone could attend the various fiestas. It is said that in the performance of these collective activities, close harmony generally prevailed.

642 619 578 [648]

BAND INTERNAL AND EXTERNAL RELATIONS

The division of the Seri tribe into bands was likely brought about through internal strife. During the period of band history known to the present-day Seri,[a] however, serious skirmishes seem to have been fought predominantly with non-Seri groups.[a]

Band I

642 621 628 578 [721] [648]

Band I internal relations appear to have been relatively peaceful. The inhabitants of subdivisions 1, 2, 3, 4, and 5 were fishermen as well as hunters and gatherers, whereas the people of subdivision 6 preferred to subsist on gathered food and wild game. Also, the members of Band I robbed cattle and horses, which pursuit brought reprisals from the Mexican ranchers. There was apparently considerable social intercourse among the six subdivisions, even to the extent that hunting rights of one were sometimes granted to inhabitants of a neighboring section.

Trouble developed when some members of Band I speared fish within the domain of Band V. Here also bitter fighting broke out, and any semblance of peaceful co-existence between the two groups was destroyed.

Except for the occurrence of several battles, relations between Bands I and III were peaceful.

Relations with non-Seri groups were not always peaceful. For many years the members of Band I were on friendly terms with the Papago; they often camped together and even intermarried. Due to a misunderstanding,[18] fighting erupted between the two groups and many people were killed in the years which followed.

BAND II

The external relations of Band II were decidedly turbulent. Although their primary base of operations was a coastal area, the people did not use the ocean as a source of food. They preferred beef and horse meat which was easily acquired by stealing animals from ranches. Here again the wrath of the ranchers and the government was incurred.

A small group of Yaqui eventually joined Band II and intermarried with them. The Seri claim that the Yaqui induced the warriors of this band to assault travelers on the road between Hermosillo and Guaymas. Coyote Iguana, who according to Seri tradition captured Lola Casanova, was of this band. This activity soon brought retribution from the government. Later, dissension arose between these Seri and the Yaqui.

The enmity and strife that occurred between Bands II and V were mentioned above.

BAND III

The history of the internal relations of this band on Tiburon Island seems to have been marked by periods of violence. Battles between subdivisions sometimes occurred; however, they were usually short-lived and soon forgotten. A major struggle once occurred when a shaman named *?apetla* "the invincible one" and warriors from subdivision 4 made repeated raids upon the neighboring subdivisions and killed many. Eventually, his enemies overcame their fear and destroyed the killer.

Although the inhabitants of Band III were hunters, gatherers, and fishermen, they began to rob cattle once they became established on the mainland. They too incurred the wrath of ranchers and the government.

BAND IV

Since the members of this band were, by choice, inhabiting an inland area of Tiburon Island, they lived in relative isolation as hunters and gatherers. Their primary contacts were with members of Band III with whom they intermarried.

BAND V

642 These people were apparently hunters, gatherers, and fishermen. It is said that they speared fish from the shore since they did not use balsas. They too apparently raided the ranches. Their warring nature has already been discussed; it resulted in the acquisition of few friends. However, several marriages between members of this band and members of subdivision 2 of Band III are said to have occurred.

BAND VI

The members of Band VI lived on San Esteban Island and were the most primitive of the tribe. They lived in huts made of driftwood and in caves and made extensive use of the balsa. Although they did not have the bow and arrow, they did become expert in the use of the spear. The people depended mainly on a seafood, iguana, and maguey diet.

Perhaps it was due to the confined living space on the small island with the accompanying lack of fresh water that relations between the four subdivisions were precarious and fights broke out frequently. The Seri today stress the fact that the members of this band were impetuous and unpredictable.

Their relations with the other bands were generally good however. Seri from Band III were free to visit San Esteban where they were well treated.

The San Esteban people seldom traveled to the mainland, and, since they spoke no Spanish, it is probable that they made no peaceful contact with non-Seri groups.

COLLAPSE OF THE BAND SYSTEM

Internal strife in the Seri tribe was probably a major factor in the establishment of the band system. External strife was a major factor in its downfall.

Reference has been made to the plundering, killings and rustling of cattle to which certain of the bands were dedicated. The concern of the Sonora government was aroused, and steps were taken to crush the rebellious groups. According to the present-day Seri, military action by army units and rancher outfits against the various bands resulted in the near-destruction of the whole tribe.[11]

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[425]
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[173]

BAND V

It was stated above that this band fought with Band II and then with Band I. Since Band V was likely killing cattle, they also may have been harassed by soldiers. Eventually Band V abandoned its territory near Punta Tepopa and headed south along the coast to a camp near present-day Bahia Kino. From this camp the entire group disappeared and was never seen again by members of the other bands. The Seri of today believe that Band V either traveled inland or was destroyed by a non-Seri force.

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BAND II

These people were rustlers and marauders. Government intervention in the situation was inevitable. The Seri recount the following final encounter between this group and the government forces.

The entire remaining membership of Band II was hiding out in a nearly inaccessible swamp thicket at Bahia Kino. Knowing that an armed force of soldiers and ranchers was searching for them, the people left their camp to seek safety elsewhere. Almost immediately they were attacked by the superior armed force which proceeded to wipe out the whole group. A youth who had avoided capture is said to have reported the affair to the Seri on Tiburon Island. This event may have occurred during the Encinas Wars fought from 1855 to 1865. [115]

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BAND VI

The members of this band on San Esteban Island were little interested in the mainland and did not participate in the raids on man and livestock there. Nevertheless, they were to share in the severe punishment meted out to the bands guilty of multitudinous depredations. [721]

Sometime after the massacre of Band II, a ship arrived at San Esteban, and many of the people were induced to go aboard. The rest of the inhabitants followed the ship to a camp on the eastern side of Tiburon Island where they were to receive gifts. As the people congregated, they were herded into a stone corral. Apparently, some of the San Esteban men were killed at this time. The rest of them, along with the women and children, were taken to Santa Rosa point on the mainland. Here, the Seri say, more of the men were killed. The remaining men were strung together by wire and led away, never to return.

The San Esteban women and children, along with some Tiburon Island women and children (of Band III), were taken in

642 648 727 the vessel to Guaymas. With the aid of a group of Yaqui, some of these women were said to have been permitted to go to Hermosillo and eventually to return to their home on Tiburon. Others of their group are said to have remained near Guaymas. The women who returned to Tiburon reported that the San Esteban women and children were put aboard another ship which sailed southward.

BANDS I, III, AND IV

642 648 72 As opposition from the Papago and government forces increased, the members of Band I were forced to seek refuge on Tiburon Island. The mainland members of Band III (subdivisions 11 and 12) were also forced, especially during the Encinas Wars, to flee to Tiburon. There the combined forces of Bands I, III, and IV sought to cope with the military expeditions sent out through the years to exterminate them. Tiburon Island is an adverse battlefield for the uninitiated; some expeditions were turned back due to lack of potable water or because of failure to make contact with the enemy in the mountainous terrain. Some expeditions did encounter the Seri, however, and many natives were either killed or captured.

642 648 178 [161] [618] Through the years, then, these military encounters, along with smallpox and measles epidemics, were responsible for reducing the Seri tribe to a small remnant. The band and clan systems lost their functional relevance as the people continued to live together for mutual protection. Shortly after the turn of the century, the expeditions and raids had practically ceased.

642 178 611 591 SIGNIFICANCE OF BANDS TODAY

With the dissolution of the band system, the rule of descent shifted from patrilineal to bilateral, and the rule of residence shifted from patrilocal to neolocal.

621 642 178 423 [428] [583] Although the substance of the band system is no longer a reality, the concept of land ownership still remains. A young Seri of today may choose to be associated with either the ?iriting of his father or that of his mother. He is said to inherit part ownership of the area. It is recalled by one informant that in former times ownership of a mountain was especially important. Sometimes ownership of a mountain was included as part payment for a bride. Thus a person might 'own' a mountain in a subdivision other than his own.

231 552 178 A custom exists even today whereby a person names his dog after a mountain or other geographical point located in his subdivision. Although the person may re-use the name, each dog so named must be of the same sex as the first.

so named must be of the same sex as the first. The significance of land ownership needs further investigation.

Many of the Seri still prefer, when possible, to live in their chosen band area. Sometimes a person, when he is approaching death, will ask to be taken to his own i?iriiting, where he can die and be buried in the area of his choice.

NOTES

1. Due to printing limitations, stress on Seri words has been omitted, and several orthographic symbol changes have been made for this paper. The phonetic values of the symbols used are the following: p is voiceless labial stop; t is vl. dental stop; k is vl. velar stop; ? is glottal stop; f is vl. labial flat spirant; w is vl. labial grooved-rounded spirant; s is vl. alveolar spirant; z is vl. alveo-palatal spirant; l is vl. lateral spirant; h is vl. velar spirant; x is vl. back velar spirant; m is labial nasal; n is dental nasal; ng is velar nasal; y is palatal semivowel; i is a high close front vowel; e is a low close front vowel; a is a low open central vowel; o is a mid close back vowel.

2. These data were compiled during field trips to the Seri camps during the years 1956-61, the studies being carried out under the auspices of the Summer Institute of Linguistics. The principal informant was R. Herrera T. whose information was checked with and supplemented by nine of the older members of the tribe. I am indebted to my colleague, David Thomas, who read an earlier draft of this paper and made helpful suggestions.

3. 1) W. J. McGee, "The Seri Indians," *Bureau of American Ethnology, Annual Report*, No. 17, Part 1. Washington, 1898. 2) A. L. Kroeber, "The Seri," *Southwest Museum Papers*, No. 6. Los Angeles, 1931. 3) W. B. Griffen, "Notes on Seri Indian Culture, Sonora, Mexico," *Latin American Monograph Series*, No. 10, Gainesville, 1959.

4. It will be noted that between subdivision 3 and 4 on Fig. 3 there is an unnumbered area, the status of which is uncertain.

5. Kroeber states that McGee's concept of Seri maternal lineages crystallized into totemic clans with matron rule seem a fantasy. In Kroeber's opinion, "The Seri may never have had sibs or clans; but the fact that they appear to lack them now is no positive evidence that they were without them three centuries ago. Shifts of residence, contraction of territory, shrinkage of numbers, amalgamation of distinct bands, may well have obliterated much of such social fabric as they once possessed."

Griffen discusses the nature of the former Seri bands and states, "they may have been patrilineal and exogamous. The criteria . . . that Julian Steward has exposited for the formation of exogamous, patrilineal bands . . . are and presumably would have been met formerly in the Seri habitat." Griffen lists other aspects of this type of band which are also verified to some extent by his data. From reading his material, it is obvious that he suspects the existence of clans at some earlier period. He emphasizes the need for further investigation.

6. G. P. Murdock, *Social Structure*, Macmillan Co., New York, 1949.

7. Marriages were usually contracted within the band.

8. As Kroeber points out, their memory likely covers only the latter part of the period of Spanish contacts.

9. The Seri recall nothing of Seri-Pima contacts and little of Seri-Apache relations.

10. The story is related that one day some Seri entered a cave where they found several Papago jugs filled with seeds. Being hungry, the people ate the seeds and left some arrows as token payment. The Seri say that the Papago apparently believed the arrows were intended as an insult. Fighting broke out soon afterward.

11. The Seri concept of the band annihilations is seen to be in contradiction to McGee's statement (p. 132): "Concordantly with their primary characteristic, the Seri have avoided ethnic and demotic union beyond the narrow limits of their own kindred; and even of these they seem to have cast out parts, annihilating the Guayma and Upanguayma, displacing and nearly destroying the Tepoka, and outlawing individuals and (apparently) small groups."

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

614 Classed with respect to major administration, therefore, the clan may be regarded as an informal *adelphiarchy* (*ἀδελφός* and *ἄρχος*) or *adelphocracy* (*ἀδελφός* and *κρατός*). It has none of the elements of the patriarchy, since male lineage is not recognized, and can not be classed as a matriarchy, since the clanmother is administratively subordinate to her brothers; while the avuncular functions are apparently inchoate and indirect, i. e., exercised only through or in conjunction with the clanmother. In short, the clan is ordinated or regimented in ostensible accordance with physical power, though the real faculty is confused (after the fashion of primitive thinking generally) with mystical faculties, imputed largely on magical grounds but partly on grounds of age-reverence, etc. Now, when two or more clans combine, the basis on 578 which the common chiefship is determined is similar to that determin- 614 ing the clan leadership; at the outset three factors enter, viz, (1) the ●643 seniority of the clans in the accepted tribal mythology (2) the prowess [756] of the respective clan leaders (always weighed in conjunction with the shamanistic potency of their consorts), and (3) the numerical strength of the respective clans; but practically, so far as can be judged from all available information, the choice really reflects physical force, since in case of doubt the strongest and bravest man becomes the eldest by virtue of his strength and bravery, while the strongest clan finds fair ground for claiming seniority in the very fact of its strength. Naturally disputes arise in the adjustment of the several relations; and in the actual analysis in council, the dispute is commonly reduced to a contest between gods and men, i. e., between the claims for mystical and magical potencies on the one hand and the claims of brawn and bone on the other hand, so that strength wins, unless omens or prodigies turn the scale—which happens often enough to keep the subjective and the objective elements in fairly equal balance. Sometimes the contests are quickly settled; again they last for months, during which the tribe struggles under its weight of Cerberus heads; and repeatedly the disputes have ended in the annihilation of clans, or even in the tribal fissions attested by the recorded and traditional history of the Serian family.

643 The chiefship once determined, the leader bends all energies toward maintaining the position by which he is dignified and his clan exalted. He recognizes his responsibility for the welfare of the tribe—not only for success in battle and food-getting, but for stilling storms at sea, protecting the aguajes from the drought-demons, and securing all other benefits, both physical and magical; he must be aggressive yet cautious on the warpath, fleet and enduring in retreat, indomitable in the chase, bold but not reckless on the balsa, and above all panoplied and favored by the shadowy potencies of air and earth and waters; he must be the local and lowly Admirable Crichton, and his never-neglected watchword must be *noblesse oblige*. His practical devices for maintaining prestige are many and diverse; it is commonly the chief who carries the sym-

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

bolic weapon, the counterfeit cartridge, the imitation machete, or other charm against alien power; it is usually he who wears the white man's hat or random garment in lieu of the deer or lion mask of earlier days; and during recent years his most-prized fetish, and one which practically insures the support of his fellows, is a written certificate of his chiefship from Señor Encinas, or, still better, from El Gobernador at Hermosillo. Yet he is a throneless and even homeless potentate, sojourning, like the rest of his fellows, in such jacales as his two or three or four wives may erect, wandering with season and sisterly whim, chased often by rumors of invasion or by fearsome dreams, and restrained by convention even from chiding his own children in his wives' jacales save through the intercession of female relatives. 643 [648]

In 1894 the head chief was reported to be on Tiburon; the putative chief of the rancheria at Costa Rica was the taciturn giant known as El Mudo (plate XIX); while Mashem (or Juan Estorga) was the head of one of the Pelican clans.

ADOPTION

One of the more important factors in demotic development among primitive peoples (probably second only to interclan marriage in extending sympathy and unifying law) is adoption; and special efforts were made to obtain data relating to the subject. Direct inquiries were futile, the responses indicating that the entire subject is foreign to the thought of the tribe; but three sporadic and measurably incongruous examples of quasi adoption are worthy of record. 594 [124]

The most specific case is that of Lieutenant Hardy, who visited Isla Tiburon in 1826, and was fortunate in gaining the confidence of the tribe through successful medical treatment of the wife of the chief. On his second landing he was greeted with many expressions of gratitude, which were especially exuberant on the part of the daughter of the family (always a personage in Seri custom), who insisted on painting his face. He specifies: 597 648

> Not wishing to deny her the indulgence of this innocent frolic, I quietly suffered her to proceed. She mixed up part of a cake of blue color, which resembles ultramarine (and of which I have a specimen), in a small shell; in another, a white color, obtained by ground talc, and in a third was mixed a color obtained from the red flint-stone of the clam which I before stated was to be found on Seal Island, and resembled cinnabar. With the assistance of a pointed stick the tender artist formed perpendicular narrow stripes down my cheeks and nose, at such distances apart as to admit of an equally narrow white line between them. With equal delicacy and skill the tops and bottoms of the white lines were finished off with a white spot. If the cartilage of my nose at the nostrils had been perforated so as to admit a small, round, white bone, five inches in length, tapering off at both ends and rigged something like a cross-jack yard, I might have been mistaken for a native of the island. As soon as the operation was finished, the whole party set up a roar of merry laughter, and called me "Hermano, Capitan Tiburon," being the very limited extent of their knowledge of Spanish.[1] [386] [302]

[1] Travels, p. 286.

3:Davis & Dawson E-5 (1923-1940) 1945
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372 773 it take its two hands, rub them over its head and then rub them together a few times? The Indians noticed this and in this way we were taught by this little fly how to make fire by rubbing a stick back and forth between our two hands."

773 In response to comments about the nocturnal howling of the coyote, Chico told another interesting tribal legend. "A long time ago all Seris were birds or animals. The badger had charge of the saints or gods, which were little images carried in a pouch and hung around his neck by black strings.

[142] [302]

● [643] FIG. 19. CHICO ROMERO
WHO SUCCEEDED OLD JUAN TOMAS AS CHIEF OF SERIS.

Coyote got to quarreling with badger and, watching his chance, grabbed the bag, tore it loose and ran off with it, giving his derisive laugh as he ran, and ever since coyote has been laughing at badger and all others.

[p.266(A)]

1: McGee E-S (1894-1895)1895 NU31 Seri NU31

During the half century of historical silence from 1844 forward, and pending the progress of the desultory researches, the Seri suffered a succession of external shocks more serious in their internal effects than any of those of the three centuries preceding; indeed it is just to say that during this half century the Seri range was curtailed, the Seri customs were modified, and the Seri population was diminished more effectively than during the preceding sesquicentury of fairly definite record. The chief factor in this transformation was an intrepid pioneer, who pushed actual settlement toward the Seri frontier more vigorously than any predecessor—Señor Pascual Encinas, a son of Sonora.[1]

Born near Hermosillo in 1819, Don Pascual was in early maturity at the time of Colonel Andrade's expedition, and was fully conversant with the later history of the Seri. Of adventurous disposition, and holding interests in Bacuachito, he was familiar with the Seri frontier; and in hunting deer and other large game over the vast delta plain of Rio Sonora he had perceived the agricultural possibilities of the region. During the struggle of 1844 he became impressed with the idea that the Seri might be controlled and gradually inducted into useful citizenship through a judicious combination of industrial, educational, and evangelical agencies; and before the end of the year he began the establishment of a rancho (the present Rancho San Francisco de Costa Rica) on the Seri borderland, with the double object of developing new resources and regulating the relations between tribesmen and settlers. Enlisting the aid of a corps of vaqueros, mechanics, and farmers, he excavated a deep well, erected corrals and adobe houses, cleared away the exceptionally luxuriant mesquite forests, fenced fields, and stocked the plains with horses, burros, and cattle. At the same time he sought Seri wanderers and treated them with such kindness and firmness as to gain their confidence; and while most of the tribe held aloof, some attached themselves to the rancho, and a few even were taught to labor, albeit in desultory fashion. In this stage, as for some years afterward, he was materially aided by his contemporary, Kolusio, then in his physical prime and still in good repute among his kinsmen. Meantime he obtained the assignment of two priests, who made it their chief duty still further to placate the tribesmen and their families and to induct them into religious observances and belief; and as the confidence of the Indians increased, he had two boys domiciled in the rancho and educated in the Spanish as well as in the faith, in the hope that they might pass into priesthood and so form a future bond with their kin. One of these neophytes disappeared in the troublous times of a later decade, though tradition indicates that he became a tribal outcast (like Kolusio still later) and slunk away to Pitiquito and Altar, and afterward to California; the other, christened Juan Estorga and

[1] The following paragraphs are condensed from oral recitals by Señor Encinas (a notably straightforward and judicious authority), supplemented and corroborated in all essential details by Señores Andres Noriega, Ygnacio Lozanio, and several other habitués of the Seri borderland, as well as by Kolusio and Mashém, several Papago informants, and various collateral documents.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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nicknamed El Gran Pelado ("The Great Shorn"), survives as unbelief Mashém, long since relapsed into his native savagery, save that he remembers the Spanish, affects a hat, cuts his hair to the neck (whence his nickname), and prefers footgear to the fashion of his fellows.

Industrially, Don Pascual's venture proved successful; the fertile soil, periodically watered from below by the underflow of the semi-annual freshets, yielded incredible crops; reveling in the exceptional floral wealth of the delta and tided over bad seasons by the artificial forage, the stock increased and multiplied beyond precedent; and so the rancho became a flourishing establishment, housing a score or more of families and harboring a hundred or two dependents, in addition to the thousands of half-wild horses and cattle. Meantime, the industrial lines ramifying from the rancho formed a drag net for Seri raiders, practically cutting off forays eastward toward Hermosillo and Horcasitas, and greatly reducing the sallies southeastward toward Guaymas and northeastward toward Bacuachito and Caborca; and Don Pascual began to receive recognition and state and federal concessions as a public benefactor. For a decade the industrial and evangelical influence and the effect of the bold kindness of El Patron extended and became felt throughout the tribe, and most of the families visited the rancho at least occasionally. Yet even the best of them remained averse to labor save in sporadic sports, and indifferent to the religious teaching, save when sweetened by substantial largess; while all but the decrepit and the two carefully restrained neophytes came and went capriciously, and were much given to decamping incontinently by night to return shamefacedly one by one in the course of a week or two, without consistent or adequate excuse for their stampede—indeed the vaqueros habitually classed these nocturnal flights of the Seri and the reasonless stampedes of their stock in the same category. Ostensibly a few of the larger boys and girls and a still smaller number of the adults were helpers about the rancho; actually they were scavengers, consuming the waste of the shambles and the earth-mixed scatterings from the thrashing floors, and saving the rancheros the noisome duty of removing the carcasses of animals dead by disease or accident; and as their indolence increased under the easy régime, they grew into more and more open thievery. By no means deficient in shrewdness and cunning, they adopted numberless devices for imposing on the credulity of the majordomo and other officials of the rancho. When coin-like tokens of stamped copper were used in the transactions of the rancho as equivalents of labor, the Seri ingeniously obtained sheet copper by stealth or barter, systematically counterfeited the tokens, and exchanged them for supplies at the rancho store; it was a favorite trick to surreptitiously break the neck or a leg of a horse, cow, or burro, and report finding the dead or crippled animal, at the same time begging for the carcass; and, whenever opportunity offered, they slyly slaughtered a head of stock, consumed it to the hoofs and horns

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

and larger bones, sucked up the blood stains, and buried the few remains in cactus thickets, impenetrable save by their own hardy limbs and bodies. Nor did any of the tribe except the two restrained neophytes ever really enter the collective life of the patriarchal group headed by Don Pascual; they attended no industrial or social or churchly function save in response to reminder and solicitation; they craved the white man's medicines in slight disorders, but rejected them in extremis; and the dying or dead were spirited away to be inhumed and mourned, according to their wont, in their harsh but beloved motherland.

During this period of mutual toleration the Seri were so deeply influenced by the white contact that, for probably the only time in their history, they voluntarily allowed an alien free entry into their territory; and Don Pascual explored the coast of Bahia Kino, projected a port, and even visited Isla Tiburon twice or thrice. In one of these visits he was ferried over Boca Infierno on a balsa, but, finding himself unable to keep pace with the swift-footed Seri on their hilly pathways, he returned for his saddle mule; halfway across, the poor animal swimming behind the balsa suddenly plunged and struggled, and, on landing, hobbled out on three legs—the fourth having being snapped by a shark. Warned by this incident, Don Pascual abandoned a half-formed plan of stocking the island, and afterward brought up a small vessel from Guaymas in which he carried across a dozen caballeros (including Don Ygnacio Lozania, who had visited the island with the Andrade expedition); and this party examined the southeastern quarter of the island, watering two or three times at Tinaja Anita, and pushing as far westward as Arroyo Carrizal. On this trip he studied the Seri house-building, and was the first to note the large use of turtle-shells and sponges in the process.[1]

About the middle fifties it became apparent that the Seri were dividing into a parasitical portion clustered about the rancho (as their forbears gathered about Populo and Pueblo Seri long before), and a more independent faction clinging to their rugged ranges and gale-swept fishing grounds; and it became evident, too, that the thievery of the dependent faction would soon ruin the rancho if not checked, or at least greatly diminished. Accordingly the passive policy was modified by introducing a more active police service. At first the penalties for theft and misdemeanors were light, and the system promised well—especially as even a slight punishment was equivalent to banishment, the criminal fleeing to Tiburon on his escape or immediately after the crime; yet the experience of a year or two proved that the escaped parasites seldom resumed the hard customs of their tribal life, but generally returned to the borderland and there preyed on the wandering stock from the rancho. Finally, driven to extremity, and supported

[1] Typical Seri jacales, as described by Don Pascual in 1856, were observed on Tiburon by the 1895 expedition, as shown by the photographs reproduced in plates VII, VIII, and IX.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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by the state and federal authorities (themselves confessedly unable successfully to cope with the condition), Don Pascual reluctantly adopted a severer régime. Sending out as messengers several Seri still remaining at the rancho, he convened the leading chiefs and clanmothers of the tribe in a council, and announced that the stock-killing must cease, on pain of a Seri head for each head of stock thereafter slain. The Indians seemingly acquiesced, and separated; but within two days a group of Seri women "milled" a band of horses, caught and threw one in such wise as to break its neck, and immediately sucked its blood, gorged its intestines, and buried its quarters to "ripen", after their former fashion. Thereupon a matron remaining near the rancho was sent to demand the delivery of the perpetrators; and, when she failed to return, the vaqueros were instructed to shoot the first Seri seen on the llano. Within two days more, the tribe were on the warpath for revenge—and the war raged for a decade.

During the early months of the Encinas war Don Pascual's vaqueros sought merely to enforce the barbaric law of a head for a head; but, as they found themselves beset by ambush, assailed and wounded by night, despoiled of favorite animals, and kept constantly in that most nerve-trying state of eternal vigilance, their rancor rose to an intensity nearly equal to the savage passion for blood-vengeance; and thenceforth the Seri were hunted from the plain east of Desierto Encinas precisely as were the stealthy jaguar and sneaking coyote—and the ghastly details were better spared. There were few open battles; commonly the vaqueros rode in groups and guarded against ambuscades, and the Seri were picked off one by one; but once in the early sixties Don Pascual, at the head of some 30 vaqueros, fell into an ambush on the frontier, and several of his horses were killed and some of his men wounded, while 60 or 70 Seri warriors were left on the field. Don Pascual's horse received a slight arrow wound, to which little attention was paid; next morning the gash was swollen and inflamed and the beast too stiff and logy for use; in the afternoon the glands under the jaw were swollen, and there was a purulent discharge from eyes and nostrils. On the second morning the animal was hardly able to move, its head was enormously swollen, there were fetid ulcers about the jaws and throat, and the swelling extended to the legs and abdomen. On the third morning there were suppurating ulcers on various parts of the body, while rags of putrefied flesh and stringy pus hung from the head and neck, and the animal was unapproachable because of the stench; during the day it dropped dead, and even the coyotes and buzzards shrank from the pestilential carcass. This and parallel incidents impressed Don Pascual with the dangers incident to Seri war; but fortunately the fact that he—the leader of the party, the first to fall into the ambush, and the target of most of the arrows—had escaped unscathed impressed still more deeply the surviving savages, and they soon sued for peace. Thenceforth he was revered as a shaman greater than those of the tribe, feared as an invulnerable fighter, and honored as a just lawgiver; and

I: McGee E-5.(1894-1895)1898 NU31 Seri NU31

gradually the condition of mutual tolerance was restored, to rest on a firmer basis than before.

Don Pascual estimates that during the dozen years of strife between his men and the Seri forces about half of the tribe were slain. The horror of the history of this period may be passed over; it may merely be noted as a casual fact that one of the two Mexicans accompanying the 1895 expedition was credited with 17 Seri heads. When he pointed out the site of his last exploit, a mile or two south of Rancho Libertad, and some incredulity was expressed, he immediately galloped to the spot and brought back a silent witness in the form of a bleached Seri skull.[1]

At the close of the war Don Pascual continued the industrial development of the plains lying east of the desert border of Seriland, received new concessions in recognition of his conquest, and developed the ranches of Santa Ana and Libertad; but the evangelical arm of his vigorous mission gradually withered. For a dozen years the Seri looked up to "El Patron" as a quasi ruler, whose approval was requisite for the ratification of chieftainship, and through him ran a slender thread of nominal fealty to the state and the republic; yet few parasites gathered about the rancho. Mashém had gone back to his clan; and when depredations were committed at Bacuachito or elsewhere and the criminals were caught, usually through Don Pascual's instrumentality, they were sometimes haled to Hermosillo for trial, and Kolusio was kept there as the official interpreter of charges and evidence and findings. Sometime during the sixties a few Seri youths were enticed to Pueblo Seri for education, but when they were instructed to cut their hair they slunk dejectedly to their temporary domicile, only to decamp during the ensuing night; again, in 1870, Kolusio was commissioned to bring in a few young people and a matron or two of the tribe, and succeeded in doing so just in time to encounter an epidemic of measles, from which some died, while the others shook the dust of the pueblo from their feet forever; and this last straw, added to his alien residence and his presence at the dreaded trials, broke down the tribal toleration of Kolusio and made him an outlaw forever.

In the later seventies Don Pascual's energies began to wane, while the Seri population was waxing again; and, although the Encinas frontier was protected, raids began to recur toward Bacuachito, on the ranches southwest of Cáborca, and sometimes toward Guaymas; and the hostilities then engendered have never terminated. In the eighties Don Pascual suffered from cataract, gradually losing his sight, and his rule relaxed still further; Rancho Libertad was abandoned, and a condition of armed neutrality supervened at San Francisco de Costa Rica and Santa Ana; and this condition still persists, save as occasionally modified by a crude sort of diplomacy on the part of the Seri: when blood-feud is not burning (and it is usually extinguished by the killing of an alien on the coast or some remote part of the frontier), and when no stock have

[1] The specimen described by Dr Hrdlička, postea, p. 143.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

been slaughtered for some months, an aged woman may be seen skulking about the mesquite clumps in sight of the rancho; if her presence is tolerated for a day or two, she approaches to beg for water and food and to receive the cast-off rags hastily forced on her nakedness by the sensitive señorita; if she deem her welcome not too chill, she erects a jacal a few hundred yards away, and there she is usually found, a morning or two later, to be accompanied by a younger matron with a child or two; and if these are tolerated, the rancheria may grow to half a dozen jacales and half a hundred persons.[1] The band may remain a fortnight or even a month; but in case of serious illness of any of their number, or of threat or punishment for petty peculiarities, or of an unusual storm, or of a brilliant meteor, or of any exceptional occurrence about the rancho, the rancheria is commonly found empty next morning. If the attaches of the rancho are indisposed to tolerate the first envoy, yet feel kindly rather than rancorous, she is merely dogged and stoned away like a depredating domestic animal from another hacienda; if the rancor of past encounters remains, the mercy accorded her is precisely that shown the predatory coyote or other feral animal from the fastnesses of the sierras—and the tribe take warning and doubtless rejoice that their loss is no greater.

Any recital of the common history of the peculiarly savage Seri and the whites necessarily conveys an exaggerated notion of intimacy and mutual influence, since it emphasizes the few positive interrelations scattered along the decades of neglected nonrelation; and this is true of the Encinas régime as of earlier centuries. The great fact is that throughout their recorded history the Seri have touched civilization so slightly and so seldom that the effect of each contact was largely lost before the next supervened; and the unprecedentedly intimate contact of the Encinas régime, especially during the initial period of abnormal toleration, serves less to indicate relationship in characteristics and sympathies than to measure the breadth of the chasm between the Seri and the Mexican—a chasm not exceeded, and probably not equaled, elsewhere in America. About the middle fifties, probably every Seri above infancy and below decrepitude had seen Don Pascual and some other habitués of the rancho; they yielded to the seductions of indolent scavengering apparently more numerously than ever before; they substituted cast-off rags and barter-bought manta (plain cotton cloth) for the products of their own primitive weaving; they ate cooked food when it fell in their way; they half-heartedly adopted metal cutting implements, and sought or stole nails and hoop-iron for arrowpoints; some of them acquired a smattering of Spanish, and many of them solicited and sported Spanish names, just as they begged and flaunted tawdry handkerchiefs and beads; and they generally enjoyed mildly the ecclesiastical fiestas, and took kindly to the cross as a symbol of peace and plenty and perhaps of deeper import. Yet

[1] Typical single jacal and the native manhood gathered at Costa Rico in 1895 are shown from photographs in plates v and xx.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

even during this halcyon term no Seri save Kolusio and the Altar outlaw ever learned to live in a house; none but these and Mashém were huts habitually; and, despite the fact that they often witnessed and sometimes playfully or perforce participated in the processes, no Seri ever really encompassed the idea of house-building or even of making adobe. Though surrounded by horses when near the rancho, they never learned to ride nor to use the animals otherwise than for immediate slaughter and consumption; though in frequent sight of skilful ropers, they never fully grasped the idea of the riata, preferring to seize their prey with hands and teeth; though familiar with the agricultural operations of the rancho, they never turned a sod nor planted a seed on their own account; though in frequent sight of cooking, they seldom began and never finished the process with their own food; though acquainted with firearms, they continued to regard them as thaumaturgic devices, and chose the bow and arrow for actual use; though submitting to apparel on the frontier, they commonly cast away the incumbrances on returning to their lairs; and no Mexican or other Caucasian ever saw within their esoteric life—their names remained unrevealed, their hair remained sacred, their mourning for the dead was unheard save at a distance, and no alien, even unto today, has ever seen the birth of their babes, the christening of their children, the burial of their dead, or the ceremonies of their shrines. The Seri and the whites were, indeed, mutually tolerant; but, so far as concerns mutual sympathy, the toleration was almost precisely on a par with that between the ranchero and the vulture-flock that scavengers his corrals—and when depredation began the toleration was of a piece with that between householders and their unwillingly domiciled rodents. It is not too much to say that the interracial mistrust and hatred of the Western Hemisphere culminates on the borders of Seriland; though the antipathy is commonly regarded by the alien tribesmen and the Mexicans as other than racial, since the Seri are felt to be hardly human—a feeling fully shared by the Seri, who undoubtedly deem themselves more closely akin to their deified bestial tutelaries than to the hated humans haunting their borders.

Even during the Encinas régime the Seri came in occasional contact with aliens on other parts of the frontier: on Hacienda Seris, the somewhat remoter borderland outpost on the north, the relations between the landholders and the Seri were analogous to those on the Encinas plains, though less acute in the ratio of relative distance. Occasionally small parties of warriors journeyed to Guaymas[1] on balsas or on foot to barter pelican-skin robes for Caucasian commodities, chiefly aguardiente and manta; still more rarely similar pilgrimages were made to the outskirts of Hermosillo; a few marauding raids were made to the ranchos lying near Cieneguilla and Caborca; and a num-

[1] The accompanying plate XII is reproduced from a photograph of a small group of Seri traders taken near Guaymas probably during the eighties. It was kindly furnished by F. A. Ober, who purchased it in Guaymas.

1: McGee E 5 (1894-1895)1898 NU31 Seri NU31

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ber of ill-advised prospecting parties, coming by land or water, paid the penalty of foolhardiness. Writing about 1864, Historian Velasco resorted to the Seri to say:

This handful of bandits, assassins, thieves, brutes [bribones], infinitely vile and cowardly, on February 23 last, on the Guaymas road, at the place called Huerfano, assassinated 4 unhappy women, including a girl of 9 years, and 7 men who were conducting them in a cart toward that port.

He bitterly denounced the apparent apathy of the state and federal authorities, adding:

When it is read in history fifty years hence that a handful of murderous Seris, certainly not more than 80 of the tribe able to bear arms, was able to dominate in the midst of their crimes with unexampled audacity on account of the debility of the government and the inhabitants, it will be regarded as a romance or a fable; for it seems impossible that in the nineteenth century such a condition of things as did exist to degrade the reason, the morality, and the dignity of civilized man.

Yet a final note, apparently added in press, recorded that—

In consequence of the last incident of the Seris, the prefect of Guaymas, Don Cayetano Navarro, took the field, returning with 12 women and 16 children prisoners; also 2 striplings and a vieillard. He slew 9 among those who had no leader. This was on Isla Tiburon. The Indians fled thence, and are supposed to be at Tepoca.[1]

These may be considered as characteristic skirmishes attending the Encinas war. Other episodes followed, including the outbreaks of 1879, noted in part by M Pinart. Bacuachito suffered in various locally important events that will never be written: when Don Jesus Omada, a water guide to the expedition of 1895, was asked about the Seri at Bacuachito, he answered with cumulative vehemence, "They killed my father. They killed my brother! They killed my brother's wife!! They have killed half my friends!!!" As he spoke he was feverishly baring his breast; displaying a frightful scar over the clavicle, he exclaimed, "There struck a Seri arrow"; then he stripped his arm with a single sweep to reveal a ragged cicatrix extending nearly from shoulder to wrist, and added in a tone tremulous with pent bitterness, "The Seri have teeth!"

In the course of the half century from 1844 onward, the population of Sonora increased materially, and carried more than a proportionate increase in the development of agricultural and mineral resources; and, especially under the beneficent Diaz régime, the state passed from the condition of a remote frontier province into that of a well-governed commonwealth. Naturally this progress carried the Caucasian element, including that of blended blood, farther and farther away from the nonprogressive Seri; and thereby the horror and detestation awakened by the very utterance of the name of the lowly tribe were intensified beyond description or ready understanding. The traditions of arrow poisoning were kept alive, and, doubtless, growing; the recitals of carrion eating were repeated, and possibly—just possibly—magnified beyond the reality; the accounts of offense and defense by nails and

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[1] Boletin de la Sociedad Mexicana de Geografia y Estadistica, tome 11, 1862, pp. 118-125.

I: McGee E-5 (1894-1895)1895 NU31 Seri NU31

forth (such as that of Jesus Umada) passed from mouth to mouth until—incredible as it may seem—the more timid Sonorenses stood in greater dread of these natural weapons of the Seri than of their brutal clubs and swift-thrown missiles, or even of their poisoned arrows; while traditions of cannibalism came up and received such general credence that the current items of Seri outrages, both in local gossip and in the Mexican and American press, customarily recounted savage butcheries ending with gruesome feastings on the raw or slightly cooked flesh of the victims. The shuddering antipathy felt for the perpetrators of these inhumanities even a thousand miles away increased toward their frontier, as light toward its source; the dread was deepened by the failure of punitive expeditions sent out again and again only to be balked by waterless sand-wastes or wrecking tidebips; and in 1894 and 1895, at least, the horror of the Seri was a daily and nightly incubus on half the citizens of Hermosillo and the tributary pueblos and ranchos, and a thorn in the flesh of the state officials.

The external history of the Seri since the spring of 1894 is fairly known, both through the direct researches and through press reports, and would seem to be typical. This era may be assumed to open with the arrival on Tiburon's shores of the sloop *Examiner*, carrying two San Francisco newspaper writers, Holdnam and Logan, with two assistants, Clark and Cowell. The to-have-been-expected happened duly, save that two of the party escaped, and on reaching Guaymas advertised the disaster through correspondence and the press. Several of the accounts indicated that the two victims were not only slain but eaten, and various plans were laid in California, Arizona, and Sonora for the recovery of the bones[1]—as if, forsooth, the omnivorous and strong-toothed Seri spared anything save scattered teeth and split sections of the longer shafts of skeletons the size of those of *Homo sapiens*. While in Guaymas the two survivors set up claims for indemnity, which initiated international correspondence and inquiry into the details of the affair. These details are indicated, in sufficient fulness for present purposes, in a formal communication incorporated in the international correspondence, viz:

SMITHSONIAN INSTITUTION,
BUREAU OF AMERICAN ETHNOLOGY,
Washington, December 14, 1894.

SIR: Early in November I visited the Seri tribe of Indians, inhabiting Tiburon island in the Gulf of California and an area of several thousand square miles of the adjacent mainland in Sonora, Mexico. The visit was for the purpose of making collections under your authority as Secretary of the Smithsonian Institution; but I availed myself of the opportunity for obtaining additional information relating to the customs, habits, and history of the tribe. In addition to my own party I was accompanied by Señor Pascual Encinas, a prominent citizen of Hermosillo, and

[1] A number of Californians and Arizonians, especially M. M. Rice, of Phoenix, intimated a strong desire to join the 1895 expedition of the Bureau of American Ethnology for the express purpose of personally ascertaining the fate and seeking the remains of Holdnam, who was extensively known in southern California and southwestern Arizona.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

648 owner of several ranches adjacent to, and one within, the territory claimed by the
[115] Seri Indians; also by Señor A. Alvemar-Leon of Hermosillo, a young Mexican gentleman educated in the United States. For Señor Encinas the Seri Indians have the highest regard, and his kindly motive in accompanying the party was to facilitate friendly intercourse with the Indians; Señor Alvemar-Leon acted as Spanish-English interpreter, and one of the tribe who speaks Spanish [Moshém] acted as the Seri interpreter.

One of the subjects of inquiry of the Indians related to the alleged killing of two Americans by the Seri Indians on Tiburon island during last spring at a date not definitely known either to the Indians or to myself. At first the Indians were indisposed to convey information on the subject, but after receiving presents from
[123] Señor Encinas and myself, and friendly assurances from the former, the interpreter for the tribe confessed the crime and detailed the circumstances, denying, however, that any of the Indians present at the place of conference (Rancho de San Francisco de Costa Rica, 17 leagues west-southwest of Hermosillo and near the coast) participated.

According to the first account given through the Indian interpreter, the Indians on the island saw a small vessel approach the shores of the island, and saw four men land therefrom in a small boat. The spokesman among the strangers made inquiry, chiefly by signs, as to whether game was abundant in the interior of the island, and was by signs answered in the affirmative by the chief of the tribe, who displayed a letter of authority from the state officials at Hermosillo. Then the strangers divided, two remaining on the shore by the small boat, while the spokesman and another, accompanied by several Indians, started toward the interior of the island. When they were some distance away—the account continues—some of the Indians remaining on shore indicated by signs a desire to borrow the rifle of one of the two men on the beach, and after some parley the rifle was turned over to them; then the Indians desired also to borrow the small boat in which the party of white men had landed, and after one of the two men remaining on the shore was put aboard the vessel, this, too, was placed in the hands of the Indians. Thereupon several of the Indians entered the small boat, carrying the white man's rifle, and rowed around a headland a short distance away. Passing this point they landed and a part of them ran quickly into the interior in such direction as to intercept the course of the white men. There they lay in wait until the strangers appeared, when they shot the spokesman, killing him almost instantly. On this the second white man cried out for help, whereupon he too was shot and wounded, and then (according to the first account) ran away and concealed himself in the bushes and was seen no more. The Indians who had borrowed the boat then went back to the shore, and reentered the boat with the intention of returning and capturing the fine vessel of the strangers; but as they approached the vessel, being at the time quite near the shore, the man on board arose suddenly with a gun pointed toward them and shouted, whereupon they dropped the borrowed gun and, leaping from the boat, ran away among the mesquite bushes, all escaping unhurt. The white man on the beach then, as the account ran, leaped into the boat, and, recovering his gun, rowed to the vessel and got aboard, when the two men at once made sail and escaped down the bay.

124 The foregoing account was given to Señor Encinas alone by the Indians through
648 their interpreter, and was afterward conveyed to me through Señor Alvemar-Leon. Both of us recognized the incongruity with the character of the Seri Indians of that part of the narrative relating to the wounding and escape of the second man, and Señors Encinas and Leon and myself sought to impress the improbability of the account on the interpreter. Subsequently the Indians, through their interpreter, conveyed to Señor Encinas a modification of the account (after adhering to the first version for twenty-four hours), which agreed in all essential respects with the first, excepting the supplementary statement that some of the Indians (but neither the party who accompanied the white men nor those who followed in the boat) ran after the wounded man, caught him, shot him again—whereupon he again cried out—and

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them killed him with stones. This modified account, also, Señor Encinas duly conveyed to me. 124

Still later, in collecting linguistic material through the Seri interpreter with the assistance of Señor Alvomar-Leon, I recurred to the subject incidentally (or at least ostensibly so) on two or three occasions, partly with the view of verifying or disproving the current report that the men were eaten by the Indians; and since the first distrust on the part of the interpreter and the companions (by whom he was commonly surrounded) had worn off, the questions were answered freely and with apparent truth. In brief, the information gained in this way was a repetition in general terms of the statement of the killing of both men; but the responses indicated (1) that the Indians are not cannibals, (2) that they do not eat any portion or portions of the body of an enemy slain in war, (3) that they do not eat human flesh in a sacrificial way, and (4), specifically, that they did not eat the flesh of the two white men killed last spring. I am disposed to give credence to all of these statements. 648 [266]

Señor Encinas informed me that for a long time after the reputed killing of the two Americans on the island the Seri were exceptionally shy and were seldom seen on the mainland; that the first representatives of the tribe to appear were one or two old women who came to his rancho with much trepidation; that these representatives being not ill-treated, a man appeared, who was also well treated, and that still later other members of the tribe appeared, though it was only a few days before our visit that any considerable body of the Seri Indians showed themselves at their favorite mainland haunt on his rancho. It was his first communication with the Indians since the killing, and, both he and they agreed, the first confession of the crime outside of their own tribe. 648

While in Sonora various conflicting accounts of the affair were given me. One, to which I was disposed to attach credence by reason of the character of my informant and his explanation of the circumstances under which the information was gained, 115 124 was given me (just before the visit referred to above) by ex-Consul Furber, of Guaymas. This account corresponds in all essential details with that conveyed to my party by the Indians, except that, according to Mr Furber' account, the survivors were altogether unarmed after the borrowing of the rifle by the Indians, and that when the man in the boat arose suddenly and shouted he pointed at the Indians not a gun but a stick, in the hope of deceiving them thereby, as he was fortunate enough to do. 648

It may be added that the Seri Indians are at the same time the most primitive and the most bloodthirsty and treacherous of the Indians of North America, so far as my knowledge extends; also that their character is well known throughout Sonora, and indeed generally throughout Mexico, Arizona, and the southern part of California. I was assured by the acting governor of Sonora and by the prefect of Hermosillo that it would be little short of suicide for even a Mexican official to visit these Indians or land on their island without an armed guard. Through conference with the Indians, also, I learned that any white man, Mexican, or Indian of another tribe coming in contact with them is killed without the slightest compunction, unless they are restrained by fear. Accordingly I am satisfied that the character of the Seri Indians is quite as bad as the unsavory reputation they have acquired throughout the Southwest. 181 648

It should be observed that while the Indians were unable to give the names of the men killed, their description of men and vessel agreed exactly with those of the newspaper correspondent Robinson and his companion, and with the sloop *Kranzer*; and Mr Furber' information was obtained direct from the survivors of the expedition of which Mr Robinson had charge. There can thus be no doubt that it was Mr Robinson and his companion who were killed by these Indians, and whose killing was confessed by them, as set forth above. 124 648

With great respect, your obedient servant,

W J McGee,
Ethnologist in charge.

Honorable S. P. Langley,
Secretary of the Smithsonian Institution.

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On first learning of the incident, months before the diplomatic correspondence began, the state and federal authorities promptly adopted vigorous punitive measures. A vessel carrying a force of federal troops was dispatched from Guaymas and a body of state troops were sent from Hermosillo with instructions to meet on the coast and capture the criminals at any cost, even to the extermination of the tribe if resistance was offered. But like so many others, the expedition failed; the horses of the land party were stalled in the sands and burrow-riddled plains, the vessel was harassed by storms and tidal currents, and the landing boats were swamped by the surf, while the Indians merely fled at sight of the invaders toward inaccessible lairs or remote parts of their territory; and when the water was gone and men and animals were at point of famishing, the forces retired without so much as seeing a single Seri.

During the ensuing autumn the tribe, having quenched their blood-feud in alien blood, turned toward peace, and sent a matron of the Turtle clan, known as Juana Maria, to Costa Rica—i. e., Rancho de San Francisco de Costa Rica—where she was gradually followed by younger matrons and children, then by youths, and finally by warriors (after the fashion of Seri diplomacy) to the aggregate number of about sixty. Here they were found by the first expedition of the Bureau of American Ethnology, in November, 1894; and here, under the still strong influence of the venerable Don Pascual, supplemented by small gifts and persistent pressure, they gradually "gave their language", submitted to extensive photographing, confessed specifically to the Robinson killing, and yielded up nearly the whole of their portable possessions in the way of domestic implements and utensils, face-painting material, pelican-skin robes, snake-skin necklaces, etc.

With the return of the Bureau party to Hermosillo the Indians became restive and soon withdrew beyond the desert. In the course of the ensuing winter a group returned to the neighborhood of Costa Rica, where, by aid of strategy, seven warriors (including some of those seen at the rancho in the preceding November) with the families of four, were arrested, taken to Hermosillo, tried, and, according to oral accounts, banished. Irritated by this action, and connecting with it the visit of Don Pascual and the strangers desiring their language and sacred things, the clans resumed the warpath, displaying special animosity toward the residents of Costa Rica. There were a few minor skirmishes; then, at the instance of the state officials, a number of Papago Indians, who are feared by the Seri beyond all other enemies, were domiciled at the rancho, where their mere presence proved a sufficient protection. Meantime, according to apparently trustworthy press accounts, two small exploring parties entered Seriland; the first consisted of seven prospectors, who kept well together until about to leave the territory, when one of their number fell behind—and his companions saw him no more, though they carefully retraced their trail beyond the

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point at which he had stopped; the other was a German naturalist-prospector with two mozos (servant-companions), purporting to hail from Chihuahua, who started across the delta-plain of Rio Bacuache and Desierto Encinas with saddle animals, and never reappeared. 648

Then came the second expedition of the Bureau of American Ethnology, to which several Papago domiciled at Costa Rica were attached as guards. While the party were at the rancho the day before the first entrada into Seriland via Barranca Salina, a party of vaqueros from Rancho Santa Ana tended a herd of stock to the barranca for water; one of the animals strayed behind a dune, and the vaqueros, following its trail, came on a small band of Seri already devouring the entrails, and attacked them so vigorously that they escaped only by outrunning the horses, leaving behind all their unattached possessions, including a bow and quiver of arrows and an ancient and nonusable army rifle. This incident, albeit typical, was untimely, and doubtless aided in rendering the Indians too wild to permit communication with the aliens during the ensuing weeks spent in their territory. 123 648

After the withdrawal of this expedition the Seri resumed their range over the borderland plain, with the evident intention of avenging the insult of the invasion. There were a number of skirmishes, in which some of the Papago guards of the 1895 expedition were wounded and had horses killed under them, though they did customary execution on the worse-armed Seri; and extensively published press items indicate that, toward the end of January, 1896, a party of five gold prospectors landed on Tiburon, whence one escaped. 648 721

A well-attested episode ensued toward the end of 1896: Captain George Porter and Sailor John Johnson spent the later part of the summer in cruising the coasts of the Gulf, collecting shells, feathers, and other curios in the small sloop *World*. About the end of October they apparently anchored in Rada Ballena; and a day or two later Captain Martin Mendez, of Guaymas, in charge of the schooner *Otila*, being driven up the gulf and into Bahia Kunkaak by storms, came on a horde of Seri looting Porter's vessel. The episode received publicity on Mendez's return to Guaymas; United States Consular Agent Crocker instituted inquiries, and Governor Corral sent a force to Costa Rica, where, after some delay, a parley was held with a strong band of Seri under the chiefship of "a seven-foot warrior named El Mudo (The Mute), . . . so called for his reticence of speech."[1] The testimony obtained at the parley and from Captain Mendez indicates that Porter and Johnson landed, or at least approached the shore, probably in a small boat; that they were met by a shower of arrows, under which Johnson immediately fell, while Porter defended himself with a shot- 648

[1] San Francisco Chronicle, October 10, 1896, p. 3. The details of the episode, including the correspondence of Consular Agent Crocker, were printed in the newspapers of San Diego (the place of residence of Porter and Johnson), as well as in those of San Francisco and other cities; and there was considerable correspondence concerning the matter with the State Department at Washington. Some reports account that the bodies of Porter and Johnson were cast to fragments and devoured, but these details naturally lack confirmation. El Mudo's portrait appears on plate XIX. [113]

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● 648 gun, slaying five of the Seri before he was himself transfixed; that the vessel was then looted, and that Mendez and his crew were prevented from landing and apparently driven off by the Seri force. In the course of the parley the state officials "demanded the surrender of the ring-leaders in the massacre", with the alternative of "regarding the whole tribe as guilty and punishing them accordingly"; but El Mudo, evidently holding the invasion of the island as the initial transgression and deeming the loss of the tribe under Porter's marksmanship as more than commensurate with the Caucasian loss, peremptorily ended the conference and returned to the island. Vigorous efforts were made to pursue the tribesmen beyond their practically impassable frontier, with the usual product of ruined horses and famished riders. Then the episode died away in an armed neutrality strained somewhat beyond the normal. Meantime the Papago guards remained at Costa Rica. "They are continuously on the lookout for these Seris, and once or twice have killed a stray one or two."[1]

Both before and after the Porter-Johnson episode schemes were devised by various parties, chiefly Californians, for obtaining concessions covering Tiburon and its resources, most of these schemes involving plans for the extermination of the Seri; and press accounts indicate that a concession covering the islands of the gulf above the latitude of 29° (i. e., including about half of Isla Tiburon) was granted to an American company of much distinction. It would appear from numerous news items that representatives of the company sought to land on Tiburon, where they were first cajoled with offerings of food, afterward found to be poisonous, and later driven off by an enlarged force of naked archers. A recent publication bearing some official sanction announces that "Mr. W. J. Lyons, of Hermosillo, Sonora, has secured a concession for the exploration of the island and in November of this year will fit out an expedition for that purpose."[2] The various movements are significant as indices of current opinion and official policy with respect to the tribe.

On the whole, the later episodes are natural sequels of the eventful and striking earlier history of the Seri; and they can only be interpreted as pointing to early extinction of one of the most strongly marked and distinctive of aboriginal tribes.

[113]

[1] The quotations are from the account of T. H. Risdon, of San Diego, prepared on his return from a visit to Costa Rica.

[2] El Estado de Sonora, Mexico. Sus Industrias, Comercio, Minería y Manufacturas. Obra Publicada bajo los Auspicios del Gobierno del Estado. Obra Ilustrada, Octubre de 1897. By J. R. Southworth, Hogabee, p. 73.

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101 Upan Guaimas—1763; [Nentwig?], Rudo Ensayo, p. 238.
Upanguaima—1864; Orozco y Berra, Geografía de las Lenguas, p. 42.
M75 Upanguaimas—1879; Malte-Brun, Congrès International des Américanistes, tome ii, p. 38.
Upanguayma—Synthetic form.
Upanguaymas—1882; Bancroft, Works (Native Races, vol. i, p. 605).
Upan-Guaymas—1890; Bandelier, Investigations in the Southwest, p. 75.

Possibly the name *Cocomaques* (1804, Orozco y Berra, Geografía de las Lenguas, p. 42), or *Cocomaques* (1727, Rivera, Diario y Derrotero, i. 514–1519) should be introduced among the synonyms of the Seri, but in the absence of definite information it may perhaps better be left unassigned.[1]

101 Of the four tribes assigned to the stock, the Upanguayma have been extinct probably for more than a century; the Guayma may survive in
197 a few representatives probably of mixed blood and adopted language; the Tepoka have never received systematic investigation, but appear to survive in limited numbers on the eastern coast of Gulf of California about the embouchure of the Rio Ignacio sand-wash; while the Seri alone continue to form a prominent factor in Sonoran thought.

External Relations

131 The most conspicuous characteristic of the Seri tribe as a whole is
648 isolation. The geographic position and physical features of their habitat favor, and indeed measurably compel, isolation: their little principality is protected on one side by stormy seas and on the other by still more forbidding deserts; their home is too hard and poor to tempt conquest, and their possessions too meager to invite spoliation; hence, under customary conditions, they never see neighbors save in chance encounters on their frontier or in their own predatory forays—and in either case the encounters are commonly inimical. The natural isola-
[186] tion of the habitat is reflected in modes of life and habits of thought; and during the ages the physical isolation has come to be reflected in a bitter and implacable hereditary enmity toward aliens—an enmity apparently forming the strongest motive in their life and thought, and indeed grown into a persistent instinct. Thus the Seri stand alone in every respect; they are isolated in habitat and still more intensely isolated in habits of thought and life from all contemporaries; they far out-Ishmael the Ishmael of old on Araby's deserts.

648 The isolation of the Seri in thought and feeling is well illustrated by the relations with their nearest neighbors (activitally as well as geographically), the Papago Indians. The Papago are much esteemed
[115] in Sonora as fearless fighters, always ready to join or even to lead a forlorn hope; yet when the expedition of 1895 was projected it was found no easy matter to induce the picked Papago guards quartered at Costa Rica to enter Seriland. They were ready, indeed mildly eager, for fray, provided it were on the frontier; but they held back in dread

[1] These names seem rather to be Yaqui. cf. Cocopa, Cocomicopa, Sobaipa, etc.

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from actual invasion of the territory of the hereditary enemy. Like representatives of the faith-dominated culture grades generally, they spoke weightily of inherent rights descended from the ancient time, even back unto the creation; they repeatedly declared the right of the Seri to protect their territory because it was *theirs;* yet their converse but served to show the depth and persistence of their abhorrence of the Seri and of everything pertaining to them. And when gales arose to delay the work, when the frail craft of the party was storm buffeted and lost for days, when they were seized with the strange sickness of the sea, when the salt and sugar mysteriously disappeared (having been secretly sacrificed to diminish suffering from thirst), when all of the earth-powers and air-powers seemed to be arrayed against the expedition, they stoically held it to be but just punishment for a sacrilegious infraction of the ancient law—and their steady adherence to duty, despite tradition and physical difficulty and constant danger, revealed a real heroism. The strain was no slight one; it may have been felt more by the stay-at-homes than by the men in action; certainly a sister of one of the party (Anton Castillo) and spouse of a supporter at the supply station broke under the strain, and died of her terrors—and the return of the party was, to the Papago women and oldsters at least, as the rising of the dead. The dread inspired by the personal presence of the alien is stronger still; when the Seri rancherías at Costa Rica was visited in 1894 it was found needful to keep the Papago interpreter and others of the tribe at a distance, since the mere sight of the inimical tribesmen threw even the women and children into watchful irritation, like that of range-bred horses at scent of bear or timber-wolf, or that of oft-harried cats and swine at sight of passing dog—they instinctively huddled into circles facing outward, and ceased to think connectedly under the stress of nervous tension. The irritation was so far mutual that it was days before the usually placid interpreter, Jose Lewis, recovered his normal spirits; while the 1895 interpreter, Hugh Norris, was actually rendered ill by the mere entrance into Seriland at Pozo Escalante. And the antipathy between Seri and Yaqui is nearly as great as that between the common-boundary neighbors. 648 [123] [115]

The instinctive antagonism, or race antipathy, between the Seri and the widely distinct Caucasian is less trenchant and intense than the local antipathy; yet even between Seri and Caucasian there would seem to be hardly a germ of sympathy. In the days of his prime, the Tiburon islanders flocked around Don Pascual, first as a provider of easy provender and later as a superpotent shaman whose wrath bore destruction; yet their allegiance was never more than that of the cowed and beaten brute to a hated trainer, and his cunning never brought a smile to their stolid features—indeed, his passage among their jacales was met with the same stolid yet sinister indifference accorded the solitary visitor to a menagerie of caged carnivores. And no sooner did his vision become

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impaired than their fear-born veneration evaporated, and their native antipathy reappeared in original virulence. The 1894 party was fortunate in successfully treating a sick wife of sub-chief Mashém, and subsequently spent days in the rancheria, distributing gifts to old and young in a manner unprecedented in their experience and making liberal exchanges for such small possessions as they wished to spare; yet, with a single possible exception, they succeeded in bringing no more human expression to any Seri face or eye than curiosity, avidity for food, studied indifference, and shrouded or snarling disgust. Among themselves they were fairly cheerful, and the families were unobtrusively affectionate; yet the cheerfulness was always chilled and often banished by the approach of an alien. The Sonorenses generally hold the Seri in indescribably deep dread as uncanny and savage monsters lying beyond the human pale; while the reciprocal feeling on the part of the Seri toward Caucasians, and still more toward Indian aliens, seems akin to that of the average man toward the rattlesnake, which he flees or slays without pause for thought—it seems nothing less than intuitive and involuntary loathing. The Seri antipathy is at once deepened into an obsession and crystallized into a cult; the highest virtue in their calendar is the shedding of alien blood; and their normal impulse on meeting an alien is to kill unless deterred by fear, to flee if the way is clear, and to fawn treacherously for better opportunity if neither natural course lies open.

Concordantly with their primary characteristic, the Seri have avoided ethnic and demotic union beyond the narrow limits of their own kindred; and even of these they seem to have cast out parts, annihilating the Guayma and Upanguayma, displacing and nearly destroying the Tepoka, and outlawing individuals and (apparently) small groups. The earlier chronicles indicate that the Jesuit missionaries, and after them the Franciscan friars and the secular officials, sought to scatter the tribe by both cajolery and coercion, and endeavored to divide families by restraint of women and children and by banishment of wives; there are loose traditions, too, of the capture and enslavement of Indian and Caucasian women in Seriland; yet the great fact remains that not a single mixed blood Seri is known to exist, and that no more than two of the blood (Kolusio and perhaps one other) now live voluntarily beyond the territorial and consanguineal confines of the tribe. The romantic story of a white slave and ancestress of a Seri clan, sometimes diffused through pernicious reportorial activity, is without shadow of proof or probability; the tradition of the captivity of a Papago belle was corroborated, albeit indefinitely, by Mashém's naive admission that an alien women was once kept as a slave to a childless death due to her ineptitude for long wanderings; and there is not a single known fact inlicating even so much as miscibility of the Seri blood with that of other varieties of the genus *Homo*. Naturally the presumption of miscibility holds in the absence of direct evidence; yet the presumption

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is at least partially countervailed by conspicuous biotic characters, such as color, stature, etc., so distinctive as almost to seem specific: the Seri are distinctively dark-skinned, their extreme color-range (so far as known) being less than their nearest approach to any neighboring tribe; they are nearly as distinctive in stature, the difference between their tallest and shortest normal adults being apparently less than that between their shortest and the tallest of the neighboring Papago—though they are not so far from the more variable and often tall Yaqui; and they appear to be no less distinctive in such physiologic processes as those connected with their extraordinary food habits. Still more distinctive are the demotic characters connected with their habits of life and modes of thought; and when the [illegible] of biotic and demotic characters is taken, the Seri are found to be set apart from all neighboring Sonoran tribes by differences much more striking than the individual range among themselves.[1]

It is especially noteworthy that the Seri have held aloof from that communality of the deserts which has brought so many tribes into union with each other and with their animal and vegetal neighbors through common strife against the common enemies of sun and sand—the communality expressed in the distribution of vital colonies over arid plains, in the toleration and domestication of animals, in the development of agriculture, and eventually in the shaping of a comprehensive solidarity, with the intelligence of the highest organism as the controlling factor.[2] Dwelling on a singularly prolific shore, the Seri never learned the hard lesson of desert solidarity, but looked on the land merely as a place of lodgment or concealment, or as a source of luxuries such as cactus tunas, mesquite beans, and tasty game; they never formed the first idea of planting or cultivating, and their only notion of harvesting and storing against time of need was the intolerably filthy one of nature's simplest teaching; they apparently never grasped the concept of cooperation with animals, and came to tolerate the parasitical coyote only in that its persistence was greater than their own, and in so far as it was stealthy enough to hide its travail and the suckling of its young against their ravening maws; and they apparently never rose to real recognition of their own kind in alien forms, but set their hands against agricultural and sacerdotal humans as peculiarly potent and hence especially obnoxious animals. Naturally their racial intolerance was seed of battle and blood-feud; and they would doubtless have melted away under the general antagonism but for the natural barriers and unlimited food of their restricted domain.

At present, as for the later and best-known decades of their history,

[1] It seems probable that the Seri were nearer in tribes of southern Baja California than to those of Sonora at the time of the earliest explorations, yet that the distinction was sufficiently strong to warrant the extension of the proposition to these tribes also.

[2] "The Beginning of Agriculture," American Anthropologist, vol. viii, 1895, p. 350. "The Beginning of Zoöculture," ibid., vol. x, 1897, p. 295 et seq.

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the Seri are absolutely without extratribal affiliations, or even sympathy. When the chronicles of three centuries are scanned in the light of recent knowledge, it seems practically certain that they have been equally isolated since the dawn of Caucasian history in Mexico; and both recent data and the chronicles combine with the principles of demotic development to indicate that the Seri have stood alone from the beginning of their tribal career, and have never foregathered with the neighboring tribes of distinct blood, distinct arts and industries, distinct organization, distinct language, and distinct thought and feeling.

The present isolation of the Seri throws light on their early history and reveals the extent of the misapprehension of the pioneer missionaries, who half deluded themselves and wholly deluded distant readers into the notion that the Seri were really proselyted and actually collected in the mission adjuncts of military posts established to protect settlers against forays of the tribe; for, as illumined by later and fuller knowledge of the tribal characteristics, the chronicles are seen to indicate merely that a few captives, malingerers, cripples, spies, and tribal outcasts were harbored at the missions until death and occasional escapes brought the colonies to a natural end, with no real assimilation of blood or culture on either side. So, too, the persistent tribal antipathy reveals the error of confounding the independent or even inimically related outbreaks of the Seri and of the Pima or Apache with the concerted action of confederated tribes. Doubtless the ever-watchful spies from Tiburon habitually gave notice of the disturbance due to outbreaks of contemporary tribes, just as they do today when the local soldiery are withdrawn for duty on the Yaqui frontier; naturally the civil and military authorities were thereby led to provide for protection against the Seri and Pima, against the Seri and Pima, or against the Seri and Apache at each period of disturbance, just as they provided against the Seri between periods; and it would appear that this association in thought and speech led to the unconscious magnification, in the minds of the chroniclers, of a supposed alliance.

In brief, the tribal relations of the Seri seem always to have been antipathetic, especially toward the aboriginal tribes of alien blood, in somewhat less measure toward Caucasians, but in least—yet still considerable—degree toward their own collinguals and (presumptive) consanguineals.

POPULATION

So far as could be ascertained by inquiries of and through Mashém in 1894, the Seri tribe then comprised about 60 or 70 warriors, with between three and four times as many women and children—i. e., the population was apparently between 250 and 350. The group of about 60 (including 17 warriors) seen at Costa Rica was evidently growing rapidly, to judge from the proportion of youths of both sexes, infants in arms, and pregnant women; and there are other indications that

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Rica) noted for his prowess in hunting. One hot afternoon he begged 224
relief from his tasks, saying the spirit of catching a deer had hold on him; and he was excused on condition that the deer be brought entire to the rancho. Two hours later he was seen driving in a full-grown buck; on approaching the rancho the terrified animal turned this way and that, describing long arcs in wild efforts to avoid the human habitation; yet the hunter kept beyond it, heading it off at every turn and gradually working it nearer, until, at a sudden turn, he was able to rush on it; whereupon he caught it, threw it over his shoulders, and ran in to the rancho with the animal still struggling and kicking off its overheated hoofs.

Señor Encinas himself, with Don Andrés Noriega and several other [648]
attachés, vouch for the catching of a horse by a Seri hunter in still more expeditious fashion: one of the horses belonging to the rancho was exceptionally fat, and hence exceptionally tempting to the Seri band (and at the same time worthless to the vaqueros); the chief begged for it persistently until, wearied by his importunities, the ranchero offered the horse to the band on condition that a single one of them should catch it within a fixed distance (about 200 yards) from the gateway of the corral—and the offer was promptly accepted. With the view of making the test of fleetness fair, a vaquero was called in to frighten the horse and start him running around the interior of the corral, while a boy stood by to drop the bars at the proper moment, the Indian standing ready outside the gateway; when the animal had gained its best speed the bars were dropped and it bolted for the open plains—but before the 200-yard limit was reached the hunter had overtaken it, leaped on its withers, caught it by the jaw in one hand and the foretop in the other, and thereby thrown it in such manner as to break its neck. Knowing of these and other instances, L. K. Thompson, of Hermosillo, undertook arrangements for publicly exhibiting Seri runners as deer catchers at different expositions during the nineties; but his arrangements failed, chiefly because of the anticipated (and probably underestimated) difficulty of taming the Seri sufficiently for the purpose.

About 1893, Señor Encinas and several attendants left Costa Rica 481
one morning for Hermosillo, leaving at the rancho, among others, a Seri matron with a sick child nearly a year old; in the evening (as they learned later) the child was worse, and the matron took the trail about dusk, in the hope of finding a cure in the white man's touch or other medicine—and at dawn next morning she was at Molino del Encinas, 17 leagues (nearly 45 miles) away, with her helpless child and a peace offering in the form of a hare, which she had run down and caught in the course of the journey. And the matrons, with children astride their hips and water-filled ollas balanced on their heads, and all their goods and chattels piled on their backs, habitually traverse [484]
Desierto Encinas from the sea to Costa Rica (some 30 miles), or from Costa Rica to the sea, in a night.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

412 rubbing face-paint, for bruising woody tissue to aid in breaking ocatillo poles for house-frames or mesquite roots for harpoons (both afterward finished by firing), and on occasion for weapons; and this many-functioned tool is initially but a wave-worn pebble, is artificially shaped only by the wear of use, and is incontinently discarded when sharp edges are produced by use or fortuitous fracture. The hupf is supplemented chiefly by the simple perforator of mandible or bone or fire-hardened wood; and these two primitive implements, together with mollusean shells in natural condition, apparently serve as the primary tools for all the mechanical operations of the tribe.

726 The dearth of tools and the absence not only of knives but of knife-sense among the Seri illumine those traditions of Seri fighting made tangible by the teeth-torn arm of Jesus Omada; for they explain the alleged resource of the Seri warriors to nature's weapons, used in the centripetal fashion characteristic of nascent intelligence.

186 The Seri are distinguished by another trait hardly less striking than the pedestrian habit, and even more conspicuous than the teeth-and-nail habit with the correlative absence of tool-sense; the trait is not tangible enough for ready definition or description in terms (of course because so unusual as not to have bred words for its expression), but is akin to—or, more properly, an exceeding intensification of—receptivity in all its protean manifestations; it may be called *race-sense*. Like other primitive folk, the Seri are self-centered (or egocentric) in individual thought, i. e., they habitually think of the extraneous phenomena of their little universe with reference to self, as in the labyrinth of consanguineal relationship extending and ramifying from the speaker; furthermore, they typify primitive culture in their collective thinking, which is tribe-centered (or ethnocentric), i. e., they view extraneous things, especially those of animate nature, with reference to the tribe, like all those lowly folk who denote themselves by the most dignified terms in their vocabulary and designate aliens by opprobrious epithets; but the Seri surpass most, if not all, other tribes in dignifying themselves and derogating contemporary aliens. Concordantly with this habitual sentiment, they glory in their strength and swiftness, and are inordinately proud of their fine figures and excessively vain of their luxuriant locks—indeed, they seem to exalt their own bodies and their own kind well toward, if not beyond, the verge of inchoate deification. The obverse of the same sentiment appears in the hereditary hate and horror of aliens attested by their history, by [826] their persistent blood-thirst, and by the rigorous marriage regulations 186 609 adapted to the maintenance of tribal purity; for just as their highest virtue is the shedding of alien blood, so is their blackest crime the transmission of their own blood into alien channels. The potency of the sentiment is established by the unparalleled isolation of the tribe [648] after centuries of contact with Caucasians, by their irrelucible love of native soil, by their implacable animosity toward invaders, and by

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

their rigorously maintained purity of blood; it is manifested in their commonplace conduct by a singular combination of hauteur and servility, forbidding association with aliens on terms of equality. The entire group at Costa Rica in 1894 were on good behavior, partly, no doubt, for profit, partly because they were at peace bought by bloodshed; yet they kept an impassable gulf between themselves and the Caucasians, and a still wider chasm against the Papago and Yaqui. They came to the tanque, usually in groups, rarely alone, always alert; especially when alone or in twos or threes, they moved slowly and stealthily in their peculiar collected and up-stepping gait, often stopping, always glancing furtively with roving eyes, and bearing a curious air of self-repression—as of the camp-prowling coyote who seems to hold down his instinctively bristling mane by voluntary effort. And the visitor to their rancheria sent a wave of influence before as his approach was noted; laughter ceased, languor disappeared, and a forced, yet sullen, amiability took their place, though the children and females edged away; if he appeared unexpectedly or came too close, the children and younger adults simply flitted like young partridges, while the elders stiffened rigidly, with bristling brows and everting lips and purpling eyes, perhaps accompanied by harsh gutturization—indeed the curiously canine snarl and growl, often evoked by the stranger unintentionally, betrayed the bitterness of Seri antipathy toward even the most tolerable aliens. Every human is panoplied in a personality, perhaps intangible but none the less real, which repels undue approach and fixes limits to familiarity on the part of strangers, friends, kinsmen, and mates, according to their respective degrees of mutually elective affinity; but the Seri are so close to each other and so far from all others that they are collectively panoplied against extra-tribal personalities even as are antipathetic animals against each other—and the Seri can no more control the involuntary snarl and growl at the approach of the alien than can the hunting-dog at sight or smell of the timber-wolf.

While the highly developed traits represented by pedestrian habit and hand-and-tooth habit and segregative habit expressing race-sense are conspicuous during exercise, each carries an equally well-marked obverse. Thus, while the Seri are known as runners par excellence in a region of runners, and were named by aboriginal neighbors from their spryness of movement, they have been no less notorious among the Caucasian settlers of two generations for unparalleled laziness—for a lethargic sloth beyond that of sluggish ox and somnolent swine, which was an irritating marvel to the patient padres of the eighteenth century, and is today a byword in the even-tempered Land of Mañana; concordantly the sinewy hands and muscular jaws are noticeably inert during the intervals between intense functionings, are practically free from the spontaneous or nervous movements of habitually busy persons, and contribute by their immobility to the air of indolence or languor which

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

strong wrench on the horns or stunned with a blow of war-club or hupf, as conditions may demand. Straggling swine and wandering dogs are occasionally ambushed or stalked and transfixed with arrows, torn hurriedly into fragments, or shouldered and carried off struggling, as exigency may require; while sheep and goats are practically barred from the entire Seri frontier because of their utter helplessness in the face of so hardy huntsmen.

The quantity of stock consumed by the Seri varies greatly with the policy of rancheros and vaqueros. At different times during the last two and a half centuries it has been estimated that the chief portion of the subsistence of the tribe was derived from stolen stock, and it is probable that during the early period of the Encinas régime this

FIG. 23—Desiccated pork.

estimate was fair; but under the Draconian rule of a Seri head for each head of slaughtered stock, the consumption is reduced to a few dozen head annually, including superannuated, crippled, and diseased animals unable to keep up with the herds, those bogged in Playa Noriega and other basins during freshets, the stallions and bulls slain in strife for leadership of their bands, and the festering or semimummied carcasses gladly turned over by idle rancheros on the chance visits of Seri bands to the frontier (such as the specimen in the photograph reproduced in figure 23).

No special devices have been developed in connection with the chase for stock, nor has material progress been made in acquiring Caucasian devices. There are, indeed, indications of a disposition to use

I: McGee E-5 (1894-1895)1898 NU31 Seri NU31

the crudeness of the work, strongly supports the inference that the stone arrow-making of the Seri was originally a fetichistic mimicry of alien devices—a plane, indeed, above which the craft has hardly risen even in recent decades. 174 324

While the Seri are devoid of military tactics in the strict sense of the term, they have certain customs of warfare which seem to be scrupulously observed. These customs are closely akin to those followed in hunting the larger land animals—indeed, the warfare of the tribe is merely an intensified counterpart of their chase. 726 [224]

The favorite tactical device of the warriors, as indicated by the great majority of their battles, is the ambuscade, laid and sprung either with or without the aid of decoys (usually aged women). Sometimes a considerable body act in concert under a prearranged plan; more commonly a few warriors only are involved at the outset, though these may be joined as the crisis approaches by companions lurking behind rocks and shrubs to be either on hand at the finish or in the way of ready flight, according to the turn of the battle-tide; and it is probable that the greater part of the ambuscades prove stillborn by reason of the oozing courage of leaders and the shirking of their supporters if the prospective victims present a bold front, or if the final omens are otherwise adverse. The ambuscade, with its flying contingent, grades into the device of stalking a stationary or slowly moving enemy, the stealthy approach terminating either in covert attack at close range or in sudden rush by a superior force. The theory, or rather the instinctive plan, of the campaign is to seek advantage in both position and numbers, to keep under cover until the instant of attack, to have sure and ample lines of retreat, and in every way to minimize individual risk.

There is a widespread notion toward the Seri frontier that the savages are given to sorties and surprises by night; but both specific testimony and the records indicate, when carefully analyzed, that this tactical device is much less common in practice than in repute, and is not, indeed, characteristic of the tribe. A few known battles began in attacks by night; but the war parties, like the hunting and fishing parties (save in the semiceremonial pelican pilgrimages), display decided preference for daylight in their forays—indeed, there are various indications that the folk are much more timid and oppressed with superstitious fears by night than by day.

In rare cases small parties of aliens have been half openly surrounded and done to death by considerably larger parties of the savage folk; but this method, too, is incongruous with the fixed habits of the tribe and with the deep-planted instinct of avoiding personal exposure.

A considerable number of the long list of homicides charged against the Seri, and marking the beginning of many of their battles, were individual rather than collective, the consummation of inimical impulse sometimes treacherously concealed for favorable opportunity, as in the 186 648

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

186 pitiful case of Fray Crisóstomo Gil, and otherwhiles rising explosively
648 beyond the feeble control of the untrained mind; for the impulse of enmity toward aliens is an ever-present possession—or obsession—of the tribe, and a reflection of that race-sense which is their most distinctive attribute.

726 Of open warfare and face-to-face fighting there is hardly a germ among the Seri. When themselves ambushed or surrounded, some of their stouter warriors have in a few instances faced the foe for a few minutes at a time, as is shown by the annals of Cerro Prieto; yet this accidental attitude but betokens the play of chance rather than the plan of choice. Concordantly, the folk avoid the method of warfare (so common among other Amerind tribes as to be properly considered characteristic) involving open duel between chiefs and other warriors; they seem to be devoid of that sense of fairness in fighting which finds expression in the duel; and despite the individual advantages growing out of gigantic stature, immense strength, and superior swiftness, they habitually seek to combine in numbers against panicked or baffled enemies, just as their hunters throw themselves mercilessly on surrounded quarry. Of open boldness or confident prowess no trace appears; and the body of facts seems to justify the prevailing Sonoran opinion that the warfare of the Seri is treacherous and cowardly in design, craven and cruel in execution.

Once begun, the conduct of the fray by the Seri fighters is fairly uniform; the warriors either discharge clouds of arrows from their coigns of vantage, or rush to brain their victims with stones, or to break their necks and limbs and crush in their chests, as in the slaughtering of quarry; and according to the tale of the occasional survivors—Señor Pascual Encinas and his son Manuel, Don Ygnacio Lozania, Don Andrés Noriega, Don Jesus Omada of Bacuachito, and Don Ramon Noriega of Pozo Noriega, are among the survivors and informants; also the sturdy Papago fighters, Mariano, Anton, Miguel, and Anton Castillo (whose sister died of dread while he was on the 1895 expedition)—the rushing warriors are transfigured with frenzy; their eyes blaze purple and green, their teeth glisten through snarling lips, their hair half rises in bristling mane, while their huge chests swell and their lithe limbs quiver in a fury sudden and blind and overpowering as that of springing puma or charging peccary. Of the successful assaults the ghastly end is rarely recorded, though whispered large in the lore of Sonora; in the unsuccessful assaults recounted by survivors the blood-frenzy burned but briefly and died swiftly as the disappointed warriors skulked silently behind rocks and shrubs, or fled across the sands with inconceivable fleetness. These details of battle precisely parallel the details of butchery of beastly quarry, as recounted by local observers and corroborated by Mashém's recitals.

[115]

266 So far as can be ascertained the parallelism between frenzied battling
727 and furious butchery in the chase affords the chief basis for the firm

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

bolic weapon, the counterfeit cartridge, the imitation machete, or other charm against alien power; it is usually he who wears the white man's hat or random garment in lieu of the deer or lion mask of earlier days; and during recent years his most-prized fetish, and one which practically insures the support of his fellows, is a written certificate of his chiefship from Señor Encinas, or, still better, from El Gobernador at Hermosillo. Yet he is a throneless and even homeless potentate, sojourning, like the rest of his fellows, in such jacales as his two or three or four wives may erect, wandering with season and sisterly whim, chased often by rumors of invasion or by fearsome dreams, and restrained by convention even from chiding his own children in his wives' jacales save through the intercession of female relatives. 643 [648]

In 1894 the head chief was reported to be on Tiburon; the putative chief of the rancheria at Costa Rica was the taciturn giant known as El Mudo (plate XIX); while Mashém (or Juan Estorga) was the head of one of the Pelican clans.

ADOPTION

One of the more important factors in demotic development among primitive peoples (probably second only to interclan marriage in extending sympathy and unifying law) is adoption; and special efforts were made to obtain data relating to the subject. Direct inquiries were futile, the responses indicating that the entire subject is foreign to the thought of the tribe; but three sporadic and measurably incongruous examples of quasi adoption are worthy of record. 594 [124]

The most specific case is that of Lieutenant Hardy, who visited Isla Tiburon in 1826, and was fortunate in gaining the confidence of the tribe through successful medical treatment of the wife of the chief. On his second landing he was greeted with many expressions of gratitude, which were especially exuberant on the part of the daughter of the family (always a personage in Seri custom), who insisted on painting his face. He specifies: 597 648

> Not wishing to deny her the indulgence of this innocent frolic, I quietly suffered her to proceed. She mixed up part of a cake of blue color, which resembles ultramarine (and of which I have a specimen), in a small shell; in another, a white color, obtained by ground talc, and in a third was mixed a color obtained from the red flint-stone of the class which I before stated was to be found on Seal Island, and resembled cinnabar. With the assistance of a pointed stick the tender artist formed perpendicular narrow stripes down my cheeks and nose, at such distances apart as to admit of an equally narrow white line between them. With equal delicacy and skill the tops and bottoms of the white lines were finished off with a white spot. If the cartilage of my nose at the nostrils had been perforated so as to admit a small, round, white bone, five inches in length, tapering off at both ends and rigged something like a cross-jack yard, I might have been mistaken for a native of the island. As soon as the operation was finished, the whole party set up a roar of merry laughter, and called me "Hermano, Capitan Tiburon," being the very limited extent of their knowledge of Spanish.[1] [386] [302]

[1] Travels, p. 286.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

597 648 While the lieutenant attached no significance to the painting, the procedure would seem to have been a ceremonial adoption, such as might, for example, be used in connection with a confederate clan. The description of the painting is sufficiently explicit to identify the totem with that of the Turtle clan, represented by the clanmother and the daughter of the clan at Costa Rica in 1894 (plates XVIII and XXIV); but it is noteworthy that the salutation with which the ceremony terminated, and which may be rendered "Captain-Brother of the Sharks", would seem to identify the totem with the shark rather than the turtle.[1]

The second case of adoption (if so it may be styled) was that of Señor Encinas, after his bloodiest battle, in which nearly all of the Seri warriors were left on the field. In this case there was no ceremony, or at least none remembered by the beneficiary; he was merely informed by a delegation of aged dames that thenceforth he would be regarded as a stronger and more invulnerable chief (shaman) than any member of the tribe, and hence as the tribal leader.

173 563 727 The third instance is still less definite, though it seems to be trustworthy. There is a widespread tradition throughout Sonora that in the course of a brush between a band of Papago hunters and a marauding bunch of Seri warriors in the mountains southeast of Cieneguilla twenty-five or thirty years ago, a Papago maiden was captured and carried off to Tiburon; and that for some years thereafter—i. e., until the Papago had taken ample blood-vengeance—the intertribal animosity was exceptionally bitter. No wholly satisfactory basis for the traditions could be found among the Papago, though some of the silences of the old men were suggestive; nor was the tradition fully credited by Señor Encinas, despite its deep lodgment in the minds of some of his yoemanry. When Mashém was interrogated on different occasions, he merely shook his head in stolid silence; but when the device was adopted of inquiring the number of Papago children brought into the tribe through this woman he responded promptly with a snort of scorn, and followed this with the explanation that she never had children, and could not because she was an alien slave. The explanation was corroborated by clanmother Juana María and other matrons, with sundry expressions of contemptuous disapproval of the inquiry and scorn of the very idea that aliens could fructify within the tribe. Later, the ice being broken, Mashém intimated that the woman had recently died of old age and its consequences—doubtless as an outcast. On the whole, the direct testimony would seem to substantiate the tradition, and to supplement it with the short and simple annals of a spouseless and childless life (incredible of other tribes, but consistent

[124] [773] [1] This identification may possibly be correct, the collocation of the totem with the turtle was shaped through unwilling and perhaps misleading responses made by Mashém to inquiries in 1894—these responses denoting a sea monster which in the beginning helped the Ancient of Pelicans to make the world by pushing from below, and which is now very good food—a description apparently fitting the turtle more closely than the other animal.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

condition characterized by absence of property and thrift-sense; while its most essential concomitant is extratribal antipathy too bitter to permit toleration of alien blood, or even of alien presence save under the constraint of superior force.

MORTUARY CUSTOMS

The prevailing opinion among the better informed Caucasian neighbors of the Seri is that the tribesmen display an inhuman indifference to their dead; and this opinion is one of the factors—combining with current notions as to cannibalism and arrow-poisoning and beastlike toothing in battle—involved in the widespread feeling that the tribesmen are to be accounted as mongrel and uncanny monsters rather than human beings.

The opinion that the Seri neglect their dead on occasion would seem to rest on a considerable body of evidence; Mendoza's record of the numberless neglected corpses of warriors polluting the air and poisoning the streams of Cerro Prieto in 1757 would seem to be unusual only in its fulness; and Señor Encinas, albeit so conservative as to repudiate the reputed anthropophagy and to recognize better qualities among the folk than any contemporary, declares that they are utterly negligent of their dead, save that when the bodies lie near rancherías heaps of brambles are thrown over them to bar—and thus to lessen the disturbance from—prowling coyotes. Quite indubitable, too, is the specific testimony of vaqueros to the effect that Seri raiders overtaken by the Draconian penalty of the frontier merely lie where they fall, even when this is well within reach of the tribesmen, Don Andrés Noriega's verification of his boast (ante, p. 113) being an instance in point. On the other hand stands the conspicuous fact (unknown to the frontiersman) that well-marked cemeteries adjoin some of the rancherías of interior Seriland. The sum of the somewhat discrepant evidence accords with a characteristically unsatisfactory statement by Mashém, to the effect that the mourning ceremonies are important only in connection with women—i. e., matrons—because "the woman is just like the family" ("la muger es como la familia"); and this intimation, in turn, is corroborated by the single known instance of inhumation in Seriland, as well as by certain indirect indications connected with the scatophagic customs (ante, p. 213). On the whole it seems certain that the mortuary ceremonies attain their highest development in connection with females, the recognized blood-bearers and legislators of the tribe.

The special dignification of females in respect to funerary rites is without precise parallel among other American aborigines, so far as is known, but is not without analogues in the shape of (presumptive) vestiges of a former magnification of matrons in the mortuary customs of certain tribes. The vestiges are especially clear among the Iroquoian Indians, whose aboriginal socialry coincided with that of the

2: Kroeber E-5 (1930) 1931 NU31 Seri NU31

[p.3]

THE SERI

By A. L. KROEBER, *University of California*

INTRODUCTION

The present paper is the first product of field studies made between January and March, 1930, in Arizona, Sonora, and Sinaloa, under a joint expedition of the Southwest Museum, Los Angeles, and the University of California. The financial contribution of the University was the gift of Mrs. Ethel W. Crocker. While the purpose of the trip was to define rather than solve problems, the following pages contain part of the positive observations obtained. 121

The Seri, who live on Tiburon Island, Sonora, in the Gulf of California, are often considered the wildest and most primitive tribe surviving in North America. They owe this repute partly to McGee's monograph about them, in the Seventeenth Annual Report of the Bureau of American Ethnology. It is easy to read between the lines of this description that McGee leaned toward a romantic and imaginative interpretation of the Seri. Also, his actual contacts with the people themselves were brief, and hampered by imperfect communication. Moreover, the Seri have been for three hundred years in contact with Spaniards and Mexicans, part of the time even under direct mission control. It therefore seems doubtful whether their backwardness could be the result wholly of preserved primitiveness, and may not rather be attributable to a recalcitrant degeneration. In order to answer this question, and to place Seri culture at least tentatively among the other tribal cultures of the Southwest instead of leaving it as an unexplained and lurid abnormality, a brief visit to them was undertaken. 114 177 [121]

The success of this visit was due wholly to Sr. Roberto Thomson of Hermosillo and Rancho San Rafael, who is now the Mexican Government's *Jefe de Vigilancia* for the Seris, and in effect what in the United States would be known as Indian Agent for the tribe. He has protected and befriended them, kept them in turn in bounds, and secured some governmental assistance for them, under which they are making a beginning of adaptation to the modern world. At any rate, the mutual raidings and killings have stopped, and the Seri, though still very suspicious of most of the neighboring settlers and of strangers, look upon Sr. Thomson as their protector and friend. Without his introduction and experience, many less data could have been collected in a longer stay. 123 648 [609]

The Seri now live wholly on Tiburon Island. I was with them six days, half of them on the island. This is about as long a time as McGee spent with them—all of it at the cattle ranch of Costa Rica. McGee also explored the island and its camps at some length, but without encountering any Seri, who eluded his party. 114 131

Inasmuch as Mr. Edward H. Davis of Mesa Grande, California, has three times visited Tiburon to form an ethnological collection for the Museum of the American Indian, Heye Foundation, I attempted no examination of Seri material or economic culture, which Mr. 114 121

2: Kroeber E-5 (1930)1931 NU31 Seri NU31

524 Dice are three splints of cane; tapering toward both ends, nearly flat. The concave inside is greenish white, the outside darker. The count is: 0 insides up, win 4; 1 inside up, win 1; 2 insides up, lose 1 and play; 3 insides up, lose 4. The 3 splints are stacked together, then thrown endwise against the palm, a piece of turtle shell, or anything similar, so as to fly forward and scatter on the ground. (Some players probably acquire a degree of skill in making the canes fall right.) A player repeats until he throws 2 whites or insides. For points scored, he draws lines on the ground in front of himself. His opponent erases his lines as he wins, or adds to them as he loses, until he himself is ahead, when he begins to mark his own lines. Ten points wins the game. A stick is then set in the ground by the winner, who goes on playing the next game. That is, if he has 8, and throws 4, he sets up his stick, erases 6 lines so as to start the new game with a credit of 2, and throws again. The Seri perform these additions and subtractions with the rapidity of a practiced white man.

A ring of people may play at once. Their scoring in relation to one another was not ascertained, but it is presumably each from his neighbor, with the totals shown by sticks.

Since with fair throws the losses in this game must equal gains, a lead of 10 over an opponent is as much as could expectably be played for if the game were not to be unduly protracted.

526 Football race is played with *palo fierro* balls, perhaps 3 inches in diameter, one to each side of 4 runners. The ball may be moved only with the foot. The race is along the beach, where cactus and brush do not interfere. The distance, according to places named to Sr. Thomson and known to him, is about 6 miles. The men on a side relieve each other in informal relays; usually only 1 or 2 finish. The [648] Seri once went north to play the Papago this game, but lost.

Shinny is a woman's game, preliminary to the football race. Four women to a side carry sticks with which they try to throw an 8-12 inch hoop to a goal mark at the end of a short field. Behind each side stand the 4 men runners who are to race with a ball.

Notes on Material Culture

482 Women carry loads on their heads with a ring: men with the
[171] pén, Spanish *palanca* or lever, a stick over the shoulder, with load hung from each end. These are the usual Sonora and Sinaloa Indian ways of carrying.

516 The Seri sit and lounge randomly. The men squat, occasionally cross the legs, put them sidewise, or sit with one knee up. The women wear long cloth skirts, but apparently sit just as variously.

714 Body armor, *naitɬanika'p*, with sleeves and helmet, and a shield. saXe'*ti*X, both of hide, were worn. The shield was described as 4 or 5 feet high, roof-shaped toward the front. It is not clear whether

3:Davis & Dawson E-5 (1922-1960) 1965
NU31 Seri NU31

THE SAVAGE SERIS OF SONORA—I

By EDWARD H. DAVIS AND E. YALE DAWSON

WHEN the Seri Indians pass into extinction, "good riddance" will be voiced by many a Mexican, for centuries of warfare against the invaders of their inhospitable lands have made this small tribe notorious among the aborigines of Mexico. Many people will be ignorant of their passing, but a few of us even now watch with some regret the losing struggle of their diminishing numbers against the spreading civilization that tramples out the wild things and destroys the natural features of the earth. With the Seri goes a link with a past, primeval age of nature in America, for these are a strange and primitive people, a people whose lives and habits assign them to the initial place in the scale of cultural development among American Indians, and hence to the lowest recognized phase of savagery.

In 1540 one of Coronado's officers was the first to capture and bring into the army encampment in Sonora a Seri warrior, an Indian so large and tall that his stature created a sensation among the Spanish soldiery. It was three and a half centuries, however, before the Seri tribe was finally subjugated by an invading force, and then only after the slaughter of nine-tenths of its population.

In modern times, though the encroachment of settlements has forced the Seris into domestic contact with the Mexican people, few outsiders have ever come to know them. Until the fishing village of Kino was settled some ten years ago, there were only two men they counted real friends among aliens. The senior author was one of those. Today the Seri not only must tolerate the encroachment of the Mexican, but must suffer from imported diseases which are gradually destroying him. The present life of the Seri is but an echo of its past, but in this modern world the habits of the survivors of America's most primitive people are none the less astonishing. Their gradual acquisition of modern implements and materials has gone along with centuries of warfare and bloodshed, and their submission to law entails a long story of violence. Before considering these more recent phases of their history, however, let

[p.193(A)]

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614 and the maternal clans disappeared. Today, with the entire tribe numbering no more than 150 persons, the meaning of the painted symbols has become vague and meaningless with respect to the nonexistent clans, yet the custom persists, now largely for personal adornment, and even a male tribesman may sometimes be seen squatting before little dishes of pigments, peering into a ten cent store mirror as he carefully applies the colors (Fig. 11).

618 Had it not been for the Seris' intolerance of aliens they might today constitute a numerous and thriving people, or at least have been absorbed by the polyglot Mexican popu-

[p. 202 (A)]

● 648 lation, but as the Ishmaelites of America they brought misery and death upon themselves by an unwavering belligerence toward all outsiders. The history of their centuries of bitter contest against the forces of law in Sonora is a bloody one, but whatever has been the extent of their wanton looting and murder, there is one crime of which they have long been unjustly accused. Sonora is [266] full of legend and tale of "los canibales," but no convincing evidence has ever come to light proving that the Seris ever practiced cannibalism. Of course, it could be argued that the only ones who might have proved it were killed and eaten.

[p. 202(B)]

[pp. 203-260 have no material relating to the Seri.]

3:Davis & Dawson E-5 (1922-1940) 1945
NU31 Seri NU31

THE SAVAGE SERIS OF SONORA—II*

By EDWARD H. DAVIS AND E. YALE DAWSON

The beginning of Seri wars was the year 1700 during which they first conducted nocturnal raids on some of the most outlying of the Jesuit mission pueblos of Sonora, killing inhabitants with their arrows and stealing the cattle and horses. Year after year, the gradual expansion of Sonoran settlements and their nearer approach to the borders of the Seri homeland aggravated the conditions of conflict. The vigorous proselyting expeditions of the Jesuit missionaries brought about the capture of some hundred women, children, cripples and vieilards of the Seris, and concurrently the death of many defending warriors. These expeditions further kindled the hatred of the free Seri against the white man, while the few score "converts" gathered about the several missions gained a shocking character for sloth, filth, thievery, treachery, obstinacy and drunkenness. Raids upon the settlements continued and between 1757 and 1763 4,000 mules, mares and horses were known to have been stolen and eaten.

[p. 261(B)] [text continues on p. 262(A)]

[291]

FIG. 14. JUAN TOMAS AND NEPHEW
OLD SERI CHIEF BEFORE CHICO ROMERO AND VETERAN OF MANY WARS, IN 1926 AT THE AGE OF 94 YEARS.

● 648 726 The further extension of settlements necessitated the establishment of military posts from which troops were sent out, first by one, then another governor of Sonora, to destroy all Seris they might find and to discourage their wanton looting and killing. If a strong force was sent out, it was frequently ambushed and many soldiers were left on the field, transfixed by arrows. Many small forces left never to be heard from again. In 1780 an army of national troops met the Seris in several bloody battles in their Cerro Prieto, and claimed to have exterminated the tribe. Yet the Indians retained sufficient vitality to continue their sanguinary raids

[p. 262 (A)]

648 726 on the settlements of Sonora. Many expeditions, fitted out at great expense, were sent against them, but in that barren land, destitute of water, the military parties suffered greatly in their campaigns, and succeeded little in their efforts to conquer the wary natives.

177 648 By 1850 probably every Seri between infancy and decrepitude had seen the proprietor and other inhabitants of the rancho of Don Pascual Encinas at Costa Rica where the Seris were abnormally tolerated and even encouraged to make themselves useful and unobjectionable. They yielded to indolent scavengering more than ever before; they substituted cast-off rags and barter-bought cotton cloth for their pelican robes and other primitive garments. They ate cooked food when it fell their way; half heartedly they adopted metal cutting implements and sought or stole nails and hoop-iron for arrow [191] points. Some acquired a smattering of Spanish and many came to sport Spanish names. Never, however, did more than one or two Seris come to live in a house, nor even to encompass the idea of making adobe. They had not learned to ride horses nor to burden them, but only to use them for immediate slaughter and consumption. They were acquainted with firearms, but it was not until years later that they learned to use them. In and about Rancho Costa Rica the Seris and the Mexicans lived for a time in mutual tolerance, certain depredations being allowed the Indians just as were the rodents of the rancheria.

648 721 When, in 1855, Don Pascual Encinas experienced the loss of unusually large numbers of stock from Seri raids, he was aroused into announcing that a Seri head would be taken for each head of stock stolen. For a while the Indians seemed to acquiesce, but within a few days a group of Seri women "milled" a band of horses, caught and threw one so that its neck was broken, whereupon [252] they immediately sucked its blood, gorged on its intestines, and buried its quarters to "ripen" according to their custom. The vaqueros of the settlement were instructed to shoot the first Seri seen on the llano. Within two days the tribe was on the warpath and the war raged for a decade.

[p.262(B)]

648 726 [161] The Encinas war reduced the tribe to some 350 people, and temporarily discouraged their bloodthirsty raids. By 1893, however, new killings were being reported. In one instance the Seri Chief, Juan Tomas (Fig. 14), watched as the men of a large rancho left for a rodeo and then, worming up through the brush, led his warriors into the buildings and with clubs and arrows massacred every woman and child within. Two Yaqui women who had managed to escape into the brush watched as the warriors seized [727] the infants by their feet and dashed their brains out against a large rock near the corral.

In 1904 a number of wilder Seri, led by several Yaquis, went on the warpath and killed every soul in a Papago village. The war with the Papagos that ensued aroused the Governor of Sonora into action. Nearly 250 armed men were sent out to kill or capture the Yaqui leaders and to administer a severe lesson to the Seris. The desert water holes were all placed under guard until the Seri chief, Juan Tomas, was forced to surrender for his thirsting tribesmen. Peace was conditional on the delivery of the Yaqui leaders with their hands tied together. Two days later a couple of gaunt, wild-looking Seri women, clothed in rags and with painted faces, walked into the camp to keep the conditions of the peace as they had understood them. They carried a palanca between them from which were suspended bundles of severed hands of the Yaquis who had been clubbed to death as they slept.

114 648 Twenty years after the delivery of the Yaqui hands (1922) the senior author, under arrangement with the Museum of the American Indian in New York, carried out his first expedition into the heart of Seriland. Although still intolerant of aliens and at times dangerous if aggravated, their depredations had been reduced to the occasional killing of a stray cow. The Seris had come to live a comparatively peaceful life under the supervision of Roberto Thomson of Hermosillo. It was through his efforts that the Seris were saved from complete extermination by the vaqueros of Sonora, and after having treated them for many years as a friend and adviser, he had made it feasible for a visitor to enter

[p.263(A)]

3:Davis & Dawson E-5 (1922-1940) 1945
NU31 Seri NU31

114 their minds and to live among them without
648 undue fear of losing his life. Through the
kindness of Señor Thomson the senior author
[123] succeeded in making himself a friend of the
Seri and, enlarging upon this friendship
through long periods of living and traveling
among them, has acquired an intimate knowl-
edge of these strange people.

105 In 1922 the fishing industry of the Gulf of
178 California was not yet well developed, and it
was to be ten years before the village of Kino
should appear on the maps of the Sonora
coast. The Seris were still isolated in their
[161] desert domain and their numbers, then about
250, were maintaining themselves out of
reach of the infectious diseases of the white
man. The clan life had disappeared, and the
people lived as a single tribe with their old
chief, Juan Tomas, 90 years old at that time

[291]
[481]
[482]
[415]

FIG. 15. MOVING DAY AMONG THE SERIS
THESE BURDENS, BORNE FOR MANY MILES OVER ROCKS, THROUGH CACTUS AND DEEP SAND, CONTAIN UTENSILS FOR HOUSEKEEPING WHEREVER THE SERIS MAY STOP.

[p.263(B)]

[89]

Seri Social Structure (1)

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1. The material presented here was collected on a three-week visit to the Seri zone, the costs of which were defrayed by the I.N.A.H. [Instituto Nacional de Antropología e Historia], for the purpose of planning later investigations. It took place in January, 1952, in the company of Mr. Paul Finninger of M.C.M. [Mexico City College].

121 The permanent system of interacting influences that is presented among the Seri is of great scientific interest for its extreme characteristics of geographic isolation, environmental hostility, poverty, and the small size of the community.

131 The Seri occupy coastal territory in Sonora on the Gulf of California; formerly they covered a territory that toward the end of the 18th century, along the coast extended from Guaymas Bay, including it, to Punta Peñasco and, on the mainland, included the area in the vicinity of the present city of Hermosillo. They have been reduced little by little, now occupying only some isolated points on Cape Tepoca, Desemboque, and Tiburón Island, places from which, in spite of their inclemency, they are also being displaced.

●648 Until some 30 years ago, most of the contacts of the Seri with Western culture had been warlike, ferociously defending their skins from the attacks of the yori (Mexican) invaders. Their contacts with the natives have been with the Yaqui, Papago, and those of Santa Rosalía (crossing the gulf). It was not until about 20 years ago, when the establishment of fishing camps was initiated with mestizo capital, that a new orientation in the treatment of the Seri came into being. Existing side by side with them at present are various Mexicans who exploit the products of Seri fishing, and some scientific investigators, principally from the United States.

13 They form enclaves in the heart of Aridamerica, with its cactus, shrubs and grasses, without flowing water, and with abundant flying and, especially, marine fauna.

[89 cont.]

000 abundant flying and, especially, marine fauna.

For a modern technology, their region has great resources,
511 but for the culture of the Seri it is frankly inhospitable. The standard of living is exceedingly low, as is proclaimed by natives and foreigners and as is demonstrated by the illnesses and hunger that weaken the population.

[90] The Seri truly form part of our Western society, in
226 so far as they catch fish, with fishhooks and motorboats, to sell
439 in the markets of Hermosillo, Nogales, and Tucson, and they
[177] obtain payments in national specie and coin. The part that
182 they form, however, has its own internal structure, which regu-
lates the relations with the environment and among its mem-
[161] bers, even though a group of 218 persons, which suffers severe alterations in percentages from disasters like the sinking of a boat or strokes of good luck like the establishment of a prosperous fishing camp, is almost insignificant for the nation.

Most probably they have never been much more numerous, and they must not have had great cohesion in the past, a situation explicable in view of their nomadic gathering economy.
621 Toward the close of the 18th century they were divided into bands, of which it is known that the most important were the Guaymas, Upanguaymas, Tepocas, Tiburones, and Salineros.
● [648] They banded together at various times in order to defend themselves and to attack the nuclei of Mexicans of the zone, achieving combined action, but without effective political unity.

At present they seem to form a single group without marked
619 subdivisions, although they recognize affiliations like that of "Tiburones," "half-Papago," etc., which appear to have little real classificatory significance.

There is great uniformity: they speak a single language
184 incomprehensible to the rest of humanity; they have a relatively
619 uniform culture, and there is tribal unification for matters involving sexual exchange.

The most obvious relations are spatial; they have important
361 settlements that sprung up around the fishing establishments and are more or less permanently occupied. Of these, "El Desemboque," close to the mouth of a river from which they have been displaced, is the most important, with 80 per cent of the Seri

9:Malkin E-5 (1953-1955)1962 NU31 Seri NU31

II

[P6A]

OUTLINE OF SERI CULTURE

Territory

131 Historically the Seri territory at its greatest expansion extended from the coast of Mar del Cortez to Hermosillo and from Porto Libertad to Guayamas and included also the Tiburon Island. 101 Ethnically, the Seris represented a collection of [197] dialectically distinct tribes, the Guyma, Tepoca, etc., perpetually at war with each other, whose common characteristic was their culture, and who were framed in to the north by the Pima Alto and Papago, to the west by the now extinct Cochimi, to the east by the Opata and Pima Bajo and to the south by the Cahita, Mayo and the Yaqui.

● 648 But their area had fluctuated much. After the 131 bitter and disastrous wars against the Mexicans from the late 18th century through most of the 19th, the Seris lost out and were forced by the Mexican government to settle on Tiburon. This incarceration did not last long. McGee had already in 1894 found them on the mainland and Kroeber found them equally divided between Tiburon and Kino. In 1930 when he visited, evidently they lived largely in Kino Bay. As the Mexicans pressed on Kino moving in, in ever greater numbers, and as Japanese fisheries worked the Gulf out of Desemboque attracting the fish-loving Seris, their main settlement has moved once more. About 1940 most of the Seris moved into Desemboque and at the time of my visit, almost all of them lived [361] there while only two families made Tiburon their "permanent" camp. School and availability of the medical facilities as well as the location of the Mexican traders in Desemboque, part of whose scheme the Indians have become, attracted the Seris. Only occasionally today they roam inland or visit other areas, either owing to the hunting or fishing expeditions.

Numbers

161 Seri numbers fluctuated as much as their territory and had suffered immense diminution. I shall list the estimates below, indicating the source of the information:

	Authority		Source
1780	Velasco	2,000	McGee
1824	Troncoso	1,000+	"
1826	Ratio (Tiburon only)	1,000-1,500	"
1826	Hardy	3,000-4,000	"
1841	de Mofras	1,500	"
1844	....	550	"
1846	Velasco	500	"
c.1855	Encinas	500-600	"
c.1865	"	250-300	"
1894	Mashem, native	250-350	"
1930	Thomson	175	Kroeber
1934	Mex. En. Cifras	160	Ethn. Synth. Mex.
1953	Smith, Jr.	248	MS. Univ. of Ariz.
1955	Malkin	236	Malkin

II

OUTLINE OF SERI CULTURE

161 At the moment their number should have increased again, after a disastrous epidemic in the 164 spring of 1955.

Biological Background

142 The Seris are somewhat atypical among the peoples of the general area in that they represent a very slender, sinewy, tall type. This is true of both men and women. This physical type in general is apt to be associated with the desert habitat and the Seris answer the requirements very well. As shall be seen, their economy also repre- 433 sents characteristic adaptation to the desert conditions of pre-agricultural people.

Economy

The Seris readily fell into the category of the pre-agricultural hunters and gatherers with one variant, dependence on the produce of the sea, whether marine turtles, fish or littoral invertebrates.

[241] Here the Seri provide another exception for the region. They are the only group that never had any agriculture. McGee has pointed out their lack of agricultural sense and this has also been mentioned by Kroeber and by incidental Mexican visitors. Of late years, some efforts have been made by the Mexican government and the American Friends' Service Committee to persuade them [648] toward agriculture, but to no avail. The Seris [464] occasionally hire out to the surrounding Mexican or American rancher-farmers but grow restless after a few days of cotton picking and retire, with their advanced pay lost to the employer. On the other hand, efforts to teach them related practices, well digging for example, also failed to interest them. To this day they remain much in the original pattern of economy.

262 McGee (1898:214) who had a chance to observe 114 them from the first hand and who also had access to valuable information from the outsiders gives the following figures for their diet:

land game, large and small (incl. stolen stock)	21%
waterfowl and eggs, incl. pelican	13
sea-turtles	25
fish	15
shellfish	10
cactus fruit	9
other plants	6
miscellaneous	2
total animal 84%	marine 65%

Kroeber (1930:20) questions these figures and thinks that shellfish represents greater percentage than McGee indicated. He also thinks the use of turtles had been exaggerated. He figures the dependence on the animal diet as 75% and on marine 60% but he suspects that these figures are too high for a band with ready access to countless cacti and mesquite.

[P.6B]

226 411 177 commercial origin are their main instruments of fishing. To this they added dynamite, sometimes with disastrous results to themselves, mostly as a way of securing bait. Single-pointed fish-spears which loomed so importantly in McGee's account have gone the way of the Dodo for its original purpose and transformed into iron bar lances, now used largely as weapons against rattlesnakes that men encounter in their desert roamings. However, in the forties, when the Seris spent a great deal of time getting sharks and huge rays, they killed them with these weapons.

226 411 What retain some importance are the harpoon and the two-pronged spear called "puiero." The two-pronged spear is one of their oldest weapons. The construction is much the same as when McGee visited them. The spear is used mainly to stab large-size fish, the giant *bais* or *mero* for example, after it has been brought up on the line. The [225] harpoon is now exclusively a weapon for the turtle hunt.

226 177 [157] An interesting fate met an effort to teach these Indians net fishing in 1947. They tried, ruined the nets and never took it up since. The instigators were Mexicans, the fish traders. I suspect that Seri individualism had a great deal to do with their lack of interest in net fishing which after all demands a certain amount of cooperation. With the hook and line fishing, men can have much more their own way.

501 177 ●648 An added "tool" of the Seris is the plank boat. The balsa which McGee still observed during his visit, had already vanished by the time Kroeber came to the Seriland and had been replaced by these boats. The boats are flat bottomed but good sized. The material was provided by the Mexican government. Boats are usually propelled by 5 hp. motors leased from the Mexicans (no Seri is rich enough to purchase [439] one) who also sell them gasoline and oil at exorbitant prices and in return buy Seris' catch of fish and sea turtle for low prices. At the time of my visits these amounted roughly to less than a peso [435] per kilo of the flayed, degutted and cleaned fish (less than 8 cents) with fluctuation up and down the scale depending on the kind of the fish, and to about 30-50 pesos for medium to large size "cahuama," the live marine turtle.

501 648 The Seri boats are also propelled by paddles and sail—this is always the case with the families who wish to stay away on Tiburon for some time. The Mexicans will not lease them their motors for such trips even if the Seri, some of them at least, have enough knowledge of the motors to repair minor stoppages—a demonstration of the fallacy [114] of McGee's idea that they are genetically unable to handle tools. In this respect, Kroeber's (1930: 25) estimate of them is closer to the truth.

462 Sexual division of labor in procuring food goes on, much the same as it had 70 and 30 years ago, with the sole exception of the imported goods. [439] Here purchases are made either by men or women or by children, depending on who at the time has the cash and what one wishes to buy.

Fishing is still done by men and so is hunting. Women still concentrate on gathering, whether of

[P.7 B]

quite possible but I couldn't substantiate the story from contemporary evidence. Perhaps during the height of the shark hunting for the liver oil, the Seris used the oil also for wood polish, although it isn't very clear just what sort of artifact they make would require such treatment. The wooden tools or artifacts among them are in short supply at all times. Finally, the huge horned manta was supposedly hunted also for its hide but just in what circumstances it was not explained. It is the only fish which the Seri ever mentioned as having been put to such use.

Fishing

As already mentioned, fishing nowadays is largely accompanied from flat-bottomed boats with hook and line. The old ways of getting fish by spearing are almost gone for good. Recently, an attempt has been made to teach the Seris siene fishing, but 10 years of these endeavors accomplished only ruination of a number of expensive nets and of much fishing gear and the desertion of the project by the Indians. It may be that their individualistic and almost anarchistic attitudes preclude cooperation, essential in this type of fishing.

The bait is obtained in any one of the three ways: by dynamiting fish in tide pools or along the shore, or by catching small fry with small hook and line, or finally by collecting small fishlets in the tide pools, prying them out from under rocks or simply—and here the Seri boys excel—by shooting them in the tide pools with tiny toy arrows or simply spearing them with a stick. The dynamiting is done with the purchased sticks of dynamite which the Seris obtain in the tiendas. The procedure is often risky and down right dangerous. Some of the Seris have blown themselves up with dynamite. I have seen one of them, who lost both arms and had a jaw broken during a dynamiting trial. He went about with a dirty rag tied up over his head to support the wrecked jaw-bone. He was carried off by measles two years later in the 1955 epidemic.

The Seris' commercial fishing is pretty much controlled and exploited by the two or three Mexican fish traders from Nogales and Hermosillo. These have their tiendas in Desemboque, which at set price sell things to the villagers. They also provide the Indians with the five horse-power motors for fishing trips and pleasure cruises and with the oil and gasoline essential to run these—also at set price. They finally purchase the fish—at a set price—and from the proceeds the Seris purchase goods at the tiendas, completing the cycle. Not all Seris are compelled to work for the Mexicans, and, in fact, they do not always do so. Some families stay away from Desemboque and depend on the sail and oars for propulsion. They come to the village only once every few months to obtain supplies. Even when in the village, the Seris make little effort to fish for more than they wish to get in order to satisfy their immediate needs.

Fishing expeditions usually take place in the morning. Most Seris will set off before daybreak and will return with the catch by 11 a.m. or noon.

ooo possible for producing domestic crops of any kind. There is no water
312 for irrigation, and drinking water is very scarce, rising in only a few parts of the Island in places known only to the Indians.

• 648 For centuries these nomads of the wastes have borne an evil repu-
[10] tation as killers and cannibals, and many an expedition to the Island for trade or exploration has never left its beautiful shores. Lured away from their boats by friendly gestures of the Indians, every last man has been killed by arrow or rifle and the expedition never heard from. No survivor has ever returned to relate his experience and, up to the time of my visit, a man risked his life to go among the Seris on their Island.

Time after time, for four hundred years, the Spaniards, and later the Mexicans, have tried to exterminate them. They have been ambushed, hunted, killed on sight for years; diseases have decimated them: they have been the Ishmaelites among the native tribes of Mexico, with every man's hand against them. Now only a small remnant survives.

[13] They have also taken heavy toll of those who have invaded their territory, which at one time extended from Altar on the north to Guaymas on the south, and from Hermosillo to the coast. When hard pressed, they retired to their Island sanctuary where, deep in the rugged ranges, they have defied pursuit. They are strong, brave, neither asking nor giving quarter in battle---men of marvelous endurance, tireless walkers, swift runners, wonderful trackers.

Within the last few years the Government has definitely set aside Tiburon as their exclusive home and sanctuary, with a strip along the mainland as their hunting and fishing ground, and where they can harvest the fruits of the giant cacti without fear of being killed. No person is allowed on this Island without special permission from the Governor of Sonora, or their Superintendent and devoted friend, Roberto Thomson. The Government has declared a permanent closed season on Seris.

175 As to the reputation of these nomads of the wastes of being can-
648 nibals, I quote the following extract from the *Life of Bill Fain:*
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After I had been in Yuma some time, a Yuma school teacher asked what I knew about Tiburon Island and the Seris. He said he had heard there was gold on the Island and he in company with a sailor intended to go down there. I said "Partner, I have been at the head of the Gulf several times, and interviewed many Mexican sailors and fishermen. These Seris are murderers and cannibals and my advice is, don't go, for as sure as God made little apples, you and your friend will make a fine feast for the *Tiburones.*"

He said the sailor would manage the boat and they would prospect on the Island and pack the gold out. And besides, they were going unarmed and trust themselves to the tender mercies of the most treacherous Indians in North America. I told him, "My advice is to stay just as far away from that Island as you can, if you want to teach school any longer." My advice was thrown away.

Some weeks later several mining men in skirting the coast opposite Tiburon, came across a place where the Seris had evidently been feasting on human flesh,

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near the narrow channel called *Infernillo*. They knew about the missing school teacher and sailor and without doubt this was the place where they had been eaten. There were the bones of two human beings, and there seemed to be a sort of cross, with hands severed at the wrists, nailed to the ends of the cross with big spikes, with a piece of leather, about as big as a dollar, to keep the nails from pulling through. The hands were from a white man, and many scattered papers from a valise near by, with the man's name stamped on it, was ample proof that the remains were those of the Yuma teacher and this sailor friend. The holes cut out of the valise fitted the leather washers. Even the bones were broken to extract the marrow. The teacher never showed up and everything happened just as I predicted. This was about 1893.

About a year after this, five other men left Yuma in a boat, called the *Examiner*, for Tiburon. Clark was an old frontiersman, O'Brien was a good man too, but not so old at the game; Charley Cowles was a mining man and the two *Examiner* reporters wanted to write up the Seris and the Island and hunt deer. All were fully armed. I gave Clark and O'Brien the same advice as I gave the school master and said on no account to all desert the boat; for O'Brien to make some excuse and stay in the large boat with a shot gun loaded with buckshot and land the reporters with the small skiff. I told Clark not to land but to stay in the skiff. I said they were all flying in the face of sure death once they landed. Charley disembarked at the mouth of a river and left for the interior.

When the boat got close to the Island, it was anchored according to my instructions and Clark and the reporters got in the skiff and were rowed close to shore, when the reporters jumped out and waded. Twelve or fifteen wild natives had emerged from the brush and were making signs of friendship and they shook hands all around with the reporters. One of the men could talk Spanish and he asked about deer and one of the Indians pointed to the mountains of the interior and said, "*Si Senor, bastante venado.*" So they all started inland and were soon concealed by the brush.

Of course, even two men fully armed and good gun men, would stand no chance with that number of wild natives.

Soon after they had disappeared around the point of a hill, the men in the boats heard the crack of a gun, followed by the scream of a man in mortal anguish. The men never showed up and Clark started for the big boat in his skiff. About this time, a great buck Indian started out in a dugout canoe to cut him off. O'Brien had kept himself concealed until the Indian came within range, when he raised up and threatened to shoot, and waved him back.

He went back all right, and as soon as Clark came aboard, they raised the anchor and sailed south to Guaymas, sold the boat and returned by train. They gave me the details as here recorded. Friends of the newspapermen took the matter up with the authorities at Washington and they had some diplomatic exchanges with the Mexican Government. Mexico answered: "If you don't want your Americans killed, keep them away from Tiburon."

[*Life of Bill Fain*, unpublished manuscript from the Davis collection.]

About 1893 George Porter and John Johnson fitted out the small sloop *World* in San Diego, to go down in the Gulf for shells and curios, and trade with the Seris. They came to grief in the same way. The men were lured ashore by the friendly attitude of the natives, led up the beach, then retreat cut off and they were shot down and "eaten by the Seris."

Dr. [W J] McGee of the Smithsonian Institute of Washington, in 1895, visited the Island with a party of scientists to study the

[text continues on p. 146]

175 Indians. Dr. McGee, confirming Bill Fain's story of the disappearance
• 698 of Robinson and Logan, the San Francisco newspapermen, secured the
266 facts from a Seri who spoke Spanish, as follows:

> On reaching the Island, Robinson and Logan asked the natives if there were any deer to be shot and receiving an affirmative reply, they started for the interior toward the mountain with several Seris as escort, leaving the two other men with the boats. On the face of it, this was a most foolhardy performance and Robinson actually loaned his rifle to one of the Seris, who accompanied him. The Seri shot Logan in the back and wounded Robinson who called for help. In trying to escape he stumbled and fell and the Indians beat his brains out with rocks.

On the Gulf Coast, this list of killed and of course eaten, could be greatly enlarged and leads to the fact that, up to recent years, no stranger---American, Mexican or Indian---could land on Tiburon and live. Ever since Sonora was settled, two or three hundred years ago, the Island has borne a sinister reputation and up to recent years, it has lived up to its reputation. Even now, no one is allowed to land on the Island without permission of the Governor or the Superintendent.

[188] The Island of Tiburon is isolated, its approaches guarded by deserts and sea, and its people the wildest and most primitive race in North America---every man's hand against them, and they against every body.

175 Dr. McGee's investigations in 1895 failed to convict the Seris of
698 cannibalism or of eating any part of either whites or Indians, killed
266 on the Island or killed in battle. This reputation of cannibalism is
114 prevalent in Mexico as well as in the United States, but the charge has never been proven.

It is true, they eat the flesh of animals raw as well as partially cooked, and that may have given rise to this gruesome reputation, but my own investigations covering several visits on the Island and on the Sonoran coast, failed to convince me that they had eaten human flesh. They told me themselves they had not, and if all reports of cannibalism by the Seris were traced back to their source, they would end in surmise or guesswork. No one, so far as I have been able to find, has actually seen a Seri eat human flesh. Until such a witness can be produced, the Seri remains unconvicted.

Let us examine the so-called evidence of the mining men, as quoted by Bill Fain: the finding of a white man's hands spiked to a cross, and the schoolmaster's papers scattered on the Gulf Coast of Sonora. This evidence is too circumstantial. The discs of leather even fitted the holes in the bag.

In the first place, nails are scarce in Sonora, and no Seri at that time would risk his life to procure nails or spikes at any ranch. Nearly all woods in that region are hard and would almost certainly turn a nail. The Seris had no axes to chop trees to make crosses, and

175 if they were as hungry then as they are today, they would not stop to
648 spike a man up preparatory to serving him. Their only tools then were
286 rocks to use as hammers and hoop iron for knives, and these are in
114 universal use today.
[412]

There is no doubt that the men were killed, but I think these mining men purposely exaggerated their findings, if any.

648 There is no doubt that the Seris were brave fighters, treacherous
721 murderers, sparing neither men, women or children on their raids,
727 killing ruthlessly. But there is one charge which cannot be brought against them, which cannot be said of many tribes north of the border. So far as I could find out, they never tortured nor scalped.

648 The Seris never took prisoners and they never inter-married with
721 other tribes, so their strain is pure.

727 There was one exception. Sixty or seventy years ago, the Seri
583 Chief Coyote Iguana and his band of warriors held up the stage between Hermosillo and Guaymas, and killed all except a handsome Spanish girl of the better class. This girl, Coyote Iguana made his wife and by her raised a family. One granddaughter still survived in 1924, and while more attractive than the general run of Seri, her complexion was fully as dark.

404 The Seris, Ishmaelites among the native tribes of Mexico---the most fascinating Indians in North America!

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123 *Reception Committee, Tiburon Island - 1935*

115 On the twenty-fifth of April, nineteen twenty-two, I engaged the services of Roberto Thompson, who with his father and grandfather

[text continues on p. 149]

123 rancheria of about ten or fifteen huts, half tumbled down, all facing
361 the sea and surrounded by turtle shells and deer bones, and sea shells. Things were dropped wherever they ate. This rancheria was deserted also.

We set sail again and landed on a sandy beach near another deserted rancheria called *Palo Fierro*. We hauled the boat way up and took out all our things and carried them up to the huts. In this place there were twenty-one huts---sometimes three built together. Many of them were in a good state of preservation. They were all in a long row with bleaching bones and turtle shells on all sides. From the inside of one hut I counted thirteen turtle shells around the base. There must have been about a hundred turtle shells here, and a few land tortoises.

123 There were two or three fragments of painted parts of a boat---
[648] probably remains of a boat belonging to seven fishermen who got drunk and landed here, and were all killed by the Seris two years ago. Six months ago a single Seri was captured by some Mexican fishermen and killed in reprisal.

As the wind increased it kicked up an ugly sea and we decided to camp over night. As we were reduced to about six gallons of water, Roberto suggested we take two empty five-gallon cans and go for water. I had offered to stay with the boat but was told the Seris would kill me if they found me alone.

[312] A Seri had told Roberto to follow a certain trail from the rancheria and go between the mountains and he would find a *pozo*, or well, not far away. Ricardo left his private sign and the five of us marched away, following a well-worn trail. For the full distance broken shards of ollas lined the trail at short distances, so we knew we were on
137 the right trail. Brush began at the sea shore and we passed various
123 kinds of desert vegetation---several kinds of cactus, especially the *sarbueso*. This starts with a single great trunk two or three feet in diameter, and then branches out like a vase, running up fifteen to twenty or more great columns like the *saguaro*. They were thirty or forty feet high. In some of these were piled a great accumulation of sticks and trash ten feet high or more, and on the top where the sea eagle makes its nest. There were a number of these.

Then we came to the *pitahalla*, *cholla*, *ocotillo*, and others, and the strange *terote* tree. This tree is the *Bursura Microphylla*, and has an odor like turpentine. It is a fat, dropsical tree like stuffed sausage, with crooked ungainly branches coming out at all angles. There are three varieties---the *terote colorado*, *blanco*, and *negro*, according to the color of the cut bark. Another strange tree was the *palo blanco*. Then there was the *palo verde*, *palo fierro* and *mesquite*. The *mesquite* was rare.

123 A number of signs were marked in the sand. We could not translate
[212] them. We walked single file, rifles in hand, and revolvers handy.

[text continues on p. 155]

123 nets of twisted fiber, hooked the nets in the ends of the notched
312 stick and started off nine or ten miles to the water hole in the heart
[402] of the mountains.

Water carried so far over loose, sandy soil, dodging cactus, threading a devious way among the *talus* thrown off the cliffs and slopes of canyon walls, with the water-bearer barefoot, acquires a value absolutely unknown to the man who draws an unlimited supply from a faucet.

The two men were gone six hours and when they returned they were almost staggering under the heavy loads of water, each man carrying at least one hundred and ten pounds of water, as the cans were full. In addition, one man had a canteen full.

The thirsty people drank sparingly, and a little Seri maid poured some of the precious liquid into a cooking olla for a thirsty dog. After the dog had lapped sufficient to allay his thirst, she carefully poured the residue back into the can, never losing a drop. One drop of water could not be spared after that arduous trip.

484 Bob says a man goes to Hermosillo occasionally and returns to the
147 coast, ninety miles, with two to five cans of *mescal*. It takes probably
• 648 four days to do it, but it is a wonderful feat of endurance. He said about thirty years ago a woman walked the ninety miles during one night, afoot, and reported to the Government House when it was opened at nine in the morning that about fifty of her people had been shot by Roberto's uncle at various times. This uncle was a very hard rough man and the Seris were fond of his mares and steers for meat, and used to steal, so he began shooting a goodly number. Fearing a man messenger would be shot, as men were frequently shot while going along the road, they sent a woman.

Ysabel was Governor at the time. Judgment was rendered against the uncle, and it is probable that a hanging squad would have been sent out to execute him. The Governor, a great friend of the family, sent for him, and he rode ninety miles at night on horseback and was saved with the Governor's help.

Roberto saw twelve Seris pack meat from two mares, two steers and two yearling heifers, for four or five miles to their boats. Their endurance and strength is phenomenal. The question naturally arises, "Why are not burros used by the Seris on the Island to ride and pack,
[402] as they are by their Mexican neighbors on the mainland?" It has been tried, but things were reversed; the Seris packed the burros around in their stomachs.

261 Roberto said: "These people, living on the verge of starvation,
262 never having a continuous food supply, would kill and eat every burro, and it is a common thing on the mainland, if a cow or horse dies, and Seris are in the neighborhood, they will try to beat the buzzards to it. They will gorge in times of plenty, and when food is scarce they

[text continues on p. 160]

262 Burro meat comes first in their estimation, then mares, then steers, but they take what they can get and no questions asked. Burro deer or black tail is a great article of diet, and these deer are on the Island. Wolves and coyotes are on the Island also. I do not think they eat them.

266 As I have said, the Seris are reputed to be cannibals, or to have been. Since those who furnished the meals cannot speak, it is a matter not entirely proven.

• 648 177 There is a war on between Mexican fishermen and the Seris. The Seris are wild for boats and will do almost anything to get one, so two years ago a chance occurred and they killed seven drunken Mexican fishermen and seized their boat. Last summer, some fishermen surprised the Seris, killed one, and recovered the boat. They mourn this boat a lot more than they do the dead man.

648 Twenty or thirty years ago, Governor Ysabel came here with some troops to capture some Yaquis who had joined the Seris. The Governor told the Chief he would have to give up the Yaquis, as they were outlaws. The next day the Seris brought in six right hands. They said they had killed the Yaquis. Asked how and why, they said they had killed them while they slept and they wanted their guns. They cut off the right hand of each as proof.

With all their apparent friendship, we never go without arms. When we sleep our rifles are alongside of us, and we wear our revolvers with us. Sometimes we roll in with our clothes on. But they have never, by sign or act, shown anything but friendship.

851 123 177 A baby boy about four months old was in camp, so Rafael Ysabel baptized him and gave his name Rafael, and presented him with a little gold cross of which his mother was very proud. She held the baby while he poured a little precious fresh water over its head and repeated:

"In the name of the Father, Son and Holy Ghost, I name thee Rafael. . ."

123 Curious black eyes follow us always. When we eat, the Seris often squat around us and watch every mouthful. If there is any bread, gravy, grease, beans or meat left over, we pass it on and they certainly clean up.

While we eat, the waves are always lapping on the shore upon which many pretty shells are thrown by the tide, besides water-worn pumice stone in all sizes down to a small marble.

Our meals are very simple. We bake biscuit in the dutch oven for every meal, cook turtle meat, if we have it, or beans or rice or spuds.

[text continues on p. 171]

five-gallon cans full. They were fastened one each end of a *palanca*, or shoulder pole, and thus brought to camp. If anyone thinks this is easy they should try it over rocky, uneven, sandy, stony ground, dodging thorny vegetation at every step. 123

The colors of the mountains were mostly red of volcanic character, with great streaks of yellow and pink, deeply cut with side canyons and sharp ridges, all similar to other desert ranges. [133]

The men caught a few crabs and gathered clams in the afternoon, which helped out our larder. One of them told about his wife being shot. He said they had a big fiesta and during the drunk, a Seri shot at his head. He happened to be stooping alongside his wife and the bullet buried itself in his wife's thigh. We could feel it through her clothes.

A good many years ago when stages ran between Nogales and Guaymas, the Seris held up the stage, killed the men and captured one Mexican girl. She was brought here and made the wife of one of the chiefs, Coyote Iguana, and she bore children. Some years later her brothers came here to induce her to return, but she refused, saying that she was ashamed to go back and she had children here. About fifteen years ago in a battle with the Papagos, two of her sons were killed. 648 727 563

The Papagos have taken toll of many Seris, these hunted Indians who are such fascinating and ingenious companions, whether they are harpooning turtle or packing water through the thorny wastes. 648

372 516 291

Seris making fire (with fire drill) - Island of Tiburon

123 [202] It was a beautiful morning in early May, and the water was still as a pond, reflecting all the sunrise tints like a mirror. After a breakfast of clams and broth, bread and sand and bronco tea, we made a big smoke and were answered by a similar smoke two miles off, so we knew our friends were on the way.

123 482 [415] In one hour they began trailing in, the women each with a load on her head, walking graceful and erect. On one head was an inverted turtle shell containing nearly all the family belongings done up in rags. On the top was the most precious belonging of all---the rifle. The man carried two or three ollas and other things on a shoulder stick. Everything necessary for their home was carried on their heads.

123 Soon the Indian Blanco was seen paddling in his *balsa;* he also had a load and had paddled all the way from Ironwood camp against wind and sometimes tide. As they were all very thirsty we gave them water around. They immediately went to the shore as it was low tide, and began gathering small oysters from the rocks. Soon each woman returned with a half bushel of them on her head.

About three o'clock and for an hour or so thereafter, Antonio Herrera, the Chief's son Chico, the old Chief Juan Tomas, two other men and one woman, came drifting into camp with their dogs. Each one was loaded with things. They were a pretty wild looking bunch. There was very little food and little water for so many.

• 648 731 The Chief said that a day or two before, some of his men had a fight with some sailors (Mexicans) on the Island of San Estevan four or five miles off the south west corner of Tiburon. Nobody was killed, but the two boats, the wealth of the Island, had drifted away and were lost, leaving eight men marooned on the Island. They had gone there to gather *mescal* to make drink to celebrate a wedding to come off soon. Three men were five days without water. They sent up frantic smoke signals every day. At last they were seen, and help went for them in the only remaining boat on the Island. They were rescued.

648 484 123 The Chief and his men and women, with us, are going to Hermosillo ninety miles afoot with all their belongings to ask the Government for food and help.

142 [222] The Chief looks to be seventy years old, a grim dark-skinned individual with a thin fringe of hair on his upper lip, broad nose, wide nostrils, small black eyes. He is well-built and erect. None of these that I have seen so far have any fat. They are lean and sinewy. [302] The young men are of large build, high cheek bones, some with hair on [291] their lips, their long black hair braided; sometimes with a strand of red worsted. All were either barefooted or wore sandals. I saw one pair of sandals made out of turtle hide; another of burro hide.

648 123 When the Chief arrived, the sail of a vessel was seen over the beach. Bob recognized it as belonging to a launch of a Yaqui Indian

[text continues on p. 180]

• 648 123 friend of his from Guaymas, although only the upper part of the sail was visible. This greatly frightened the women who began packing to escape to the interior. They thought they were friends of ours and it was a plan to have them land. Bob proposed to go out and meet them, and if possible get provisions. With the Chief and two other Seris, Bob and his brother, leaving the firearms behind, hoisted the sail and headed for the mouth of the bay.

When they reached the Infernillo the sloop veered away, its crew being afraid of being killed by the Seri. There were six men and boys and they mustered all the rifles and stood ready to fight. They had just had trouble three days before at San Estevan. At last the wind veered and they had to stop and Bob waved his cap. Finally they got close enough to talk, and then came on board and secured some provisions---a little coffee, sugar, fresh onions, tomatoes and rice, and a little flour for the Chief. They had a fair wind back and returned about dusk.

123 At night everybody was happy. I had gathered two pails of oysters that are exposed on the rocks at low tide and I had built a fire over them so they would open readily, and then had cut them out. We made a sort of stew then, enough to go around the crowd.

123 534 [515] After supper the Indians gave a dance, a very weird affair. I have seen nearly all the musical instruments used by the Indians of the Southwest and Mexico in their ceremonial dances, but the Seris were the first tribe I had ever seen use the bow and arrow as a musical instrument. A six-foot bow with a tightly stretched bowstring of twisted sinew was held, back down, on two inverted bowl baskets by one of three men, all of whom struck the string with arrows. This [533] emitted a musical baritone note like the vibration of a piano wire, in perfect rhythm to the weird chanting of the three musicians, singing a wild plaintive air.

535 123 The dancer, Manuel Encina, a grim old boy, facing the orchestra, mounted the back of a turtle shell resting over a hollow in the sand, as a resonator, with a long staff held in his right hand to steady him, and gave one of the prettiest exhibitions of the double shuffle on the rounded top of an oily old turtle shell that I have ever seen. At the end of each canto there was a rest, and then they went at it again. This lasted two hours, and was lighted by a feeble camp fire and moon and was danced on the shore.

123 Before daybreak the following morning we arose, loaded the boat, and then the Indians brought a lot of things, besides three or four rifles. Then two young Indians jumped in. We were so crowded that we could not move. The two Indians and two of our men used paddles as we were too crowded to row. There were seven men besides all the junk, and the boat was so loaded and so cranky there was imminent danger of capsizing. At the least movement she would dip to the edge of her

"I'll take a piece of leg," the other would answer.

A chunk of living flesh would be cut out and piece by piece the captive was hacked to pieces.

Only two or three years ago Bob and two friends had trouble. Bob escaped by a very narrow margin, but they tracked him like hounds for twelve miles. His friends were captured and stripped of clothes and everything, and expected every moment to be shot. They caught a hog, hung it up alive and cut a long strip off the back and left it hanging. They got frightened away suddenly and left the two friends unharmed. His uncle was captured on his way to Royon, on the San Miguel River twenty miles south of Opodepe.

648 The Yaquis and the Seri Indians have been enemies for untold years. What grim scenes the eyes of the desert have witnessed in the past!

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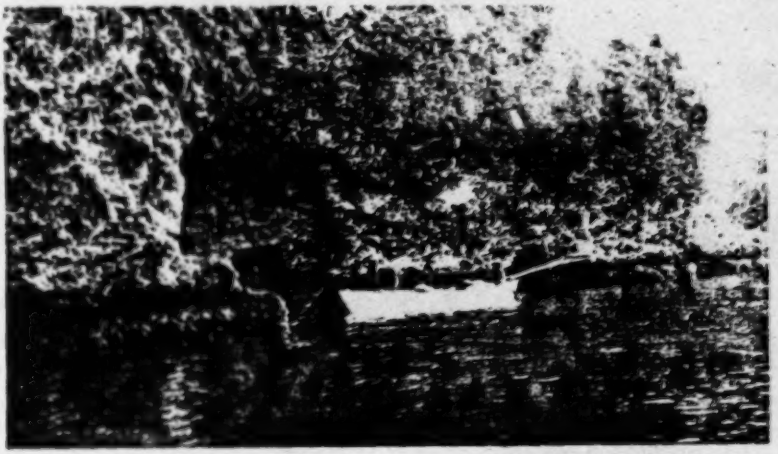

Entering cave - Tiburon - 1936

123 One night when the sea was quiet Bob and his brother went sea turtle hunting but didn't catch any. We made a bright fire of drift to guide them back. The sea murmured gently, accompanying the crackle of the fire.

We turned in on-shore in the clean white sand. We roasted the turtle breast that the Seris gave us, by standing it on edge in front of the fire. It was tender and elegant. For bread we made pancakes, mixed with sea water. We were out of baking powder. The green coffee secured from the Yaqui fishermen was wasted in a frying pan until it

123 but nothing happened.

123 622 [115] We reached Hermosillo at three in the afternoon, and as we landed Roberto and Sara met us, and Roberto embraced me. Then the Seri Indian Chief rushed up and fairly hugged me in his joy at seeing me again. A timid wild-looking Seri boy, of fifteen years of age, shyly shook hands with the *Americano*, while all the Mexican men and women, fully one hundred in number, looked on open-mouthed and wide-eyed, to see the Chief of the wildest and lowest of savage Indians in North America, rush up and embrace a white man.

We all climbed into Roberto's auto-truck, and my things were brought to Hotel Cohen, and then we all went to Roberto's home and stayed all the afternoon. He had just returned from the coast the day before, and Juan Tomas was determined to come also and greet me, and the boy---a nephew---hung on to the Chief, and finally Roberto said he would have to return on foot if he brought him. Juan Tomas said that made no difference. He would walk to the coast eighty or ninety miles, if only he could come.

[291] [302] He was probably seventy-five years old. He wore a hat, but his hair was straggly and he had a slight moustache. He wore shirt and trousers and a dirty kilt---remanent of the Pelican-skin-kilt---around his waist, and he was barefooted. The boy had a not unpleasant face, long wild hair, shirt, pants, and a cotton kilt reached to his knees. He, too, was barefooted.

I gave the Chief a knife, and the boy a red crayon and fifty cents. With the crayon he made a V on his kilt. He was very shy and always kept in a shadow, or in the background, and he spoke no Spanish although he knew the Spanish alphabet.

Sara showed some photographs and postcards in a baloptican in a dark room, and among them were pictures of some Seris and myself. These created much excitement with the Chief and the boy, and they jabbered together in the Seri language with animation. They recognized some of the subjects, their own people.

584 622 648 123 Juan Tomas is to be married soon to an elderly Seri dame, and we have been invited to attend the fiesta. He has been laying in the trousseau for the bride, and several gallons of mescal. A steer or burro will have to be provided, and all the fixin's and nothing will be left undone to make a very festive occasion. When asked to show us his gifts he reluctantly brought forth a package which he carefully unwrapped and disclosed eighteen yards of *manta*, two red pieces and one pink piece of Calico, some red handkerchiefs, and one box for painting the face. He carefully wrapped these up again and put them in the room set apart for him and the boy.

[508] [509] The woman he is to marry has no male relatives from whom she can be bought, so the Chief appointed a man and created him Uncle *pro-tempore*, and to him the Chief is going to give a rifle and a blanket as the purchase price. Pretty high!

642 621 618 714 [186] [406]

The third specification states that a kin group, to constitute a clan, must exhibit actual social integration. Murdock stresses the necessity of observing a positive group sentiment, such as would be manifested by organized collective activities or group functions, before the group can be characterized as a clan. An essential feature of this group sentiment is the inclusion of the wife as an integral member of her husband's kin group.

621 618 [628] [622] [701] [583] [406]

This sort of social integration was indeed exhibited by the Seri kin group of each subdivision. It was, in fact, fostered by the isolation brought about by the inhabitants' reservation of hunting and fishing rights for themselves. Tension existed between certain subdivisions and, since there was no chief, the oldest capable male organized and led the fighting force of the clan. In times of need, the members of the group united to give mutual assistance. The groom-to-be could expect material aid from his fellow clan members in the payment of the bride price. Mutual assistance was given in the fulfillment of puberty ceremony and burial obligations. The men cooperated in their hunting and fishing expeditions. The women of the clan, including the in-married spouses, cooperated in the gathering and sharing of food. Everyone could attend the various fiestas. It is said that in the performance of these collective activities, close harmony generally prevailed.

BAND INTERNAL AND EXTERNAL RELATIONS

642 619 578 [648]

The division of the Seri tribe into bands was likely brought about through internal strife. During the period of band history known to the present-day Seri,[8] however, serious skirmishes seem to have been fought predominantly with non-Seri groups.[9]

BAND I

642 621 628 578 [721] [648]

Band I internal relations appear to have been relatively peaceful. The inhabitants of subdivisions 1, 2, 3, 4, and 5 were fishermen as well as hunters and gatherers, whereas the people of subdivision 6 preferred to subsist on gathered food and wild game. Also, the members of Band I robbed cattle and horses, which pursuit brought reprisals from the Mexican ranchers. There was apparently considerable social intercourse among the six subdivisions, even to the extent that hunting rights of one were sometimes granted to inhabitants of a neighboring section.

Trouble developed when some members of Band I speared fish within the domain of Band V. Here also bitter fighting broke out, and any semblance of peaceful co-existence between the two groups was destroyed.

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Except for the occurrence of several battles, relations between Bands I and III were peaceful.

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Relations with non-Seri groups were not always peaceful. For many years the members of Band I were on friendly terms with the Papago; they often camped together and even intermarried. Due to a misunderstanding,[10] fighting erupted between the two groups and many people were killed in the years which followed.

BAND II

The external relations of Band II were decidedly turbulent. Although their primary base of operations was a coastal area, the people did not use the ocean as a source of food. They preferred beef and horse meat which was easily acquired by stealing animals from ranches. Here again the wrath of the ranchers and the government was incurred.

[262]
[721]

A small group of Yaqui eventually joined Band II and intermarried with them. The Seri claim that the Yaqui induced the warriors of this band to assault travelers on the road between Hermosillo and Guaymas. Coyote Iguana, who according to Seri tradition captured Lola Casanova, was of this band. This activity soon brought retribution from the government. Later, dissension arose between these Seri and the Yaqui.

[582]

The enmity and strife that occurred between Bands II and V were mentioned above.

BAND III

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The history of the internal relations of this band on Tiburon Island seems to have been marked by periods of violence. Battles between subdivisions sometimes occurred; however, they were usually short-lived and soon forgotten. A major struggle once occurred when a shaman named *ʔapetla* "the invincible one" and warriors from subdivision 4 made repeated raids upon the neighboring subdivisions and killed many. Eventually, his enemies overcame their fear and destroyed the killer.

[721]

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Although the inhabitants of Band III were hunters, gatherers, and fishermen, they began to rob cattle once they became established on the mainland. They too incurred the wrath of ranchers and the government.

BAND IV

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Since the members of this band were, by choice, inhabiting an inland area of Tiburon Island, they lived in relative isolation as hunters and gatherers. Their primary contacts were with members of Band III with whom they intermarried.

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[582]

Band V

642 [226] [501] [721] These people were apparently hunters, gatherers, and fishermen. It is said that they speared fish from the shore since they did not use *balsas*. They too apparently raided the ranches. Their warring nature has already been discussed; it resulted in the [582] [628] acquisition of few friends. However, several marriages between members of this band and members of subdivision 2 of Band III are said to have occurred.

Band VI

[131] [342] [501] [411] [262] The members of Band VI lived on San Esteban Island and were the most primitive of the tribe. They lived in huts made of driftwood and in caves and made extensive use of the *balsa*. Although they did not have the bow and arrow, they did become expert in the use of the spear. The people depended mainly on a seafood, iguana, and maguey diet.

621 628 578 [157] Perhaps it was due to the confined living space on the small island with the accompanying lack of fresh water that relations between the four subdivisions were precarious and fights broke out frequently. The Seri today stress the fact that the members of this band were impetuous and unpredictable.

642 [574] [628] Their relations with the other bands were generally good however. Seri from Band III were free to visit San Esteban where they were well treated.

[484] [191] [648] The San Esteban people seldom traveled to the mainland, and, since they spoke no Spanish, it is probable that they made no peaceful contact with non-Seri groups.

COLLAPSE OF THE BAND SYSTEM

642 628 578 648 Internal strife in the Seri tribe was probably a major factor in the establishment of the band system. External strife was a major factor in its downfall.

[721] Reference has been made to the plundering, killings and rustling of cattle to which certain of the bands were dedicated. The concern of the Sonora government was aroused, and steps were taken to crush the rebellious groups. According to the present-day Seri, military action by army units and rancher outfits against the various bands resulted in the near-destruction of the whole tribe.[11]

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[173]

BAND V

It was stated above that this band fought with Band II and then with Band I. Since Band V was likely killing cattle, they also may have been harassed by soldiers. Eventually Band V abandoned its territory near Punta Tepopa and headed south along the coast to a camp near present-day Bahia Kino. From this camp the entire group disappeared and was never seen again by members of the other bands. The Seri of today believe that Band V either traveled inland or was destroyed by a non-Seri force.

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BAND II

These people were rustlers and marauders. Government intervention in the situation was inevitable. The Seri recount the following final encounter between this group and the government forces.

The entire remaining membership of Band II was hiding out in a nearly inaccessible swamp thicket at Bahia Kino. Knowing that an armed force of soldiers and ranchers was searching for them, the people left their camp to seek safety elsewhere. Almost immediately they were attacked by the superior armed force which proceeded to wipe out the whole group. A youth who had avoided capture is said to have reported the affair to the Seri on Tiburon Island. This event may have occurred during the Encinas Wars fought from 1855 to 1865.

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BAND VI

The members of this band on San Esteban Island were little interested in the mainland and did not participate in the raids on man and livestock there. Nevertheless, they were to share in the severe punishment meted out to the bands guilty of multitudinous depredations.

Sometime after the massacre of Band II, a ship arrived at San Esteban, and many of the people were induced to go aboard. The rest of the inhabitants followed the ship to a camp on the eastern side of Tiburon Island where they were to receive gifts. As the people congregated, they were herded into a stone corral. Apparently, some of the San Esteban men were killed at this time. The rest of them, along with the women and children, were taken to Santa Rosa point on the mainland. Here, the Seri say, more of the men were killed. The remaining men were strung together by wire and led away, never to return.

The San Esteban women and children, along with some Tiburon Island women and children (of Band III), were taken in

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the vessel to Guaymas. With the aid of a group of Yaqui, some of these women were said to have been permitted to go to Hermosillo and eventually to return to their home on Tiburon. Others of their group are said to have remained near Guaymas. The women who returned to Tiburon reported that the San Esteban women and children were put aboard another ship which sailed southward.

BANDS I, III, AND IV

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As opposition from the Papago and government forces increased, the members of Band I were forced to seek refuge on Tiburon Island. The mainland members of Band III (subdivisions 11 and 12) were also forced, especially during the Encinas Wars, to flee to Tiburon. There the combined forces of Bands I, III, and IV sought to cope with the military expeditions sent out through the years to exterminate them. Tiburon Island is an adverse battlefield for the uninitiated; some expeditions were turned back due to lack of potable water or because of failure to make contact with the enemy in the mountainous terrain. Some expeditions did encounter the Seri, however, and many natives were either killed or captured.

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Through the years, then, these military encounters, along with smallpox and measles epidemics, were responsible for reducing the Seri tribe to a small remnant. The band and clan systems lost their functional relevance as the people continued to live together for mutual protection. Shortly after the turn of the century, the expeditions and raids had practically ceased.

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SIGNIFICANCE OF BANDS TODAY

With the dissolution of the band system, the rule of descent shifted from patrilineal to bilateral, and the rule of residence shifted from patrilocal to neolocal.

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Although the substance of the band system is no longer a reality, the concept of land ownership still remains. A young Seri of today may choose to be associated with either the *i?iziiting* of his father or that of his mother. He is said to inherit part ownership of the area. It is recalled by one informant that in former times ownership of a mountain was especially important. Sometimes ownership of a mountain was included as part payment for a bride. Thus a person might 'own' a mountain in a subdivision other than his own.

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A custom exists even today whereby a person names his dog after a mountain or other geographical point located in his subdivision. Although the person may re-use the name, each dog so named must be of the same sex as the first.

so named must be of the same sex as the first. The significance of land ownership needs further investigation.

Many of the Seri still prefer, when possible, to live in their chosen band area. Sometimes a person, when he is approaching death, will ask to be taken to his own i?iziitng, where he can die and be buried in the area of his choice.

NOTES

1. Due to printing limitations, stress on Seri words has been omitted, and several orthographic symbol changes have been made for this paper. The phonetic values of the symbols used are the following: p is voiceless labial stop; t is vl. dental stop; k is vl. velar stop; ? is glottal stop; f is vl. labial flat spirant; w is vl. labial grooved-rounded spirant; s is vl. alveolar spirant; z is vl. alveo-palatal spirant; l is vl. lateral spirant; h is vl. velar spirant; x is vl. back velar spirant; m is labial nasal; n is dental nasal; ng is velar nasal; y is palatal semivowel; i is a high close front vowel; e is a low close front vowel; a is a low open central vowel; o is a mid close back vowel.

2. These data were compiled during field trips to the Seri camps during the years 1956-61, the studies being carried out under the auspices of the Summer Institute of Linguistics. The principal informant was R. Herrera T. whose information was checked with and supplemented by nine of the older members of the tribe. I am indebted to my colleague, David Thomas, who read an earlier draft of this paper and made helpful suggestions.

3. 1) W. J. McGee, "The Seri Indians," *Bureau of American Ethnology, Annual Report*, No. 17, Part 1. Washington, 1898. 2) A. L. Kroeber, "The Seri," *Southwest Museum Papers*, No. 6. Los Angeles, 1931. 3) W. B. Griffen, "Notes on Seri Indian Culture, Sonora, Mexico," *Latin American Monograph Series*, No. 10, Gainesville, 1959.

4. It will be noted that between subdivision 3 and 4 on Fig. 3 there is an unnumbered area, the status of which is uncertain.

5. Kroeber states that McGee's concept of Seri maternal lineages crystallized into totemic clans with matron rule seem a fantasy. In Kroeber's opinion, "The Seri may never have had sibs or clans; but the fact that they appear to lack them now is no positive evidence that they were without them three centuries ago. Shifts of residence, contraction of territory, shrinkage of numbers, amalgamation of distinct bands, may well have obliterated much of such social fabric as they once possessed."

Griffen discusses the nature of the former Seri bands and states, "they may have been patrilineal and exogamous. The criteria . . . that Julian Steward has exposited for the formation of exogamous, patrilineal bands . . . are and presumably would have been met formerly in the Seri habitat." Griffen lists other aspects of this type of band which are also verified to some extent by his data. From reading his material, it is obvious that he suspects the existence of clans at some earlier period. He emphasizes the need for further investigation.

6. G. P. Murdock, *Social Structure*, Macmillan Co., New York, 1949.

7. Marriages were usually contracted within the band.

8. As Kroeber points out, their memory likely covers only the latter part of the period of Spanish contacts.

9. The Seri recall nothing of Seri-Pima contacts and little of Seri-Apache relations.

10. The story is related that one day some Seri entered a cave where they found several Papago jugs filled with seeds. Being hungry, the people ate the seeds and left some arrows as token payment. The Seri say that the Papago apparently believed the arrows were intended as an insult. Fighting broke out soon afterward.

11. The Seri concept of the band annihilations is seen to be in contradiction to McGee's statement (p. 132): "Concordantly with their primary characteristic, the Seri have avoided ethnic and demotic union beyond the narrow limits of their own kindred; and even of these they seem to have cast out parts, annihilating the Guayma and Upanguayma, displacing and nearly destroying the Tepoka, and outlawing individuals and (apparently) small groups."

262 I have no idea, of course, what the diet may
178 have been in the past since only archaeology can suggest the answer. But I am sure that there has been much change in their diet since Kroeber saw them, not in the basic pattern but in the composition. With the introduction of hook and line [177] fishing, the percentages swung in favor of fish, [226] while decimation of the marine turtle cut down the importance of this animal. Simultaneously, 262 the Seris now have available manufactured or [177] imported Mexican food items: flour, sugar, rice, [439] potato (when no one is looking; potatoes are not supposed to be sold to them because they make *tepache* from them which makes them grossly ill) fish in cans, coffee and tea. Dependence on the products of the desert has dwindled. Rattlesnakes, desert turtles and chuckawalla still find their way to the Seri kitchen but not too frequently. Pelican and sea gull will be eaten only when rough times beset them but are disdainfully refused at other times. My own estimates, impressions not supported by any attempt to measure their diet, are as follows:

fish	50+%
turtle	8-
Mexican import	20
desert plant	7
desert land animals incl. stock	5
shellfish	10
total marine origin	68+
total desert origin	12
imported origin	20

224 Another important change in the pattern is the
178 unquestionable decrease of hunting (other than marine animals) in Seri life, as of the domestic [685] stock stealing, the place of which has been taken in a way by the dependence on manufactured foods and items. Hunting nowadays is done rarely and only few individuals will devote some months out of the year to it. Stealing of domestic stock [685] has ceased for practical purposes, since in the past it lead to virtual extermination of these Indians. Occasionally the Seri kill off a semi-wild burro, herds of which run about loose in the desert or they'll get leavings off one, hunted down by a Mexican trader or fishermen.

411 The Seris' basic tools of game procurement have
224 changed. Bow and arrow were still much in evidence and in use in McGee's time but seem to have gone out soon after. Kroeber did not mention them and by now they are quite extinct, except as [857] clumsy toys little boys use to play with. The throwing stick is still used on rabbits—any stick one can scrounge on a moment's notice will do for the purpose. If any traps or falls had been used we do not know of them. Accidental stones may be used much in the same way as throwing sticks. In general, various sorts of fire arms, mostly .22 and .38 [177] caliber are owned by a good many Seri men and have replaced other weapons in the terrestrial hunt.

226 More important are changes in the fishing pro-
411 cedures. Formerly spear and detachable harpoon
177 were their only marine weapons. Even as late as 1930, during Kroeber's visit, the Seris made no use of hook and line. But now, hook and line of

[P. 7A]

apparently a line of type has been omitted here-Analyst]

642 621 618 714 [186] [406]

The third specification states that a kin group, to constitute a clan, must exhibit actual social integration. Murdock stresses the necessity of observing a positive group sentiment, such as would be manifested by organized collective activities or group functions, before the group can be characterized as a clan. An essential feature of this group sentiment is the inclusion of the wife as an integral member of her husband's kin group.

621 618 [628] [622] [701] [583] [406]

This sort of social integration was indeed exhibited by the Seri kin group of each subdivision. It was, in fact, fostered by the isolation brought about by the inhabitants' reservation of hunting and fishing rights for themselves. Tension existed between certain subdivisions and, since there was no chief, the oldest capable male organized and led the fighting force of the clan. In times of need, the members of the group united to give mutual assistance. The groom-to-be could expect material aid from his fellow clan members in the payment of the bride price. Mutual assistance was given in the fulfillment of puberty ceremony and burial obligations. The men cooperated in their hunting and fishing expeditions. The women of the clan, including the in-married spouses, cooperated in the gathering and sharing of food. Everyone could attend the various fiestas. It is said that in the performance of these collective activities, close harmony generally prevailed.

BAND INTERNAL AND EXTERNAL RELATIONS

642 619 578 [648]

The division of the Seri tribe into bands was likely brought about through internal strife. During the period of band history known to the present-day Seri,[8] however, serious skirmishes seem to have been fought predominantly with non-Seri groups.[9]

Band I

642 621 628 578 [721] [648]

Band I internal relations appear to have been relatively peaceful. The inhabitants of subdivisions 1, 2, 3, 4, and 5 were fishermen as well as hunters and gatherers, whereas the people of subdivision 6 preferred to subsist on gathered food and wild game. Also, the members of Band I robbed cattle and horses, which pursuit brought reprisals from the Mexican ranchers. There was apparently considerable social intercourse among the six subdivisions, even to the extent that hunting rights of one were sometimes granted to inhabitants of a neighboring section.

Trouble developed when some members of Band I speared fish within the domain of Band V. Here also bitter fighting broke out, and any semblance of peaceful co-existence between the two groups was destroyed.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

171 726 measure; so that the Seri frenzy is at once more instinctive and more fortuitous, or in general terms more inchoate, than the corresponding condition among most of their contemporaries. Accordingly the war customs, like several other features of the tribe, seem to afford a connecting link between the habits normal to carnivorous beasts and the well-organized war customs of somewhat higher culture-grades; and thus they contribute toward outlining the course of human development through some of its darker stages.

712 Conformably with their poverty in offensive devices, the Seri are exceedingly poor in devices for defense. It is an impressive fact that a restricted motherland which has been successfully protected against invasion for nearly four centuries of history should be destitute of earthworks, fortifications, barricades, palisades, or other protective structures; yet no such structures exist on any of the natural lines of approach, and none are known anywhere in Seriland save in a single spot—Tinaja Trinchera—where there are a few walls of loose-laid stone, so unlike anything else in Seriland and so like the structures characteristic of Papaguería as to strongly indicate (if not to demonstrate) invasion and temporary occupancy by aliens. The jacales are not fortified in the slightest degree, unless the turtle-shells with which they are sometimes shingled be regarded as armor; even the most ancient rancherías are absolutely devoid of contravallations of earth, stone, or other material; and both the structures themselves and the expressions of the folk concerning them indicate that the jacales are not regarded as fortresses or places of refuge against enemies, but only as comfortable lodges for use in times of peace. Nor are walls like those of the borderland Tinaja Trinchera known in the interior of the tribal territory—e. g., the similarly conditioned Tinaja Anita, which differs only in the greater abundance and permanence of the water-supply, is entirely devoid of artificial structures, not even a pebble or bowlder being artificially placed save perchance by the casual trampling of the pathways. As already noted, the Seri seem to be practically devoid of knife-sense; they are still more completely devoid of fort-sense, although (and evidently because) they rely so fully on natural things, including tutelaries and their own fleetness, for safety.

713 Although devoid of even the germ of fortification-sense, so far as can be discovered, the Seri are not without a sort of shield-sense, which is of much significance partly by reason of its inchoate character. The ordinary shield is a pelican pelt, or a robe or kilt comprising several skins; it is employed either for confusing the enemy by swift brandishing, something after the fashion of the capa of the banderillero in the bull ring, or for actual protection of the body against arrows and other missiles or weapons. So far as known it is not backed or otherwise strengthened, the user relying solely on the stout integument and [825] thick feathers—or rather on the mystical properties imputed to the pelt as the mystery-tinged investiture of their chief creative tutelary.

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1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

On the coast bucklers are improvised from turtle-shells, though, according to Mashém (confirmed by direct observation), these are not carried inland for the purpose; but the protective function imputed to the turtle was well represented in the rancherìa at Costa Rica by several fetishes made from phalanges of turtle-flippers tricked out in rags in imitation of Caucasian dress (somewhat like the mortuary fetishes illustrated in figure 40*a* and *b*). On the whole, the most conspicuous feature of the individual shields or protectors is their emblematic character; they are sortilegic rather than practical, and express imputation of mystical potencies rather than recognition of actual properties; and in this as in other respects they correspond closely with the offensive devices, and aid in defining the ideas and motives of the primitive warriors. 713 [825]

The actually effective protection of the Seri in warfare is their fleetness, coupled with their habitual and constitutional timidity, i. e., their wildness—for they are verily, as their Mexican neighbors say, "gente muy bronco". Moreover, they are adepts in concealing their persons and their movements behind shrubbery and rocks, and in finding cover on the barest plains; and suggestions are not wanting that the protecting shrub-clumps and rocks of their wonted ranges are credited with occult powers and elevated to the lower places of their zoic pantheon, after the customary way of that overpowering zootheism, or animism, which the Seri so well exemplify in many of their habits. 726 [186] [178]

Summarily, the warfare of the Seri complements the pacific industries of the tribe in every essential respect. It is notable for improvidence, i. e., for reliance on chance; the dearth of devices for offense and defense parallels the poverty in industrial artifacts; and the disregard of fortifications is of a kind with the squandering of present food supplies and the utter neglect of provision for the future. A striking correspondence between workfare and warfare is found in the fierce blood-lust displayed alike in chase and battle, a feature manifestly borrowed from beasts and intensified by besetting beast-faith; and more striking still is the correspondence in motive, as revealed by the overlapping functions of the protective kilt, by the borrowing of animal symbols alike in peace and war, and by the imitation of animal movements on the warpath as in the chase.

In the last synthesis the warfare of the Seri may be considered as characterized by two attributes: (1) The motives, so far as developed, are zoomimic in even greater degree than the prevailing motives of the pacific industries; and (2) the methods are shaped largely by mechanical chance, like those normal to protolithic industry.

Nascent Industrial Development

Industries form the chief bond between man and his environment. The esthetic activities arise in the individual and extend to his fellows; the institutional activities express the relations among individual men 000

2: Kroeber E-5 (1930)1931 NU31 Seri NU31

524 Dice are three splints of cane; tapering toward both ends, nearly flat. The concave inside is greenish white, the outside darker. The count is: 0 insides up, win 4; 1 inside up, win 1; 2 insides up, lose 1 and play; 3 insides up, lose 4. The 3 splints are stacked together, then thrown endwise against the palm, a piece of turtle shell, or anything similar, so as to fly forward and scatter on the ground. (Some players probably acquire a degree of skill in making the canes fall right.) A player repeats until he throws 2 whites or insides. For points scored, he draws lines on the ground in front of himself. His opponent erases his lines as he wins, or adds to them as he loses, until he himself is ahead, when he begins to mark his own lines. Ten points wins the game. A stick is then set in the ground by the winner, who goes on playing the next game. That is, if he has 8, and throws 4, he sets up his stick, erases 6 lines so as to start the new game with a credit of 2, and throws again. The Seri perform these additions and subtractions with the rapidity of a practiced white man.

A ring of people may play at once. Their scoring in relation to one another was not ascertained, but it is presumably each from his neighbor, with the totals shown by sticks.

Since with fair throws the losses in this game must equal gains, a lead of 10 over an opponent is as much as could expectably be played for if the game were not to be unduly protracted.

526 Football race is played with *palo fierro* balls, perhaps 3 inches in diameter, one to each side of 4 runners. The ball may be moved only with the foot. The race is along the beach, where cactus and brush do not interfere. The distance, according to places named to Sr. Thomson and known to him, is about 6 miles. The men on a side relieve each other in informal relays; usually only 1 or 2 finish. The [648] Seri once went north to play the Papago this game, but lost.

Shinny is a woman's game, preliminary to the football race. Four women to a side carry sticks with which they try to throw an 8-12 inch hoop to a goal mark at the end of a short field. Behind each side stand the 4 men runners who are to race with a ball.

Notes on Material Culture

482 Women carry loads on their heads with a ring: men with the pên, Spanish *palanca* or lever, a stick over the shoulder, with load [171] hung from each end. These are the usual Sonora and Sinaloa Indian ways of carrying.

516 The Seri sit and lounge randomly. The men squat, occasionally cross the legs, put them sidewise, or sit with one knee up. The women wear long cloth skirts, but apparently sit just as variously.

714 Body armor, *naitkanikap*, with sleeves and helmet, and a shield. *saXe'tiX*, both of hide, were worn. The shield was described as 4 or 5 feet high, roof-shaped toward the front. It is not clear whether

2: Kroeber E-5 (1930) 1931 NU31 Seri NU31

it was set up by an archer in front of himself, or carried for him by another man. At any rate it suggests open fighting besides raids and ambushes. 714 ●

Pottery, which is thin, porous, and reddish-buff to gray, was not seen made. The clay is said to be tempered with jackrabbit or horse dung. The vessel is started, apparently by coiling, in a dish or receptacle. It is certainly built up by coiling, the sausages being somewhat less than the thickness of a finger. It dries fast, the bottom becoming somewhat hard as the top is being built. The coils are smoothed as they are added, with a stone inside, a shell to scrape the outside. A paddle is not used. The vessel is further smoothed with the stone and dried for a day. It is fired with wood, sufficient manure being unavailable on the island. 323 [372]

2: Kroeber E-5 (1930) 1931 NU31 Seri NU31

is what their "shirt" (McGee, pl. 29) probably was. The fabrics of McGee's Mexican informant may refer to gunny-sacks made over into improvised imitations of civilized garments; or to single-element carrying bags. It is entirely possible that contact with the cloth-weaving tribes of Sonora long ago induced the Seri to shrink from habitual complete nudity; but it is difficult to imagine them producing even a coarse wearable cloth. McGee's interpretation of the historic sequence of Seri garments is of course wholly speculative.

The cradle shown by McGee (p. 226, fig. 30) consists of a kite-shaped hoop with eight sticks tied across it and a lashing thong passed back and forth across it half-a-dozen times. Even allowing for some slip of the parts in transport to Washington, this specimen is quite typical in Seri disregard of evenness, neatness, order, or finish. The Yaqui cradle illustrated by Hrdlička[7] consists of eight or nine lengthwise sticks or canes twined close together. The Lower Californians used a basket or a turtleshell. The Gila Pima and river Yuman cradle is of "ladder" type, and therefore similar in structure to the Seri except that it lacks the point at the bottom and has the sides parallel; it also carries a hood of wickered or twilled splints. As regards basic structure, one form of Maidu cradle is most similar to the Seri; just as the plan of the Yaqui one reappears among Miwok, Yokuts, and Mono a little further south in California.[8] It appears from this irregular distribution that so simple an apparatus as the open or flat baby-carrier, which can be just as serviceable without a definite technique or style entering into it, is likely to vary locally without much significance, and that its forms will indicate historic connection only when they are parallel in a number of details. In these respects it resembles house types. In both these objects, new "inventions," certainly of detail elements and perhaps of basic structure, seem to be readily made and adopted.

McGee's finding (p. 247) that the Seri are "not habitual stone arrow-makers" has a parallel among the river Yumans, and, at least partially, among the remaining Sonoran tribes. His conclusion (p. 259) that the *yerba de la flecha* (magot, Sebastiano bilocularis?) was an Opata but probably not a Seri arrow poison, seems sound. The plant was shown me on the island, and the Seri knew it as venomous, but volunteered nothing as to using it on arrows.

That the question of Seri cannibalism must be left open, with a preponderance of evidence against the practice (p. 263), also seems a conservative judgment.

As to shields, McGee learned of loose pelican pelts and turtle-shells (p. 264), I of armor and a large upright shield of hide. Both accounts may be right, one referring to emergency pick-ups, the other ——— to prepared defense or attack.

[7] AA 6, pl. 9, 1904.
[8] BAE-B 78:885, fig. 48, pls. 39, 46.

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the vessel to Guaymas. With the aid of a group of Yaqui, some of these women were said to have been permitted to go to Hermosillo and eventually to return to their home on Tiburon. Others of their group are said to have remained near Guaymas. The women who returned to Tiburon reported that the San Esteban women and children were put aboard another ship which sailed southward.

BANDS I, III, AND IV

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As opposition from the Papago and government forces increased, the members of Band I were forced to seek refuge on Tiburon Island. The mainland members of Band III (subdivisions 11 and 12) were also forced, especially during the Encinas Wars, to flee to Tiburon. There the combined forces of Bands I, III, and IV sought to cope with the military expeditions sent out through the years to exterminate them. Tiburon Island is an adverse battlefield for the uninitiated; some expeditions were turned back due to lack of potable water or because of failure to make contact with the enemy in the mountainous terrain. Some expeditions did encounter the Seri, however, and many natives were either killed or captured.

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Through the years, then, these military encounters, along with smallpox and measles epidemics, were responsible for reducing the Seri tribe to a small remnant. The band and clan systems lost their functional relevance as the people continued to live together for mutual protection. Shortly after the turn of the century, the expeditions and raids had practically ceased.

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SIGNIFICANCE OF BANDS TODAY

With the dissolution of the band system, the rule of descent shifted from patrilineal to bilateral, and the rule of residence shifted from patrilocal to neolocal.

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Although the substance of the band system is no longer a reality, the concept of land ownership still remains. A young Seri of today may choose to be associated with either the *i?iziitiŋ* of his father or that of his mother. He is said to inherit part ownership of the area. It is recalled by one informant that in former times ownership of a mountain was especially important. Sometimes ownership of a mountain was included as part payment for a bride. Thus a person might 'own' a mountain in a subdivision other than his own.

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A custom exists even today whereby a person names his dog after a mountain or other geographical point located in his subdivision. Although the person may re-use the name, each dog so named must be of the same sex as the first.

I: McGee E-5 (1894-1895)1898 NU31 Seri NU31

648 On first learning of the incident, months before the diplomatic correspondence began, the state and federal authorities promptly adopted vigorous punitive measures. A vessel carrying a force of federal troops was dispatched from Guaymas and a body of state troops were sent from Hermosillo with instructions to meet on the coast and capture the criminals at any cost, even to the extermination of the tribe if resistance was offered. But like so many others, the expedition failed; the horses of the land party were stalled in the sands and burrow-riddled plains, the vessel was harassed by storms and tidal currents, and the landing boats were swamped by the surf, while the Indians merely fled at sight of the invaders toward inaccessible lairs or remote parts of their territory; and when the water was gone and men and animals were at point of famishing, the forces retired without so much as seeing a single Seri.

During the ensuing autumn the tribe, having quenched their blood-feud in alien blood, turned toward peace, and sent a matron of the Turtle clan, known as Juana María, to Costa Rica—i. e., Rancho de San Francisco de Costa Rica—where she was gradually followed by younger matrons and children, then by youths, and finally by warriors (after the fashion of Seri diplomacy) to the aggregate number of about sixty.
124 Here they were found by the first expedition of the Bureau of American Ethnology, in November, 1894; and here, under the still strong influence of the venerable Don Pascual, supplemented by small gifts and persistent pressure, they gradually "gave their language", submitted to extensive photographing, confessed specifically to the Robinson killing, and yielded up nearly the whole of their portable possessions in the way of domestic implements and utensils, face-painting material, pelican-skin robes, snake-skin necklaces, etc.

648 With the return of the Bureau party to Hermosillo the Indians became restive and soon withdrew beyond the desert. In the course
721 of the ensuing winter a group returned to the neighborhood of Costa Rica, where, by aid of strategy, seven warriors (including some of those seen at the rancho in the preceding November) with the families of four, were arrested, taken to Hermosillo, tried, and, according to oral accounts, banished. Irritated by this action, and connecting with it the visit of Don Pascual and the strangers desiring their language and sacred things, the clans resumed the warpath, displaying special animosity toward the residents of Costa Rica. There were a few minor skirmishes; then, at the instance of the state officials, a number of Papago Indians, who are feared by the Seri beyond all other enemies, were domiciled at the rancho, where their mere presence proved a sufficient protection.

648 Meantime, according to apparently trustworthy press accounts, two small exploring parties entered Seriland; the first consisted of seven prospectors, who kept well together until about to leave the territory, when one of their number fell behind—and his companions saw him no more, though they carefully retraced their trail beyond the

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

point at which he had stopped; the other was a German naturalist-prospector with two mozos (servant-companions), purporting to hail from Chihuahua, who started across the delta-plain of Rio Bacuache and Desierto Encinas with saddle animals, and never reappeared. 648

Then came the second expedition of the Bureau of American Ethnology, to which several Papago domiciled at Costa Rica were attached as guards. While the party were at the rancho the day before the first entrada into Seriland via Barranca Salina, a party of vaqueros from Rancho Santa Ana tended a herd of stock to the barranca for water; one of the animals strayed behind a dune, and the vaqueros, following its trail, came on a small band of Seri already devouring the entrails, and attacked them so vigorously that they escaped only by outrunning the horses, leaving behind all their unattached possessions, including a bow and quiver of arrows and an ancient and nonusable army rifle. This incident, albeit typical, was untimely, and doubtless aided in rendering the Indians too wild to permit communication with the aliens during the ensuing weeks spent in their territory. 123 648

After the withdrawal of this expedition the Seri resumed their range over the borderland plain, with the evident intention of avenging the insult of the invasion. There were a number of skirmishes, in which some of the Papago guards of the 1895 expedition were wounded and had horses killed under them, though they did customary execution on the worse-armed Seri; and extensively published press items indicate that, toward the end of January, 1896, a party of five gold prospectors landed on Tiburon, whence one escaped. 648 721

A well-attested episode enacted toward the end of 1896: Captain George Porter and Sailor John Johnson spent the later part of the summer in cruising the coasts of the Gulf, collecting shells, feathers, and other curios in the small sloop *World*. About the end of October they apparently anchored in Rada Ballena; and a day or two later Captain Martin Mendez, of Guaymas, in charge of the schooner *Otila*, being driven up the gulf and into Bahia Kunkaak by storms, came on a horde of Seri looting Porter's vessel. The episode received publicity on Mendez's return to Guaymas; United States Consular Agent Crocker instituted inquiries, and Governor Corral sent a force to Costa Rica, where, after some delay, a parley was held with a strong band of Seri under the chiefship of "a seven-foot warrior named El Mudo (The Mute), . . . so called for his reticence of speech."[1] The testimony obtained at the parley and from Captain Mendez indicates that Porter and Johnson landed, or at least approached the shore, probably in a small boat; that they were met by a shower of arrows, under which Johnson immediately fell, while Porter defended himself with a shot- 648

[1] *San Francisco Chronicle*, October 16, 1896, p. 3. The details of the episode, including the correspondence of Consular Agent Crocker, were printed in the newspapers of San Diego (the place of residence of Porter and Johnson), as well as in those of San Francisco and other cities; and there was considerable correspondence concerning the matter with the State Department at Washington. Some reports recount that the bodies of Porter and Johnson were cast in fragments and devoured, but these details naturally lack confirmation. El Mudo's portrait appears in plate XII. [113]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

between these stages and that next higher in the series with unparalleled clearness; their craft also displays an aberrant (and hence presumptively accultural) feature pertaining to the technolithic stage; and in so far as their craftsmen use the material typical of the age of metal they degrade it to the transitional substage between dominant zoomimicry and designless stone-using.

Viewed in the general light of their pacific industries, the Seri are, accordingly, among the most primitive of known tribes; their technic is in harmony with their esthetic, and also with their somatic and tribal characteristics, in attesting a lowly plane of development; while their industries, like their other demotic features, are essentially autochthonous.

WARFARE

Something is known of Seri warfare through the history of the centuries since 1540, and especially through the bloody episodes of the Encinas régime and the occasional outbreaks of the last decade or two. The available data clearly indicate that the warfare of the tribe complements their pacific industries in every essential respect.

As befits their primitive character, warfare has played an important rôle in the history of the folk, forming, indeed, one of the chief factors in determining the course of tribal development. There is no means of estimating the losses suffered and occasioned in warfare with the neighboring tribes during either prehistoric or historic times; but the indications are that they were much greater than the losses connected with Caucasian contact. Neither is it practicable to estimate reliably the fatalities attending the interminable conflicts with the Spanish invaders and their descendants, though it is safe to say that the Seri losses in strife against Spaniards and Mexicans aggregate many hundred, and that the correlative loss on the part of their enemies reaches several score, if not some hundred, lives. Few if any other aboriginal tribes of America have had so sanguinary a history as the Seri, and none other has at once so long and so bloody a record.

According to the consistent accounts of several survivors of conflict with the Seri, their chief weapons are arrows, stones, and clubs—though several survivors manifest greater fear of the throttling hands and rending teeth of the savage warriors than of all their artificial weapons combined. A striking feature of the recitals, indeed, is the rarity of reference to weapons; the ambushes or surrounds or chance meetings, with their disastrous or happy consequences, are commonly described with considerable detail; the carbines or rifles, the machetes and knives, or the deftly thrown riatas employed by the rancheros or vaqueros are mentioned with full appreciation of their serviceability; but the ordinary expressions concerning the despised yet dreaded Seri are precisely those employed in recounting conflicts with carnivorous beasts. When Andrés Noriega's kinswoman proudly related how he

648 726 on the settlements of Sonora. Many expeditions, fitted out at great expense, were sent against them, but in that barren land, destitute of water, the military parties suffered greatly in their campaigns, and succeeded little in their efforts to conquer the wary natives.

177 648 By 1850 probably every Seri between infancy and decrepitude had seen the proprietor and other inhabitants of the rancho of Don Pascual Encinas at Costa Rica where the Seris were abnormally tolerated and even encouraged to make themselves useful and unobjectionable. They yielded to indolent scavengering more than ever before; they substituted cast-off rags and barter-bought cotton cloth for their pelican robes and other primitive garments. They ate cooked food when it fell their way; half heartedly they adopted metal cutting implements and sought or stole nails and hoop-iron for arrow [191] points. Some acquired a smattering of Spanish and many came to sport Spanish names. Never, however, did more than one or two Seris come to live in a house, nor even to encompass the idea of making adobe. They had not learned to ride horses nor to burden them, but only to use them for immediate slaughter and consumption. They were acquainted with firearms, but it was not until years later that they learned to use them. In and about Rancho Costa Rica the Seris and the Mexicans lived for a time in mutual tolerance, certain depredations being allowed the Indians just as were the rodents of the rancheria.

648 ● 721 When, in 1855, Don Pascual Encinas experienced the loss of unusually large numbers of stock from Seri raids, he was aroused into announcing that a Seri head would be taken for each head of stock stolen. For a while the Indians seemed to acquiesce, but within a few days a group of Seri women "milled" a band of horses, caught and threw one so that its neck was broken, whereupon [252] they immediately sucked its blood, gorged on its intestines, and buried its quarters to "ripen" according to their custom. The vaqueros of the settlement were instructed to shoot the first Seri seen on the llano. Within two days the tribe was on the warpath and the war raged for a decade.

[p.262(B)]

175 if they were as hungry then as they are today, they would not stop to
648 spike a man up preparatory to serving him. Their only tools then were
266 rocks to use as hammers and hoop iron for knives, and these are in
114 universal use today.

[412] There is no doubt that the men were killed, but I think these mining men purposely exaggerated their findings, if any.

648 There is no doubt that the Seris were brave fighters, treacherous
721 murderers, sparing neither men, women or children on their raids,
727 killing ruthlessly. But there is one charge which cannot be brought against them, which cannot be said of many tribes north of the border. So far as I could find out, they never tortured nor scalped.

648 The Seris never took prisoners and they never inter-married with
721 other tribes, so their strain is pure.

727 There was one exception. Sixty or seventy years ago, the Seri
563 Chief Coyote Iguana and his band of warriors held up the stage between Hermosillo and Guaymas, and killed all except a handsome Spanish girl of the better class. This girl, Coyote Iguana made his wife and by her raised a family. One granddaughter still survived in 1924, and while more attractive than the general run of Seri, her complexion was fully as dark.

600 The Seris, Ishmaelites among the native tribes of Mexico---the most fascinating Indians in North America!

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123 *Reception Committee, Tiburon Island - 1935*

115 On the twenty-fifth of April, nineteen twenty-two, I engaged the services of Roberto Thompson, who with his father and grandfather

[text continues on p. 149]

642 BAND II *xika xnai kkoii* "they who live toward the south wind"
101 This group is commonly referred to as the Tastioteño. These
131 people roamed the coastal area from Guaymas to Bahia Kino.

BAND III *ta?eowkw kongkaak* "the people of Tiburon Island"

This band is referred to in the literature as the Seri or Tiburones. At one time their territory included only the northern and eastern coasts of Tiburon Island. Later it was extended to include the whole coastal strip of the mainland directly opposite the island.

BAND IV *?eno kongkaak* "the people of the desert"

The area this band occupied in the center of Tiburon Island is shown in Fig. 2.

642 BAND V *xnaamotat* "they who came from the direction of the
131 south wind"
173 The Seri believe that this band came originally from a region
628 south of Guaymas. It may have been the Upanguayma group
[101] mentioned in the literature. Its members came in contact with the members of Band II with whom they resided, apparently for a period of years. Whether the *xnaamotat* were Seri or non-Seri,
[197] I have been unable to ascertain. Since no informant suggests that this group spoke another language besides Seri, it seems reasonable to believe that it was simply a distinct dialect group.

642 The *xnaamotat* were a belligerent people and, after fighting
628 broke out between them and the members of Band II, they
721 traveled northward. Eventually they established themselves on
[131] the relatively small coastal strip located east of Punta Tepopa as shown in Fig. 2.

642 BAND VI *xika ?ast ano koii* "they who live in the mountains"
[101] This group, which has been recognized previously only by
[131] Griffen, inhabited San Esteban Island. It laid claim also to the greater part of the coast on the southern end of Tiburon Island. One informant stated that in earlier times this band had ranged over all of Tiburon Island except for the northern two-thirds of the eastern coast, but that they were slowly pushed southward by the movements of other groups.

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The third specification states that a kin group, to constitute a clan, must exhibit actual social integration. Murdock stresses the necessity of observing a positive group sentiment, such as would be manifested by organized collective activities or group functions, before the group can be characterized as a clan. An essential feature of this group sentiment is the inclusion of the wife as an integral member of her husband's kin group.

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This sort of social integration was indeed exhibited by the Seri kin group of each subdivision. It was, in fact, fostered by the isolation brought about by the inhabitants' reservation of hunting and fishing rights for themselves. Tension existed between certain subdivisions and, since there was no chief, the oldest capable male organized and led the fighting force of the clan. In times of need, the members of the group united to give mutual assistance. The groom-to-be could expect material aid from his fellow clan members in the payment of the bride price. Mutual assistance was given in the fulfillment of puberty ceremony and burial obligations. The men cooperated in their hunting and fishing expeditions. The women of the clan, including the in-married spouses, cooperated in the gathering and sharing of food. Everyone could attend the various fiestas. It is said that in the performance of these collective activities, close harmony generally prevailed.

BAND INTERNAL AND EXTERNAL RELATIONS

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The division of the Seri tribe into bands was likely brought about through internal strife. During the period of band history known to the present-day Seri,[8] however, serious skirmishes seem to have been fought predominantly with non-Seri groups.[9]

BAND I

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Band I internal relations appear to have been relatively peaceful. The inhabitants of subdivisions 1, 2, 3, 4, and 5 were fishermen as well as hunters and gatherers, whereas the people of subdivision 6 preferred to subsist on gathered food and wild game. Also, the members of Band I robbed cattle and horses, which pursuit brought reprisals from the Mexican ranchers. There was apparently considerable social intercourse among the six subdivisions, even to the extent that hunting rights of one were sometimes granted to inhabitants of a neighboring section.

Trouble developed when some members of Band I speared fish within the domain of Band V. Here also bitter fighting broke out, and any semblance of peaceful co-existence between the two groups was destroyed.

Except for the occurrence of several battles, relations between Bands I and III were peaceful.

Relations with non-Seri groups were not always peaceful. For many years the members of Band I were on friendly terms with the Papago; they often camped together and even intermarried. Due to a misunderstanding,[10] fighting erupted between the two groups and many people were killed in the years which followed.

BAND II

The external relations of Band II were decidedly turbulent. Although their primary base of operations was a coastal area, the people did not use the ocean as a source of food. They preferred beef and horse meat which was easily acquired by stealing animals from ranches. Here again the wrath of the ranchers and the government was incurred.

A small group of Yaqui eventually joined Band II and intermarried with them. The Seri claim that the Yaqui induced the warriors of this band to assault travelers on the road between Hermosillo and Guaymas. Coyote Iguana, who according to Seri tradition captured Lola Casanova, was of this band. This activity soon brought retribution from the government. Later, dissension arose between these Seri and the Yaqui.

The enmity and strife that occurred between Bands II and V were mentioned above.

BAND III

The history of the internal relations of this band on Tiburon Island seems to have been marked by periods of violence. Battles between subdivisions sometimes occurred; however, they were usually short-lived and soon forgotten. A major struggle once occurred when a shaman named *ʔapetia* "the invincible one" and warriors from subdivision 4 made repeated raids upon the neighboring subdivisions and killed many. Eventually, his enemies overcame their fear and destroyed the killer.

Although the inhabitants of Band III were hunters, gatherers, and fishermen, they began to rob cattle once they became established on the mainland. They too incurred the wrath of ranchers and the government.

BAND IV

Since the members of this band were, by choice, inhabiting an inland area of Tiburon Island, they lived in relative isolation as hunters and gatherers. Their primary contacts were with members of Band III with whom they intermarried.

BAND V

642 These people were apparently hunters, gatherers, and fishermen. It is said that they speared fish from the shore since they did not use *balsas*. They too apparently raided the ranches. Their warring nature has already been discussed; it resulted in the acquisition of few friends. However, several marriages between members of this band and members of subdivision 2 of Band III are said to have occurred.

BAND VI

The members of Band VI lived on San Esteban Island and were the most primitive of the tribe. They lived in huts made of driftwood and in caves and made extensive use of the *balsa*. Although they did not have the bow and arrow, they did become expert in the use of the spear. The people depended mainly on a seafood, iguana, and maguey diet.

621 628 578 Perhaps it was due to the confined living space on the small island with the accompanying lack of fresh water that relations between the four subdivisions were precarious and fights broke out frequently. The Seri today stress the fact that the members of this band were impetuous and unpredictable.

642 Their relations with the other bands were generally good however. Seri from Band III were free to visit San Esteban where they were well treated.

The San Esteban people seldom traveled to the mainland, and, since they spoke no Spanish, it is probable that they made no peaceful contact with non-Seri groups.

642 628 578 648 COLLAPSE OF THE BAND SYSTEM

Internal strife in the Seri tribe was probably a major factor in the establishment of the band system. External strife was a major factor in its downfall.

Reference has been made to the plundering, killings and rustling of cattle to which certain of the bands were dedicated. The concern of the Sonora government was aroused, and steps were taken to crush the rebellious groups. According to the present-day Seri, military action by army units and rancher outfits against the various bands resulted in the near-destruction of the whole tribe.[11]

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BAND V

It was stated above that this band fought with Band II and 628
then with Band I. Since Band V was likely killing cattle, they 648
also may have been harassed by soldiers. Eventually Band V [425]
abandoned its territory near Punta Tepopa and headed south
along the coast to a camp near present-day Bahia Kino. From [131]
this camp the entire group disappeared and was never seen again
by members of the other bands. The Seri of today believe that [173]
Band V either traveled inland or was destroyed by a non-Seri
force.

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BAND II

These people were rustlers and marauders. Government inter- 648
vention in the situation was inevitable. The Seri recount the 726
following final encounter between this group and the government
forces.

The entire remaining membership of Band II was hiding out in a nearly inaccessible swamp thicket at Bahia Kino. Knowing that an armed force of soldiers and ranchers was searching for them, the people left their camp to seek safety elsewhere. Almost immediately they were attacked by the superior armed force which proceeded to wipe out the whole group. A youth who had avoided capture is said to have reported the affair to the Seri on Tiburon Island. This event may have occurred during the Encinas [115]
Wars fought from 1855 to 1865.

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BAND VI

The members of this band on San Esteban Island were little 648
interested in the mainland and did not participate in the raids on 727
man and livestock there. Nevertheless, they were to share in the [721]
severe punishment meted out to the bands guilty of multitudi-
nous depredations.

Sometime after the massacre of Band II, a ship arrived at San Esteban, and many of the people were induced to go aboard. The rest of the inhabitants followed the ship to a camp on the eastern side of Tiburon Island where they were to receive gifts. As the people congregated, they were herded into a stone corral. Apparently, some of the San Esteban men were killed at this time. The rest of them, along with the women and children, were taken to Santa Rosa point on the mainland. Here, the Seri say, more of the men were killed. The remaining men were strung together by wire and led away, never to return.

The San Esteban women and children, along with some Tiburon Island women and children (of Band III), were taken in

so named must be of the same sex as the first. The significance of land ownership needs further investigation.

Many of the Seri still prefer, when possible, to live in their chosen band area. Sometimes a person, when he is approaching death, will ask to be taken to his own i?iziiting, where he can die and be buried in the area of his choice.

NOTES

1. Due to printing limitations, stress on Seri words has been omitted, and several orthographic symbol changes have been made for this paper. The phonetic values of the symbols used are the following: p is voiceless labial stop; t is vl. dental stop; k is vl. velar stop; ? is glottal stop; ʔ is vl. labial flat spirant; w is vl. labial grooved-rounded spirant; s is vl. alveolar spirant; z is vl. alveo-palatal spirant; l is vl. lateral spirant; h is vl. velar spirant; x is vl. back velar spirant; m is labial nasal; n is dental nasal; ng is velar nasal; y is palatal semivowel; i is a high close front vowel; e is a low close front vowel; a is a low open central vowel; o is a mid close back vowel.

2. These data were compiled during field trips to the Seri camps during the years 1956-61, the studies being carried out under the auspices of the Summer Institute of Linguistics. The principal informant was R. Herrera T. whose information was checked with and supplemented by nine of the older members of the tribe. I am indebted to my colleague, David Thomas, who read an earlier draft of this paper and made helpful suggestions.

3. 1) W. J. McGee, "The Seri Indians," *Bureau of American Ethnology, Annual Report*, No. 17, Part 1. Washington, 1898. 2) A. L. Kroeber, "The Seri," *Southwest Museum Papers*, No. 6. Los Angeles, 1931. 3) W. B. Griffen, "Notes on Seri Indian Culture, Sonora, Mexico," *Latin American Monograph Series*, No. 10, Gainesville, 1959.

4. It will be noted that between subdivision 3 and 4 on Fig. 3 there is an unnumbered area, the status of which is uncertain.

5. Kroeber states that McGee's concept of Seri maternal lineages crystallized into totemic clans with matron rule seem a fantasy. In Kroeber's opinion, "The Seri may never have had sibs or clans; but the fact that they appear to lack them now is no positive evidence that they were without them three centuries ago. Shifts of residence, contraction of territory, shrinkage of numbers, amalgamation of distinct bands, may well have obliterated much of such social fabric as they once possessed."

Griffen discusses the nature of the former Seri bands and states, "they may have been patrilineal and exogamous. The criteria . . . that Julian Steward has exposited for the formation of exogamous, patrilineal bands . . .(are and presumably would have been met formerly in the Seri habitat." Griffen lists other aspects of this type of band which are also verified to some extent by his data. From reading his material, it is obvious that he suspects the existence of clans at some earlier period. He emphasizes the need for further investigation.

6. G. P. Murdock, *Social Structure*, Macmillan Co., New York, 1949.

7. Marriages were usually contracted within the band.

8. As Kroeber points out, their memory likely covers only the latter part of the period of Spanish contacts.

9. The Seri recall nothing of Seri-Pima contacts and little of Seri-Apache relations.

10. The story is related that one day some Seri entered a cave where they found several Papago jugs filled with seeds. Being hungry, the people ate the seeds and left some arrows as token payment. The Seri say that the Papago apparently believed the arrows were intended as an insult. Fighting broke out soon afterward.

11. The Seri concept of the band annihilations is seen to be in contradiction to McGee's statement (p. 132): "Concordantly with their primary characteristic, the Seri have avoided ethnic and demotic union beyond the narrow limits of their own kindred; and even of these they seem to have cast out parts, annihilating the Guayma and Upanguayma, displacing and nearly destroying the Tepoka, and outlawing individuals and (apparently) small groups."

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

412 rubbing face-paint, for bruising woody tissue to aid in breaking ekatilla poles for house-frames or mesquite roots for harpoons (both afterward finished by firing), and on occasion for weapons; and this many-functioned tool is initially but a wave-worn pebble, is artificially shaped only by the wear of use, and is incontinently discarded when sharp edges are produced by use or fortuitous fracture. The hupf is supplemented chiefly by the simple perforator of mandible or bone or fire-hardened wood; and these two primitive implements, together with molluscan shells in natural condition, apparently serve as the primary tools for all the mechanical operations of the tribe.

● 726 The dearth of tools and the absence not only of knives but of knife-sense among the Seri illumine those traditions of Seri fighting made tangible by the teeth-torn arm of Jesus Omada; for they explain the alleged recourse of the Seri warriors to nature's weapons, used in the centripetal fashion characteristic of nascent intelligence.

186 The Seri are distinguished by another trait hardly less striking than the pedestrian habit, and even more conspicuous than the tooth-and-nail habit with the correlative absence of tool-sense; the trait is not tangible enough for ready definition or description in terms (of course because so unusual as not to have bred words for its expression), but is akin to—or, more properly, an exceeding intensification of—race-pride in all its protean manifestations; it may be called *race-sense*. Like other primitive folk, the Seri are self-centered (or egocentric) in individual thought, i. e., they habitually think of the extraneous phenomena of their little universe with reference to self, as in the labyrinth of consanguineal relationship extending and ramifying from the speaker; furthermore, they typify primitive culture in their collective thinking, which is tribe-centered (or ethnocentric), i. e., they view extraneous things, especially those of animate nature, with reference to the tribe, like all those lowly folk who denote themselves by the most dignified terms in their vocabulary and designate aliens by opprobrious epithets; but the Seri outpass most, if not all, other tribes in dignifying themselves and derogating contemporary aliens. Concordantly with this habitual sentiment, they glory in their strength and swiftness, and are inordinately proud of their fine figures and excessively vain of their luxuriant locks—indeed, they seem to exalt their own bodies and their own kind well toward, if not beyond, the verge of inchoate deification. The obverse of the same sentiment appears in the hereditary hate and horror of aliens attested by their history, by their persistent blood-thirst, and by the rigorous marriage regulations adapted to the maintenance of tribal purity; for just as their highest virtue is the shedding of alien blood, so is their blackest crime the transmission of their own blood into alien channels. The potency of the sentiment is established by the unparalleled isolation of the tribe after centuries of contact with Caucasians, by their irreducible love of native soil, by their implacable animosity toward invaders, and by

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1; McGee E-5 (1894-1895)1898 NU31 Seri NU31

is an infallible remedy. On the whole it seems probable that the yerba mala (*Sebastiana bilocularis?*), or yerba de flécha, or mago, or magot, yielded or formed the standard arrow-poison of the Opata and perhaps of other Indians, and that the ill-repute of the shrub survived and spread throughout Mexicanized Sonora in such frequent repetition and common belief as to affect the ideas of residents and travelers alike; but it seems equally probable that the magic-inspired brew of the Seri is entirely distinct.[1]

As suggested by widespread primitive customs, and as illustrated specifically by the arrow-charming, the warfare of the Seri is largely sortilegic, this feature being but an extension and magnification of a corresponding feature of their hunting customs. The economic object of the chase is, of course, the flesh of the quarry; but the hunt normally begins with invocatory or other fiducial ceremonies, culminates in a feast opened with oblations, and ends in the use of horns or hoofs, teeth or bones, mane or tail, as talisman-trophies—primarily pledges of fealty to the favorable potencies, only secondarily symbols of success. The observances illumine the ever-present esoteric object of the chase, which is to gain the favor or overcome the power of the beast-god represented by the animal hunted; in general, this is sought to be effected through mimetic movements, or symbolic objects, associated with that animal-kind, and the retained charm-trophy is valued as a symbol of the placation or outwitting of a particular deity. Similarly, the Seri warrior strives for the supposed deific symbols of the enemy—the scalp or headdress or arrow of the alien tribesman, the fire-breathing and echo-waking (as well as death-dealing) wand of the Caucasian; and the Papago arrows, Yaqui scalps, and white man's firearms are sought avidly, treasured as fetishes, and often carried conspicuously as badges of borrowed prowess.[2] So the Seri are never without alien insignia in the form of weapons. The day before the 1895 expedition entered their stronghold, a band of warriors and women were frightened from a freshly slaughtered cow by a party of vaqueros so suddenly that their arms were left behind—and these

[1] It should be noted that the actuality of the poisonous property ascribed to the yerba mala is in some degree questionable; the plant is the only one of southern Papaguería yielding suitable material for arrow-shafts, and it is possible (if not probable) that it was consecrated to this purpose by the aboriginal Opata and protected by tabu in such wise as to become a sacred and fearsome thing. It is accordingly by no means improbable that the reputed poisonous property is but the product of generations of association, and that the plant is really harmless—an inference supported by experiments on the part of the leader of the 1895 expedition, who swallowed the juice of stem and leaves in two or three minute but increasing doses without perceptible effect. (On the other hand, it should be observed that the region is one abounding in toxic juices, and that this shrub is so luxuriant and so free from thorny armament and other protective devices of a mechanical sort as to raise the presumption that it must be protected against herbivorous animals, at least, by chemical constituents of some kind (cf. ante, p. 30).

[2] These motives on the part of the Seri were reciprocated by their tribal enemies; a Papago fetish in the form of an Apache arrowpoint, long worn by an aged warrior as a protection from Apache arrows, was among the spoil of the 1894 expedition; and a "poisoned" Seri arrowhead and foreshaft, worn by a supposed Papago "doctor" as a badge of invulnerability to similar missiles, was confidently shown to the 1895 expedition, but was held above price by its wearer—and this despite the fact that he had been christianized for decades, and retained no other pagan symbols.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

included a heavy Springfield "remodeled" rifle, lacking not only ammunition but breechblock and firing pin; while Don Andrés Noriega, of Costa Rica, and L. K. Thompson, of Hermosillo, described a rifle of modern make captured similarly two years before, which was in good working order and charged with a counterfeit cartridge ingeniously fashioned from raw buckskin in imitation of a center-fire brass shell and loaded with a polished stone bullet.[1] The finders opined that the rifles were carried to bluff the enemy, and even that the counterfeit cartridge was designed to do deadly execution; but it would better accord with Seri customs, and with the law of piratical acculturation which they typify,[2] to infer that the weapons were regarded rather as symbols of mystical potencies than as simple scarecrows. Of related import were two or three pseudomachetes made from rust-pitted cask hoops, reported by the majordomo and several vaqueros at Costa Rica; and of still greater significance was a machete picked up in a just-abandoned jacal by Don Ygnacio Lozania—veteran of the Andrade expedition and the Encinas conquest—which was laboriously rasped and scraped out of paloblanco wood, colored in imitation of iron blade and mahogany handle by means of face-paints, and even furnished with "eyes" replacing the handle-rivets, in the form of embedded iron scales. Some of the Seri are familiar with the normal use of firearms, as was demonstrated by the Robinson and other episodes, and many of them modernly make some use of machetes or other knives, as shown by various rudely whittled wooden artifacts; yet the burden of proof indicates that the chief use of the Caucasian's weapons in the heat of actual warfare is shamanistic and symbolic. This interpretation is, in fact, practically established by the experience of the frontier; for the vaqueros and local soldiery have little fear of the ill-understood firearms and clumsily handled machetes occasionally seen in Seri hands, though they dread unspeakably the necromantic arrows and flesh-rending teeth with which the agile foes are credited.

The mystical potency ascribed to Caucasian firearms and cutlery by the zoomimic tribesmen is of interest as a reflection of motives and methods pervading the entire range of their activities; at the same time it suggests the genesis of the aberrant technolithic craft displayed in arrow-chipping. The information obtained from Mashém and his mates concerning chipped arrowpoints implied that the process was hieratic and little understood by the body of the tribe, its place in the tribal knowledge, indeed, being similar to that of the brewing of the arrow "poison", which is the special work of shamans; and this information, comporting as it does with the rarity of the chipped points and

[1] The imitative skill of the Seri was illustrated at Costa Rica some years ago, when the petty accounts for labor, etc., were kept by means of tokens stamped from sheet brass. While a Seri rancheria was maintained near the rancho, the storekeeper detected a number of counterfeits of his tokens, so well executed as to pass readily over the counter in ordinary exchange—and after extended detective work the counterfeiting was traced to the rancheria.

[2] American Anthropologist, vol. 11, August, 1898, pp. 313-348.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

the crudeness of the work, strongly supports the inference that the stone arrow-making of the Seri was originally a fetishistic mimicry of alien devices—a plane, indeed, above which the craft has hardly risen even in recent decades.

While the Seri are devoid of military tactics in the strict sense of the term, they have certain customs of warfare which seem to be scrupulously observed. These customs are closely akin to those followed in hunting the larger land animals—indeed, the warfare of the tribe is merely an intensified counterpart of their chase.

The favorite tactical device of the warriors, as indicated by the great majority of their battles, is the ambuscade, laid and sprung either with or without the aid of decoys (usually aged women). Sometimes a considerable body act in concert under a prearranged plan; more commonly a few warriors only are involved at the outset, though these may be joined as the crisis approaches by companions lurking behind rocks and shrubs to be either on hand at the finish or in the way of ready flight, according to the turn of the battle-tide; and it is probable that the greater part of the ambuscades prove stillborn by reason of the oozing courage of leaders and the shirking of their supporters if the prospective victims present a bold front, or if the final omens are otherwise adverse. The ambuscade, with its flying contingent, grades into the device of stalking a stationary or slowly moving enemy, the stealthy approach terminating either in covert attack at close range or in sudden rush by a superior force. The theory, or rather the instinctive plan, of the campaign is to seek advantage in both position and numbers, to keep under cover until the instant of attack, to have sure and ample lines of retreat, and in every way to minimize individual risk.

There is a widespread notion toward the Seri frontier that the savages are given to sorties and surprises by night; but both specific testimony and the records indicate, when carefully analyzed, that this tactical device is much less common in practice than in repute, and is not, indeed, characteristic of the tribe. A few known battles began in attacks by night; but the war parties, like the hunting and fishing parties (save in the semiceremonial pelican pilgrimages), display decided preference for daylight in their forays—indeed, there are various indications that the folk are much more timid and oppressed with superstitious fears by night than by day.

In rare cases small parties of aliens have been half openly surrounded and done to death by considerably larger parties of the savage folk; but this method, too, is incongruous with the fixed habits of the tribe and with the deep-planted instinct of avoiding personal exposure.

A considerable number of the long list of homicides charged against the Seri, and marking the beginning of many of their battles, were individual rather than collective, the consummation of inimical impulse sometimes treacherously concealed for favorable opportunity, as in the

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

186 pitiful case of Fray Cristobal Gil, and othertimes rising explosively
648 beyond the feeble control of the untrained mind; for the impulse of enmity toward aliens is an ever-present possession—or obsession—of the tribe, and a reflection of that race-sense which is their most distinctive attribute.

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Sonoran belief that the similarity extends one step further, and that the human victims are rent and consumed, like the beasts. There is a lamentable lack of data concerning the alleged anthropophagy of the Seri; on the one hand there is the deep-seated local opinion, generally growing stronger as the tribal territory is approached, and agreeing so well with the hunting customs, the thaumaturgic arrow-poisoning, the zoomimic handicraft, and zootheistic faith, and especially with the pervading fetish-piracy of the folk, that its validity would seem inherently probable; on the other hand, there is not only a dearth of specific positive testimony, but hacendero Encinas (best informed among Caucasians concerning Seri customs) and several of his yeomen reject the prevailing belief, while Mashém consistently repudiated the custom, both in general and in particular, and in ceremonial as well as in economic aspects, whenever and in whatever way the subject was approached during his intercourse with the 1894 expedition. On the whole, the much-mooted question of Seri cannibalism must be left open pending further inquiry, with some preponderance of evidence against the existence of the custom.

The war-frenzy of the Seri fighters is significant in its parallelism with the blood-craze of the chase, and even more so in its analogy with the warpath customs and ceremonies of most Amerind tribes and many other primitive peoples. In typical tribes the warpath custom is a most distinctive one, standing for an abnormal state of mind and an unaccustomed habit of body, perhaps to the extent of an extreme exaltation or obsession akin to intoxication, in which the ordinary ideas of justice and humanity are inhibited; among most tribes the condition is sought voluntarily and deliberately when occasion is thought to demand, and is superinduced by fasts and vigils, exciting songs and ceremonies, and related means; while among certain tribes the aid of symbolic "medicines", which may be actual intoxicants, is invoked. Thus the savage on the warpath is a different being from the same man in times of peace; viewed from his own standpoint, he is possessed of an alien and violent demon, usually that of a fantastic and furious beast-god whose rage he must symbolize and enact; viewed from the standpoint of higher culture, he is a raving and ruthless maniac whose craze is none the less complete by reason of its voluntary origin. The warpath frenzy is one of the fundamental, even if little understood, facts of primitive life, and the character of the savage tribe can not properly be weighed without appreciation of it. Now, the Seri blood-craze seems measurably distinct in two ways: in the first place, it expresses a more profound and bitter enmity toward aliens than is found among most savage tribes—i. e., it is instinctive and persistent in exceptional degree; in the second place, it is more spontaneous and explosive in its culmination when conditions favor than among tribesmen who induce the condition by elaborate preparation—i. e., it is dependent on the swift-changing hazard of warfare in exceptional

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171 measure; so that the Seri frenzy is at once more instinctive and more
●726 fortuitous, or in general terms more inchoate, than the corresponding condition among most of their contemporaries. Accordingly the war customs, like several other features of the tribe, seem to afford a connecting link between the habits normal to carnivorous beasts and the well-organized war customs of somewhat higher culture-grades; and thus they contribute toward outlining the course of human development through some of its darker stages.

712 Conformably with their poverty in offensive devices, the Seri are exceedingly poor in devices for defense. It is an impressive fact that a restricted motherland which has been successfully protected against invasion for nearly four centuries of history should be destitute of earthworks, fortifications, barricades, palisades, or other protective structures; yet no such structures exist on any of the natural lines of approach, and none are known anywhere in Seriland save in a single spot—Tinaja Trinchera—where there are a few walls of loose-laid stone, so unlike anything else in Seriland and so like the structures characteristic of Papagueria as to strongly indicate (if not to demonstrate) invasion and temporary occupancy by aliens. The jacales are not fortified in the slightest degree, unless the turtle-shells with which they are sometimes shingled be regarded as armor; even the most ancient rancherias are absolutely devoid of contravallations of earth, stone, or other material; and both the structures themselves and the expressions of the folk concerning them indicate that the jacales are not regarded as fortresses or places of refuge against enemies, but only as comfortable lodges for use in times of peace. Nor are walls like those of the borderland Tinaja Trinchera known in the interior of the tribal territory—e. g., the similarly conditioned Tinaja Anita, which differs only in the greater abundance and permanence of the water-supply, is entirely devoid of artificial structures, not even a pebble or bowlder being artificially placed save perchance by the casual trampling of the pathways. As already noted, the Seri seem to be practically devoid of knife-sense; they are still more completely devoid of fort-sense, although (and evidently because) they rely so fully on natural things, including tutelaries and their own fleetness, for safety.

713 Although devoid of even the germ of fortification-sense, so far as can be discovered, the Seri are not without a sort of shield-sense, which is of much significance partly by reason of its inchoate character. The ordinary shield is a pelican pelt, or a robe or kilt comprising several skins; it is employed either for confusing the enemy by swift brandishing, something after the fashion of the capa of the banderillero in the bull ring, or for actual protection of the body against arrows and other missiles or weapons. So far as known it is not backed or otherwise strengthened, the user relying solely on the stout integument and
[825] thick feathers—or rather on the mystical properties imputed to the pelt as the mystery-tinged investiture of their chief creative tutelary.

I: McGee E-5 (1894-1895)1898 NU31 Seri NU31

On the coast bucklers are improvised from turtle-shells, though, according to Mashém (confirmed by direct observation), these are not carried inland for the purpose; but the protective function imputed to the turtle was well represented in the rancherís at Costa Rica by several fetishes made from phalanges of turtle-flippers tricked out in rags in imitation of Caucasian dress (somewhat like the mortuary fetishes illustrated in figure 40*a* and *b*). On the whole, the most conspicuous feature of the individual shields or protectors is their emblematic character; they are sortilegic rather than practical, and express imputation of mystical potencies rather than recognition of actual properties; and in this as in other respects they correspond closely with the offensive devices, and aid in defining the ideas and motives of the primitive warriors.

The actually effective protection of the Seri in warfare is their fleetness, coupled with their habitual and constitutional timidity, i. e., their wildness—for they are verily, as their Mexican neighbors say, "gente muy bronco". Moreover, they are adepts in concealing their persons and their movements behind shrubbery and rocks, and in finding cover on the barest plains; and suggestions are not wanting that the protecting shrub-clumps and rocks of their wonted ranges are credited with occult powers and elevated to the lower places of their zoic pantheon, after the customary way of that overpowering zootheism, or animism, which the Seri so well exemplify in many of their habits.

Summarily, the warfare of the Seri complements the pacific industries of the tribe in every essential respect. It is notable for improvidence, i. e., for reliance on chance; the dearth of devices for offense and defense parallels the poverty in industrial artifacts; and the disregard of fortifications is of a kind with the squandering of present food supplies and the utter neglect of provision for the future. A striking correspondence between workfare and warfare is found in the fierce blood-lust displayed alike in chase and battle, a feature manifestly borrowed from beasts and intensified by besetting beast-faith; and more striking still is the correspondence in motive, as revealed by the overlapping functions of the protective kilt, by the borrowing of animal symbols alike in peace and war, and by the imitation of animal movements on the warpath as in the chase.

In the last synthesis the warfare of the Seri may be considered as characterized by two attributes: (1) The motives, so far as developed, are zoomimic in even greater degree than the prevailing motives of the pacific industries; and (2) the methods are shaped largely by mechanical chance, like those normal to protolithic industry.

Nascent Industrial Development

Industries form the chief bond between man and his environment. The esthetic activities arise in the individual and extend to his fellows; the institutional activities express the relations among individual men

3:Davis & Dawson E-5 (1922-1940) 1945
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THE SAVAGE SERIS OF SONORA—II*

By EDWARD H. DAVIS AND E. YALE DAWSON

The beginning of Seri wars was the year 1700 during which they first conducted nocturnal raids on some of the most outlying of the Jesuit mission pueblos of Sonora, killing inhabitants with their arrows and stealing the cattle and horses. Year after year, the gradual expansion of Sonoran settlements and their nearer approach to the borders of the Seri homeland aggravated the conditions of conflict. The vigorous proselyting expeditions of the Jesuit missionaries brought about the capture of some hundred women, children, cripples and vieilards of the Seris, and concurrently the death of many defending warriors. These expeditions further kindled the hatred of the free Seri against the white man, while the few score "converts" gathered about the several missions gained a shocking character for sloth, filth, thievery, treachery, obstinacy and drunkenness. Raids upon the settlements continued and between 1757 and 1763 4,000 mules, mares and horses were known to have been stolen and eaten.

[p. 261(B)] [text continues on p. 262(A)]

3:Davis & Dawson E-5 (1922-1946) 1945
NUSI Seri NUSI

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FIG. 14. JUAN TOMAS AND NEPHEW
OLD SERI CHIEF BEFORE CHICO ROMERO AND VETERAN OF MANY WARS, IN 1926 AT THE AGE OF 94 YEARS.

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The further extension of settlements necessitated the establishment of military posts from which troops were sent out, first by one, then another governor of Sonora, to destroy all Seris they might find and to discourage their wanton looting and killing. If a strong force was sent out, it was frequently ambushed and many soldiers were left on the field, transfixed by arrows. Many small forces left never to be heard from again. In 1780 an army of national troops met the Seris in several bloody battles in their Cerro Prieto, and claimed to have exterminated the tribe. Yet the Indians retained sufficient vitality to continue their sanguinary raids

[p. 262 (A)]

648 726 on the settlements of Sonora. Many expeditions, fitted out at great expense, were sent against them, but in that barren land, destitute of water, the military parties suffered greatly in their campaigns, and succeeded little in their efforts to conquer the wary natives.

177 648 By 1850 probably every Seri between infancy and decrepitude had seen the proprietor and other inhabitants of the rancho of Don Pascual Encinas at Costa Rica where the Seris were abnormally tolerated and even encouraged to make themselves useful and unobjectionable. They yielded to indolent scavengering more than ever before; they substituted cast-off rags and barter-bought cotton cloth for their pelican robes and other primitive garments. They ate cooked food when it fell their way; half heartedly they adopted metal cutting implements and sought or stole nails and hoop-iron for arrow [191] points. Some acquired a smattering of Spanish and many came to sport Spanish names. Never, however, did more than one or two Seris come to live in a house, nor even to encompass the idea of making adobe. They had not learned to ride horses nor to burden them, but only to use them for immediate slaughter and consumption. They were acquainted with firearms, but it was not until years later that they learned to use them. In and about Rancho Costa Rica the Seris and the Mexicans lived for a time in mutual tolerance, certain depredations being allowed the Indians just as were the rodents of the rancheria.

648 721 When, in 1855, Don Pascual Encinas experienced the loss of unusually large numbers of stock from Seri raids, he was aroused into announcing that a Seri head would be taken for each head of stock stolen. For a while the Indians seemed to acquiesce, but within a few days a group of Seri women "milled" a band of horses, caught and threw one so that its neck was broken, whereupon [252] they immediately sucked its blood, gorged on its intestines, and buried its quarters to "ripen" according to their custom. The vaqueros of the settlement were instructed to shoot the first Seri seen on the llano. Within two days the tribe was on the warpath and the war raged for a decade.

[p.262(B)]

3:Davis & Dawson E-5 (1923-1940) 1945
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The Encinas war reduced the tribe to some 350 people, and temporarily discouraged their bloodthirsty raids. By 1893, however, new killings were being reported. In one instance the Seri Chief, Juan Tomas (Fig. 14), watched as the men of a large rancho left for a rodeo and then, worming up through the brush, led his warriors into the buildings and with clubs and arrows massacred every woman and child within. Two Yaqui women who had managed to escape into the brush watched as the warriors seized the infants by their feet and dashed their brains out against a large rock near the corral.

In 1904 a number of wilder Seri, led by several Yaquis, went on the warpath and killed every soul in a Papago village. The war with the Papagos that ensued aroused the Governor of Sonora into action. Nearly 250 armed men were sent out to kill or capture the Yaqui leaders and to administer a severe lesson to the Seris. The desert water holes were all placed under guard until the Seri chief, Juan Tomas, was forced to surrender for his thirsting tribesmen. Peace was conditional on the delivery of the Yaqui leaders with their hands tied together. Two days later a couple of gaunt, wild-looking Seri women, clothed in rags and with painted faces, walked into the camp to keep the conditions of the peace as they had understood them. They carried a palanca between them from which were suspended bundles of severed hands of the Yaquis who had been clubbed to death as they slept.

Twenty years after the delivery of the Yaqui hands (1922) the senior author, under arrangement with the Museum of the American Indian in New York, carried out his first expedition into the heart of Seriland. Although still intolerant of aliens and at times dangerous if aggravated, their depredations had been reduced to the occasional killing of a stray cow. The Seris had come to live a comparatively peaceful life under the supervision of Roberto Thomson of Hermosillo. It was through his efforts that the Seris were saved from complete extermination by the vaqueros of Sonora, and after having treated them for many years as a friend and adviser, he had made it feasible for a visitor to enter

[p.263(A)]

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BAND V

It was stated above that this band fought with Band II and then with Band I. Since Band V was likely killing cattle, they also may have been harassed by soldiers. Eventually Band V abandoned its territory near Punta Tepopa and headed south along the coast to a camp near present-day Bahia Kino. From this camp the entire group disappeared and was never seen again by members of the other bands. The Seri of today believe that Band V either traveled inland or was destroyed by a non-Seri force.

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BAND II

These people were rustlers and marauders. Government intervention in the situation was inevitable. The Seri recount the following final encounter between this group and the government forces.

The entire remaining membership of Band II was hiding out in a nearly inaccessible swamp thicket at Bahia Kino. Knowing that an armed force of soldiers and ranchers was searching for them, the people left their camp to seek safety elsewhere. Almost immediately they were attacked by the superior armed force which proceeded to wipe out the whole group. A youth who had avoided capture is said to have reported the affair to the Seri on Tiburon Island. This event may have occurred during the Encinas Wars fought from 1855 to 1865.

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BAND VI

The members of this band on San Esteban Island were little interested in the mainland and did not participate in the raids on man and livestock there. Nevertheless, they were to share in the severe punishment meted out to the bands guilty of multitudinous depredations.

Sometime after the massacre of Band II, a ship arrived at San Esteban, and many of the people were induced to go aboard. The rest of the inhabitants followed the ship to a camp on the eastern side of Tiburon Island where they were to receive gifts. As the people congregated, they were herded into a stone corral. Apparently, some of the San Esteban men were killed at this time. The rest of them, along with the women and children, were taken to Santa Rosa point on the mainland. Here, the Seri say, more of the men were killed. The remaining men were strung together by wire and led away, never to return.

The San Esteban women and children, along with some Tiburon Island women and children (of Band III), were taken in

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

is an infallible remedy. On the whole it seems probable that the yerba mala (*Sebastiana bilocularis?*), or yerba de flécha, or mago, or magot, yielded or formed the standard arrow-poison of the Opata and perhaps of other Indians, and that the ill-repute of the shrub survived and spread throughout Mexicanized Sonora in such frequent repetition and common belief as to affect the ideas of residents and travelers alike; but it seems equally probable that the magic-inspired brew of the Seri is entirely distinct.[1]

As suggested by widespread primitive customs, and as illustrated specifically by the arrow-charming, the warfare of the Seri is largely sortilegic, this feature being but an extension and magnification of a corresponding feature of their hunting customs. The economic object of the chase is, of course, the flesh of the quarry; but the hunt normally begins with invocatory or other fiducial ceremonies, culminates in a feast opened with oblations, and ends in the use of horns or hoofs, teeth or bones, mane or tail, as talisman-trophies—primarily pledges of fealty to the favorable potencies, only secondarily symbols of success. The observances illumine the ever-present esoteric object of the chase, which is to gain the favor or overcome the power of the beast-god represented by the animal hunted; in general, this is sought to be effected through mimetic movements, or symbolic objects, associated with that animal-kind, and the retained charm-trophy is valued as a symbol of the placation or outwitting of a particular deity. Similarly, the Seri warrior strives for the supposed deific symbols of the enemy—the scalp or headdress or arrow of the alien tribesman, the fire-breathing and echo-waking (as well as death-dealing) wand of the Caucasian; and the Papago arrows, Yaqui scalps, and white man's firearms are sought avidly, treasured as fetishes, and often carried conspicuously as badges of borrowed prowess.[2] So the Seri are never without alien insignia in the form of weapons. The day before the 1895 expedition entered their stronghold, a band of warriors and women were frightened from a freshly slaughtered cow by a party of vaqueros so suddenly that their arms were left behind—and these

[1] It should be noted that the actuality of the poisonous property ascribed to the yerba mala is to some degree questionable; the plant is the only one of southern Papaveraceæ yielding suitable material for arrow-shafts, and it is possible (if not probable) that it was consecrated to this purpose by the aboriginal Opata and protected by taboo in such wise as to become a sacred and fearsome thing. It is accordingly by no means improbable that the reputed poisonous property is but the product of superstitious association, and that the plant is really harmless—an inference supported by experiments on the part of the leader of the 1895 expedition, who swallowed the juice of stem and leaves in two or three minute but increasing doses without perceptible effect. On the other hand, it should be observed that the region is one abounding in toxic juices, and that this shrub is so luxuriant and so free from thorny armament and other protective devices of a mechanical sort as to raise the presumption that it must be protected against herbivorous animals, at least, by chemical constituents of some kind (cf. ante, p. 28).

[2] These motives on the part of the Seri were reciprocated by their tribal enemies; a Papago fetish in the form of an Apache arrowpoint, long worn by an aged warrior as a protection from Apache arrows, was among the spoil of the 1894 expedition; and a "poisoned" Seri arrowhead and foreshaft, worn by a supernumerated Papago "doctor" as a badge of invulnerability to similar missiles, was confidently shown to the 1895 expedition, but was held above price by its wearer—and this despite the fact that he had been christianized for decades, and retained no other pagan symbols.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

597 While the lieutenant attached no significance to the painting, the
648 procedure would seem to have been a ceremonial adoption, such as might, for example, be used in connection with a confederate clan. The description of the painting is sufficiently explicit to identify the totem with that of the Turtle clan, represented by the clanmother and the daughter of the clan at Costa Rica in 1894 (plates XVIII and XXIV); but it is noteworthy that the salutation with which the ceremony terminated, and which may be rendered "Captain-Brother of the Sharks", would seem to identify the totem with the shark rather than the turtle.[1]

The second case of adoption (if so it may be styled) was that of Señor Encinas, after his bloodiest battle, in which nearly all of the Seri warriors were left on the field. In this case there was no ceremony, or at least none remembered by the beneficiary; he was merely informed by a delegation of aged dames that thenceforth he would be regarded as a stronger and more invulnerable chief (shaman) than any member of the tribe, and hence as the tribal leader.

173 The third instance is still less definite, though it seems to be trust-
563 worthy. There is a widespread tradition throughout Sonora that in
727 the course of a brush between a band of Papago hunters and a marauding bunch of Seri warriors in the mountains southeast of Clemeguilla twenty-five or thirty years ago, a Papago maiden was captured and carried off to Tiburon; and that for some years thereafter—i. e., until the Papago had taken ample blood-vengeance—the intertribal animosity was exceptionally bitter. No wholly satisfactory basis for the traditions could be found among the Papago, though some of the silences of the old men were suggestive; nor was the tradition fully credited by Señor Encinas, despite its deep lodgment in the minds of some of his yoemanry. When Mashém was interrogated on different occasions, he merely shook his head in stolid silence; but when the device was adopted of inquiring the number of Papago children brought into the tribe through this woman he responded promptly with a snort of scorn, and followed this with the explanation that she never had children, and could not because she was an alien slave. The explanation was corroborated by clanmother Juana María and other matrons, with sundry expressions of contemptuous disapproval of the inquiry and scorn of the very idea that aliens could fructify within the tribe. Later, the ice being broken, Mashém intimated that the woman had recently died of old age and its consequences—doubtless as an outcast. On the whole, the direct testimony would seem to substantiate the tradition, and to supplement it with the short and simple annals of a spouseless and childless life (incredible of other tribes, but consistent

[1] This identification may possibly be correct, the collocation of the totem with the turtle was shaped through unwilling and perhaps misleading responses made by Mashém to inquiries in 1894—[124] these responses denoting a sea monster which in the beginning helped the Ancient of Pulicane to make [773] the world by pushing from below, and which is now very good food—a description apparently fitting the turtle more closely than the other animal.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

with the customs of the Seri), endured for many years and ending at last in unpitied death.

Collectively the cases seem to define a germ, rather than a mature custom, of adoption. In the first case a benefactor (by means regarded as magical) was formally inducted into the reigning family; in the second case the conquering hero (through what were again regarded as magical means) was less formally recognized and venerated, even worshiped, as an all-powerful shaman; while in the third case a representative of the doughtiest alien tribe was enslaved, probably with motives akin to those expressed in the carrying of chargeless guns, the making of imitation machetes, and other fetishistic devices. Except in the first instance there is no indication of consistent custom; but since the entire history of the tribe clearly contradicts regulated adoption of aliens (and indeed affords no other example), it must be inferred that any such custom is intratribal rather than intertribal.

MARRIAGE

The most striking and significant social facts discovered among the Seri relate to marriage customs.

As noted repeatedly elsewhere, the tribal population is preponderantly feminine, so that polygyny naturally prevails; the number of wives reaches three or possibly four, averaging about two, though the younger warriors commonly have but one, and there are always a number of spouseless (widowed) dames but no single men of marriageable age. So far as could be ascertained, no special formalities attend the taking of supernumerary wives, who are usually widowed sisters of the first spouse; it seems to be practically a family affair, governed by considerations of convenience rather than established regulations—an irregularity combining with other facts to suggest that polygyny is incidental, and perhaps of comparatively recent origin.

The primary mating of the Seri is attended by observances so elaborate as to show that marriage is one of the profoundest sacraments of the tribe, penetrating the innermost recesses of tribal thought, and interwoven with the essential fibers of tribal existence. Few if any other peoples devote such anxious care to their mating as do the Seri;[1] and among no other known tribe or folk is the moral aspect of conjugal union so rigorously guarded by collective action and individual devotion.

The initial movement toward formal marriage seems to be somewhat indefinite (or perhaps, rather, spontaneous); according to Mashém it may be made either by the prospective groom or else by his father, though not directly by the maiden or her kinswomen. In any event the prerequisites for the union are provisionally determined in the suitor's family; these relate to the suitability of age, the propriety of

[1] Perhaps the closest parallel in this respect is that found in the elaborate marriage regulations prevailing among the Australian aborigines, as described by Spencer and Gillen, Walter E. Roth, and other modern observers.

2: Kroeber E-5 (1930)1931 NU31 Seri NU31

789 Some shamans display their ability to hold live coals in their mouth.

Taboos

[88] 784 At first menstruation, the girl eats nothing (!) for 8 days, only drinking water. For 4 nights a *fiesta* is held for her, men and women dancing in a circle, anti-sunwise. She is outside the ring. Her head is not covered. San-pit roasting was unknown to the informant.

[841] At menstruation a woman drinks hot water. She may cook for others. She may not eat deer meat.

[844] After childbirth, both husband and wife eat only *atole* (gruel) and water, he for 4, she for 8 days. She may not work at all, he only a little, such as getting wood, "hunting" as necessary, etc.

[861] There is no puberty ceremony for boys. Nothing is said to be known of any rule forbidding a boy to eat of the first game killed [224] by him.

[833] Continence before hunting deer was not observed. Nor was there any special treatment or respect due the deer carcass. It is said that deer meat could not be left behind unless there was too much, but this is probably a statement of practise rather than a taboo.

Dances

535 Besides the girl's puberty dance, the Seri also had a scalp dance. Only the frontal piece of the scalp was used. This was hung on a [727] pole. Men (armed) and women danced together around it. If the scalp fell down, all would die.

Dances seen were solo on a plank laid over a shallow pit. Several singers sat by, beating or rattling anything convenient. Each song and dance lasted scarcely three minutes. The tempo is fast. The step is a quick double shuffle with alternate feet. In one type, the dancer held to a stick with one hand, his body and hanging arm remaining as motionless as possible. Another type was without the stick, the dancer holding a gourd rattle and keeping his body bent forward somewhat.

534 Rattles are of gourds, e'Xēc, on a stick, or of cocoons, Xekakë'ntta. Deer-hoof rattles were denied. The cocoons are on 171 a band worn below the knee. The Yaqui-Mayo wear such knee-bands of cocoons; and sometimes of deer-hoofs. The Gila Pima also know the cocoon band.

Various Religious Items

276 Datura (toloache, jimsonweed) does not appear to have been used. Even the plant seems unknown, although it is said to occur in the Seri range.

778 789 Rain making seems to be by amulet rather than by direct shamanistic power. For instance, Antonio Herrera wears a small object

648 726 [161] The Encinas war reduced the tribe to some 350 people, and temporarily discouraged their bloodthirsty raids. By 1893, however, new killings were being reported. In one instance the Seri Chief, Juan Tomas (Fig. 14), watched as the men of a large rancho left for a rodeo and then, worming up through the brush, led his warriors into the buildings and with clubs and arrows massacred every woman and child within. Two Yaqui women who had managed to escape into the brush watched as the warriors seized [727] the infants by their feet and dashed their brains out against a large rock near the corral.

In 1904 a number of wilder Seri, led by several Yaquis, went on the warpath and killed every soul in a Papago village. The war with the Papagos that ensued aroused the Governor of Sonora into action. Nearly 250 armed men were sent out to kill or capture the Yaqui leaders and to administer a severe lesson to the Seris. The desert water holes were all placed under guard until the Seri chief, Juan Tomas, was forced to surrender for his thirsting tribesmen. Peace was conditional on the delivery of the Yaqui leaders with their hands tied together. Two days later a couple of gaunt, wild-looking Seri women, clothed in rags and with painted faces, walked into the camp to keep the conditions of the peace as they had understood them. They carried a palanca between them from which were suspended bundles of severed hands of the Yaquis who had been clubbed to death as they slept.

114 648 Twenty years after the delivery of the Yaqui hands (1922) the senior author, under arrangement with the Museum of the American Indian in New York, carried out his first expedition into the heart of Seriland. Although still intolerant of aliens and at times dangerous if aggravated, their depredations had been reduced to the occasional killing of a stray cow. The Seris had come to live a comparatively peaceful life under the supervision of Roberto Thomson of Hermosillo. It was through his efforts that the Seris were saved from complete extermination by the vaqueros of Sonora, and after having treated them for many years as a friend and adviser, he had made it feasible for a visitor to enter

175 if they were as hungry then as they are today, they would not stop to
648 spike a man up preparatory to serving him. Their only tools then were
266 rocks to use as hammers and hoop iron for knives, and these are in
114 universal use today.
[412]

There is no doubt that the men were killed, but I think these mining men purposely exaggerated their findings, if any.

648 There is no doubt that the Seris were brave fighters, treacherous
721 murderers, sparing neither men, women or children on their raids,
727 killing ruthlessly. But there is one charge which cannot be brought against them, which cannot be said of many tribes north of the border. So far as I could find out, they never tortured nor scalped.

648 The Seris never took prisoners and they never inter-married with
721 other tribes, so their strain is pure.

727 There was one exception. Sixty or seventy years ago, the Seri
563 Chief Coyote Iguana and his band of warriors held up the stage between Hermosillo and Guaymas, and killed all except a handsome Spanish girl of the better class. This girl, Coyote Iguana made his wife and by her raised a family. One granddaughter still survived in 1924, and while more attractive than the general run of Seri, her complexion was fully as dark.

The Seris, Ishmaelites among the native tribes of Mexico---the most fascinating Indians in North America!

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123 *Reception Committee, Tiburon Island - 1938*

115 On the twenty-fifth of April, nineteen twenty-two, I engaged the services of Roberto Thompson, who with his father and grandfather

[text continues on p. 149]

five-gallon cans full. They were fastened one each end of a *palanca*, 123
or shoulder pole, and thus brought to camp. If anyone thinks this is
easy they should try it over rocky, uneven, sandy, stony ground,
dodging thorny vegetation at every step.

The colors of the mountains were mostly red of volcanic character, [133]
with great streaks of yellow and pink, deeply cut with side canyons
and sharp ridges, all similar to other desert ranges.

The men caught a few crabs and gathered clams in the afternoon,
which helped out our larder. One of them told about his wife being
shot. He said they had a big fiesta and during the drunk, a Seri shot
at his head. He happened to be stooping alongside his wife and the
bullet buried itself in his wife's thigh. We could feel it through
her clothes.

A good many years ago when stages ran between Nogales and Guaymas, 648
the Seris held up the stage, killed the men and captured one Mexican 727
girl. She was brought here and made the wife of one of the chiefs, 563
Coyote Iguana, and she bore children. Some years later her brothers
came here to induce her to return, but she refused, saying that she
was ashamed to go back and she had children here. About fifteen years
ago in a battle with the Papagos, two of her sons were killed.

The Papagos have taken toll of many Seris, these hunted Indians 648
who are such fascinating and ingenious companions, whether they are
harpooning turtle or packing water through the thorny wastes.

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Seris making fire (with fire drill) - Island of Tiburon

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Band V

It was stated above that this band fought with Band II and 628
then with Band I. Since Band V was likely killing cattle, they 648
also may have been harassed by soldiers. Eventually Band V [425]
abandoned its territory near Punta Tepopa and headed south [131]
along the coast to a camp near present-day Bahia Kino. From
this camp the entire group disappeared and was never seen again [173]
by members of the other bands. The Seri of today believe that
Band V either traveled inland or was destroyed by a non-Seri
force.

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Band II

These people were rustlers and marauders. Government inter- 648
vention in the situation was inevitable. The Seri recount the 726
following final encounter between this group and the government
forces.

The entire remaining membership of Band II was hiding out in a nearly inaccessible swamp thicket at Bahia Kino. Knowing that an armed force of soldiers and ranchers was searching for them, the people left their camp to seek safety elsewhere. Almost immediately they were attacked by the superior armed force which proceeded to wipe out the whole group. A youth who had avoided capture is said to have reported the affair to the Seri on Tiburon Island. This event may have occurred during the Encinas [115]
Wars fought from 1855 to 1865.

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Band VI

The members of this band on San Esteban Island were little 648
interested in the mainland and did not participate in the raids on 727
man and livestock there. Nevertheless, they were to share in the [721]
severe punishment meted out to the bands guilty of multitudinous depredations.

Sometime after the massacre of Band II, a ship arrived at San Esteban, and many of the people were induced to go aboard. The rest of the inhabitants followed the ship to a camp on the eastern side of Tiburon Island where they were to receive gifts. As the people congregated, they were herded into a stone corral. Apparently, some of the San Esteban men were killed at this time. The rest of them, along with the women and children, were taken to Santa Rosa point on the mainland. Here, the Seri say, more of the men were killed. The remaining men were strung together by wire and led away, never to return.

The San Esteban women and children, along with some Tiburon Island women and children (of Band III), were taken in

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the vessel to Guaymas. With the aid of a group of Yaqui, some of these women were said to have been permitted to go to Hermosillo and eventually to return to their home on Tiburon. Others of their group are said to have remained near Guaymas. The women who returned to Tiburon reported that the San Esteban women and children were put aboard another ship which sailed southward.

BANDS I, III, AND IV

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As opposition from the Papago and government forces increased, the members of Band I were forced to seek refuge on Tiburon Island. The mainland members of Band III (subdivisions 11 and 12) were also forced, especially during the Encinas Wars, to flee to Tiburon. There the combined forces of Bands I, III, and IV sought to cope with the military expeditions sent out through the years to exterminate them. Tiburon Island is an adverse battlefield for the uninitiated; some expeditions were turned back due to lack of potable water or because of failure to make contact with the enemy in the mountainous terrain. Some expeditions did encounter the Seri, however, and many natives were either killed or captured.

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Through the years, then, these military encounters, along with smallpox and measles epidemics, were responsible for reducing the Seri tribe to a small remnant. The band and clan systems lost their functional relevance as the people continued to live together for mutual protection. Shortly after the turn of the century, the expeditions and raids had practically ceased.

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SIGNIFICANCE OF BANDS TODAY

With the dissolution of the band system, the rule of descent shifted from patrilineal to bilateral, and the rule of residence shifted from patrilocal to neolocal.

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Although the substance of the band system is no longer a reality, the concept of land ownership still remains. A young Seri of today may choose to be associated with either the *i?iziiting* of his father or that of his mother. He is said to inherit part ownership of the area. It is recalled by one informant that in former times ownership of a mountain was especially important. Sometimes ownership of a mountain was included as part payment for a bride. Thus a person might 'own' a mountain in a subdivision other than his own.

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A custom exists even today whereby a person names his dog after a mountain or other geographical point located in his subdivision. Although the person may re-use the name, each dog so named must be of the same sex as the first.

7: Marroquin E-5 (1955) 1957 NU31 Seri NU31

Geographical Distribution

The Seri Indians live in two small Indian villages on the coast of the Gulf of California, State of Sonora, Desemboque and Punta Chueca. From there they frequently go to Isla Tiburón in the Gulf of California. 131 [484]

Approximately 35 Seri families live in Desemboque and 16 in Punta Chueca. Only in the first of these two places are there five "yori" (mestizo) families. 162 [563]

Sanitary Problems

The Seris have no defense against certain diseases which, like measles and flu, they acquire in their relations with the "yoris"; these diseases cause many deaths among the Indians. According to the an- 164 731 [751]

[291] [854] [302]

Seri Indian woman of Desemboque, Sonora. *Photo Henriette Yurchenco.*

cient Seri Chico Romero, last Seri Governor, there was a great smallpox epidemic there about 1897 which caused the death of a third of the tribe which was living in Costa Rica, a small ranch on the coast of Sonora.

In 1955 measles appeared among the Seris, with a great number of victims, children and adults; the actions of the rural teacher Leo Sandoval, the Linguistic Eduardo Mosser and of the sanitation authorities of Hermosillo, succeeded in keeping the mortality rate down; nevertheless, the number of deaths reached 5% of the total native population. [165] [744]

226 Occasionally they'll stay a little longer and when far off in the Gulf, they will return only in the afternoon. But this is not frequent. Some of the bait catching is done during the night by the light of torches or Colemans.

As already mentioned, unfavorable weather may put off fishing for several days and when [731] that happens, famine becomes a real menace to [251] the Indians because they have no supply of food stored away for the lean day and no cash for such purposes.

Sexing

* 825 Sex differences in fishes have been observed by the Seri probably in the majority of the species from the list, although for several there is no data available. The tabulation breaks down by the number of species as follows:

	number of species
Sex differences observed	22
Sexes alike in all respects	6
Didn't know what differences there are	6
No data	8

The six species in which sexes are considered indistinguishable in size and color and in other respects are *Pescara*, *Pinta*, *Baya*, *Pinturera*, *Smyrna* and the undertermined shark *sp. C*. The inclusion here of the most important economic species such as *Pinta* and *Pescara* and of the sharks is interesting. It shows, in the main, probable lack of information rather than ignorance of differences on the part of the Indians. It was probably an oversight in questioning, for surely the sharks' sexual differences are usually known to them and it is improbable that they could never tell the difference between the sexes of their most important marine game.

The species in which they expressed puzzlement over the differences and simply indicated that they didn't know the answer were largely little known forms about which they could tell very little anyway, either because they occurred far away from their territory like, for example, the flying fish and the tuna, or otherwise were obscure species, too small to pay attention to, or finally, the huge monsters, too big for them to hunt and approach for more careful inspection.

In more detail, a number of different sexing criteria seem to be employed by the Indians. These differences are tabulated below:

Males larger	Females wider, larger in bulk, but length the same
Abudefduf saxatilis	*Cynoscion macdonaldi*
Gymnothorax castaneus	*Trachinotus paitensis*
Girella simplicidens	*Cynoscion parvipinnis*
Anisotremus davidsoni	*Mugil sp.*
Gillichthys seta	*Bairdiella iuciatus*
Sphoeroides annulatus	**Males more brightly colored**
Paralabrax viola	*Paralabrax maculofasciatus*
Females larger	*Hypsoblennius gentilis*
Epinephelus analogus	

Other sex differences considered by the Seri are structural and appy to the sharks. They associate the presence of the "2 penises" in the sharks and mantas with the males and their absence with the females. The "penises" are, of course, sex claspers present near the vent in the male sharks which aid them in holding up the female during the mating. These differences had been observed

[P. 33 B]

123 It was a beautiful morning in early May, and the water was still
[202] as a pond, reflecting all the sunrise tints like a mirror. After a breakfast of clams and broth, bread and sand and bronco tea, we made a big smoke and were answered by a similar smoke two miles off, so we knew our friends were on the way.

123 In one hour they began trailing in, the women each with a load on
482 her head, walking graceful and erect. On one head was an inverted
[415] turtle shell containing nearly all the family belongings done up in rags. On the top was the most precious belonging of all---the rifle. The man carried two or three ollas and other things on a shoulder stick. Everything necessary for their home was carried on their heads.

123 Soon the Indian Blanco was seen paddling in his *balsa;* he also had a load and had paddled all the way from Ironwood camp against wind and sometimes tide. As they were all very thirsty we gave them water around. They immediately went to the shore as it was low tide, and began gathering small oysters from the rocks. Soon each woman returned with a half bushel of them on her head.

About three o'clock and for an hour or so thereafter, Antonio Herrera, the Chief's son Chico, the old Chief Juan Tomas, two other men and one woman, came drifting into camp with their dogs. Each one was loaded with things. They were a pretty wild looking bunch. There was very little food and little water for so many.

648 The Chief said that a day or two before, some of his men had a
731 fight with some sailors (Mexicans) on the Island of San Estevan four or five miles off the south west corner of Tiburon. Nobody was killed, but the two boats, the wealth of the Island, had drifted away and were lost, leaving eight men marooned on the Island. They had gone there to gather *aescal* to make drink to celebrate a wedding to come off soon. Three men were five days without water. They sent up frantic smoke signals every day. At last they were seen, and help went for them in the only remaining boat on the Island. They were rescued.

648 The Chief and his men and women, with us, are going to Hermosillo
484 ninety miles afoot with all their belongings to ask the Government
123 for food and help.

142 The Chief looks to be seventy years old, a grim dark-skinned in-
[122] dividual with a thin fringe of hair on his upper lip, broad nose, wide nostrils, small black eyes. He is well-built and erect. None of these that I have seen so far have any fat. They are lean and sinewy.
[302] The young men are of large build, high cheek bones, some with hair on
[291] their lips, their long black hair braided; sometimes with a strand of red worsted. All were either barefooted or wore sandals. I saw one pair of sandals made out of turtle hide; another of burro hide.

648 When the Chief arrived, the sail of a vessel was seen over the
123 beach. Bob recognized it as belonging to a launch of a Yaqui Indian

[text continues on p. 180]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

approaching nubility—receive some advantage through the connivance of the matrons. To a considerable extent in the matter of sustentation, and to a dominant degree in the matter of apparelling, the distribution of values is affected by a highly significant (though by no means peculiar) humanitarian notion of inherent individual rights—i. e., every member of the family or clan is entitled to necessary food and raiment, and it is the duty of every other person to see that the need is supplied. The stress of this duty is graded partly by proximity (so that, other things equal, it begins with the nearest person), but chiefly by standing and responsibility in the group (which again are reckoned as equivalents of age), whereby it becomes the business of the first at the feast to see that enough is left to supply all below him; and this duty passes down the line in such wise as to protect the interests of the helpless infant, and even of the tribal good-for-naught or hanger on, who may gather crumbs and lick bones within limits fixed by the tribal consensus. Beyond these limits lies outlawry; and this status arises and passes into the tribal recognition in various ways: Kolusio was outlawed for consociating with aliens, and Mashem narrowly missed the same fate at several stages of his career; the would-be grooms who fail in their moral tests are ostracized and at least semioutlawed, and range about like rogue elephants, approved targets for any arrow, until they perish through the multiplied risks of solitude, or until some brilliant opportunity for display of prowess or generosity brings reinstatement; deformed offspring are classed as outside the human pale, even when the deformity is deemed rather by occult associations than by physical features; abnormal and persistent indolence, too serious for scorn and ostracism to cure, may also outpass the tribal toleration; and, as indicated by Mashem's guarded expressions and slight additional data, disease, mental aberration, and decrepitude are allied with indolence and deemed sufficient reason for excluding the persistently helpless from the tribal solidarity, and hence from recognized humanity—and the fate of the outlaw, even if nothing more severe than abandonment in the desert, is usually sure and swift. The entire customs of outlawry among the Seri are singularly like those of gregarious animals, including especially kine and swine in domestication. Now, studied equity in the distribution of necessaries might seem to be allied to thrift; but it is noteworthy that this is not so among the Seri, who take thought for one another but not for the morrow, who seem to have no conception of storage (save an incipient one in connection with water and the repulsive notion underlying the "second harvest"), and who habitually gorge everything in sight until their stomachs and gullets are packed—and then waste the fragments.

The division of labor which affects proprietary interests is undoubtedly affected in turn by the militant habit of the tribe and by the frequent decimation of the warriors. In general, the adult males limit their work to fighting and fishing, with occasional excursions into the hunt

3:Davis & Dawson E-5 (1922-1940) 1945
NU31 Seri NU31

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FIG. 17. SERI BLIND MAN
BEING LED BY A BOY. NOTE THE CRUDE SHELTER OF POLES AND BRUSH SERVING AS AN ARU DWELLING.

231 destitute of nourishment, tough and strong as rawhide; but hope springs eternal in an Indian dog's stomach, and again and again he will search out and mouth the same old pelican bone or fish head, discouraged never. The dogs, beside keeping the camp clean, lick all the cooking utensils when they are not tended, and also are allowed to lick clean the infants after they have performed their natural defecations. A Seri girl was seen placing [312] a small can of water for a dog to drink from, afterward drinking some of the remainder herself and then pouring the rest back into the family five-gallon can.

732 Although the conditions of existence for
734 the Seris had from time immemorial been too precarious to permit of anyone living who was unable by physical disability to hunt or fish to get his meat, there were two or three men, blind or nearly so, whose wives got an uncertain living for them by the hardest struggle (Fig. 17). If a Seri, however, became ill of a disease which the tribe feared, he was often taken into the desert and left with a little food and water, either to get well and return or to perish.

[p: 265(A)]

10: Davis E-5 (1922-ca.1939) 1965 NU31 Seri NU31

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Alverto Mendoza and Lupe Astorga getting water from cactus - used for cooking

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Child leading Petra - blind woman, Kino Bay - 1936

123 484 Then Chico Romero and his load of children and dogs arrived and he unloaded his impedimenta on the beach, and soon the women came walking along the beach and joined the party. The boats carrying the heavy things and children; the women, with their babies and a few light things on their heads, walk along the beach when possible and follow the boats, which hug the shore to avoid the strong currents and tide. The boats are propelled by paddles mostly, though some of the Indians use oars. The women are slightly built, slender and inclined to be gaunt, owing to the hard life and lack of food. Their cheek bones are quite prominent and their profiles present protruding lips.

501 142

432 [364] Having no permanent homes, moving hither and thither for their various food supply, household things are not accumulated and life is reduced to its very simplest elements and absolute necessities.

Crude baskets made from shoots of the torote tree, vessels in which to cook, and some patched rags in place of Pelican skins to serve as blankets to the fortunate few, constitute the family possessions. Strange to relate, many of the women have an over-supply of milk, and according to Roberto have puppies nurse what the babies cannot take. One woman was known to nurse a baby pig on one side and a puppy on the other.

231 [958]

[264] [804] Family dogs lick all cooking vessels which is unnecessary as they are thoroughly clean when the Seris are through with them, and also lick the infants clean after performing their natural functions, so they are quite indispensable. I saw a Seri girl place on the sand a small can of water for a dog and then saw her drink some of the remainder and pour the rest back in a five-gallon can. Dogs frequently swim across the Infernillo to join their masters.

732 Asked about cripples and incompetents, Roberto said they probably did not exist. The conditions of survival were too precarious to admit of anyone living who was unable, by physical disability, to hunt or fish. There are two or three men who are nearly blind or so. The wives of these men eke an uncertain living for them by the hardest struggle. The sea turtle is the staple; one man and one good boat can secure a living for five families. There are now nine boats, but one boat to a family would practically free them from continual want. With the exception of four bones in the flippers and the bones of the head, all the sea turtle is used---the meat, blood, entrails, shell which furnishes food and oil, skin of flippers which furnishes sandals, sinew for strings. Nothing is wasted except contents of the entrails.

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123 Again, we laid our blankets on the clean white sand of the shore and were lulled to rest by the murmuring sea.

123 484 Daylight found us up the next morning, and we breakfasted, rolled up our blankets, pushed the boats into the sea and were off by the time the sun rose over the mountains and shone over a glassy sea. Two Seris towed their boat by a tump line, while a boy of twelve steered

3:Davis & Dawson 3-6 (1925-1969) 1965
MUSI Seri MUSI

[342]
[415]
[732]

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[p. 265(A)]

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Geographical Distribution

The Seri Indians live in two small Indian villages on the coast of the Gulf of California, State of Sonora, Desemboque and Punta Chueca. From there they frequently go to Isla Tiburón in the Gulf of California.

Approximately 35 Seri families live in Desemboque and 16 in Punta Chueca. Only in the first of these two places are there five "yori" (mestizo) families.

Sanitary Problems

The Seris have no defense against certain diseases which, like measles and flu, they acquire in their relations with the "yoris"; these diseases cause many deaths among the Indians. According to the ancient Seri Chico Romero, last Seri Governor, there was a great smallpox epidemic there about 1897 which caused the death of a third of the tribe which was living in Costa Rica, a small ranch on the coast of Sonora.

Seri Indian woman of Desemboque, Sonora. *Photo Henriette Yurchenco.*

In 1955 measles appeared among the Seris, with a great number of victims, children and adults; the actions of the rural teacher Leo Sandoval, the Linguistic Eduardo Mosser and of the sanitation authorities of Hermosillo, succeeded in keeping the mortality rate down; nevertheless, the number of deaths reached 5% of the total native population.

7: Marroquin E-5 (1955) 1957 NU31 Seri NU31

In general, the Seris have a healthy appearance; the most frequent complaints are gastro-intestinal and visual defects due to avitaminosis. It is very possible that given the difficult living conditions resulting from the desert environment, a rigorous selective process among the newborn takes place so that only those who possess exceptional physical qualities survive. This explains why the majority of them retain the physical characteristics described by Hardy more than a century ago: "the Indians of Isla Tiburón are tall, healthy and well built".

In spite of attempts at education, the Seris do not practice the elemental rules of hygiene; their way of life, neglecting this aspect, contributes to increase the unhealthy foci which exist in the places where they have established themselves.

Dwellings.—The Seris retain many vestiges of their nomadic life, among them the hut which serves as their living quarters; many of them are simple provisional arrangements for sheltering themselves from wind and sun, and they bear no relationship to the stability and durability of our dwellings. The Seri hut was made to meet the necessities of a nomadic people who had no reason to spend much time nor work on making a dwelling which would only be used for a season (one, two or at the most three months). Nevertheless, some innovations have been introduced in the last 20 years, so that we must distinguish between two types of houses. The primitive model consists of a series of scrub pine arches interwoven with branches from the same shrub almost totally covered by foliage, tortoise shells, *zacate*, etc., with only a small hole in one of its ends as an entrance (this type of hut is the same that McGee saw in 1894 when the Seris still led a nomadic life).

In the new model more resistent woods are used, like *sahueso*, *torote*, etc., and poles, between which is laid a layer mud. The house is rectangular, without windows; with only one entrance, but always larger than the entrance to the brush hut. Other models would have to be added to these two, due to the incorporation and utilization of tents made in the United States which some U. S. tourists or the Society of Friends have given them. The tent is used as permanent living quarters; or sometimes combined with branches to cover the primitive type huts.

Domestic Animals.—The Seris are very fond of domestic animals like the dog, cat, and finally, the chicken. For all practical purposes these animals live together with the family; they rest on the piles of rags and sand which serve the Indians as beds; lick the plates and cooking utensils; dirty the house; increase the household fauna with their fleas and other vermin thus contributing to create and unhealthy atmosphere in the home.

Problems of Intoxication.—Their dealings with the fish buyers, in whose stores are sold beer, mezcal and tequila, has turned them to the consumption of these drinks. The Seri drinks liquor in an uncontrolled

Food Habits

225 The food habits of all but a very few of the insects are totally unknown to the Indians but they do have accurate and detailed knowledge of the food habits of fish. This is probably due to the great economic importance of fish to the Seris. They also have very full data for the mammals, including bats, which are said to be insectivorous. The responses varied concerning lizards and often did not parallel the situation in nature. In some instances, the acuteness of the observation was remarkable. Thus, the Northern Crested lizard, Dipeosaurus dorsalis sonorensis, which occurs on the sands of Rancho San Francisco, inland from Desemboque, has been mentioned as climbing trees after fruit. Even more unusual, the leopard lizard, Crotaphytus wislizeni, was said to feed on other species of lizards. And indeed, it is one of the very few species of lizard in the region which habitually devours others of its own kind.

Mating Seasons, Eggs and Nesting

In most of these aspects of natural history the native information is quite deficient. In the case of birds, it is assumed that mating occurs in early spring, that the eggs are laid a month later, that in another month the young hatch out and about the third month they fly from the nest. This sequence seems to represent a conventionalized idea rather than a reflection of direct observation. Another difficult question for them to answer, with respect to the reptiles, was whether the young are born alive or whether they hatch from an egg. Only a few of the species are correctly described, among them the rattlesnakes. Sharks and mantas are said to give birth to live young.

Guesses as to the number of eggs varied from fairly accurate estimates for some of the birds to rough approximations ("many") for some of the reptiles and most of the fishes. The knowledge of bird nesting habits was fair. The informants had no difficulty in pointing out the particular localities where one or another species of bird nests nor in the identification of the nest by its shape and construction. This was especially true of the cormorants, egrets, sea-gulls and pelicans. All these are either marine or shore birds as will be noted.

Animals: Venomous and Otherwise Feared

171 In contrast to the Mexicans, the Seris fear relatively few animals and they are almost always those which can inflict a vicious or toxic bite or sting. The Mexicans, on the other hand, are afraid of a great many animals. European folklore plays a part in this as does unfamiliarity with the desert and the consequent fear of it.

The Seris fear most the rattlesnake, both the Western Diamondback and the Sidewinder. These snakes, they say, bite with their fangs but the venom is located in the rear of the body, about two inches in front of the anus. A plant called "humco" (?) is used as a remedy both in the form of a drink and as a dressing for the wound. The Mexicans claim this remedy is effective. The coral snake is also considered to be venomous although the Seris believe that its bite is fatal only to Mexicans and not to themselves (!). Most of the

*825 [171] an idea from one animal to another.[13] The *Xanthusia* does not share this similarity to the salamander in appearance, but it is found along with the gecko and behaves much like the gecko when exposed to the light. Hence, perhaps, comes the association.

I excluded here from the discussion the red racer because the notions concerning it are conflicting, with some informants insisting that it is toxic and can cause death and others that it is not. But all agree that it'll bite—and painfully so.

Finally the toad. The toad, although unagressive and considered as such, is feared a great deal as a repository of all sorts of toxic traits. There was some disagreement as to its ability to bite, with some informants thinking that it does bite with its tongue, others thinking it can't bite at all. But all agree on the following attributes of the amphibian: venom in body, toxic on touch, always fatal to eat to most animals and to all men. In [262] this the toad joins the gecko and the *Xanthusia*. These too are believed to be fatal to eat and these three represent the only animals in this class that are considered inedible.

It is interesting that the list of toxic (though non-fatal) animals should also include the *Phrynosoma* although here there seemed to have been again disagreement between the informants. The lizard is perfectly harmless and actually will not [763] bite even in self-defense. But the Seris say it causes swelling.

●752 278 For the rattlesnake bite, the remedy is a plant called *Kásox*. An extract of this plant is made after boiling it in hot water and then it is taken orally. It is also applied to the wound and, the Seri say, it must be taken all day long for a full day. The Seris take this when they are harmed by these snakes. This plant is supposed to be found in the mountains near Kino but not in the Desemboque or Tiburon area. But in addition to their own medicaments, the Seris, especially the younger fellows, will make use of the regular anti-venom available at the school or mission.

Attitudes Toward Reptiles and Amphibians

*825 With the few exceptions, these animals are not particularly feared. Those that are feared are considered dangerous in some ways, and, in fact, most of them are either by their ability to inflict painful bite or by possession of venom. But otherwise, their attitude seems to be very much a matter of fact and one of unconcern, which seems to corroborate Kroeber's opinion of the Seris' psychological makeup in other matters.

[13]Since this has been written, I have plenty of evidence that the gecko is similarly dreaded in many parts of the world.

[p 30B]

9:Malkin E-5 (1953-1955)1962 MU31 Seri MU31

* 825 it is said to live "in refuse, fish and fish offal and only in the fishing camp." This is one that one must reconcile with the Seris' simultaneous belief that it is parasitic on dogs and that it sucks human blood as well. More difficulty here creates their belief that it is found only in the camp but that the dogs on Tiburon are free from it.

The Phasmids interestingly are associated with trees and sticks, a very correct notion and the Mantids also with the trees.

However, the information is incomplete and apart from the few cases cited above usually contradictory and hazy.

Toxic Insects

Only 19 species out of 92, or little more than 20% of the total, are considered toxic in anyway. Unlike in most of the other phases of the Seri knowledge of the natural history of insects, the natural groupings are quite clear. The three main groups the Seris consider toxic or harmful are the Arachnids, the Arachnoids (*Acarina* included) and the *Hymenoptera*, all very much as one would expect. In addition few beetles and bugs complement the list of the dangerous creatures. tures.

Among the *Hymonoptera* are all of the species listed, with the exception of the bee. This may be due to the fact that the bee in the Seri country is the stingless Melipoind (?). Of the toxic kind, *Pepsis* (the Tarantula hawk) is probably most feared. The sting the Seris think is very painful but disappears after a few minutes as it contains little venom. A plant is applied to the bite and also taken internally with hot water. The *Pepsis* must be really feared because the informants assured me it was one insect the children preferred not to play with—an excellent confirmation of the caution. *Chlorion aeriatus*, the Sphecid wasp, induces similar symptoms by its sting. Here as a cure, Vic's mentholate tablets were said to be used, smeared on the injured spot. This cure is also applied by the Mexicans and the Seris probably adopted it from them. The sting of this wasp is considered more dangerous to children than to adults. The Velvet wasps[12] (Multillids) are also supposed to sting with the rear of the body causing some pain. Finally the *Hemisia*, and Anthrophorid bee inflict a good bite but otherwise are harmless.

[152] [157] [752] [177] [753]

Arachnids on the whole are more feared than the *Hymenoptera* and include what the Seris believe to be the most dangerous of all terrestrial arthropods, with a very good justification. The effects of the damage inflicted by these creatures is more lasting and overpowering. The Black Widow easily takes first place and is feared as much as the gecko or the rattler. Some Seris even claim it is the most dangerous of all creatures. It may cause death, they say, although usually one can do with a 2-3 day illness. However, to small children the bite (or as they say "sting" owing

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[12] *Ptiloglossa mexicana* causes swelling and much pain lasting 2-3 hours and is considered most unpleasant of all Hymenopterans.

[P. 52 B]

* 825 to the belief that the spider stings with the rear of the body) may cause death in 2-3 hours. It may [753] also kill chicks and one of the informants, Jose Juan Moreno, claimed to have been paralized by the sting of the Black Widow for eight days . . . . [158] However, Juan is a good hypochondriac, and even when not apt to exaggerate, he may have suffered a genuine trauma owing to an encounter with this spider. While smaller spiders are not considered too dangerous, the *Tarantula* is. It can both bite with its jaws and sting with the rear end of the [753] body and it is said to be more dangerous to children—it may cause their death at times. The adults will weather its attack but will become quite ill. [752] As remedy for its bite, a plant *quivira* is used as a hot extract taken in a small glass for 2-3 days.

Almost all of the animals closely related to the Arachnoids, the scorpion, the Sun spider, *Scolopendra* and the tick, are also venomous in the Seri view. Of these, the scorpion is most feared, and in adults it will cause illness lasting up to a week while to very small children it may be fatal. As a proof the informants mentioned a six months old [165] girl recently stung by a scorpion who died in less than six hours—the fact confirmed by the Mexicans in the village. Remedy for this is similar to [762] others—a plant called *amx.xuhây* is drank with hot water for three days, a glass per day.

The Sun spider, also armed supposedly with a sting at its rear, is said to be fatal to horses for whom there is no remedy. This is a pure fiction. [177] but the belief is common among the Mexicans and the Seris certainly took it up from them. But no one suggested that the Sun spiders are in any way harmful to men although they are avoided, just in case.

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The tick's unpleasant traits had already been discussed under another heading. All that is essential to add is a belief that in addition to other ex- [753] ploits it can enter a person's ear causing much pain and that for this reason it is particularly bad for the children, as there is no remedy.

There remain three more species of various degree of toxicity. Of these, the *Triatoma* is most conspicuous both for its effects and factual observation. This blood sucker bites with its mouth parts [753] and introduces illness called by the Seri *syexhis. ?e . kemep* which may end fatally. People of all sexes and ages are subject to it equally, and the illness may last three months, and there is no

825 other snakes are also viewed as venomous but are claimed to be of mild disposition and do not bite people.

Among the lizards, curiously, the one feared most is not the highly poisonous Gila Monster, but the harmless little gekko, Coelonyx variegatus sonorensis, which lives in fallen and dried-up saguaros. The informants could not even be induced to touch specimens killed in alcohol. It is believed 753 that this creature could kill humans either by contact or by allowing them to inhale its vapors which cause a fatal lung illness. This little lizard is reminiscent of the European salamander in some ways. The Mexicans call it 177 locally "salamanquesa", and attribute to it the same unpleasant traits which the Seris do. Since this little lizard does resemble the European salamander and the beliefs about it are quite similar to those in European folklore, it is possible that here is a case of a transfer of this folklore upon an animal of a different kind. These beliefs eventually perhaps diffused to the Seris.

A small desert night lizard, Xantusia vigilis, is also very much feared and is frequently confused with the gekko. It lives in an identical habitat. A toad, Bufo alvarius, is said to bite with its tongue and is supposed to be able to inject venom with it. Its blood and "milk" are also very toxic.

Several of the arthropods are believed to be dangerous. The Seris claim that the blood sucking cone-nosed beetle, Triatoma rubida, stings with its mouth parts and also causes an illness called eyxhil i te kmap, which can be fatal to children. This bug actually is a vector of the Chagas disease and its repeated bites may cause a sensitization to them. But in this case it is impossible to tell which is the situation without a clinical analysis. Scorpions, which sting with their tails, are considered to be very dangerous. The Black Widow spider, which is very numerous in the locality, is also viewed as very toxic and is said to be sometimes fatal, although a few days' illness is all that its bite usually causes. The tarantula spider also bites but its venom is never fatal. The Sun spiders, Solifugida, are venomous but their venom supposedly kills horses but not people. All of these spiders and their relatives, according to the informants, sting with the rear end of their body in wasp-like fashion. No medicant is applied on the bite, nature being allowed to take its own course in the recovery.

Concerning other animals, the sting rays are much feared because of the venom in their thorns and their ability to inflict a nasty wound. The bats, according to some informants, can cause disintegration of the body by spitting on it and they also have venom in their tongues, although this belief was not shared by one of the more sophisticated informants.

Only a few animals are considered to be dangerous to eat owing to their toxicity. The toad is one and a little fish, Sphaeroides annulatus, is another. 262 of this fish it is said that "one hundred years ago, a man ate one; he died", hence the avoidance. However, rattlesnakes are eaten with relish; only the head and the part of the body where venom is believed to be located being discarded.

171 The above discussion suggested some of the differences in the attitudes 825 toward animals between the Mexicans and the Seris. While the former fear many,

* 825 heard the Mexicans talk about the dreadful consequences of its bite, and they took them at their word!

However, it will be seen that not one of the snakes is considered to be dangerous in any way on mere handling of its body. Coral snakes, though actually potentially fatal, do not bite readily and often may be handled with impunity.

This then leaves the three lizards and the toad in the category of potentially fatal animals. This is mysterious because not one of these lizards is in any way harmful.

Of these, the leopard lizard (*Crotaphytus*) is dangerous simply through biting and through venom which it has in its teeth. The Seris seemed dubious, somewhat, if this beast could kill other men, but they were sure it could kill them (the Seris). They also denied that wild animals could die from its bite. This situation is difficult to explain except perhaps by an existence of some sort of myth connected with this lizard. It may be also that the vile temper of *Crotaphytus* when captured has persuaded the Seris that any animal so vicious must be dangerous.

But the two little perfectly harmless nocturnal lizards, the gecko and the *Xanthusia*, represents a different stripe of danger, but they are feared just as much as any of the really venomous snakes (rattler) if not more. Neither of them will bite,
●[753] the Seri say, but they'll cause an illness on touch which can be fatal and at best they'll cause an illness of the lungs which can also be fatal. In addition, touching them will cause flesh to fall off one's hands and body. This, the informants explained, was the reason why they were not eaten. That both of them are terribly feared, the gecko even more than the *Xanthusia*, I had examples galore. While collecting with the Seri in the dried-up sahuaros, we encountered a great many of these lizards after breaking up the logs. Invariably the Indians fled and retreated obviously alarmed at the sight of the wiggling little creatures and when I picked them up bare-handed they were altogether shocked. I could not persuade them to touch even later specimens killed in alcohol. Some showed clear fear of picking up or touching the vial in which these lizards were preserved. A good
171 possibility is that this belief is in some ways con-
* 825 nected with the European folklore about the salamander. The gecko is called in the local Spanish *salamancesa* which means salamander. And the salamander, in the European mythology, may inflict harm on people in the very same manner as the gecko is supposed to do. The Mestizos, a good many of them at any rate, also hold similar views. There is a general similarity in the appearance and outward behaviour of the gecko and the salamander and, perhaps, we have here a transfer of

[P. 30A]

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[P 30 B]

+ 825 eyes in front of the body. These are small spots which are different organs but the Seris think they serve as eyes.

Toxic Forms

●753 This group of miscellaneous marine animals
+ 825 contains, according to the Seris, an unusual number of toxic and dangerous forms. Three are considered as nasty and toxic, the *Medusa*, the stinging worm and the regular sea urchin. The least dangerous of these is the sea urchin. Its spines are "sometimes poisonous. When broken off, they stay in the body and it never heals." The Seris, however, are more fearful of the other two. The *Medusa* "is very venomous and dangerous when touched." "It causes great pain, irritation and swelling" and then "it is not fatal. Just 12-13 hours of illness and then . . nothing." The stinging worm is equally bad, the Seris say. "It has spines which sting badly. It causes local swelling for 2-3 days. It has much painful venom but is not fatal."

All these comments are based on observation and reflect pretty much the real situation. There is no exaggeration in them.

Miscellaneous

+ 825 Movements of animals had been observed at least in a few cases. The sea-cucumber they say "walks like the viper," leaving marks on sand. The regular sea urchin walks on its spines which are called *zeppe nosymx* or *zeppé*, meaning sea.

[P. 46 B]

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[P-63 A]

Malkin E-5 (1953-1955)1962 NU31 Seri NU31

825 [753] [164]

known remedy. This bug is actually a vector of the Chagas disease. Its repeated bites may cause allergic sensitization. For lack of clinical observation it is impossible to determine the exact nature of its effects, as the Seris describe them.

The remaining two creatures are both beetles. *Calosoma* is thought a nuisance rather than a danger. Its disagreeable habit is spitting out poison through the rear end of the body which may [753] cause headache for a brief while. To this I may readily attest having on more than one occasion be subjected to *Calosoma's* bombardment. However, at worst it is a mere irritant. Finally *Hippomelas*, sometimes confused with the *Steriphanus* and *Dermestes* are supposedly evil smelling but not harmful.

Finally the male *Arenivaga*, considered separate from the female, the Seris claim also bites with the mouth but it is not dangerous.

What is little surprising is that the Seris did not include in their list a few other insects that could have readily found their way into the "dangerous" gallery. The huge water bug *Leptocerus* of course bites, although the Seris claim it does not. An aquatic insect par excellence, it simply never had a chance to prove to them what it can do. The Pentatomid bug *Rhytidolomia* at least may be included among the stinging variety, although it is perfectly harmless. Finally there are various Reduviid bugs, notorious carnivores, which when disturbed and offered an opportunity will sting painfully. But here again, the Seris may not have played enough with them to find out.

On the whole, the Seris are well informed concerning possible dangers from various insects. As a matter of practical application, they do in this regard far better than the Mexicans."

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278 "The Seris may have used a concoction of insects in arrow poisoning. McGee quotes Hardy who had visited them in 1825 as follows:

> "It is believed that the Ceres Indians have discovered a method of poisoning their arrows and that they do in that way: They kill a cow and take from it its liver. They then collect a number of rattlesnakes, scorpions, centipedes and tarantulas, which they confine in a hole with the liver. The next process is then to beat them with the sticks in order to enrage them, and being thus infuriated, they fasten their fangs and exhaust their venums upon each other and upon the liver. When the hole mass is in high state of corruption, the old women take the arrows and pass the point through it. They are then allowed to dry in the shade and it is said that the wound inflicted by them will prove fatal. Others again say that the poison is obtained from the juice of the yerba de fle'cha (arrow wort)."

[P. 53 B]

2: Kroeber E-5 (1930) 1931 NU31 Seri NU31

wanted people to die so he could eat their bodies; Pinacate because men stepped on him. Then Coyote killed his own son (daughter?), and people began to die. 539

4.

Fire is from the fly, who made it by rubbing his hands together, as he still does (*fide* R. Thomson).

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A man wanted to find the house of "Dios," who was the Sun. He went to ask Moon. Moon sent him on, but he could not find it, and returned. Moon played the musical bow (kāpə̀xa"ēt) to call all the birds, but they could not tell him. He played again and one more came, CaXa'pniX ke"ēt, a little duck, who took the man and showed him the way, in a field, with the house in a corner, and showed him the door. The man went in. Sun had a pretty daughter. The man wanted to marry her, she was willing, but Sun would not allow it. He played (cards!) with the man, for each other's bodies. Sun won. He kept the man in his house. But in the morning when Sun went his rounds, the man escaped with the girl into the brush.

Of these tales, the first, except for the cane concept, is a rationalization, evidently post-Caucasian; the third probably finds its nearest analogues in central California; the fourth and fifth are characteristic of the Yuman tribes and southern California Shoshoneans.

Episodes apparently unknown to the Seri of today are: earth diving; frog eating the excrement of the god who dies; vagina dentata.

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Most old men have more or less shamanistic power.

A shaman is paid a knife, a bow, four arrows, five pesos, or any such amount for curing. Killing of unsuccessful shamans was denied.

POPULATION ABLE TO WORK
(between 11 and 65 years)

Men, 74 or 69% of the masculine population. 464
Women, 76 or 70% of the feminine population. 162
462

We can add that, at least as far as the male population is concerned, the figure of 69% with a potential work capacity is equivalent, in general terms, to the percentage of the population economically active, since one of the singular characteristics of the Seri population is the fact that they constitute a community fully occupied: all the men of working age have a place set aside in the fishing activities; this is an advantageous position for increasing economic development of the tribe. With relation to the women the situation is not the same, since the majority of girls of marriageable age carry on very few productive activities; it could be said that economic responsibility begins with matrimony. [226]

If it is true that all the Seri men are fishermen, it is also true that there is the beginning of some specialization of jobs, which are carried on complementing or as an accessory to the principal occupation. Thus we have among the men: 463 462 162

Carpenters, constructors of *piraguas* (a kind of canoe)	6
Medicine men	14
Farmers	2

And among the women:

Seamstresses	4
Farmers	1
Midwives	22

The relatively high number of medicine men and midwives should not be surprising; Seri popular medicine is very well known and depends principally on magical propitiation and since the magic powers are acquired in a variety of ways, including dreams, and the healing rites are, on the other hand, very simple, it is not strange that medicine men should abound. As for the midwives, it can be said that every woman who has undergone the experience of childbirth feels herself able to help at a birth; nevertheless, it is said that the more experienced women are those best able to take care of those giving birth. 755 756 844

Problems which should be attended to

In addition to the sanitary problem mentioned above, mention should also be made of the problem of agriculture, linked with the necessity for supplying food to an Indian population which since economically it depends principally on fishing, needs to complement its diet with agricultural products to achieve a better one. In close relation 185 [262] [241] [423]

12: Moser L-5 (no date) 1964
(ca. 1960) NU31 Seri NU31

To use the clay as paint, a bit of water is placed on a stone and the clay is rubbed into it to make a paste. It is then applied to the face (Fig. 4). It spreads smoothly and adheres firmly to the skin. The blue was formerly used for decorating pottery, clay figurines, headdresses, fetishes, arrows, wrist guards, and cane gaming sticks, as well as for face painting. In curing the sick, the shaman sometimes used the blue for painting crosses on the patient's chest. Also, women made necklaces using beads formed from the blue clay.

FIG. 4. Painting the face with the finished pigment.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

Naturally the conditions at Costa Rica were unfavorable to the study of native ideas concerning apparel. The women and some of the children were arrayed chiefly in cast-off habiliments of the rancheras or in nondescript rags, while the men either aped Mexican fashions, like Maahém, or shamefacedly sweltered under the unaccustomed burden of tatterdemalion gear; yet there was a meaningful absence of that desire for finery so prominent among primitive peoples—a fact quite as eloquent in itself as the absence of bracelets and bangles, tassels and trappings. It is probable that the shamans and mystery-hedged crones in the depths of Seriland enhance their influence by the aid of symbolic paraphernalia (indeed, some inkling of such customs is found in the meager records of earlier visitors);[1] yet the conspicuous feature of Seri costumery is the dearth of decorative devices.

FIG. 13.—Necklace of wooden beads.

The habitations of the tribe are the simplest of jacales—mere bowers, affording partial protection from sun and wind, but not designed to shed rain or bar cold. Half a dozen of these were examined at Costa Rica in 1894 and probably a hundred more, in various stages of habitability, in Seriland proper in 1895, yet not the slightest trace of decoration was observed—the structures are plainly and barrenly utilitarian in every feature. The same may be said of the balsas in which the Seri navigate their stormy waters; for the peculiarly graceful curves of the craft evidently stand for nothing more than the mechanical solution of a complex problem in balanced forces, wrought out through the experience of generations, while the simple reed bundles are absolutely devoid of paint, of superfluous cord, of fetishistic appendages or markings, of tritons, nereids, or other votive symbols at bow or stern, and of industrially superfluous features or attachments in general—indeed, the only appendages discovered were one or two simple wooden marlinspikes (shown in figure 26), thrust among the reeds to be at hand in case of need for repairs.

Among the utensils employed in the primitive householdry of the Seri the most conspicuous and at the same time the most essential is the olla, or water-jar. Its technical features are described elsewhere; but it may here be noted that the olla is the central artifact about which the very

[1] Hardy noted the use of "a small leathern bag, painted and otherwise ornamented", as a medicine rattle (Travels, p. 262), and also described a wind-symbol and an effigy used for thaumaturgic purposes (ibid., pp. 264, 265).

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

462 ing field; though by far the greater part of their time is spent in listless lounging or heedless slumber under the incidental guard of roaming youths and toiling women. The matrons are the real workers in the tribal hive; they are normally alert and active, passing from one simple task to another, gathering flotsam food along the beach or preparing edibles in the shadow of the jacal, with an eye ever on material possessions and children; they frequently join in hunting excursions of considerable extent; they are the chief manufacturers of apparel, utensils, and tools; and the scions of Castilian caballeros are not infrequently staggered at the sight of half a dozen Seri women "milling" a band of horses, and at intervals leaping on one to kill it with their hands. The masculine drones are the more petted and courted by reason of their fewness, for during a century or two, at least, the women [162] [562] have far outnumbered their consorts—a disproportion doubtless tending in some respects toward the disintegration of the clan system and, reciprocally, toward the firmer union of the tribe.

One of the most noteworthy extensions of feminine functions among [756] the Seri is toward shamanism. So far as could be ascertained from Mashém and the associated matrons at Costa Rica, it is such baldams as Juana María who concoct the arrow "poison", compound both necromantic medicines and curative simples, cast spells on men and things, and even fabricate the stone arrowpoints and counterfeit cartridges; though unhappily the data are neither so full nor so decisive as desirable.[1]

562 Conformably with their prominence in proprietary affairs, the Seri 623 matrons seem to exercise formal legislative and judicative functions; for not only do they hold their own councils for the arrangement of the domestic business of the rancherías, but they also participate prominently in the tribal councils (as explained by Mashém), and play important rôles in carrying out the decisions of such councils—as when they cooperate with war parties as decoys, or journey across their bounding desert to spy out the land of the enemy.

614 On the whole, it would appear that the clan organization of the Seri conforms closely with that characteristic of savagery elsewhere, especially among the American aborigines. The social unit is the maternal clan, organized in theory and faith in homage of a beast-god, though defined practically by the ocular consanguinity of birth from a common line of mothers; yet the several units are pretty definitely welded into [649] a tribal aggregate by common feelings, identical interests, and conjugal ties. The most distinctive features brought out by the incomplete 562 investigation are the somewhat exceptional manifestation of property-right in the females, the singularly strong sense of maternal relation, and the apparent prominence of females in shamanistic practices as well as in the tribal councils.

[1] The agency of the women in applying the arrow "poison" was noted by Hardy; cf. p. 788.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

614 Classed with respect to major administration, therefore, the clan may be regarded as an informal *adelphiarchy* (*ἀδελφός* and *ἄρχω*) or *adelphocracy* (*ἀδελφός* and *κρατέω*). It has none of the elements of the patriarchy, since male lineage is not recognized, and can not be classed as a matriarchy, since the clanmother is administratively subordinate to her brothers; while the avuncular functions are apparently inchoate and indirect, i. e., exercised only through or in conjunction with the clanmother. In short, the clan is ordinated or regimented in ostensible accordance with physical power, though the real faculty is confused (after the fashion of primitive thinking generally) with mystical faculties, imputed largely on magical grounds but partly on grounds of age-reverence, etc. Now, when two or more clans combine, the basis on which the common chiefship is determined is similar to that determining the clan leadership; at the outset three factors enter, viz, (1) the seniority of the clans in the accepted tribal mythology (2) the prowess of the respective clan leaders (always weighed in conjunction with the shamanistic potency of their consorts), and (3) the numerical strength of the respective clans; but practically, so far as can be judged from all available information, the choice really reflects physical force, since in case of doubt the strongest and bravest man becomes the object by virtue of his strength and bravery, while the strongest clan finds fair ground for claiming seniority in the very fact of its strength. Naturally disputes arise in the adjustment of the several relations; and in the actual analysis in council, the dispute is commonly reduced to a contest between gods and men, i. e., between the claims for mystical and magical potencies on the one hand and the claims of brawn and bone on the other hand, so that strength wins, unless omens or prodigies turn the scale—which happens often enough to keep the subjective and the objective elements in fairly equal balance. Sometimes the contests are quickly settled; again they last for months, during which the tribe struggles under its weight of Cerberus heads; and repeatedly the disputes have ended in the annihilation of clans, or even in the tribal fissions attested by the recorded and traditional history of the Serian family.

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643 The chiefship once determined, the leader bends all energies toward maintaining the position by which he is dignified and his clan exalted. He recognizes his responsibility for the welfare of the tribe—not only for success in battle and food-getting, but for stilling storms at sea, protecting the aguajes from the drought-demons, and securing all other benefits, both physical and magical; he must be aggressive yet cautious on the warpath, fleet and enduring in retreat, indomitable in the chase, bold but not reckless on the balsa, and above all panoplied and favored by the shadowy potencies of air and earth and waters; he must be the local and lowly Admirable Crichton, and his never-neglected watchword must be *noblesse oblige*. His practical devices for maintaining prestige are many and diverse; it is commonly the chief who carries the sym-

2: Kroeber E-5 (1930) 1931 NU31 Seri NU31

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826 so all the other flies could see and also come to this dead thing."

707 A few weeks ago, Antonio Herrera had a very vivid dream. He dreamed
[198] that he was hunting in the mountains for deer and came across a cave. (These volcanic mountains are pitted with caves.) He went into the cave and saw all kinds of things dear to the heart of a Seri---plenty of rifles, lots of cartridges, knives, *manta* (unbleached cotton), necklaces, red bandannas, blue overalls, *plata*, or silver, and many other things.

• [854] When he awoke he sought his father Manuel Encinas, who is a medicine man and interpreter of dreams, to explain his dream to him. The price demanded by Manuel was six *tiras*---or 30-30 cartridges, a very high price, according to Seri standard. The explanation was this:

It was true that the cave was there and all the things in it just as seen and described by Antonio, but in order to find it he would have to fast nine days and go without water that length of time also, in the heat of summer. Then the way would appear to reach the cave. So far, Antonio has not attempted the fast.

381 I witnessed the operation of making a certain kind of pitch or
396 tar which the Seris use to make the seams in their canoes or boats tight. The women pound up the dried pulp next to the outside skin of a dead *pitahalla* cactus (organ cactus). This is very dry and brown in color and the pieces are pounded up to a dry powder with a wash or shore rock in a dried deer hide. This is placed in a *batello*, or flat basket, and manipulated so that the coarse pieces come to the top and are scraped off and thrown away. The fine powder is then put in a five gallon can and some porpoise or sea-lion oil or horse oil is poured on it and stirred into a thick gummy mass. When thoroughly mixed it is put over the fire, in an olla, to boil and continually stirred for an hour or two until it is the consistency and has the appearance of coal tar. While being worked it is kept heated and applied to seams inside and outside the boat. It hardens just like tar and answers the same purpose.

123 Since the corn, which had kept this band of Seris in food, disap-
226 peared two days before we came, and they had barely kept going on
[198] seeds and a few fish, and they all had decided to leave camp with us in the morning---the women walking and the men and some children in boats---it was necessary to supply them with some food to take them to the hunting grounds of the *cahuama*, or sea turtles, and land them
[264] on the Island. The *cahuama* would furnish them meat---their favorite and national food, and the shores would supply them with clams, oysters, crabs and other sea food.

123 So the whole band was called around our camp and each family was furnished with two cups of corn, two of beans, some green coffee and a cup of cube sugar. For the first time our camp was free of Indians, and we ate and went to bed in peace.

The amenities of civilization were laid aside and forgotten in

12: Moser L-5 (no date) 1964
(ca. 1960) NU31 Seri NU31

SERI BLUE

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ABSTRACT

The blue which the Seri Indians of Sonora, Mexico, use in face painting is not the mineral dumortierite, as previously believed, but is a prepared pigment. This paper is a description of the process in which three elements are combined to produce this pigment.

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McGee and Kroeber reported the mineral dumortierite as the source of the blue pigment used in Seri face painting (McGee 1898: 165-6; Kroeber 1931: 27). Coolidge described two blues, one a mixture of gypsum and a boiled root, the other a blue stone found on Tiburon Island (Coolidge 1939: 200). Xavier mentioned dumortierite and commercial bluing. She also referred to a third blue obtained from a plant on Tiburon (Xavier 1946). Present investigation has shown that as far as the Seri know, the only blues they have ever used are *ika?óil* "to cause to be blue" (commercial bluing) and the highly prized *?antezj kóil* "blue clay" of their own manufacture.[1]

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The components and the method of manufacture of *?antezj kóil* are said to have been taught to the women long ago by *?ant i?akímxoj* "they who tell the things about the earth." The actual color transformation is veiled in mystery to the Seri who say that if the process of making the clay is observed by any girl who has not passed the menarche, the blue will not appear. Its appearance is not attributed to shaman power, however.

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881
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?antezj kóil has been in less demand during the last few decades since commercial bluing has been readily available. Nevertheless, *?antezj kóil* is the blue preferred by those women who continue to adorn their faces in the traditional manner.

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The three ingredients used in making the blue clay are the root bark of *xkoktz (Franseria dumosa)*, *iki kóizj* "to grind with" (a mixed clay in which montmorillonitic layers predominate), and *mokni óoxW* "excrement (sap) of *mókni (Guaiacum coulteri)*." The Seri say that the *iki kóizj* and the *mókni* are found only on Tiburon Island. The root bark of *tinkl (Franseria ambrosioides* Cav.) or of *xneejan siiktoj (Stegnospermum halimifoliam)* can be used instead of *xkoktz*. *tinkl* gives a distinct aroma to the clay. The plants mentioned are fairly common along the Sonoran coast.*

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*EDITOR'S NOTE: It is interesting to note that none of the ingredients is blue in its unaltered state.

2: Kroeber E-5 (1930) 1931 NU31 Seri NU31

in endearment when drunk. This may apply also to other siblings-in-law. 607

Younger siblings (? and other relatives) may say nothing obscene before the older, out of respect for them; but the older talk freely before the younger. This applies to both men and women. Otherwise there seems to be little prudery; the informant recited the names of the private parts before his wife and children, and she indifferently repeated them after him in confirmation. 593 834

There is no teknonymy. 551

The dead are buried. Cremation of the body seemed unknown to the informant. All property of the dead person is burned or destroyed. His balsa was burned; modern boats are not, because they "belong to the government," which furnishes the lumber. The house is abandoned and a new one built a short distance away. The name of the dead is not spoken. 76 [422]

Kinship

The Seri kinship system is distinguished by three general features: the large number of terms; the strong tendency to terms reciprocal in meaning; and the distinction made between older and younger siblings of nearer relatives if they are of the same sex. All of these are characteristic Yuman traits. 601

The number of terms obtained is 50; which number might have been increased if step-relatives, great-grandparents, great-uncle-aunts, siblings of siblings-in-law, spouses of uncles-aunts, and spouses had been inquired for. However, the informant seemed to feel that the list was exhausted with the set obtained; before that, he pursued the subject of his own accord. Fifty is an unusually large number of kinship names in any language; the more so, since there are no cousin terms. The 12 siblings-in-law terms—a quite extraordinary number—swell the total.

Conceptually reciprocal terms dominate the system except in the sibling class. The informant soon realized this principle. Some of the reciprocals are derivatives; others are not; self-reciprocals are lacking. This last fact helps increase the size of the system.

The distinction between older and younger siblings of the same (but not of the opposite) sex as nearer relatives is consistently carried out for uncles-aunts and spouses' siblings (or siblings' spouses).

ôl	**father**	**reciprocals iaâ'k (man's son), ôq man's daughter)**	
o't·a	**mother**	**rec. iqo't**	**(woman's child)**
o'p·ke	**father's father**	**rec. ik-o'pke**	**(man's son's child)**
omde	**father's mother**	**rec. oka'mk**	**(woman's son's chd.)**
ô'de	**mother's father**	**rec. iqôei**	**(man's dtr.'s child)**
ôkt	**mother's mother**	**rec. iqaq**	**(woman's dtr.'s chd.)**

10:Davis E-5 (1922-ca.1939) 1965 NU31 Seri NU31

War Chief of the Seris

622 765 There is sorrow and mourning on that little known island in the Gulf of California, Tiburon.

[169] During the last few years, many of the Seri tribesmen have succumbed to influenza and pneumonia, and many a night has the weird and melancholy wailing for the dead mingled with the soft lapping of the waters of the Gulf on the shores of that lovely desert isle.

But now a universal grief has overtaken the remnants of a once powerful and warlike tribe---Juan Tomas (*Pik-taa-aohe*, "Very Brave" in his own language)---the old War Chief of the Seris, is no more. He has fought a last and losing battle. For a month, maybe for several months, the women will wail and lament, and around the tribal camp fires, for many a night, the Seris will tell of his exploits and miraculous escapes, as they told Roberto Thomson, their friend and advisor.

[169] The old Chief died on the shores of Kino Bay opposite Alcatraz Island, probably of pneumonia.

There was no soft mattress to lie upon, no pillow to rest his head, and no roof to shelter him from sun or storm. His bed was the sand of the sea shore; his canopy, the blue heavens above, and his [169] requiem, the solemn beating of the surf on the shore. His last words were to his grand-nephews to inherit the *Sierra de las Tinajas*, and he asked the Indians and his *Yori* (Mexican) friends to protect his nephews and the mountains.

622 764 His body was wrapped in an old *zerape*, fastened around by rope of native fibre. His grave was dug with paddles from the canoes, four and one-half feet deep in the sand hills near the sea. He was placed in the grave with his head to the north, face up, with the carapace of a sea turtle covering his head. Amid much lamentation and mourning, the grave was partially filled, and then a heavy layer of *cholla* cactus spread over. The grave was then filled and mounded up and covered with *chollas*, *mesquite*, shells, and thorny growths, and also a five-gallon can. The cactus spines were to discourage coyotes.

so named must be of the same sex as the first. The significance of land ownership needs further investigation.

Many of the Seri still prefer, when possible, to live in their chosen band area. Sometimes a person, when he is approaching death, will ask to be taken to his own i?iziiting, where he can die and be buried in the area of his choice.

NOTES

1. Due to printing limitations, stress on Seri words has been omitted, and several orthographic symbol changes have been made for this paper. The phonetic values of the symbols used are the following: p is voiceless labial stop; t is vl. dental stop; k is vl. velar stop; ? is glottal stop; f is vl. labial flat spirant; ʍ is vl. labial grooved-rounded spirant; s is vl. alveolar spirant; z is vl. alveo-palatal spirant; l is vl. lateral spirant; h is vl. velar spirant; x is vl. back velar spirant; m is labial nasal; n is dental nasal; ŋ is velar nasal; y is palatal semivowel; i is a high close front vowel; e is a low close front vowel; a is a low open central vowel; o is a mid close back vowel.

2. These data were compiled during field trips to the Seri camps during the years 1956-61, the studies being carried out under the auspices of the Summer Institute of Linguistics. The principal informant was R. Herrera T. whose information was checked with and supplemented by nine of the older members of the tribe. I am indebted to my colleague, David Thomas, who read an earlier draft of this paper and made helpful suggestions.

3. 1) W. J. McGee, "The Seri Indians," *Bureau of American Ethnology, Annual Report*, No. 17, Part 1. Washington, 1898. 2) A. L. Kroeber, "The Seri," *Southwest Museum Papers*, No. 6. Los Angeles, 1931. 3) W. B. Griffen, "Notes on Seri Indian Culture, Sonora, Mexico," *Latin American Monograph Series*, No. 10, Gainesville, 1959.

4. It will be noted that between subdivision 3 and 4 on Fig. 3 there is an unnumbered area, the status of which is uncertain.

5. Kroeber states that McGee's concept of Seri maternal lineages crystallized into totemic clans with matron rule seem a fantasy. In Kroeber's opinion, "The Seri may never have had sibs or clans; but the fact that they appear to lack them now is no positive evidence that they were without them three centuries ago. Shifts of residence, contraction of territory, shrinkage of numbers, amalgamation of distinct bands, may well have obliterated much of such social fabric as they once possessed."

Griffen discusses the nature of the former Seri bands and states, "they may have been patrilineal and exogamous. The criteria . . . that Julian Steward has exposited for the formation of exogamous, patrilineal bands . . . are and presumably would have been met formerly in the Seri habitat." Griffen lists other aspects of this type of band which are also verified to some extent by his data. From reading his material, it is obvious that he suspects the existence of clans at some earlier period. He emphasizes the need for further investigation.

6. G. P. Murdock, *Social Structure*, Macmillan Co., New York, 1949.

7. Marriages were usually contracted within the band.

8. As Kroeber points out, their memory likely covers only the latter part of the period of Spanish contacts.

9. The Seri recall nothing of Seri-Pima contacts and little of Seri-Apache relations.

10. The story is related that one day some Seri entered a cave where they found several Papago jugs filled with seeds. Being hungry, the people ate the seeds and left some arrows as token payment. The Seri say that the Papago apparently believed the arrows were intended as an insult. Fighting broke out soon afterward.

11. The Seri concept of the band annihilations is seen to be in contradiction to McGee's statement (p. 132): "Concordantly with their primary characteristic, the Seri have avoided ethnic and demotic union beyond the narrow limits of their own kindred; and even of these they seem to have cast out parts, annihilating the Guayma and Upanguayma, displacing and nearly destroying the Tepoka, and outlawing individuals and (apparently) small groups."

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prepared by trituration with a pebble or rubbing with the fingers, usually in a shell cup. Sometimes the shell used for the purpose is the valve of a *Cardium*, which serves indiscriminately as cup, spoon, skin-scraper, etc; but preference is apparently given to thick and strong shells, such as the wave-worn valve of *Chama* (?), shown in plate XXVII, figure 7, which are consecrated to the use and eventually buried with the user, together with a supply of the paint (like that illustrated in the cane cylinder—figure 4—which was a mortuary sacrifice). The gypsum is usually carried in natural slabs or other fragments, perhaps rounded by wear (plate XXVII, figures 6 and 8); it is prepared by wetting and rubbing two pieces together, the larger being reduced to metate shape by the operation. The dumortierite was observed only in the form of a pencil made by pulverizing the substance and mixing with sufficient clay to give consistency. The several pigments are applied wet by means of human-hair brushes kept for the purpose, the process occupying from half an hour to three or four hours for the more elaborate designs. So far as observed at Costa Rica in 1894, the paints were mixed in water only; but since painting outfits found on Tiburon island in 1895 were smeared with grease, it is probable that either water or fats may serve for menstrua, at the convenience of the artists. Commonly the process of painting is measurably cooperative. The matron usually depicts her device on the faces of her daughters up to the age of 12 or 15 years, when they learn to make the applications themselves; and frequently two or more women (usually those with similar devices) work together in preparing and applying the pigments, each laying the paint on her own face and apparently guiding her hand partly by the sense of feeling and partly by suggestions from her coworkers; but Candelaria and some other of the younger women at Costa Rica frequently worked alone, aided by a mirror in the form of a shallow bowl of water set in the shadow while the brilliant desert glare fell full on the face.

The mines yielding the pigments were not located. The geologic conditions are such that the ochers are undoubtedly abundant; but it is probable that the gypsum is uncommon and confined to a remote locality or two, and that the dumortierite is rare and scanty here as elsewhere. The care with which the paints are preserved, prepared, and applied, the fact that they are indispensable feminine appurtenances even on the longest journeys, and their sacred rôle in the mortuary customs, all combine to indicate that they are among the most highly prized possessions of the people and by far the most precious of their minerals.

The sematic functions of the designs are esoteric, yet an inkling of their meaning was obtained through Mashém, the interpreter at Costa Rica in 1894; from his expressions it appears that the designs are sacred insignia of totemic character, serving to denote the clans of which the tribe is composed. But three clans were identified, and

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life of the tribe rotates: since the clans never reside and rarely camp nearer than 3 to 15 miles from the aguaje, a large part of the water consumed must be transported great distances in these vessels; since the region is one of extreme aridity, the lives of small parties often depend on the integrity of the olla and on the care with which the fragile vessel is protected from shock or overturning; and hence the utensil must occupy a large if not a dominant place in everyday thought—indeed, the fact that it does so is attested by constant custom and also by its employment as the most conspicuous among

FIG. 14—Rattlesnake necklace.

the mortuary sacrifices. Thus, the relation of the Seri olla to its makers and users is parallel with that of the ever-present earthen pot to the Pueblo people, or that of the cooking basket to the acorn-eaters of California, save that its relative importance is enhanced by the fewness of activital lines and motives in Seri life. Moreover, this most characteristic utensil is established and hallowed in Seri thought by immemorial associations: its sherds are sown over the hundred thousand square miles of ancient "despoblado" from Tiburon to Caborca, Magdalena, Rio Opodepe, and Cerro Prieto, and are scattered through the 20 feet of shells forming Punta Antigualla (perhaps the oldest shell mound of America); and all the sherds from the range

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by faith and attendant ceremony; for the doubly consumed food is credited with intensified powers and virtues, and held to be specially potent in the relief of hunger and in giving endurance for the hard warpath or prolonged chase; it is—and makes—very strong ("mucho fuerte"), in the laconic and confident explanation of Mashém. Incongruous as the custom is to higher culture, it finds natural suggestion in the everyday habits of the tribe, who are wonted not only to the eating of animal entrails in raw and uncleaned condition, but especially to the relief of the sharpest pangs of hunger by means of the soft structures and their semiassimilated contents—an association of much influence in primitive thought. Concordantly with the custom and the faith grown out of it, the excreta in general take a prominent place in the Seri mind; the use of urine in ablution, etc, is little understood and may be passed over; but all bony feces—and it may be noted that the "sign" of the Seri more resembles that of wolves or snake-eating swine than that of men—following gorges of large quarry are customarily located and kept in mind for recourse in time of ensuing shortage, when the mass is ground on the shat and reconsumed; and even the ordinary discharge is preserved during the seasons of less reliable food supply.

There is an obscure connection between this curious and repulsive food custom of the Seri and the mortuary customs of the tribe, which

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to finish it. Twenty-four pounds of meat in twenty-four hours is not deemed an extraordinary ration for a single person, and to see anything eatable before him is a temptation for a Californian which he cannot resist, and not to make away with it before night would be a victory he is very seldom capable of gaining over himself."

Clavigero's account of the food-habits of the California Indians is similar, though generally less explicit. According to him the seeds forming the "second harvest of pitahayas" are extracted carefully while fresh, and are afterward roasted, ground, and preserved in the form of meal against the opening winter. Of the raw-swallowing habit, he says:

"The savages living in the northern part of the peninsula have found the secret, unknown to mortals in general, to eat and re-eat the same meal repeatedly. They tie a string around a mouthful of meat dried and hardened in the sun. After chewing it for a while they swallow it, leaving the string hanging from the mouth. After two or three minutes, by means of the string they draw the meat up again to be re-chewed, and this they repeat as many times as may be necessary until the morsel is empowered or so softened that the string will not hold it any longer. In extracting it from the throat they make such a noise that to one who has not before heard it it appears that they are choking themselves.

"When many individuals are gathered together to eat in this manner it is practised with more vehemence. They seat themselves on the ground, forming a circle of eight or ten persons. One of them takes the mouthful and re-swallows it, and afterwards draws it up again and passes it to the next one, and this one to another, proceeding then around the circle with much enjoyment until the morsel is consumed. This has astonished the Spaniards who have seen it, and indeed it would not be credible if it had not been unanimously testified to by all who have been in that country. Several Jesuits who did not believe this, notwithstanding that sincere and prominent persons confirmed it, having afterwards gone to California saw it with their own eyes. Among those Indians who have embraced Christianity this loathsome and dangerous method of eating has been abandoned in consequence of the continual reproofs of the missionaries." (Historia de la Antigua ó Baja California, obra postuma del Padre Francisco Javier Clavijero. Mexico, 1852, p. 24.)

The records of Clavigero and Baegert indicate fair correspondence in the food habits of the Californian Indians and the Seri, though there are certain noteworthy differences, e. g., the tabu of the badger among the former and of the ground squirrel among the latter; it would also appear that the Californians were the more largely vegetarian and the latter advanced in culinary processes. The customs of the Seri throw light on the genesis of "re-eating", for the process would appear to be but an extension of the repeated mouthing and swallowing of tendinous strings still attached to the bones of larger animals.

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was not detected until the opportunity for personal inquiry had gone by. About the rancherias on Isla Tiburon, and especially about the extensive house-group at the base of Punta Tormenta, there are burial places marked by cairns of cobbles, or by heaps of thorny brambles where cobbles are not accessible; and most of these cairns and bramble-piles are supplemented by hoards of desiccated feces carefully stored in shells, usually of *Arca* (a typical specimen is illustrated in figure 25). The hoards range from 50 to 500 shells in quantity, and there were fully a score of them at Punta Tormenta alone. About the newer rancherias, as at Rada Ballena, where there are no cemeteries, the hoards are simply piled about small clumps of shrubbery. The meaning of the association of the dietetic residua and death in the Seri mind is not wholly clear; yet the connection between the "strong food" for the warpath and the

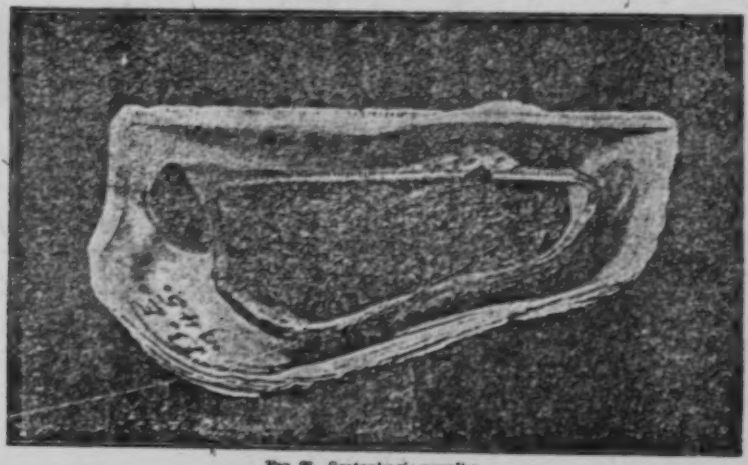

FIG. 2—Scatophagic supplies.

mystical food for the manes in the long journey to the hereafter is close enough to give some inkling of the meaning.[1]

In recapitulating the food supplies of the Seri it is not without interest to estimate roughly the relative quantities of the several constituents consumed; and the proportions may be made the more readily comprehensible by expression in absolute terms. As a basis for the quantitative estimate, it may be assumed that the average Seri, living, as he does, a vigorous outdoor life, consuming, as he does, a diet of less average nutrition than the selected and cooked foods of higher culture, and attaining, as he does, an exceptional stature and strength, eats something more than the average ration; so that his ration of solid food may be lumped at 2.75 pounds (about 1,250 grams) daily, or 1,000

[1] Cf. Scatologic Rites of all Nations, by Captain John G. Bourke, 1891, especially chapter II, pp. 439-469. The Seri custom, resting on it does, on an ordinary economic basis, tends to explain the scatophagy of the Hopi and other tribes described by Bourke.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

conspicuous records of its latest uses; both faces (more especially the pitted one) are stained with sap from green vegetal substance (probably immature mesquite pods), while one face is brilliantly marked with ocher in such manner as to indicate that a lump of face-paint was partially pulverized by grinding on the slightly rough surface. It was found, together with the ahst illustrated in plate XXXVIII, in the rear of a recently occupied jacal midway between Punta Antigualla and Punta Ygnacio, cached beneath a thorny cholla cactus uprooted and dragged thither for the purpose. The trail and other signs indicated that the jacal had been occupied for a few days and up to within twenty-four hours by a family group of six or seven persons; that it was vacated suddenly at or about the time of arrival of the party of five whose trail was followed by the 1895 expedition from Punta Antigualla to Punta Miguel (where they were interrupted in the midst of a meal and frightened to Tiburon); and that the larger party fled toward the rocky fastnesses of southern Sierra Seri.

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Of the foregoing hupfs several are aberrant, and serve merely to illustrate the prevailing directions of departure from the optimum form and size of implements. Six of the specimens may be deemed typical; they are as follows:

Plate No.	Locality	Material	Weight	Condition
			Lb. Oz.	
XLIII.....	Costa Rica	Quartzite .	1 14 (0.86 kg.).	Nearly natural.
XLIV	Campo Navidad	Tuff.....	1 1 (.48 kg.) ...	Four-fifths natural.
XLVI	Pozo Escalante.....	Vesicular lava.	1 13 (.82 kg.) ..	Nearly natural.
XLV	Punta Miguel	Granite ...	1 10 (.74 kg.) ..	One-fifth natural.
LV	Punta Narragánsett	....do	1 11 (.77 kg.) ..	One-fourth natural.
LVI	South point Sierra Seri.	Andesite ..	1 15 (.98 kg.) ..	One-third natural.

From these specimens a type of Seri hand implement may easily be formulated: it is a wave-worn pebble or cobble of (1) granite, quartzite, or other tough and hard rock, (2) tuff, or other light and pulverulent rock, or (3) vesicular lava; it is of flattened ovoid form, or of biscuit shape; it weighs a trifle under 2 pounds (about 0.85 kilogram); originally the form and surface are wholly natural, but through the chance of use it is modified (*a*) by a battering of the ends and more projecting edges, and (*b*) by grinding and consequent truncation of the sides; though initially a natural pebble, chosen nearly at random from the beach, it eventually becomes personal property, acquires fetichistic import, and is buried with the owner at her death.

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[764]

The ahsts and the heavier cobbles used alternatively as ahsts and hupfs are too fortuitous for reduction to type; while the protean peb-

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

condition characterized by absence of property and thrift-sense; while its most essential concomitant is extratribal antipathy too bitter to permit toleration of alien blood, or even of alien presence save under the constraint of superior force.

MORTUARY CUSTOMS

The prevailing opinion among the better informed Caucasian neighbors of the Seri is that the tribesmen display an inhuman indifference to their dead; and this opinion is one of the factors—combining with current notions as to cannibalism and arrow-poisoning and beastlike toothing in battle—involved in the widespread feeling that the tribesmen are to be accounted as mongrel and uncanny monsters rather than human beings.

The opinion that the Seri neglect their dead on occasion would seem to rest on a considerable body of evidence; Mendoza's record of the numberless neglected corpses of warriors polluting the air and poisoning the streams of Cerro Prieto in 1737 would seem to be unusual only in its fulness; and Señor Encinas, albeit so conservative as to repudiate the reputed anthropophagy and to recognize better qualities among the folk than any contemporary, declares that they are utterly negligent of their dead, save that when the bodies lie near rancherias heaps of brambles are thrown over them to bar—and thus to lessen the disturbance from—prowling coyotes. Quite indubitable, too, is the specific testimony of vaqueros to the effect that Seri raiders overtaken by the Draconian penalty of the frontier merely lie where they fall, even when this is well within reach of the tribesmen, Don Andrés Noriega's verification of his boast (ante, p. 113) being an instance in point. On the other hand stands the conspicuous fact (unknown to the frontiersman) that well marked cemeteries adjoin some of the rancherias of interior Seriland. The sum of the somewhat discrepant evidence accords with a characteristically unsatisfactory statement by Mashém, to the effect that the mourning ceremonies are important only in connection with women—i. e., matrons—because "the woman is just like the family" ("la muger es como la familia"); and this intimation, in turn, is corroborated by the single known instance of inhumation in Seriland, as well as by certain indirect indications connected with the scatophagic customs (ante, p. 213). On the whole it seems certain that the mortuary ceremonies attain their highest development in connection with females, the recognized blood-bearers and legislators of the tribe.

The special dignification of females in respect to funerary rites is without precise parallel among other American aborigines, so far as is known, but is not without analogues in the shape of (presumptive) vestiges of a former magnification of matrons in the mortuary customs of certain tribes. The vestiges are especially clear among the Iroquoian Indians, whose aboriginal society coincided with that of the

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

Seri at various points; witness the following passage from the Onondaga mourning ritual, as collected and translated by Hewitt:

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Now, moreover, again, another thing, indeed, our voices come forth to utter; and is it not that that we say, that far yonder the Hayaner [chief of highest grade] who labored for us so well is falling away as falls a tree? So, moreover, it is these things that he bears away with him—this file of mat-carriers, warriors all; visible and present here; also this file of those who customarily dance the corn-dances [the women]—they go prosperously. And alas! How utterly calamitous is that thing that occurs when the body of this woman falls! For, verily, far yonder in the length of the file will the file of our grandchildren be removed! These our grandchildren who run hither and thither in sport, these our grandchildren who by creeping drag themselves about in the dust, these our grandchildren whose bodies are slung to cradle-boards, and even those of them whose faces are looking hitherward as they come under the ground.[1]

764

The identifiable cemeteries of Seriland are few and small—much less populous than might be expected of a tribe numbering several hundreds for centuries, and able to maintain well-worn trails threading all parts of their rugged domain. Three graves were noted near the abandoned rancheria at Puzo Escalante; one was observed near a jacal skeleton at Barranca Salina; five or six were made out doubtfully on a low spur adjacent to Punta Antigualla; another was found near the rancheria midway thence to Punta Yguacio; still another was doubtfully identified hard by a ruinous jacal just where the foothills of Sierra Seri descend to the plain stretching toward Punta Miguel; and this distribution may be deemed representative. A scant half-dozen perceptible graves were observed near the considerable rancheria of Punta Narragansett, which was numerously inhabited during the Dewey surveys of 1873; one was found adjoining the old jacal near Campo Navidad; but none were discovered in connection with the extensive rancheria on Bahia Ballena. The largest known cemetery occupies the triangular point of shrub-dotted plain pushing out toward the site of the old rancheria at the base of Punta Tormenta; it comprises perhaps a score of evidently ancient graves, while two newer ones were found on the pebble bar beyond the jacales. When near the pebbly beaches the graves are marked by heaps of pebbles and small cobbles, commonly about the size of those used as hupfa, these cairns being 3 or 4 feet long, two-thirds as wide, and seldom over 12 or 15 inches in height; and most of the cairns are accompanied and enlarged by piles (ranging from a peck to a bushel) of the scatophagic shells already noted. The graves remote from pebbly beaches are marked by heaps of cholla stems and branches, rudely thatched with miscellaneous brambles roughly pinned

[1] Given in the archives of the Bureau of American Ethnology. A somewhat more elaborate version was recorded by Hale in "The Iroquois Book Rites": "Now, there is another thing we say, we younger brothers. He who has worked for us has gone afar off, and he also will in time take with him all these—the whole body of warriors and also the whole body of women—they will go with him. But it is still harder when the women shall die, because with her the line is lost. And also the grandchildren and the little ones who are running around—these he will take away; and also those that are creeping on the ground, and also those that are on the cradle-boards; all these he will take away with him." (Brinton's Library of Aboriginal American Literature, number vi, 1883, pp. 145-147.)

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764 together by okatilla stems, the shocks being sometimes nearly as high and broad as the jacales. A few of the scatophagic shells were found about the bramble-marked graves at Pozo Escalante, and a single one [768] at Barranca Salina. In general the association of cemeteries and rancherias, or of graves and jacales, indicates that habitations are usually abandoned for a time when a death occurs within or near [415] them.

FIG. 89.—Mortuary olla.

The most conspicuous cairn seen in Seriland was well within Tiburon. It stands on the southern side of a little rock-butte about a mile and a half east-southeast of Tinaja Anita, south of the main arroyo, and near where the trail from the tinaja bifurcates toward Arroyo Carrizal and Punta Narragansett, respectively. It is shadowed by a notably large and widespreading paloverde, and is in the form of a cone estimated at 7 feet in height and 18 or 20 feet across the base. The materials, at least on the surface, are rounded pebbles and cobbles, possibly from the adjacent arroyos, though more probably from the beaches, of which the nearest is miles away. It was not determined to be mortuary.[1]

On the death of the matron, a grave is scooped out by means of shells

[126] [1] As an indication of the conditions for observation in Seriland, this cairn is fairly typical: it was seen but once (on December 23, 1895), and the observation was limited to a few minutes by the attendant circumstances. On the evening before the party landed at Campo Navidad, with the hope of working up the coast nearly or quite to Punta Tormenta on the following day; but before morning a downbay gale was whitening the waters of Bahia Kunkaak so fiercely as to prohibit embarkation. Meantime the supply of water—that standard commodity of arid regions—was too nearly exhausted to permit inaction; so while Mr Johnson with three guards ascended the Sierra to establish a new topographic station, the leader of the party with the remaining seven men set out in search of water. The nearest known aguaje was that of Arroyo Carrizal; but under the hypothesis that some of the better-beaten trails turning northward might lead to nearer water, one of them was taken; and after turning back from half a dozen false courts, the principal trail was followed to the well-known Tinaja Anita, 18 miles by the trail from Campo Navidad; and here the party watered. It was on the return trip that the cairn was discovered; but the party were laden with filled canteens and canvas-jars and cullapots, the day was well spent, and the camp more than a dozen miles distant even over the air line traversing spall-sprinkled tableau and sharp-edged rocks; moreover, the men were naturally and necessarily heavily armed and on constant guard. Accordingly even the short stay and scrutiny notes involved an additional mile of darkness on a trail so rough as to cut through shoe-soles and sandals, and catch scents of blood to tempt coyotes to the camp site. Thus it was that the cairn was not more critically examined and is not more fully described.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

764 a few yards from her jacal, preference being given to relatively elevated or commanding points. The excavation is about 30 inches (90 cm.) in depth; within it is placed first the pelican-skin robe of the deceased, so arranged as to fold over the body; then the corpse, dressed in the ordinary costume of life, is compressed into small compass by closely flexing the knees and bringing them against the thorax, extending the arms around and along the lower limbs so that hands and feet are together, and bending the head forward on the chest; when it is deposited in the receptacle in such manner as to lie on the left side, facing north-

[532]
[778]

FIG. 40.—Woman's fetishes.

ward. Near the face is laid a dish of baked clay or a large shell filled with food, and beside it a small olla of water (an actual example is shown in figure 39), while the hupf, awls, hairbrush, olla-ring, and other domestic paraphernalia are placed near the hands. Next the personal-fetishes and votive symbols (in the form of puppets or dolls such as those shown in figure 40 *a* and *b*) of the dead mother are slipped beneath the face, and her paint-cup, with a plentiful supply of paint, is added; the poor personal possessions, in the form of shell-beads and miscellaneous trinketry, are then heaped over the face and shoulders, and these are covered with the superfluous garments and miscellaneous

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

property of the deceased. Finally the pelican-pelt bedding is folded over the body, and two turtle-shells are laid over all as a kind of coffin, when the grave is carefully filled, and the ground so smoothed as to leave no mark of the burial. During subsequent hours the stones for the cairn or the cholla-joints and other brambles for the brush-heap are piled over the spot, while the scatophagic shells are added at intervals apparently for weeks or months and perhaps for years after the burial.

FIG. 41.—Food for the long journey.

The mortuary food is carefully selected for appropriate qualities (i. e., for "strength" in the notion of the mourners). It comprises portions of turtle-flippers, and, if practicable, a chunk of charred plastron—the food substance especially associated with long and hard journeys—with a few fresh mollusks, and, judging from a single good example as well as from analogy, one or two scatophagic shells. The remains of a funerary feast are illustrated in figures 41 and 42, the latter being the scatophagic receptacle utilized apparently in the absence of the customary Noah's ark. It may be significant that this shell is perforated at the apex, evidently by long wave-wear before utilization, and that the accompanying olla bears marks of having been broken, then repaired, and afterward perforated, as illustrated in the photo-mechanical reproduction (figure 39); for these features perhaps express that idea of "killing" mortuary sacrifices, ostensibly to fit them to the condition of the deceased, though really (in subconscious practicality) to protect the sepulcher from predation.[1]

FIG. 42.—Mortuary cup.

[1] "In all stages of development belief runs a close race against cupidity, and is sometimes distanced; so the sages learn that even a buried weapon may be a source of contention, which they thenceforward forestall by breaking or burning it." (Primitive Trephining in Peru; Sixteenth Ann. Rep., Bureau of American Ethnology, 1897, p. 32.)

773 Before this it was day all the time, but then it became night and coyote only laughs at night. The black strings still hang about badger's neck."

It is strange to find, too, that a flood legend is traditional among the Seris. Chico said: "In the times of the ancients a great flood came, the ocean rose up and all the country of the Seris was under water except the top of Cerro Alto. There a few Seris gathered and were saved. Everyone else was drowned. To this day the top of Cerro Alto is covered with brush which the flood did not submerge. All Seri children are taught this flood tradition, and they must learn it by heart so as to teach their children and their grandchildren."

764 The death of a tribesman gives no cause for ceremony among the Seris, although the [765] nearest relatives may customarily wail, sometimes for months, morning and evening. The disposal of the bodies of the dead, is, however, of considerable interest. A hole about [412] three feet deep is dug by means of large clam shells and a cave is excavated for the head such that the earth will not touch it. The deceased Indian is wrapped in his own blanket and laid in the grave with the head to the East, face up. The body is covered and the grave is partly filled with earth, then covered with a layer of the spiniest of chollas and thorny brush, further filled, leveled and covered with another layer of chollas to discourage the coyotes from digging up the body. When the Seris are on the move, how- [766] ever, and grave-digging is too great a task, a body may simply be lifted high to the fork of a giant cactus and left there.

583 Marriage among the Seris is not so much
585 a ceremony as it is the completion of a bargain. Under ordinary circumstances, when a man buys a woman he strikes a bargain with the bride's parents and makes a down payment. Only after completion of the bargain does the woman go to live with the man, but even then payments do not cease but continue intermittently through life. Chico Romero, although "married" for fifteen years, gave his wife's father some paint that he had received in payment for guiding and
425 packing. It is also considered natural to
858 buy and sell children. One Seri, Santo

[p. 266 (B)]
[Text continues on p. 267 (B)]

5:Dawson N-5 (1940) 1944 NU31 Seri NU31

of nutritious material which was ground to powder on their stone ahsts, winnowed in shallow baskets and made into a meal or paste.

The abundant cacti of many species served several other functions in the domestic economy of the Seris. The thorny cholla whose insipid fruits were not fit to eat and whose spines were a constant threat to the unprotected bodies of the Serjs, found one use, nevertheless, in the burial procedure. After a body was partly covered with earth in the three foot deep grave, it was densely overlaid with chollas before leveling, to discourage the coyotes from digging for the body.

The dry skeletons of the giant cacti provided the long, cylindrical poles used in knocking off ripe pitahayas as well as in all other instances in which a straight, slender pole was needed. Since the advent of the open boat in modern times, the cactus skeleton has come in for a new use, for after trituration between stone ahst and hupf, it was found to yield a satisfactory caulking compound when mixed with sea-lion oil.

The barrel-cacti, *Ferocactus Wislizenii* and *F. Coulteri*, though ordinarily abundant on the Sonoran desert are rare in Seriland and practically absent from Isla Tiburon where they may easily have been exterminated by the improvident Seris during their centuries of occupancy on account of their recognized value as water providers on the wastelands over which the Seris so frequently ventured.

These Indians found housing no problem, for, living under a climate in which frost is rare and rain infrequent, they found little need for shelters except for protection against the blazing desert sun. Camps that were occupied for more than a day or two, however, usually saw the appearance of a group of crude sun shelters. These were usually made of long, flexible ocotillo branches, *Fouquieria splendens*, stuck in the sand and fashioned into an arched framework over which a more or less complete covering of brush was piled. If, by the sea, a windbreak were desired, the brush top and siding were usually augmented by the addition of several empty turtle shells.

On the delta plain of the Rio Sonora, the mesquite, *Prosopis juliflora*, grows in remarkable luxuriance, these gnarled, spiny trees forming an almost continuous open forest 20-40 feet high. Its fruit, consisting of small, hard beans borne in slender, woody pods forms a concentrated, starchy food that the Seris found highly nutritious if not appetizing. In late summer when all fresh vegetable food had withered and disappeared, provided the turtle fisheries had not yet attracted them back to their island, they often spent some weeks gathering the beans and grinding them into a meal which was eaten as a watery atole or as a paste mixed with sea-lion oil. The more straggly and thorny cat's claw mesquite, *Acacia Greggii*, and the ironwood, *Olneya tesota*, also yielded woody beans in limited quantity.

In the deeper gorges of the mountains the Seris found *Guaiacum Coulteri* yielding a berry of medicinal properties and also *Jacquinia pungens* which produced a nut, edible when not quite ripe, and forming a favorite rattlehead when dry.

Along sandy washes, particularly on the lower flood plain of the llano grows a low, shrubby weed, *Hymenoclea monogyra*. Although during times of drought it shrinks to stunted tussocks, after periods of heavy rain its flourishing fens produce abundant seeds eaten both by the beasts of the plain and formerly by the Seris.

Before the advent of the tin can and the cardboard carton, basketry was

[TEXT CONTINUES ON P. 138 --Quails]

War Chief of the Seris

622 765 There is sorrow and mourning on that little known island in the Gulf of California, Tiburon.

[168] During the last few years, many of the Seri tribesmen have succumbed to influenza and pneumonia, and many a night has the weird and melancholy wailing for the dead mingled with the soft lapping of the waters of the Gulf on the shores of that lovely desert isle.

But now a universal grief has overtaken the remnants of a once powerful and warlike tribe---Juan Tomas (*Pik-tan-aohe*, "Very Brave" in his own language)---the old War Chief of the Seris, is no more. He has fought a last and losing battle. For a month, maybe for several months, the women will wail and lament, and around the tribal camp fires, for many a night, the Seris will tell of his exploits and miraculous escapes, as they told Roberto Thomson, their friend and advisor.

[169] The old Chief died on the shores of Kino Bay opposite Alcatraz Island, probably of pneumonia.

There was no soft mattress to lie upon, no pillow to rest his head, and no roof to shelter him from sun or storm. His bed was the sand of the sea shore; his canopy, the blue heavens above, and his [163] requiem, the solemn beating of the surf on the shore. His last words were to his grand-nephews to inherit the *Sierra de las Tinajas*, and he asked the Indians and his *Yori* (Mexican) friends to protect his nephews and the mountains.

622 764 His body was wrapped in an old *serape*, fastened around by rope of native fibre. His grave was dug with paddles from the canoes, four and one-half feet deep in the sand hills near the sea. He was placed in the grave with his head to the north, face up, with the carapace of a sea turtle covering his head. Amid much lamentation and mourning, the grave was partially filled, and then a heavy layer of *cholla* cactus spread over. The grave was then filled and mounded up and covered with *chollas*, *mesquite*, shells, and thorny growths, and also a five-gallon can. The cactus spines were to discourage coyotes.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

765 Soon after the death (immediately after the burial, so nearly as could be ascertained) there is an apparently ceremonial mourning, in which the matrons of the clan, and, at least to some extent, the warriors also, participate. The mourners wail loudly, throw earth and ashes or ordure on their heads, and beat and bruise (but apparently avoid scarifying) their breasts, faces, and arms. This is continued, culminating daily about the hour of interment, for several days—unless the rancheria is sooner abandoned, in which case the period of formal mourning is shortened.

In addition to the formal mourning of matrons there is a custom of nocturnal wailing after the death of warriors in battle, and, apparently, also, following the death of matrons or nubile maidens, which attracts the notice of frontier rancheros and vaqueros. According to their accounts the first note of lamentation may be sounded at any hour of the night by any of the group to which the deceased belonged; it is successively taken up by other members of the party until all voices are united in a resounding chorus of inarticulate moans, wails, shriller cries, and wild howls, likened by the auditors to the blood-bellowing of cattle; if other groups of the tribesmen are within hearing, they, too, take up the cry, so that the lamentation may extend to the entire tribe and echo throughout practically all Seriland at the same moment. The fierce howling and attendant excitement may rise so high in the group in which the wailing begins that all seem bereft of customary caution; and sometimes they suddenly seize clubs and weapons, and decamp incontinently, perhaps scattering widely and racing for miles before settling again for sleep or watchful guard.

775 The ideas of the folk concerning death and concerning the relations between the living and the dead are largely esoteric, and are, moreover, veiled by the nonequivalence of Seri expressions with the terms of alien languages.

At least an inchoate belief in a life beyond the grave was intimated by Mashém and his companions at Costa Rica, and their circumspection of speech and mien indicated a strong veneration for, or dread of, the manes; though the specific expressions were connected with deceased matrons, who alone seemed to be prominent in the minds of the clanmates. So far as could be gathered the belief seems to be that the dead find their way back to the primordial underworld, whence Earth and Beings were brought up by Pelican and Turtle (or Shark) respectively, and are liable to return by night with mischievous intent.

The direct expressions of the Seri informants are fully corroborated by the association of things in interior Seriland. The burial of water and food, of the personal fetishes and votive objects, and of the highly prized face-paint belonging to the dead matron, attests anticipation of a post-mortuary journey; while the temporary abandonment of jacales and rancherias and the nocturnal fears and flights alike betoken

773 Before this it was day all the time, but then it became night and coyote only laughs at night. The black strings still hang about badger's neck."

It is strange to find, too, that a flood legend is traditional among the Seris. Chico said: "In the times of the ancients a great flood came, the ocean rose up and all the country of the Seris was under water except the top of Cerro Alto. There a few Seris gathered and were saved. Everyone else was drowned. To this day the top of Cerro Alto is covered with brush which the flood did not submerge. All Seri children are taught this flood tradition, and they must learn it by heart so as to teach their children and their grandchildren."

764 The death of a tribesman gives no cause for ceremony among the Seris, although the nearest relatives may customarily wail, sometimes for months, morning and evening. The disposal of the bodies of the dead, is, however, of considerable interest. A hole about three feet deep is dug by means of large clam shells and a cave is excavated for the head such that the earth will not touch it. The deceased Indian is wrapped in his own blanket and laid in the grave with the head to the East, face up. The body is covered and the grave is partly filled with earth, then covered with a layer of the spiniest of chollas and thorny brush, further filled, leveled and covered with another layer of chollas to discourage the coyotes from digging up the body. When the Seris are on the move, however, and grave-digging is too great a task, a body may simply be lifted high to the fork of a giant cactus and left there.

[765]

[412]

[766]

583 585 Marriage among the Seris is not so much a ceremony as it is the completion of a bargain. Under ordinary circumstances, when a man buys a woman he strikes a bargain with the bride's parents and makes a down payment. Only after completion of the bargain does the woman go to live with the man, but even then payments do not cease but continue intermittently through life. Chico Romero, although "married" for fifteen years, gave his wife's father some paint that he had received in payment for guiding and packing. It is also considered natural to buy and sell children. One Seri, Santo

425 858

[p. 266 (B)]

[text continues on p. 267 (B)]

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[p. 266 (B)]
[text continues on p. 267 (B)]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

764 together by okatilla stems, the shocks being sometimes nearly as high and broad as the jacales. A few of the scatophagic shells were found about the bramble-marked graves at Pozo Escalante, and a single one at Barranca Salina. In general the association of cemeteries and ran-
[768] cherias, or of graves and jacales, indicates that habitations are usually abandoned for a time when a death occurs within or near
[415] them.

FIG. 50.—Mortuary olla.

The most conspicuous cairn seen in Seriland was well within Tiburon. It stands on the southern side of a little rock-butte about a mile and a half east-southeast of Tinaja Anita, south of the main arroyo, and near where the trail from the tinaja bifurcates toward Arroyo Carrizal and Punta Narragansett, respectively. It is shadowed by a notably large and widespreading paloverde, and is in the form of a cone estimated at 7 feet in height and 18 or 20 feet across the base. The materials, at least on the surface, are rounded pebbles and cobbles, possibly from the adjacent arroyos, though more probably from the beaches, of which the nearest is miles away. It was not determined to be mortuary.[1]

On the death of the matron, a grave is scooped out by means of shells

[126] [1] As an indication of the conditions for observation in Seriland, this cairn is fairly typical: it was seen but once (on December 23, 1895), and the observation was limited to a few minutes by the attendant circumstances. On the evening before the party landed at Campo Navidad, with the hope of working up the coast nearly or quite to Punta Tormenta on the following day; but before morning a downbay gale was whitening the waters of Bahia Kunkaak so fiercely as to prohibit embarkation. Meantime the supply of water—that standard commodity of arid regions—was too nearly exhausted to permit inaction; so while Mr Johnson with three guards ascended the Sierra to establish a new topographic station, the leader of the party with the remaining seven men set out in search of water. The nearest known aguaje was that of Arroyo Carrizal; but under the hypothesis that some of the better-beaten trails turning northward might lead to nearer water, one of them was taken; and after turning back from half a dozen false scents, the principal trail was followed to the well-known Tinaja Anita, 15 miles by the trail from Campo Navidad, and here the party watered. It was on the return trip that the cairn was discovered; but the party were laden with filled canteens and scarcopane and coffeepots, the day was well spent, and the camp more than a dozen miles distant even over the air line traversing spall-sprinkled taluses and sharp-edged rocks; moreover, the men were naturally and necessarily heavily armed and on constant guard. Accordingly even the short stay and cursory notes involved an additional mile of darkness on a trail so rough as to cut through shoe-soles and sandals, and such scents of blood to tempt coyotes to the camp site. Thus it was that the cairn was not more critically examined and is not more fully described.

2: Kroeber E-5 (1930)1931 NU31 Seri NU31

Society

583 Marriage is monogamous. The wife is bought, in spite of the
[595] poverty of the Seri. Santa Blanco paid 150 pesos in property for his wife. Chico Romero, a widower, paid more for his, a widow, "because she had three daughters, and a family with daughters is rich" (in expectation of bride prices).

591 The wife goes to live with the husband. A young couple lives
562 with the young man's parents, perhaps in an annex to the house. "The man commands." Chico was emphatic on this point, and repeated that when his son married he would live with him, not with the girl's relatives. Both he and Santo have step-sons-in-law as well as daughters-in-law living with them, but this is because they are chief and boat-owner respectively; (and the sons-in-law are young).

833 Copulation was said to take place immediately on marriage.
McGee's statement of a period of continence being cited as the custom of a foreign tribe, the informant obviously wondered and laughed.
[843] Intercourse goes on during pregnancy; but not for some months after birth, for fear of a new pregnancy, which would be injurious to the child. A good man respects his wife at all times and does not constantly pursue her.

144 No half-breeds were seen, and the Seri declare they are free of
164 venereal disease.

551 Nothing could be elicited from the informant as to anything like
614 the group-inherited names of lineages, or clans, of the Yuman tribes.

768 When a woman dies, the widower may give the children to his dead wife's parents to raise. This is the only item learned that might point to McGee's "matriarchate"; but the informant may have been thinking of particular cases. His son lives with him, though he lost the boy's mother.

582 Cross-cousin marriage is as prohibited as that of parallel cousins. This is in accord with the sibling terminology for all cousins; but in view of the present small number of the tribe, the rule must work difficulty.

[587] A man does not marry his dead wife's sister. Apparently he may not. Nor is there levirate. The informant volunteered the question if marriage with step-daughters was permitted by other peoples. Being told of the Navaho custom, he seemed shocked.

606 Neither husband nor wife looks at or addresses either parent-
183 in-law. In the isolated, small-group life of the Seri, this rule can hardly be adhered to with complete rigor, and its conspicuous carrying out was not observed; but then everything in their behavior is casual, informal, and slovenly.

607 The kinship system as recorded contains a note as to a woman not addressing her younger sister's husband by kinship term except

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

000 and groups; the linguistic activities serve to extend social relations in space and time, and the sophic activities to integrate and perpetuate all relations; but it is through the industrial activities that human intelligence interacts with physical nature and makes conquest of the material world. Accordingly, industries act as a steady and never-ceasing stimulus to intelligence; accordingly, too, the industrial activities afford the simplest and surest measure of intellectual advancement.

Under this view of the place of industrial activities in human phylogeny, certain phases of Seri technology acquire importance and especial significance.

105 177 1. One of the most conspicuous features of Seri craft is its local character. The foodstuffs, the materials for appareling and habitations, and the substances utilized in the several lines of simple handicraft are essentially local; moreover, the characteristic methods and devices evidently reflect local environmental conditions. There are, indeed, a few phenomena suggesting, and a still less number demonstrating, extraneous origin; the balsa and the kilt are sufficiently similar to devices of other districts to suggest, though not to prove, genetic identity (indeed, the sum of indications of local origin is much weightier than the several suggestions of extraneous derivation); the iron harpoon-points and arrow-tips are mainly of local flotsam, and are essentially provincial in modes of employment; the chipped stone arrow-tips, though local in material, are foreign in motive; but on summarizing the industrial phenomena, it would appear that by far the greater share are essentially local, while the few of exceptional (and extraneous) character can be pretty definitely traced to importation through the social intersections of recent centuries.

105 182 13 2. An equally conspicuous feature of the industrial craft of the Seri is the dominance of chance in both processes and devices. The traditional "fisherman's luck" is made exceptionally uncertain by the sudden gales and shifting currents of Seriland shores, while the absolute necessaries of life on land are still more capricious than those alongshore; this uncertainty of resources has profoundly affected the somatic features of the tribesman, as indicated elsewhere (ante, p. 159); and that the mental attributes of the folk are even more profoundly affected is attested by the rôle played by chance in the selection and shapement of the prevailing tools of stone and shell. The large rôle of chance in Seri life is also revealed, though less directly, in the overweening mysticism of zootheistic faith, with its material reflection in zoomimic [771] craft.

3. When the local and fortuitous features of the Seri industries are juxtaposed they are found to express a notably inchoate or primitive stage of industrial development. In both the local and the fortuitous or accidental aspects, the activities are so closely adjusted to the immediate environment as to approach the instinctive agencies and movements of bestial life, and correspondingly to diverge from the composite

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

597 While the lieutenant attached no significance to the painting, the
648 procedure would seem to have been a ceremonial adoption, such as might, for example, be used in connection with a confederate clan. The description of the painting is sufficiently explicit to identify the totem with that of the Turtle clan, represented by the clanmother and the daughter of the clan at Costa Rica in 1894 (plates XVIII and XXIV); but it is noteworthy that the salutation with which the ceremony terminated, and which may be rendered "Captain-Brother of the Sharks", would seem to identify the totem with the shark rather than the turtle.[1]

The second case of adoption (if so it may be styled) was that of Señor Encinas, after his bloodiest battle, in which nearly all of the Seri warriors were left on the field. In this case there was no ceremony, or at least none remembered by the beneficiary; he was merely informed by a delegation of aged dames that thenceforth he would be regarded as a stronger and more invulnerable chief (shaman) than any member of the tribe, and hence as the tribal leader.

The third instance is still less definite, though it seems to be trust-
173 worthy. There is a widespread tradition throughout Sonora that in
563 the course of a brush between a band of Papago hunters and a maraud-
727 ing bunch of Seri warriors in the mountains southeast of Cieneguilla twenty-five or thirty years ago, a Papago maiden was captured and carried off to Tiburon; and that for some years thereafter—i. e., until the Papago had taken ample blood-vengeance—the intertribal animosity was exceptionally bitter. No wholly satisfactory basis for the traditions could be found among the Papago, though some of the silences of the old men were suggestive; nor was the tradition fully credited by Señor Encinas, despite its deep lodgment in the minds of some of his yoemanry. When Mashém was interrogated on different occasions, he merely shook his head in stolid silence; but when the device was adopted of inquiring the number of Papago children brought into the tribe through this woman he responded promptly with a snort of scorn, and followed this with the explanation that she never had children, and could not because she was an alien slave. The explanation was corroborated by clanmother Juana María and other matrons, with sundry expressions of contemptuous disapproval of the inquiry and scorn of the very idea that aliens could fructify within the tribe. Later, the ice being broken, Mashém intimated that the woman had recently died of old age and its consequences—doubtless as an outcast. On the whole, the direct testimony would seem to substantiate the tradition, and to supplement it with the short and simple annals of a spouseless and childless life (incredible of other tribes, but consistent

[1] This identification may possibly be correct, the collocation of the totem with the turtle was shaped through unwilling and perhaps misleading responses made by Mashém to inquiries in 1894—these responses denoting a sea monster which in the beginning helped the Ancient of Pelicans to make the world by pushing from below, and which is now very good food—a description apparently fitting the turtle more closely than the other animal.

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[773]

2: Kroeber E-5 (1930)1931 NU31 Seri NU31

McGEE ON THE SERI

114 [128] The pages that follow deal with McGee's well-known monograph on the Seri,[1] discussing first points on which his data are fuller or mine confirm or modify his, and then points on which I believe him to have been in error or to have misconstrued his observations. McGee spent little more time in actual contact with the Seri than I did.[2] His work impresses me as that of an extraordinarily good observer, keen in seeing significant evidence, but of uncontrolled imagination and unconscious of his preconceptions. It is only fair to state that where he founds an interpretation on slender or uncertain data, he generally indicates the fact to a careful reader.

Data and Discussion

114 415 The ratio of kilogram weight to liter capacity of water jars is given by McGee (p. 183) as follows: 2 Seri, .126-.147; 2 Papago, .239-.279; 4 modern Pueblo, .252-.295. There is no doubt that the Seri olla is unusually thin-walled. Sherds seen at a campsite near San Rafael, on the dry course of the Bacuachi, 20 or more miles from the coast, ran from 2 to 5.5 millimeters in thickness, averaging 3.8; their curvature was slight, indicating large vessels. McGee remarks (p. 184) that the purpose of nearly all Seri pottery is to hold or transport water, other uses being secondary, generally after breakage. My observations on the island confirm this.

114 Head loads are carried on a ring of "yucca" fiber (p. 184).

482 The carrying stick or yoke, with nets to hold ollas, is considered accultural by McGee (p. 184), although he mentions (p. 68) that Ugarte in 1721 saw the device in use by men, the women carrying single ollas, presumably on their heads. Nordenskiöld has recently shown the "coolie yoke" to be ancient in the area.[3] It is used today in Sinaloa and Sonora.

114 773 McGee (pp. 11, 191, 292) thought that he understood that the "Ancient of Pelicans" was the chief creative deity and brought up the islands and earth with the help of the Turtle or Shark. This

[1] W J McGee, The Seri Indians, BAE-R 17, part 1, pp. 1-128, 129*-344*, 1898. (In citations of the higher page numbers, the asterisk is omitted.)

[2] McGee (pp. 13, 98, 291) in 1894 spent "about a week" at Costa Rica west of Hermosillo where some 60 Seri were temporarily congregated, his principal informants being subchief Mashém who spoke Spanish, and Juana María. A Spanish-English interpreter is referred to. In 1895 the coast and Tiburon Island were visited, camps examined, but not a single Seri encountered. The vocabulary was obtained chiefly at Hermosillo from Kahuin, an old Seri official interpreter who had left the island in childhood, never revisited it, considered himself an outlaw in Seri eyes, and had long had no dealings with them except under Mexican protection. I spent six days or parts of days with Seri, sleeping two nights on Punta San Miguel and three in the *ranchería* on the island opposite. Two Seri accompanied us back to Hermosillo to draw their government stipends, and were available for some supplementary questioning and revision of notes on the two following days.

[3] Comparative Ethnographical Studies, No. 8, 284, 1930.

2: Kroeber E-5 (1930) 1931 NU31 Seri NU31

sounds like an expectable enough mythic idea, but seems involved with McGee's dubious conceptions as to totemism, discussed below. 114 193

The two-pointed fish-spear, with serrated points 6 inches long and spreading 5°, seen by Hardy (McGee, p. 193), is interesting because seemingly unreported in or near the area. 114 227

"Fishing" with staked pelicans who are then fed by free birds, is authenticated by the statement of Venegas for lower California, (McGee, p. 193). [226 231]

No fish nets, hooks, or lines were seen by McGee among the abandoned effects on Tiburon (p. 194). This is in accord with my observation. The abundance of sharks may interfere with net or deep water fishing.

The bow (p. 200) is of *palo blanco;* the release (pls. 28, 29), Mediterranean; the archer's position (pl. 29), with elbow above head, suggests a quick downward shot at a target or game lying on the ground not far away. 114 411

Mesquite, according to McGee (p. 207), is ground on the metate. Sr. Thomson told me of its being pounded in a hole in the ground. The Seri gave me the name a'kata for what I understood to be this earth mortar. According to Sr. Thomson's description, the flour from the first beans cakes and lines the cavity firmly, so that the bulk of the material is secured quite cleanly. In general, mesquite is mortar-pounded rather than metate-ground by the tribes from whom we have records, as is expectable from the woody nature of the beans. 114 252

McGee (p. 207) noted the viznaga cactus, Echinocistus, as rare in the Seri habitat, presumably owing to its use for water by the natives. I made the same observation on the mainland, but Sr. Thomson stated that along the roads the plant is being gathered for candying. 114 137

The one basket described by McGee (p. 208, fig. 24) is bundle-coiled and plain. The only one I saw in use among the Seri was ornamented with a plain reddish band. Sr. Thomson presented me with two which bear patterns (fig. 13), and showed me a photograph of a collection made by Mr. Davis for the Museum of the American Indian, Heye Foundation, nearly all of which were decorated, some fairly elaborately. Several of these are shown by courtesy of that institution in figure 12. As McGee observes, there is obvious resemblance to Southwestern baskets; especially of the Papago, Pima, and Apache. Southern California basketry is less similar. That of Baja California is unknown from specimens, though the mention of water-tight vessels used for winnowing and parching suggests a coiled tray of Seri type. The surviving tribes of Sonora other than the Seri use few baskets distinguishable from those of the non-Indian population. 114 285 [191]

3:Davis & Dawson I-5 (1822-1940) 1945
MU31 Seri MU31

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Sea turtle was still the staple meat, and with better boats and improved tools and tackle borrowed from the Mexicans, the living was becoming considerably less harsh along the shores. They then had nine boats for some two hundred people. One good boat could secure a living for five families, and they had well improved this minimum standard of living.

[161]

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773

The origin of the use of fire among the Seri's is unknown, but they have their own story of it. One day Chico Rosnero, present chief of the Seris (Fig. 19), made a fire drill out of a piece of dry driftwood and showed how to make a fire by turning the stick between the hands. In three or four minutes the fine dust became a glowing punk which, with the aid of some dry grass and the wind, was quickly fanned into a flame. He was then induced to tell the legend. He looked about and pointed to a little green and blue-bodied fly and said: "The gods sent this fly down from the sky to show us how to make fire. Notice when it lands. Did you not see

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FIG. 18. THE NATIVE DANCE
IS DONE ON TOP OF A TURTLE SHELL TO THE BEAT OF A BOW STRING BEING STRUCK WHILE THE BOW IS HELD AGAINST TWO INVERTED BASKETS OR SAFES.

[p. 265 (B)]

3:Davis & Dawson E-5 (1922-1940) 1945
NU31 Seri NU31

it take its two hands, rub them over its head and then rub them together a few times? The Indians noticed this and in this way we were taught by this little fly how to make fire by rubbing a stick back and forth between our two hands."

In response to comments about the nocturnal howling of the coyote, Chico told another interesting tribal legend. "A long time ago all Seris were birds or animals. The badger had charge of the saints or gods, which were little images carried in a pouch and hung around his neck by black strings.

FIG. 19. CHICO ROMERO
WHO SUCCEEDED OLD JUAN TOMAS AS CHIEF OF SERIS.

Coyote got to quarreling with badger and, watching his chance, grabbed the bag, tore it loose and ran off with it, giving his derisive laugh as he ran, and ever since coyote has been laughing at badger and all others.

773 Before this it was day all the time, but then it became night and coyote only laughs at night. The black strings still hang about badger's neck."

It is strange to find, too, that a flood legend is traditional among the Seris. Chico said: "In the times of the ancients a great flood came, the ocean rose up and all the country of the Seris was under water except the top of Cerro Alto. There a few Seris gathered and were saved. Everyone else was drowned. To this day the top of Cerro Alto is covered with brush which the flood did not submerge. All Seri children are taught this flood tradition, and they must learn it by heart so as to teach their children and their grandchildren."

764 The death of a tribesman gives no cause for ceremony among the Seris, although the [765] nearest relatives may customarily wail, sometimes for months, morning and evening. The disposal of the bodies of the dead, is, however, of considerable interest. A hole about [412] three feet deep is dug by means of large clam shells and a cave is excavated for the head such that the earth will not touch it. The deceased Indian is wrapped in his own blanket and laid in the grave with the head to the East, face up. The body is covered and the grave is partly filled with earth, then covered with a layer of the spiniest of chollas and thorny brush, further filled, leveled and covered with another layer of chollas to discourage the coyotes from digging up the body. When the Seris are on the move, how- [766] ever, and grave-digging is too great a task, a body may simply be lifted high to the fork of a giant cactus and left there.

583 Marriage among the Seris is not so much a ceremony as it is the completion of a bar- 585 gain. Under ordinary circumstances, when a man buys a woman he strikes a bargain with the bride's parents and makes a down payment. Only after completion of the bargain does the woman go to live with the man, but even then payments do not cease but continue intermittently through life. Chico Romero, although "married" for fifteen years, gave his wife's father some paint that he had received in payment for guiding and 425 packing. It is also considered natural to 858 buy and sell children. One Seri, Santo

[p. 266 (B)]
[text continues on p. 267 (B)]

9:Malkin E-5 (1953-1955)1962 NU31 Seri NU31

Coyote figures out probably

as an important and perhaps disreputable figure in the mythology although nothing but scraps and bits of information suggest this. It is possible that there is actually a taboo on eating this animal or perhaps it is so disreputable that eating its flesh would put a gourmant in an inferior position.

How important is the Seri mammalian diet is hard to tell. It certainly looms more heavily during the winter, because in the cool season hunting is easier than during the heat of the summer and in fact this is when most of it is done by the ardent hunters. Too, winter subjects the Seris to greater hazards and is apt to increase their dependence on the desert resources over that during the summer, even if these resources are scantier at that time.

To all of these animals one should add the semi-wild burros running about the extensive Mexican rancherias. The Indians poach on them frequently using their fire arms, usually the .22 caliber rifles. In any case, it appears that during the summer when the field work was carried out, the mammalian diet figures quite lightly on the Seri table.

Food preparation: Very little is done in the preparation of the mammalian meat. All that I could observe was the boiling of it in hot water spiced with salt. The Indians were saying that in order to have the meat of a peccary, deer or bighorn ready to eat one must boil it 2-8 hours. The same procedure is followed with the meat of the burros. In contrast to this, as shall be seen later, fish are boiled as well as roasted while the turtles are also dried and salted. Preparation of meat is done by women, certainly at least in the encampments when they are present.

Food preferences: Some of the Seri food preferences have already been mentioned. At the top of the list as the desirables are the peccary, the deer, the bighorn and the blacktail jackrabbit; at the bottom is the badger, whose meat "is not much good." There is also preference by sex. Females of both the bighorn and peccary are preferred over the males "because they do not have the bad odor like the males." This sort of favoritism also occurs among the Mexicans. However, the Indians did not elaborate beyond this point.

Other economic uses: Apart from meat, hides are also used. The hides of the deer, bighorn and peccary had been used for sleeping mats although this matter has been expressed in the past tense. Miguel Barnett also suggested that the bighorn hides had been used for clothing by the Indians in the past—but he neglected to say how long ago. During Kroeber's stays, no Seris went about in the animal or bird (pelican) skins but earlier when McGee visited them they went about in these simple garments. Judging then by Miguel's memory, the use of the bighorn hide for clothing must be pushed back to the period of World War I or even earlier.

Miguel Barnett indicated that the "fur" of the bighorn had once been worn for the cold season "but not now."

[P 10 A]

123 relief and contentment rose, and everybody smiled. This concoction I placed on the fire while the Indian stirred with a long stick. It took half an hour to cook into a thick sticky paste, gummy white.

[315] Meanwhile, the women vanished and returned with various vessels: greasy baskets, a black chamber pot, frying pans, ollas, stew pots, shells, any old thing---even a cuspidor. When ready, the Indians dipped the sticky mess out with a cup into the various vessels and the women and children licked it up. Some of the children covered the back of a large clam shell with the paste and then licked it off, repeating this until it was gone. Most of the people hooked their fingers into it and licked them off time and again. Any drip on the outside was carefully licked off that four gallons of goo. I do not think one single drop was lost.

126 123 As one little girl was carrying away a clam shell of paste I secured her photograph. It was a sight not soon to be forgotten, to watch these little ones dip in their fingers, mostly two, sometimes three fingers and contentedly lick them off.

Wishing to secure a photo of the Indians in Pelican skin kilts, Roberto induced Chico Romero to strip and wrap a kilt of Pelican skins around his waist. He did this and Roberto secured a good photograph. For this service, Chico demanded three oranges which he gave to his children.

By coaxing and wheedling and joking, Roberto finally persuaded a young woman to put on the Pelican kilt, and she gradually pulled off her shirt, or waist, or whatever name it goes by, and laughingly permitted it. As her brown shoulders and breasts were exposed she covered them with her arms and hands while I took the photo. I gave her some blue powder to decorate herself and a little round mirror.

372 Chico Romero made a fire drill out of a piece of dry driftwood from a cottonwood tree, and then made a fire by turning the stick between his hands. After three or four minutes the fine dust became punk and turned into a live coal. This he carefully put in some dry grass and by holding it up in the wind it was fanned into a flame. The price of this was a red bandanna.

372 773 825 The legend of Fire was told to me later by the campfire. The Seris' god sent down a fly to Seriland to show the Indians how to make fire. The fly was pointed out to me one day. It was a trifle larger than a house fly with a body of shining green and blue.

"Now," they said to me, "notice when it lands. Did you not see it take its two hands, rub them over its head and then rub them together a few times?". . ."Each time it settles it rubs its hands together, and our Indians noticed this and in this way we were taught by this little fly how to make fire by rubbing a stick between our two hands, back and forth. One fly came to earth and found something dead and he rubbed a stick between his hands and made a smoke signal

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826 so all the other flies could see and also come to this dead thing."

787 A few weeks ago, Antonio Herrera had a very vivid dream. He dreamed
[158] that he was hunting in the mountains for deer and came across a cave. (These volcanic mountains are pitted with caves.) He went into the cave and saw all kinds of things dear to the heart of a Seri---plenty of rifles, lots of cartridges, knives, *manta* (unbleached cotton), necklaces, red bandannas, blue overalls, *plata*, or silver, and many other things.

[758] When he awoke he sought his father Manuel Encinas, who is a medicine man and interpreter of dreams, to explain his dream to him. The price demanded by Manuel was six *tiras*---or 30-30 cartridges, a very high price, according to Seri standard. The explanation was this:

It was true that the cave was there and all the things in it just as seen and described by Antonio, but in order to find it he would have to fast nine days and go without water that length of time also, in the heat of summer. Then the way would appear to reach the cave. So far, Antonio has not attempted the fast.

381 I witnessed the operation of making a certain kind of pitch or
396 tar which the Seris use to make the seams in their canoes or boats tight. The women pound up the dried pulp next to the outside skin of a dead *pitahalla* cactus (organ cactus). This is very dry and brown in color and the pieces are pounded up to a dry powder with a wash or shore rock in a dried deer hide. This is placed in a *batello*, or flat basket, and manipulated so that the coarse pieces come to the top and are scraped off and thrown away. The fine powder is then put in a five gallon can and some porpoise or sea-lion oil or horse oil is poured on it and stirred into a thick gummy mass. When thoroughly mixed it is put over the fire, in an olla, to boil and continually stirred for an hour or two until it is the consistency and has the appearance of coal tar. While being worked it is kept heated and applied to seams inside and outside the boat. It hardens just like tar and answers the same purpose.

123 Since the corn, which had kept this band of Seris in food, disap-
226 peared two days before we came, and they had barely kept going on
[189] seeds and a few fish, and they all had decided to leave camp with us in the morning---the women walking and the men and some children in boats---it was necessary to supply them with some food to take them to the hunting grounds of the *cahuama*, or sea turtles, and land them
[262] on the Island. The *cahuama* would furnish them meat---their favorite and national food, and the shores would supply them with clams, oysters, crabs and other sea food.

123 So the whole band was called around our camp and each family was furnished with two cups of corn, two of beans, some green coffee and a cup of cube sugar. For the first time our camp was free of Indians, and we ate and went to bed in peace.

The amenities of civilization were laid aside and forgotten in

2: Kroeber E-5 (1930) 1931 NU31 Seri NU31

on a string around his neck, which he got from his father. It is a two inch length of cane, with a wooden stopper, containing a white powder of stone (?). A little of this powder put into fresh water, brings dew; into salt water, rain. 778 789

Similarly, Chico Romero wears on his neck a tiny spool-shaped object of wood, scarcely 2 cm. long, with notched ends. When he dies, this will burst; or rather, it seems that a larger object of the same shape, which another man keeps, will burst with thunder.

To get luck, a man paints a "cross" on his forehead, breast, and "bed" and goes to sleep. Then a dream comes in which he gets what he is thinking of. Sometimes the dream comes true; sometimes not. Some dreams are lies. 787

The soul (*alma*), he'ë'sax, is all over the body and is noiseless. It is "nearly the same as blood": when the blood is lost, the soul goes. Some say that when the Seri die they are reborn in the north as Cocopa. 774 775

There seem to be no special beliefs or practises about twins. 845

Antiso'ma (— Montezuma?) is the size of a child, has a beard, a golden staff, white clothes inside and black outside. He lives in a cave. Once he tried to take a young man away with him in order to dress him nicely. Later the young man's relatives went with him to find Antiso'ma again, but could not. 776

Songs

Toad was a woman who had only a breech-clout and wanted a cotton shirt. She said she would give herself to a man for one. 533

Coyote was a Seri once.

Pinacate (dung-beetle?) wanted a bride and was jealous about her.

Colaprieta, the black-bellied ant, also was a man and wanted to marry the hokó'ctim ant. He was making a house of grass for her. She was afraid of him, and her relatives took her away.

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The four-tube-hiding game is played with canes open at one end. These canes are: blackened all over, old man; unpainted, old woman; blackened at one end, boy; blackened in the middle, girl. The boy and girl are made by slitting off slivers on two sides. The names serve as designations only; the differences between the tubes do not enter into the game. The player with the tubes turns around, puts a piece of twig into one, fills them all with sand, and throws them before his opponent, who tries to empty the twig from the *third* tube he selects. If so, he wins the canes, that is, the right to play. If the twig is in the first tube emptied, he loses 10; if in the second, 6; if in the fourth, 4. Counters are little natural shell disks. 524

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

765 Soon after the death (immediately after the burial, so nearly as could be ascertained) there is an apparently ceremonial mourning, in which the matrons of the clan, and, at least to some extent, the warriors also, participate. The mourners wail loudly, throw earth and ashes or ordure on their heads, and beat and bruise (but apparently avoid scarifying) their breasts, faces, and arms. This is continued, culminating daily about the hour of interment, for several days—unless the rancheria is sooner abandoned, in which case the period of formal mourning is shortened.

In addition to the formal mourning of matrons there is a custom of nocturnal wailing after the death of warriors in battle, and, apparently, also, following the death of matrons or nubile maidens, which attracts the notice of frontier rancheros and vaqueros. According to their accounts the first note of lamentation may be sounded at any hour of the night by any of the group to which the deceased belonged; it is successively taken up by other members of the party until all voices are united in a resounding chorus of inarticulate moans, wails, shriller cries, and wild howls, likened by the auditors to the blood-bellowing of cattle; if other groups of the tribesmen are within hearing, they, too, take up the cry, so that the lamentation may extend to the entire tribe and echo throughout practically all Seriland at the same moment. The fierce howling and attendant excitement may rise so high in the group in which the wailing begins that all seem bereft of customary caution; and sometimes they suddenly seize ollas and weapons, and decamp incontinently, perhaps scattering widely and racing for miles before settling again for sleep or watchful guard.

775 The ideas of the folk concerning death and concerning the relations between the living and the dead are largely esoteric, and are, moreover, veiled by the nonequivalence of Seri expressions with the terms of alien languages.

At least an inchoate belief in a life beyond the grave was intimated by Mashém and his companions at Costa Rica, and their circumspection of speech and mien indicated a strong veneration for, or dread of, the manes; though the specific expressions were connected with deceased matrons, who alone seemed to be prominent in the minds of the clanmates. So far as could be gathered the belief seems to be that the dead find their way back to the primordial underworld, whence Earth and Beings were brought up by Pelican and Turtle (or Shark) respectively, and are liable to return by night with mischievous intent.

The direct expressions of the Seri informants are fully corroborated by the association of things in interior Seriland. The burial of water and food, of the personal fetishes and votive objects, and of the highly prized face-paint belonging to the dead matron, attests anticipation of a post-mortuary journey; while the temporary abandonment of jacales and rancherias and the nocturnal fears and flights alike betoken

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

dread of sepulchral visitants. The most suggestive of the associations, i. e., between the scatophagic stores and the sepulchers, awaits full explanation.

Serial Place of Seri Socialry

In the conventional seriation of social development four stages are clearly recognizable, viz: (1) Savagery, in which the social organization is based on blood kinship reckoned in the female line; (2) barbarism, in which the basis of organization is actual or assumed consanguinity reckoned in the male line; (3) civilization, in which the laws are based on property-right, primarily territorial; and (4) enlightenment, in which the organization is constitutional and rests on the recognition of equal human rights to life, liberty, and the pursuit of happiness. Now, in terms of this seriation of general culture-stages, the place of the Seri tribe is clear. Reckoning consanguinity wholly in the maternal line, as they do, they belong in the initial stage of savagery. Accordingly they pertain to the lower or more primitive of the two great stages represented by the American aborigines.

A still more refined seriation may be effected through conspection of the several lines of activital development—the esthetic and industrial, and especially the sophic or fiducial, as well as the strictly social; for these lines are most intimately intertwined. Thus, in the Old World, the transition from maternal to patriarchal organization was accompanied, and evidently superinduced, by the development of zooculture into extensive herding; in different districts of the New World, a parallel transition attended the development of agriculture to a phase involving the protection of acequias and fields by armed men; while throughout primitive life, laws are formulated and enforced chiefly through appeals to the superphysical or mythologic. Now, review of the Seri esthetic indicates that the decorative concepts and activities are in large measure inchoate and are practically confined to a single manifestation, i. e., the delineation of totemic symbols primarily denoting zoic tutelaries and incidentally connoting the blood carriers of clans consecrated to these beast gods; so that the esthetic motives and devices of the tribe are essentially zoosematic. In like manner a considerable part of the technic of the tribe is zoomimic, as already shown, while even the most highly developed industrial activities occupy the biotic borderland of mechanical chance rather than the characteristic demotic realm of intellectual design. So, too, the faith of the folk is exclusively and overweeningly zootheistic, to the extent that every motion, every thought, every organized action, every law, every ceremony, is shaped with reference to mystical potencies vaguely conceived as a pantheon of maleficent beast gods; and it is this dark and hopeless faith that gives character to the tribal esthetic and technic. Concordantly the faith finds reflection in the very elements of the social organization; the matron is the blood-carrier and the lawgiver not in and for herself

2: Kroeber E-5 (1930) 1931 NU31 Seri NU31

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1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

vivacity awakened in the Seri bystanders by their spokesman's frequent interlocutions with them during the recital. Unfortunately the account was not clear as to the seasons selected, though the expressions indicated that the feasts are fixed for times at which the young are fully fledged. It would seem inconceivable that the Seri, with their insatiate appetite for eggs and tender young, should consciously respect a breeding time or establish a closed season to perpetuate any game; yet it is probable that the pelican is somehow protected in such wise that it is not only not exterminated or exiled, but actually fostered and cultivated. It is certain that the mythical Ancient of Pelicans is the chief creative deity of Seri legend, and its living representative the chief tutelary of one of the clans; it is certain, too, that this fleshly fowl, sluggish and defenseless as it is on its sleeping grounds, would be the easiest source of Seri food if it were hunted indiscriminately; and it is no less certain that the omnivorous tribesmen would quickly extinguish the local stock if they were to make its kind, including eggs and young, their chief diet; yet it survives in literal thousands to patrol the waters of all Seriland in far-stretching files and vees seldom out of sight in suitable weather. On the whole, it would seem evident that an interadjustment has grown up between the tribesmen and their fish-eating tutelary during the centuries, whereby the fowl is protected, albeit subconsciously only, during the breeding seasons; and in view of other characteristics of the tribe it would seem equally evident that the protection is in some way effected by means of ceremonies and tabus.

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Somewhat analogous, though apparently less ceremonial, expeditions are made to Isla Patos and other points in search of ducks, and to Isla San Esteban, and still more distant islands in search of eggs (preferably near the hatching point) and nestlings; while the abundant waterfowl of the region are sought in Rada Ballena and other sheltered bays, as well as in such landlocked lagoons as those of Punta Miguel and Punta Arena. This hunting involves the use of bows and arrows, though the archery of the tribe pertains rather to the chase of larger land game, and apparently attains its highest development in connection with warfare. No specialized fowling devices have been observed among the Seri; and their autonomous recitals, the facies of their artifacts, and the observed habits of the tribe (especially the youth) with respect to birds, all indicate that ordinary fowling holds a subordinate place in Seri craft—i. e., that it is a fortuitous and emergency avocation, rather than an organized art like turtle-fishing and water-carrying. Concordantly, culinary processes are not normally employed in connection with waterfowl, and the customary implements used for incising the skin and severing other tissues are the shell-cup, which is carried habitually for other purposes, the cane-splint, which appears to be improvised on occasion and never carried habitually, and the ubiquitous hupf.

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Summarily, the customary apparel of Seri men and women may be regarded as limited to three articles—(1) a kilt, normally of coarse textile fabric, which is made a prime necessity by a well-developed pudency; (2) a short wammus, also normally of coarse textile fabric, which is apparently regarded as a convenience and luxury rather than a necessity; and (3) a robe, normally of pelican skin, sometimes substituted for either or both of the other articles, but ordinarily used as bedding or as a buckler. The most valued of these articles is the robe, which in the absence of the others replaces the kilt; yet pudency demands the habitual use of some form of kilt, while both wammus and robe are held so far superfluous that they may be laid aside or bartered or otherwise dispensed with whenever occasion arises. 291

On considering the special functions and probable genesis of the Seri appareling, the student is impressed by the absence of the breech-clout, except perhaps in temporary improvisations—though the absence of this widespread article of primitive costumery need awaken little surprise in view of the environment, and especially of the abounding barbs of Seriland, which render all appareling of doubtful value save for the protection of tissues softened by habitual covering. The prevailing thorniness of the habitat renders the free-flowing and easily removable apron the most serviceable protection for the exposed vitals of the pubic region; and this device, a common one in thorny habitats generally, grades naturally into the short skirt or kilt; while it would well accord with the maritime habit and habitual thought of the Seri to apply the tough and densely feathered skin of the pelican to the purpose. This suggestion as to the nascent covering of the tribe consists with the tribal faith, in which the Ancient of Pelicans ranks as the creative deity, while its modern representative is esteemed a protective tutelary possessing talismanic powers against cold, wet, bestial claw and fang, alien arrows, and all other evils; so that the use of this feathered pelt as a shield against spiny shrubbery, sharp-leaved sedges, and barb-thorned cacti is quite in harmony with Seri philosophy. Accordingly it seems clear that the pelican-skin kilt was autochthonous among the Seri, and that it was the original form of tribal appareling; and it is of no small significance that the type persists in actual use as well as in suggestive vestigial forms, such as pelican-down swaddling for infants, pelican-feather plumes on cradle nets, etc. 182 291 [176] [174]

The passage from the pelican-skin kilt to the garment of textile fabric under the slow processes of primitive thought may not be traced confidently, though a strong suggestion arises in the Seri hair-cult (a Samsonian faith not without parallel in far higher culture) under which mystical powers and talismanic virtues are imputed to the human pelage. It is in connection with this cult that the Seri locks are so attentively cultivated and so assiduously preserved and consecrated to more intimate personal uses in belts, necklaces, and the like; and although the connecting links have not been found, it is thoroughly 174 291 826

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is an infallible remedy. On the whole it seems probable that the yerba mala (*Sebastiana bilocularis?*), or yerba de flecha, or mago, or magot, yielded or formed the standard arrow-poison of the Opata and perhaps of other Indians, and that the ill-repute of the shrub survived and spread throughout Mexicanized Sonora in such frequent repetition and common belief as to affect the ideas of residents and travelers alike; but it seems equally probable that the magic-inspired brew of the Seri is entirely distinct.[1]

As suggested by widespread primitive customs, and as illustrated specifically by the arrow-charming, the warfare of the Seri is largely sortilegic, this feature being but an extension and magnification of a corresponding feature of their hunting customs. The economic object of the chase is, of course, the flesh of the quarry; but the hunt normally begins with invocatory or other fiducial ceremonies, culminates in a feast opened with oblations, and ends in the use of horns or hoofs, teeth or bones, mane or tail, as talisman-trophies—primarily pledges of fealty to the favorable potencies, only secondarily symbols of success. The observances illumine the ever-present esoteric object of the chase, which is to gain the favor or overcome the power of the beast-god represented by the animal hunted; in general, this is sought to be effected through mimetic movements, or symbolic objects, associated with that animal-kind, and the retained charm-trophy is valued as a symbol of the placation or outwitting of a particular deity. Similarly, the Seri warrior strives for the supposed deific symbols of the enemy—the scalp or headdress or arrow of the alien tribesman, the fire-breathing and echo-waking (as well as death-dealing) wand of the Caucasian; and the Papago arrows, Yaqui scalps, and white man's firearms are sought avidly, treasured as fetishes, and often carried conspicuously as badges of borrowed prowess.[2] So the Seri are never without alien insignia in the form of weapons. The day before the 1895 expedition entered their stronghold, a band of warriors and women were frightened from a freshly slaughtered cow by a party of vaqueros so suddenly that their arms were left behind—and these

[1] It should be noted that the actuality of the poisonous property ascribed to the yerba mala is in some degree questionable; the plant is the only one of southern Papagueria yielding suitable material for arrow-shafts, and it is possible (if not probable) that it was consecrated to this purpose by the aboriginal Opata and protected by tabu in such wise as to become a sacred and fearsome thing. It is accordingly by no means improbable that the reputed poisonous property is but the product of generations of association, and that the plant is really harmless—an inference supported by experiments on the part of the leader of the 1895 expedition, who swallowed the juice of stem and leaves in two or three minute but increasing doses without perceptible effect. On the other hand, it should be observed that the region is one abounding in toxic juices, and that this shrub is so luxuriant and so free from thorny armament and other protective devices of a mechanical sort as to raise the presumption that it must be protected against herbivorous animals, at least, by chemical constituents of some kind (cf. ante, p. 25).

[2] These motives on the part of the Seri were reciprocated by their tribal enemies; a Papago fetish in the form of an Apache arrowpoint, long worn by an aged warrior as a protection from Apache arrows, was among the spoil of the 1894 expedition; and a "poisoned" Seri arrowhead and foreshaft, worn by a superannuated Papago "doctor" as a badge of invulnerability to similar missiles, was cautiously shown to the 1895 expedition, but was held above price by its wearer—and this despite the fact that he had been christianized for decades, and retained no other pagan symbols.

278 [171] 224 [776] 727 177 411 726 [171]

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I: McGee E-5 (1894-1895)1898 NU31 Seri NU31

On the coast bucklers are improvised from turtle-shells, though, according to Maahém (confirmed by direct observation), these are not carried inland for the purpose; but the protective function imputed to the turtle was well represented in the rancheria at Costa Rica by several fetishes made from phalanges of turtle-flippers tricked out in rags in imitation of Caucasian dress (somewhat like the mortuary fetishes illustrated in figure 40a and b). On the whole, the most conspicuous feature of the individual shields or protectors is their emblematic character; they are sortilegic rather than practical, and express imputation of mystical potencies rather than recognition of actual properties; and in this as in other respects they correspond closely with the offensive devices, and aid in defining the ideas and motives of the primitive warriors. 713 [325]

The actually effective protection of the Seri in warfare is their fleetness, coupled with their habitual and constitutional timidity, i. e., their wildness—for they are verily, as their Mexican neighbors say, "gente muy bronco". Moreover, they are adepts in concealing their persons and their movements behind shrubbery and rocks, and in finding cover on the barest plains; and suggestions are not wanting that the protecting shrub-clumps and rocks of their wonted ranges are credited with occult powers and elevated to the lower places of their zoic pantheon, after the customary way of that overpowering zootheism, or animism, which the Seri so well exemplify in many of their habits. 726 [186] [178]

Summarily, the warfare of the Seri complements the pacific industries of the tribe in every essential respect. It is notable for improvidence, i. e., for reliance on chance; the dearth of devices for offense and defense parallels the poverty in industrial artifacts; and the disregard of fortifications is of a kind with the squandering of present food supplies and the utter neglect of provision for the future. A striking correspondence between workfare and warfare is found in the fierce blood-lust displayed alike in chase and battle, a feature manifestly borrowed from beasts and intensified by besetting beast-faith; and more striking still is the correspondence in motive, as revealed by the overlapping functions of the protective kilt, by the borrowing of animal symbols alike in peace and war, and by the imitation of animal movements on the warpath as in the chase.

In the last synthesis the warfare of the Seri may be considered as characterized by two attributes: (1) The motives, so far as developed, are zoomimic in even greater degree than the prevailing motives of the pacific industries; and (2) the methods are shaped largely by mechanical chance, like those normal to protolithic industry.

Nascent Industrial Development

Industries form the chief bond between man and his environment. The esthetic activities arise in the individual and extend to his fellows; the institutional activities express the relations among individual men 000

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

764 a few yards from her jacal, preference being given to relatively elevated or commanding points. The excavation is about 30 inches (90 cm.) in depth; within it is placed first the pelican-skin robe of the deceased, so arranged as to fold over the body; then the corpse, dressed in the ordinary costume of life, is compressed into small compass by closely flexing the knees and bringing them against the thorax, extending the arms around and along the lower limbs so that hands and feet are together, and bending the head forward on the chest; when it is deposited in the receptacle in such manner as to lie on the left side, facing north-

[532]
[778]

FIG. 40.—Woman's fetishes.

ward. Near the face is laid a dish of baked clay or a large shell filled with food, and beside it a small olla of water (an actual example is shown in figure 39), while the hupf, awls, hairbrush, olla-ring, and other domestic paraphernalia are placed near the hands. Next the personal fetishes and votive symbols (in the form of puppets or dolls such as those shown in figure 40 *a* and *b*) of the dead mother are slipped beneath the face, and her paint-cup, with a plentiful supply of paint, is added; the poor personal possessions, in the form of shell-beads and miscellaneous trinketry, are then heaped over the face and shoulders, and these are covered with the superfluous garments and miscellaneous

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Similarly, Chico Romero wears on his neck a tiny spool-shaped object of wood, scarcely 2 cm. long, with notched ends. When he dies, this will burst; or rather, it seems that a larger object of the same shape, which another man keeps, will burst with thunder.

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Recently I observed the manufacture of *?antezj kóil* in Desemboque, Sonora. Although the woman involved normally makes the clay in complete privacy, she agreed to let me watch. Seven young men and two young women were near a fire outside her hut as she seated herself on the ground behind a water drum. As she began to work she cautioned them not to watch.[2]

She commenced by scraping several roots of *xkoktz* to remove any dirt and then moistened them with water. Using a mano and metate, she split the bark and removed it. The rest of the root was discarded. She then pounded the bark into a pulp, moistening it at the same time with more water (Fig. 1). This pulp was put in a cup and set to one side.[3]

Next she ground several small chunks of *iki kóizj* into a fine powder. Then she placed a piece of hard *mokni óoxW*, the size of a marble, on the white powder. At this point she told her daughter, one of the two young women, to bring her a clean white rag and a blanket. After again warning the young people to stay away, she covered herself and her metate with the blanket, leaving only a small opening by her shoulder through which I could observe. The warning was heeded by all of the youths except the daughter who came over once to take a peek. The group remained interested, and several times someone asked, "Is it blue yet?"

Beneath the blanket, the woman ground the *mokni óoxW* into the *iki kóizj*, mixing the powders thoroughly. After scraping the mixture to one side of the metate, she wrapped the bark pulp in the white cloth and squeezed approximately ½ teaspoonful of liquid onto the center of the stone. Then she combined some of the powder with the liquid and ground the resultant paste for about ten minutes. As necessary, she added more powder or liquid to the mixture. Finally she daubed a streak of the clay onto the back of her hand, withdrew her hand into the sunlight, and remarked that it was beginning to turn blue. At that time it was a grayish-blue. She continued to work for several more minutes and then tested the color again. This time she seemed satisfied that it was the right shade. It was now a bright, or as she put it, a strong blue. This was the *?antezj kóil*, the prized blue pigment (Fig. 2).

The making of the *?antezj kóil* is followed immediately by the making of a second portion of clay, called *?a?óoskl*, which is a lighter shade of blue. Thus its name, the root meaning of which is "drab or grayish." *?a?óoskl* is considered to be inferior to the *?antezj kóil*. After the woman had scraped the finished *?antezj kóil* from the metate and mano and transferred it to a saucer, she added more ground *iki kóizj* to the small amount of remaining

12: Moser L-5 (no date) 1964
(ca. 1960) NU31 Seri NU31

ACKNOWLEDGMENTS

I am indebted to Richard Felger, Department of Zoology, University of Arizona, for information concerning plants referred to in this article. H. Wesley Peirce of the Arizona Bureau of Mines identified the mineral material used in the pigment.

NOTES

1. The phonetic values of the symbols used are the following: t is voiceless dental stop; k is vl. velar stop; ? is glottal stop; W is vl. labial grooved-rounded spirant; s is vl. alveolar spirant; z is vl. alveo-palatal spirant; l is vl. lateral spirant; j is vl. velar spirant; x is vl. back velar spirant; m is labial nasal; n is dental nasal; i is a high close front vowel; e is a low close front vowel; a is a low open central vowel; o is a mid close back vowel.

2. The restriction as stated to me by various women pertains only to young girls below the age of menarche. Actually, however, none of the above-mentioned young men and women, most of them in their twenties, was allowed to observe.

3. Plant specimens are deposited in the Herbarium of The University of Arizona.

4. The blue "pencil" which McGee describes (McGee 1898: 166) and pictures (McGee 1898: Plate XXVII facing p. 170) is apparently the *?antezj kóil*.

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2: Kroeber E-5 (1930) 1931 NU31 Seri NU31

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372 373 826 so all the other flies could see and also come to this dead thing.''

787 [198] A few weeks ago, Antonio Herrera had a very vivid dream. He dreamed that he was hunting in the mountains for deer and came across a cave. (These volcanic mountains are pitted with caves.) He went into the cave and saw all kinds of things dear to the heart of a Seri---plenty of rifles, lots of cartridges, knives, *manta* (unbleached cotton), necklaces, red bandannas, blue overalls, *plata*, or silver, and many other things.

[194] When he awoke he sought his father Manuel Encinas, who is a medicine man and interpreter of dreams, to explain his dream to him. The price demanded by Manuel was six *tiras*---or 30-30 cartridges, a very high price, according to Seri standard. The explanation was this:

It was true that the cave was there and all the things in it just as seen and described by Antonio, but in order to find it he would have to fast nine days and go without water that length of time also, in the heat of summer. Then the way would appear to reach the cave. So far, Antonio has not attempted the fast.

381 396 I witnessed the operation of making a certain kind of pitch or tar which the Seris use to make the seams in their canoes or boats tight. The women pound up the dried pulp next to the outside skin of a dead *pitahalla* cactus (organ cactus). This is very dry and brown in color and the pieces are pounded up to a dry powder with a wash or shore rock in a dried deer hide. This is placed in a *batello*, or flat basket, and manipulated so that the coarse pieces come to the top and are scraped off and thrown away. The fine powder is then put in a five gallon can and some porpoise or sea-lion oil or horse oil is poured on it and stirred into a thick gummy mass. When thoroughly mixed it is put over the fire, in an olla, to boil and continually stirred for an hour or two until it is the consistency and has the appearance of coal tar. While being worked it is kept heated and applied to seams inside and outside the boat. It hardens just like tar and answers the same purpose..

123 226 [86] Since the corn, which had kept this band of Seris in food, disappeared two days before we came, and they had barely kept going on seeds and a few fish, and they all had decided to leave camp with us in the morning---the women walking and the men and some children in boats---it was necessary to supply them with some food to take them to the hunting grounds of the *cahuama*, or sea turtles, and land them [262] on the Island. The *cahuama* would furnish them meat---their favorite and national food, and the shores would supply them with clams, oysters, crabs and other sea food.

123 So the whole band was called around our camp and each family was furnished with two cups of corn, two of beans, some green coffee and a cup of cube sugar. For the first time our camp was free of Indians, and we ate and went to bed in peace.

The amenities of civilization were laid aside and forgotten in

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SERI BLUE

MARY BECK MOSER
SUMMER INSTITUTE OF LINGUISTICS
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ABSTRACT

The blue which the Seri Indians of Sonora, Mexico, use in face painting is not the mineral dumortierite, as previously believed, but is a prepared pigment. This paper is a description of the process in which three elements are combined to produce this pigment.

McGee and Kroeber reported the mineral dumortierite as the source of the blue pigment used in Seri face painting (McGee 1898: 165-6; Kroeber 1931: 27). Coolidge described two blues, one a mixture of gypsum and a boiled root, the other a blue stone found on Tiburon Island (Coolidge 1939: 200). Xavier mentioned dumortierite and commercial bluing. She also referred to a third blue obtained from a plant on Tiburon (Xavier 1946). Present investigation has shown that as far as the Seri know, the only blues they have ever used are *ika?óil* "to cause to be blue" (commercial bluing) and the highly prized *?antezj kóil* "blue clay" of their own manufacture.[1]

The components and the method of manufacture of *?antezj kóil* are said to have been taught to the women long ago by *?ant i?akímxoj* "they who tell the things about the earth." The actual color transformation is veiled in mystery to the Seri who say that if the process of making the clay is observed by any girl who has not passed the menarche, the blue will not appear. Its appearance is not attributed to shaman power, however.

?antezj kóil has been in less demand during the last few decades since commercial bluing has been readily available. Nevertheless, *?antezj kóil* is the blue preferred by those women who continue to adorn their faces in the traditional manner.

The three ingredients used in making the blue clay are the root bark of *xkoktz (Franseria dumosa)*, *iki kóizj* "to grind with" (a mixed clay in which montmorillonitic layers predominate), and *mokni óoxW* "excrement (sap) of *mókni (Guaiacum coulteri)*." The Seri say that the *iki kóizj* and the *mókni* are found only on Tiburon Island. The root bark of *tinkl (Franseria ambrosioides* Cav.) or of *xneejan siiktoj (Stegnospermum halimifoliam)* can be used instead of *xkoktz*. *tinkl* gives a distinct aroma to the clay. The plants mentioned are fairly common along the Sonoran coast.*

*EDITOR'S NOTE: It is interesting to note that none of the ingredients is blue in its unaltered state.

123 handed to show their friendliness.

142 291 123 [302] [411] One was a young man with rather pleasant features, his braided hair hanging below his shoulders. His name was Antonio Herrera. The other was a wild-looking specimen called Ramon Blanco. His hair was a tangled mat with a short braid behind, suspicious black piercing eyes, long sparse moustache and chin-beard hiding a broad cruel mouth. He wore the remnants of an old sweater, a short dirty kilt, or skirt, nearly to his knees, a belt full of cartridges, mostly empty, and a long knife in a rawhide scabbard.

123 [765] [291] The young man had been baptized and given a name by Roberto, who had acted as godfather or *patrona*, many years ago. He wore a hat, jacket, and pants of blue denim, and *guaraches*, or sandals of rawhide.

We shook hands all around and then they called and halloed in the brush and soon three women and a lot of children, wild and half-clothed, filed into camp. The women were tall, gaunt, unkempt, ragged and barefooted, paying us not the slightest notice. They were bearing on their heads large baskets filled with all their earthly possessions---cooking ollas, scraps of cloth, pieces of turtle meat, bone brads, hair brushes, and odds and ends. They carried, also, an infant or two wrapped in odd bits of rags. Several gaunt dogs followed in their wake.

[415] [482] [422] [854] [231]

342 [592] In all, three families came trailing in, removed their household equipment from their heads and resumed their interrupted and primitive housekeeping. Each family occupied its apartment in the row of brush shelters, separated from each other only by brush partitions with a total lack of privacy. These shelters, always open to the sea, serve as shade from the fierce rays of the sun, and also as windbreaks, but are no protection from infrequent rains. They are occupied only for a brief period and then their nomadic tenants move on to fresh *cahuama*, or sea turtle range.

[361]

123 [142] Soon, a third man arrived while we were near the huts, Manuel Encina. He was a man of sixty-five, gray hair and mustache, seamed features, and not evil looking. He was out of breath. He had gone for water to the same water hole where we had been yesterday, struck our tracks, had left his water cans and hurried back to warn his people. He was greatly relieved to find friends.

Since he had gone for water, inquiry revealed there had been no water in camp for two days, and six adults and one girl of thirteen and six children were thirsty. We gladly gave them one of our five-gallon cans of water and they were very grateful. They had caught a sea turtle the day before and gave us some turtle steaks which looked like beef or mutton.

[225] [262]

312 482 123 As the camp was without water and we were running short, the young man and Encina offered to get some. Each took a *palanca*, or short shoulder pole with knotched ends, fitted empty five-gallon cans in

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

During the half century of historical silence from 1844 forward, and pending the progress of the desultory researches, the Seri suffered a succession of external shocks more serious in their internal effects than any of those of the three centuries preceding; indeed it is just to say that during this half century the Seri range was curtailed, the Seri customs were modified, and the Seri population was diminished more effectively than during the preceding sesquicentury of fairly definite record. The chief factor in this transformation was an intrepid pioneer, who pushed actual settlement toward the Seri frontier more vigorously than any predecessor—Señor Pascual Encinas, a son of Sonora.[1]

Born near Hermosillo in 1819, Don Pascual was in early maturity at the time of Colonel Andrade's expedition, and was fully conversant with the later history of the Seri. Of adventurous disposition, and holding interests in Bacuachito, he was familiar with the Seri frontier; and in hunting deer and other large game over the vast delta plain of Rio Sonora he had perceived the agricultural possibilities of the region. During the struggle of 1844 he became impressed with the idea that the Seri might be controlled and gradually inducted into useful citizenship through a judicious combination of industrial, educational, and evangelical agencies; and before the end of the year he began the establishment of a rancho (the present Rancho San Francisco de Costa Rica) on the Seri borderland, with the double object of developing new resources and regulating the relations between tribesmen and settlers. Enlisting the aid of a corps of vaqueros, mechanics, and farmers, he excavated a deep well, erected corrals and adobe houses, cleared away the exceptionally luxuriant mesquite forests, fenced fields, and stocked the plains with horses, burros, and cattle. At the same time he sought Seri wanderers and treated them with such kindness and firmness as to gain their confidence; and while most of the tribe held aloof, some attached themselves to the rancho, and a few even were taught to labor, albeit in desultory fashion. In this stage, as for some years afterward, he was materially aided by his contemporary, Kolusio, then in his physical prime and still in good repute among his kinsmen. Meantime he obtained the assignment of two priests, who made it their chief duty still further to placate the tribesmen and their families and to induct them into religious observances and belief; and as the confidence of the Indians increased, he had two boys domiciled in the rancho and educated in the Spanish as well as in the faith, in the hope that they might pass into priesthood and so form a future bond with their kin. One of these neophytes disappeared in the troublous times of a later decade, though tradition indicates that he became a tribal outcast (like Kolusio still later) and slunk away to Pitiquito and Altar, and afterward to California; the other, christened Juan Estorga and

[1] The following paragraphs are condensed from oral recitals by Señor Encinas (a notably straightforward and judicious authority), supplemented and corroborated in all essential details by Señores Andres Noriega, Ygnacio Lozanio, and several other habitués of the Seri borderland, as well as by Kolusio and Mashém, several Papago informants, and various collateral documents.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

+175 648 [797]

nicknamed El Gran Pelado ("The Great Shorn"), survives as subchief Mashém, long since relapsed into his native savagery, save that he remembers the Spanish, affects a hat, cuts his hair to the neck (whence his nickname), and prefers footgear to the fashion of his fellows.

Industrially, Don Pascual's venture proved successful; the fertile soil, periodically watered from below by the underflow of the semi-annual freshets, yielded incredible crops; reveling in the exceptional floral wealth of the delta and tided over bad seasons by the artificial forage, the stock increased and multiplied beyond precedent; and so the rancho became a flourishing establishment, housing a score or more of families and harboring a hundred or two dependents, in addition to the thousands of half-wild horses and cattle. Meantime, the industrial lines ramifying from the rancho formed a drag net for Seri raiders, practically cutting off forays eastward toward Hermosillo and Horcasitas, and greatly reducing the sallies southeastward toward Guaymas and northeastward toward Bacuachito and Caborca; and Don Pascual began to receive recognition and state and federal concessions as a public benefactor. For a decade the industrial and evangelical influence and the effect of the bold kindness of El Patron extended and became felt throughout the tribe, and most of the families visited the rancho at least occasionally. Yet even the best of them remained averse to labor save in sporadic spurts, and indifferent to the religious teaching, save when sweetened by substantial largess; while all but the decrepit and the two carefully restrained neophytes came and went capriciously, and were much given to decamping incontinently by night to return shamefacedly one by one in the course of a week or two, without consistent or adequate excuse for their stampede—indeed the vaqueros habitually classed these nocturnal flights of the Seri and the reasonless stampedes of their stock in the same category. Ostensibly a few of the larger boys and girls and a still smaller number of the adults were helpers about the rancho; actually they were scavengers, consuming the waste of the shambles and the earth-mixed scatterings from the thrashing floors, and saving the rancheros the noisome duty of removing the carcasses of animals dead by disease or accident; and as their indolence increased under the easy régime, they grew into more and more open thievery. By no means deficient in shrewdness and cunning, they adopted numberless devices for imposing on the credulity of the majordomo and other officials of the rancho. When coin-like tokens of stamped copper were used in the transactions of the rancho as equivalents of labor, the Seri ingeniously obtained sheet copper by stealth or barter, systematically counterfeited the tokens, and exchanged them for supplies at the rancho store; it was a favorite trick to surreptitiously break the neck or a leg of a horse, cow, or burro, and report finding the dead or crippled animal, at the same time begging for the carcass; and, whenever opportunity offered, they slyly slaughtered a head of stock, consumed it to the hoofs and horns

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

the Seri are absolutely without extratribal affiliations, or even sympathy. When the chronicles of three centuries are scanned in the light of recent knowledge, it seems practically certain that they have been equally isolated since the dawn of Caucasian history in Mexico; and both recent data and the chronicles combine with the principles of demotic development to indicate that the Seri have stood alone from the beginning of their tribal career, and have never foregathered with the neighboring tribes of distinct blood, distinct arts and industries, distinct organization, distinct language, and distinct thought and feeling.

The present isolation of the Seri throws light on their early history and reveals the extent of the misapprehension of the pioneer missionaries, who half deluded themselves and wholly deluded distant readers into the notion that the Seri were really proselyted and actually collected in the mission adjuncts of military posts established to protect settlers against forays of the tribe; for, as illumined by later and fuller knowledge of the tribal characteristics, the chronicles are seen to indicate merely that a few captives, malingerers, cripples, spies, and tribal outcasts were harbored at the missions until death and occasional escapes brought the colonies to a natural end, with no real assimilation of blood or culture on either side. So, too, the persistent tribal antipathy reveals the error of confounding the independent or even inimically related outbreaks of the Seri and of the Pima or Apache with the concerted action of confederated tribes. Doubtless the ever-watchful spies from Tiburon habitually gave notice of the disturbance due to outbreaks of contemporary tribes, just as they do today when the local soldiery are withdrawn for duty on the Yaqui frontier; naturally the civil and military authorities were thereby led to provide for protection against the Seri and Pima, against the Seri and Pima, or against the Seri and Apache at each period of disturbance, just as they provided against the Seri between periods; and it would appear that this association in thought and speech led to the unconscious magnification, in the minds of the chroniclers, of a supposed alliance.

In brief, the tribal relations of the Seri seem always to have been antipathetic, especially toward the aboriginal tribes of alien blood, in somewhat less measure toward Caucasians, and in least—yet still considerable—degree toward their own collinguals and (presumptive) consanguineals.

POPULATION

So far as could be ascertained by inquiries of and through Mashém in 1894, the Seri tribe then comprised about 60 or 70 warriors, with between three and four times as many women and children—i. e., the population was apparently between 250 and 350. The group of about 60 (including 17 warriors) seen at Costa Rica was evidently growing rapidly, to judge from the proportion of youths of both sexes, infants in arms, and pregnant women; and there are other indications that

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

impaired than their fear-born veneration evaporated, and their native antipathy reappeared in original virulence. The 1894 party was fortunate in successfully treating a sick wife of sub-chief Mashóm, and subsequently spent days in the rancheria, distributing gifts to old and young in a manner unprecedented in their experience and making liberal exchanges for such small possessions as they wished to spare; yet, with a single possible exception, they succeeded in bringing no more human expression to any Seri face or eye than curiosity, avidity for food, studied indifference, and shrouded or snarling disgust. Among themselves they were fairly cheerful, and the families were unobtrusively affectionate; yet the cheerfulness was always chilled and often banished by the approach of an alien. The Sonorenses generally hold the Seri in indescribably deep dread as uncanny and savage monsters lying beyond the human pale; while the reciprocal feeling on the part of the Seri toward Caucasians, and still more toward Indian aliens, seems akin to that of the average man toward the rattlesnake, which he flees or slays without pause for thought—it seems nothing less than intuitive and involuntary loathing. The Seri antipathy is at once deepened into an obsession and crystallized into a cult; the highest virtue in their calendar is the shedding of alien blood; and their normal impulse on meeting an alien is to kill unless deterred by fear, to flee if the way is clear, and to fawn treacherously for better opportunity if neither natural course lies open.

Concordantly with their primary characteristic, the Seri have avoided ethnic and demotic union beyond the narrow limits of their own kindred; and even of these they seem to have cast out parts, annihilating the Guayma and Upanguayma, displacing and nearly destroying the Tepoka, and outlawing individuals and (apparently) small groups. The earlier chronicles indicate that the Jesuit missionaries, and after them the Franciscan friars and the secular officials, sought to scatter the tribe by both cajolery and coercion, and endeavored to divide families by restraint of women and children and by banishment of wives; there are loose traditions, too, of the capture and enslavement of Indian and Caucasian women in Seriland; yet the great fact remains that not a single mixed-blood Seri is known to exist, and that no more than two of the blood (Kolusio and perhaps one other) now live voluntarily beyond the territorial and consanguineal confines of the tribe. The romantic story of a white slave and ancestress of a Seri clan, sometimes diffused through pernicious reportorial activity, is without shadow of proof or probability; the tradition of the captivity of a Papago belle was corroborated, albeit indefinitely, by Mashóm's naïve admission that an alien woman was once kept as a slave to a childless death due to her inaptitude for long wanderings; and there is not a single known fact indicating even so much as miscibility of the Seri blood with that of other varieties of the genus *Homo*. Naturally the presumption of miscibility holds in the absence of direct evidence; yet the presumption

2: Kroeber E-5 (1930) 1931 NU31 Seri NU31

SERIAN TERRITORY AND TRIBES

The close speech unity of the Seri, Tepoca, Salineros, Guaymas, and Upanguaymas is affirmed by all the older authors. The name Seri has however been used in several senses, even in pre-ethnologic days: (1), for the entire group of related tribes, sometimes excluding and sometimes including the Guaymas; (2), for the inhabitants of Tiburon Island and the immediately opposite stretch of mainland; (3), for the inlanders more or less associated with the mission establishments from Hermosillo upstream, in contrast with the "Tiburones" of the island; (4), for the modern fusion of mainlanders and islanders, which evidently includes descendants of all Serian tribes except the Guaymas and Upanguaymas, who became absorbed in the lowermost Yaqui tribe or village of Belem. It is in this fourth and last sense that I use the term; my principal informant, in the tradition given, employed the third meaning; McGee mostly the second, with a strong implication of the thorough apartness and greater primitiveness of the islanders, as compared with their ethnic kinsmen.

The Tastioteños of my informant appear not to be known otherwise. The coastwise alignment of tribes from south to north seems to have been: Guaymas, Upanguaymas, Tastioteño, Seri or Tiburones, Tepoca, Salinero.

As already mentioned in the Introduction, it seems inherently unlikely that Serian territory extended as far up the Sonora river as Ures, near which Orozco y Berra puts the boundary. His undue extension is probably due to the fact that the missions to which Serians (other than Guaymas-Upanguaymas) became attached, were situated in the valley of the Opodepe or Horcasitas branch of the Sonora. According to McGee[10] these Missions were: Santa Magdalena de Tepoca, founded in 1699, soon abandoned, location long lost but probably up-stream from next; Nacameri, 7 leagues below Opodepe; Nuestra Señora del Pópulo, 9 leagues down, at Horcasitas; Nuestra Señora de los Angeles, 3-4 leagues down, maintained, with preceding, until 1767; Pitic or Pueblo de los Seris, more than 12 leagues down (opposite Hermosillo), founded last, in 1742. Nacameri and Pitic sound like Pima, not Seri, words. Whether the river valleys from Hermosillo up were actually Pima territory, as here surmised, will have to be established from documentary sources, possibly supplemented by recollections of the Pima surviving about Ures. It is conceivable that Serian tribes had driven the Pima out of the Sonora valley shortly before the founding of the missions, thus effectuating the division into Pima Bajos and Altos; or that the Pima shrinkage out of the middle of their territory began after their mis-

[10] Pp. 66, 69, 70, 72.

3:Davis & Dawson E-5 (1922-1940) 1945
NU31 Seri NU31

THE SAVAGE SERIS OF SONORA—II*

By EDWARD H. DAVIS AND R. YALE DAWSON

The beginning of Seri wars was the year 1700 during which they first conducted nocturnal raids on some of the most outlying of the Jesuit mission pueblos of Sonora, killing inhabitants with their arrows and stealing the cattle and horses. Year after year, the gradual expansion of Sonoran settlements and their nearer approach to the borders of the Seri homeland aggravated the conditions of conflict. The vigorous proselyting expeditions of the Jesuit missionaries brought about the capture of some hundred women, children, cripples and vieillards of the Seris, and concurrently the death of many defending warriors. These expeditions further kindled the hatred of the free Seri against the white man, while the few score "converts" gathered about the several missions gained a shocking character for sloth, filth, thievery, treachery, obstinacy and drunkenness. Raids upon the settlements continued and between 1757 and 1763 4.000 mules, mares and horses were known to have been stolen and eaten.

[p. 261(B)] [text continues on p. 262(A)]

Section V

The Seri Indian

Unfinished Book Manuscript

War Chief of the Seris

The Pelican Skin Robe

175 131 *Three centuries ago they were a friendly people living along the banks of the Sonora River from Hermosillo to where the flow of water sinks into the marshy banks along the coast of the Gulf of California.*

175 • 717 *The great Padre of the Pimas, Eusebio Francisco Kino, first visited the Seris in 1685, and found them "a very gentle people." After a short preachment to them he noted that "With very great insistency they begged me to remain with them and baptize them saying they would give me horses, fish and many products of the country, and that they would build me a house and a church. On three different days I said Mass in their country."*

The Padre could not remain but two years later (1687), he sent Father Adan Lily to them. Lily established a mission---Santa Maria del Populo---on the banks of the River near what is now Hermosillo. The Seris remained faithful to the Padres when the whole country rose in revolt some years later.

175 [134] *The withering hand of time worked against them, however. They were pushed farther and farther down onto the barren lands along the gulf coast until, finally, in a fierce and desperate retreat out into the sea and onto the desert Island of Tiburon. The swift and deadly channel between the Island and the Sonoran mainland gave them protection. They retrogressed through the centuries into a fierce and, perhaps, cannibalistic tribe.*

114 [123] *As late as 1922, when Edward Davis first visited Tiburon Island, a man was putting his life on the line when he stepped on the Island. But perhaps the quality of the man had something to do with it. As did Father Kino, Edward Davis was able to make friends of them.*

The following manuscript is an incompleted book on the Seris which was found among his papers.

[pp. 6-138 not processed]

*825 In the northern chuckawalla, the female is supposed to have lesser ridges than does the male but this is an exception. In all other cases, the sole possessor of this characteristic is the male. This, of course, is not so in nature, but it shows that certain structures are supposed to indicate male sex. It is also clear that this particular trait is associated with the lizards and in a way represents a kind of taxonomic character the Seri tend to associate with the male lizards.

The only other trait employed exclusively refers to the toad. Here the male is supposed to have "dos huevos," two eggs, outside, the same feature the Seris associate with the male of the mammals.

It is interesting that no structural differences were suggested for the side-winder.

Age

The age of reptiles and amphibians is really a great mystery to the Seri. Although they have given some sort of answer for 19 species in the list and for 16 they suggested definite length of life for the animal (for the other three they didn't know), no reliable replies suggesting anything else than the individual idiosyncracies of the informants could be established. The informants showed a distinct tendency to provide pat answers for all sorts of creatures. This tendency appears to be associated with the age. The younger informants usually gave brief prospective age of various species; the older ones gave longer age. Thus, Moreno, for example, usually gave hypothetical age of larger species as say 5-6 years while Chico Romero or Ramon Montanyo for the same species gave 70 or 80 years respectively. It is interesting that the two last men are close to the age indicated for the animals.

The only general tendency that could be established is a gradient of relationship between the size and longevity of the animal. The larger the beast, the longer it lives.

Seasonality to some extent enters here. Thus two of the informants said of the side-winder that "perhaps it dies with the cold season" although others thought it lived a long time. Similar suggestions had been made for a couple of species of lizards. It is clear that absence of such small creatures during the cold season must suggest to the Seri their early demise.

In one case, a definite manner of establishing age of an animal has been suggested. In the western diamondback and the side-winder, the age, the Seris think, can be established by counting the rattles on the tail. This belief is widespread among the Mexicans and it may well be that it represents an increment from the influence of the Spanish-Mexican culture. [177]

Size and Weight

Seris' ideas of the size of reptiles is remarkably accurate. Time after time they made very correct estimates of the size which the animal can reach. They expressed this as a rule with a hand motion indicating the size of the animal. The accuracy is not surprising, because they see these animals [804]

[P. 25A]

2: Kroeber E-5 (1930) 1931 NU31 Seri NU31

Havasupai. This therefore looks like a trait of Yuman origin. The Papago go farther, with eight terms. 171 601

The Seri habit of calling cross cousins siblings prevails through central and northern California alongside the trait of designating them by uncle-nephew terms. All southern California, including the Yuman tribes, has special cross cousin terms. The Walapai-Havasupai combine the last two methods.

As compared with the three Seri parent-in-law terms, the California Yumans have two, the Walapai-Havasupai one. The twelve Seri sibling-in-law terms are most nearly approached in California by the Yuman Kamia, with seven. The Yuma have five; the Mohave, like the majority of Californian tribes, three. The Walapai-Havasupai, like the Hopi and apparently the Pima-Papago, have reduced separate terms for both siblings-in-law and children-in-law to very few.

Calendar and Astronomy

One informant said there were 12 moons in the year; another, 6. The list obtained consists of 12. Of these, about 6 refer to seasonal events, especially those concerned with food; 6 to constellations. This type of calendar resembles that of the Walapai-Havasupai. 805 ● 821

1. June, eko'saX hi'caX, mesquite ripe.
2. July, antia'ia hi'caX, grass green, rains.
3. August, soxwo'mas or xacuxo'mas (cf. 7), (certain stars) not yet visible (before dawn); tunas.
4. September, kō'to-ya'o, (stars of that name) appear; cold begins.
5. October, e'-ya'o, constellation jackrabbit (ē') rises in morning.
6. November, na'pXo-ya'o, constellation buzzard (nā'pXo) appears (in morning).
7. December, xasoXwo'mas mo'o (cf. 3; verified) (certain stars) not yet visible.
8. January, koyaXca'k, certain stars just begin to show; small sea-turtles appear.
9. February, koyaXa'ku, larger turtles appear.
10. March, eXno'lcan't hi'caX, eel-grass sea-weed (xno'la) "appears." See below.
11. April, iqō'tmu hi'caX, sharks (a'qāt) come.
12. May, oma'moma hi'caX, pitahaya ripe (oma'm was given as ripe fruit of sahuaro, pitahaya, etc.)

Some of these names appear to be merely connotive of the events to which they refer. The seasonal happenings would probably be more truly placed if the calendar fell a fortnight to a month later, beginning in June-July or July instead of June. This would put the beginning at about the summer solstice, and might account for the statement that the "year" had six moons. The list was recorded on

2: Kroeber E-5 (1930)1931 NU31 Seri NU31

February 28, 1930, which the informant (correctly) declared to be the first of a new moon. He also said it was eXno'isea't, with which he began his list. This would roughly equate moon 10 with March, as per the list; but when asked about the edible "seeds" of the eel-grass, he stated that these were due next month.

Unfortunately, the informant who stated that there were six "months" in the year was not questioned further. He may have referred to a calendar of six seasons like that of the Lower Californians.

The upper large star in Orion (Betelgeuze) is an antelope; the three of the belt, mountain-sheep; the three of the hilt, an arrow; Sirius, a dog following the sheep.

The Pleiades, kmā'mk, are a woman (xmām, kmām) with children, who came outdoors to urinate.

Ursa Major is a sahuaro or pitahaya fruit-gathering crook, a pole with a bar diagonally across the end.

Kwe'pituX, quail (*codorniz*, qwe'pt) is a constellation.

Suxmi'ka, a man carrying a harpoon (*lanza*), may be Scorpio.

There are constellations Jackrabbit (ë'), Buzzard (nā'pXe), and kë'to, according to the calendar. These rise before dawn about March 1. Clouded skies prevented their being seen several mornings. A few days later, at 6 a. m. (7 a. m. Mexican time), Altair was visible well above the horizon; this may be Buzzard — compare Luiseño Buzzard-Altair.

Polaris was pointed out in answer to the question if there was a star that did not move.

The sickle of Leo was not recognized (Walapai-Havasupai, hand).

Of these, Orion-Mountain-sheep, Ursa-crook, Pole-carrier-Scorpio (?), Buzzard-Altair occur among Yuman tribes as far away as Diegueño, Walapai, Havasupai.

Myth Fragments

1.

People were born in a cane, the Seri in one joint, the Mexicans, Americans, Chinese in others, separate from each other. God (Dios, Yos) came along here from south, then went east (?), setting signal smokes; the Seri alone did not come to him, therefore have nothing.

2.

Coyote was trying to catch ducks. As he jumped, they flew away and he landed in the moon, where he is visible now.

3.

Death was caused by Coyote and Kontë'tXiat (*pinacate*, an insect that stinks, turns his black belly up, dung-beetle?). Coyote

\# 825 informants suggested that maybe the animals die with the onset of cold. But in such cases it does not occur to them to figure out how the species may carry on from the fall to the spring. The eggs, they know, usually are laid in the spring and if the adult dies off in the fall before depositing eggs, then what? To this Seri idea we have no answer. The usual reply is often "in winter not seen."

But occasionally more specific beliefs are advanced, of which the most common is that the adult sits out the cold season underground (just as it may sit out the heat of the day or cool of the night, depending on its requirements). The toad thus "lives underground. It goes underground in October and comes out in May." It also "comes out when it rains and then it makes the noise—raurrau, rrau, rrau—the male and the female make it." The cold season, to the Seri, lasts from October till May and frequently May through October has been indicated as time of occurrance of the animal. Like the toad, the tortoise and the race runner disappear underground for the duration of the cold season and there had been a few feeble suggestions from the informants that the patch nose snake does the same. As for the sea turtles, they go to deeper waters for the winter. Nothing much of this sort had been said about the loggerhead turtle, undoubtedly owing to its extreme rarity.

●[805]

Sometimes the informants went beyond mere statement of the absence or presence and indicated where the animal may be absent during either of the seasons. Thus, for example, the black whipsnake is common in Desemboque during the summer but very rare during the winter.

In some instances, association between rains and sudden activity is made. The tortoise and the toad both come with the rains, they thought.

b) Geographical 1

The appended table of the distribution of animals as seen by the Seris requires few comments. Four species had been described by the blanket statement "found everywhere" and this is indicated in the chart. But while it may well be true of the utas, very small and ubiquitous lizards, it is less likely to be true of the patch nose snake and the western diamond back. Unfortunately, the exact distribution of these reptiles in the area is little known, even in the islands of the Gulf. What basis there exists for the Seri statement is hard to tell.

On the whole, the distribution often reflects the Seris' acquaintance with this or that locality rather than peculiarities of the fauna. Hence, Desemboque, Kino and Tiburon are most frequently mentioned localities, while Punto Peñasco least, and these are really localities most and least frequently visited by them. But, in other instances, there is a real reflection of the natural situation. It is known that the fauna of Isla Patos is extremely limited and also that some species, chuckawalla, for example, are found on three of the larger Gulf islands toward the coast of Baja California, but not on the Sonoran side of the Gulf

[484]

[P. 27 B] 1 [see category 116, p62. - Analyst.]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

akin in function even in the superficial view of the Caucasian, and are much more closely related in primitive thought—indeed the fire-drill is but a featherless and nockless arrow, with the foreshaft charred at its fire-giving tip; and all are closely linked in language and allied with other terms in such wise as practically to establish identity among them in the thinking of their lowly makers (though unfortunately the incomplete vocabularies extant are insufficient for full study of the linguistic homologies). Briefly the indications are that the harpoon was the primary device, and that its foreshaft was a tooth of an aquatic fish-eater like the seal, or perchance in some cases an os penis; that its lineal successor was a loose-head lance for use on sea and land, at first with the unaided hand and later with the atlatl, or throwing-stick (the lance being now extinct, though recorded by early visitors to Seriland); that the next artifact-generation in the direct line was represented by the arrow, foreshafted with hard wood or tooth, made light and graceful and loose-headed or not, according to needs, and by the substitution of bow for atlatl; and that a somewhat aberrant line was marked by the taming of fire, its reproduction by the modified arrow, and the differentiation of fire-stick from arrow and either atlatl or bow.

In tracing these stages in technologic growth, it is to be remembered that the Seri are so primitive as to betray some of the very beginnings of activital concepts; that to them zoic potencies are the paramount powers of the cosmos; that in their simple thought fire is a bestial rather than a physical phenomenon; that in their naive philosophy the production of devouring flame is of a kind with vital birth and a similitude of sexual reproduction; and that according to their notions the conquest of quarry, including fire, is made practicable only by aid of the mystical potencies of beasts and flames gained through invocatory use of symbols or actual organs.

In the Seri tongue the term "fire-drill" is *kaak*, an indefinite generic meaning "kind" or "strong kind", with an egocentric connotation ("Our-Strong-Kind"), as in the proper tribal designation *Ku-kaak* or *Ku-kaak;* while the term for the nether fire-stick or hearth is either *maam* ("woman", or more properly "mother"), or else (and more commonly) *kaak-maam*, which may be rendered "Kind-Mother"—the "Kind", as among primitive folk generally, comprising both men and tutelary beasts, and in this case fire as the most mysterious of the beasts; there is thus a suggestive analogy between the designation for the fire-producing apparatus and that for the tribe itself. It should be noted that the zoic concept of fire is widespread among the more primitive peoples of various provinces, and sometimes persists in recognizable form in higher culture (witness the fire-breathing dragons of various mythologies, the "Red Flower" notion gathered in India by Kipling, etc); also that the ascription of sex to the fire-sticks is prevalent among North American tribes, and at once helps to interpret the development of the fire-drill, fire-syringe, and other primitive devices, such, for example, as

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

411 and seldom stirred until the stranger approached within 50 or 60 yards; whence it may be assumed that these distances fairly indicate the ordinary range of Seri arrows. The few accounts of conflicts in which arrows are mentioned prove, however, that those missiles are discharged with great rapidity and in considerable numbers during the brief interval to which the fighting is customarily limited.

278 411 The most notorious feature of the Seri warfare, and that of deepest interest to students, is the reputed use of poisoned arrows. The scattered literature of the tribe, from the days of Coronado onward, abounds in references to this custom; the Jesuit authorities give somewhat varied yet fairly consistent descriptions of the preparation and the effects of these arrows; Hardy added his testimony as to the character of the poison; General Stone gave directly corroborative evidence; haciendero Encinas gives witness to the effects of the envenomed missiles on his own stock; while Mashém recounted to the 1894 expedition the various uses of the "poisoned" arrows and highly extolled their potency, though he was noncommittal—save in casual allusions—as to the details of the poisoning. A part of the arrows acquired by this expedition and now preserved in the National Museum were professedly poisoned; they are easily distinguished by a thin varnish of gummy and greasy substance over the iron tips and wooden foreshafts, and especially about the attachments of mesquite gum and sinew. According to Mashém's asseverations, such arrows are habitually used in war save when the supply is exhausted by continued demand; they are also used occasionally in hunting, especially for deer and lions (i. e., the swiftest and fiercest game of the region); and the use of the poisoned missile does not destroy the meat of the animal, though the portion immediately about the wound is "thrown away". Two of [126] the treated arrows brought back from Costa Rica were submitted to Dr S. Weir Mitchell some months afterward for examination, and for identification of any poisonous matter found on them; but no poison was detected. On the whole, the data concerning the reputed arrow poisoning are less definite than might be desired; yet they are sufficient to suggest the nature of the custom with considerable clearness.

278 [811] In any consideration of Seri customs it is to be realized that the folk are notably primitive in thought, and hence deeply steeped in that overweening mysticism which dominates all lowly folk—that they still cling to zoomimic motives in their simple handicraft, and are still wholly within zootheism in their lowly faith. In the light of this realization the numerous consistent records of the preparation of the poison are easily interpreted, and are found to be fully in accord with the prevailing motives of the tribe; and the interpretation serves to explain the somewhat discrepant accounts of the effects of the poison, effects ranging from nil to horrible sepsis. According to the more circumstantial recipes, the first constituent of the poison is a portion of lung, preferably human—a selection readily explained by pristine philosophy,

1: McGee E-5 (1894-1895)1898 NU31 Seri

is at least partially countervailed by conspicuous biotic characters, such as color, stature, etc., so distinctive as almost to seem specific: the Seri are distinctively dark-skinned, their extreme color-range (so far as known) being less than their nearest approach to any neighboring tribe; they are nearly as distinctive in stature, the difference between their tallest and shortest normal adults being apparently less than that between their shortest and the tallest of the neighboring Papago—though they are not so far from the more variable and often tall Yaqui; and they appear to be no less distinctive in such physiologic processes as those connected with their extraordinary food habits. Still more distinctive are the demotic characters connected with their habits of life and modes of thought; and when the sum of biotic and demotic characters is taken, the Seri are found to be set apart from all neighboring Sonoran tribes by differences much more striking than the individual range among themselves.[1]

It is especially noteworthy that the Seri have held aloof from that communality of the deserts which has brought so many tribes into union with each other and with their animal and vegetal neighbors through common strife against the common enemies of sun and sand—the communality expressed in the distribution of vital colonies over arid plains, in the toleration and domestication of animals, in the development of agriculture, and eventually in the shaping of a comprehensive solidarity, with the intelligence of the highest organism as the controlling factor.[2] Dwelling on a singularly prolific shore, the Seri never learned the hard lesson of desert solidarity, but looked on the land merely as a place of lodgment or concealment, or as a source of luxuries such as cactus tunas, mesquite beans, and tasty game; they never formed the first idea of planting or cultivating, and their only notion of harvesting and storing against time of need was the intolerably filthy one of nature's simplest teaching; they apparently never grasped the concept of cooperation with animals, and came to tolerate the parasitical coyote only in that its persistence was greater than their own, and in so far as it was stealthy enough to hide its travail and the suckling of its young against their ravening maws; and they apparently never rose to real recognition of their own kind in alien forms, but set their hands against agricultural and zoocultural humans as peculiarly potent and hence especially obnoxious animals. Naturally their racial intolerance was seed of battle and blood-feud; and they would doubtless have melted away under the general antagonism but for the natural barriers and unlimited food of their restricted domain.

At present, as for the later and best-known decades of their history,

[1] It seems probable that the Seri were scarcer in tribes of southern Baja California than in those of Sonora at the time of the earliest explorations, yet that the distinction was sufficiently strong to warrant the extension of the proposition to these tribes also.

[2] The Beginning of Agriculture, American Anthropologist, vol. VIII, 1895, p. 350. The Beginning of Zoöculture, ibid., vol. X, 1897, p. 295.

2: Kroeber E-5 (1930) 1931 NU31 Seri NU31

Havasupai. This therefore looks like a trait of Yuman origin. The Papago go farther, with eight terms. 171 601

The Seri habit of calling cross cousins siblings prevails through central and northern California alongside the trait of designating them by uncle-nephew terms. All southern California, including the Yuman tribes, has special cross cousin terms. The Walapai-Havasupai combine the last two methods.

As compared with the three Seri parent-in-law terms, the California Yumans have two, the Walapai-Havasupai one. The twelve Seri sibling-in-law terms are most nearly approached in California by the Yuman Kamia, with seven. The Yuma have five; the Mohave, like the majority of Californian tribes, three. The Walapai-Havasupai, like the Hopi and apparently the Pima-Papago, have reduced separate terms for both siblings-in-law and children-in-law to very few.

Calendar and Astronomy

One informant said there were 12 moons in the year; another, 6. The list obtained consists of 12. Of these, about 6 refer to seasonal events, especially those concerned with food; 6 to constellations. This type of calendar resembles that of the Walapai-Havasupai. 805 821

1. June, eko'ɬaX hl'caX, mesquite ripe.
2. July, antia'ila hl'caX, grass green, rains.
3. August, soxwe'mal or xacuxe'mal (cf. 7), (certain stars) not yet visible (before dawn); tunas.
4. September, kê'to-ya'o, (stars of that name) appear; cold begins.
5. October, e'-ya'o, constellation jackrabbit (ê') rises in morning.
6. November, na'pXe-ya'o, constellation buzzard (nä'pXe) appears (in morning).
7. December, xasoXwe'mal me'e (cf. 3; verified) (certain stars) not yet visible.
8. January, koyaXca'k, certain stars just begin to show; small sea-turtles appear.
9. February, koyaXa'ku, larger turtles appear.
10. March, eXno'lasn't hl'caX, eel-grass sea-weed (xno'ls) "appears." See below.
11. April, iqê'tmu hl'caX, sharks (a'qät) come.
12. May, ema'mem hl'caX, pitahaya ripe (ema'm was given as ripe fruit of sahuaro, pitahaya, etc.)

Some of these names appear to be merely connotive of the events to which they refer. The seasonal happenings would probably be more truly placed if the calendar fell a fortnight to a month later, beginning in June-July or July instead of June. This would put the beginning at about the summer solstice, and might account for the statement that the "year" had six moons. The list was recorded on

2: Kroeber E-5 (1930)1931 NU31 Seri NU31

February 28, 1930, which the informant (correctly) declared to be the first of a new moon. He also said it was aXno'isa't, with which he began his list. This would roughly equate moon 10 with March, as per the list; but when asked about the edible "seeds" of the eel-grass, he stated that these were due next month.

Unfortunately, the informant who stated that there were six "months" in the year was not questioned further. He may have referred to a calendar of six seasons like that of the Lower Californians.

The upper large star in Orion (Betelgeuze) is an antelope; the three of the belt, mountain-sheep; the three of the hilt, an arrow; Sirius, a dog following the sheep.

The Pleiades, kmâ'mk, are a woman (xmâm, kmâm) with children, who came outdoors to urinate.

Ursa Major is a sahuaro or pitahaya fruit-gathering crook, a pole with a bar diagonally across the end.

Kwe'pituX, quail (*codorniz*, qwe'pt) is a constellation.

Suxmi'ka, a man carrying a harpoon (*lanza*), may be Scorpio.

There are constellations Jackrabbit (ê'), Buzzard (nâ'pXe), and kê'to, according to the calendar. These rise before dawn about March 1. Clouded skies prevented their being seen several mornings. A few days later, at 6 a. m. (7 a. m. Mexican time), Altair was visible well above the horizon; this may be Buzzard — compare Luiseño Buzzard-Altair.

Polaris was pointed out in answer to the question if there was a star that did not move.

The sickle of Leo was not recognized (Walapai-Havasupai, hand).

Of these, Orion-Mountain-sheep, Ursa-crook, Pole-carrier-Scorpio (?), Buzzard-Altair occur among Yuman tribes as far away as Diegueño, Walapai, Havasupai.

Myth Fragments

1.

People were born in a cane, the Seri in one joint, the Mexicans, Americans, Chinese in others, separate from each other. God (Dios, Yos) came along here from south, then went east (?), setting signal smokes; the Seri alone did not come to him, therefore have nothing.

2.

Coyote was trying to catch ducks. As he jumped, they flew away and he landed in the moon, where he is visible now.

3.

Death was caused by Coyote and Konté'tXiat (*pinacate*, an insect that stinks, turns his black belly up, dung-beetle?). Coyote

823
824
135
317

[For the use of various plants and minerals in the preparation of ?antez] kóil or blue clay used in Seri facial ornamentation, see category 386.]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

291 erty even transcending the poor apparel, flimsy habitations, and generally ill-developed artifacts of the lowly tribe.

[237] The most prominent personal possession is the pelican-skin robe; it is usually made of six skins, slightly dressed and in full plumage, sewed together with sinew in a conventional pattern of such sort as to give the greatest possible expanse consistent with the irregular outlines of the individual skins, and at the same time to display a conventional color pattern on the feathered side, the colors ranging from the dorsal slate to the ventral white of the fowl (as indicated in plate XXIII); sometimes there are only four skins and rarely there are eight, but the conventional arrangement is maintained. Before the beginning of a

[301] [824]

FIG. 8.—Dried flower necklace.

[177] fairly regular barter at Rancho de Costa Rica, and hence before the introduction of manta and other stuffs, the pelican-skin robes were supplemented by kilts made of mesquite root or other fibers, spun and twisted

[266] in the fingers and woven probably on some primitive device no longer in use; but so far as is known these native fabrics were devoid of decorative patterns in color or weave. Less habitually a short wammus or shirt, with long sleeves, made of a material similar to that of the kilt, was worn; but it, too, was without ornamentation, so far as can be ascertained. The remaining article of utilitarian apparel is the belt, usually consisting of a strip of skin (of deer, rabbit, peccary, etc), slightly dressed with the hair on; frequently this is replaced by a cord or braided band of human hair, while the favorite belt of some of the

ingenuity of a modern shipbuilder to have constructed a boat. These simple, desert people, however, through centuries of struggle for life in their desolate realm had learned to use every natural material available to them, however laborious the tasks and inefficient the products. The carrizal reed, *Phragmites communis*, grows about the few permanent water holes of Seriland, and from countless numbers of these slender, buoyant canes they built their watercraft. The reeds were stripped of leaves and gathered in long bundles, bound together and gradually augmented by more and more interlaced canes until a bundle 18 to 30 feet long and 1½ feet in diameter, tapering at both ends, was made. Three of these were then bound together with cords of fiber or human hair, making a maneuverable one or two man raft, easily transported to the shores.

The mesquite tree, *Prosopis juliflora*, provided fiber for cords. The flexible outer tissues of the roots were stripped off, soaked and progressively pounded, split and worked between hand and mouth until very slender, fibrous threads were obtained which were then twisted into cords. In some cases a coarse, rough fabric was woven from these fibers, but most garments were made of pelican skins. The strips of workable mesquite root or sometimes yucca fiber were also used in making doughnut-shaped head pads which aided in balancing the capacitous earthen water jars as they were carried on the heads of the women over rough and stony trails from water hole to camp site.

While occupying the turtle fishing camps on El Infiernillo during the good season, vegetable supplements to the fishy diet were few. Every nourishing seed or woody fruit yielded by the desert was carefully gathered; even the tiny seeds of the sea grass, *Ruppia*, were sorted from beach drift and made into meal. Never did the Seris learn to cultivate any crop or domesticate any animals other than the half wild coyote dogs that lived in mutual toleration with them. Even had they done so, their success in the barren, waterless land would have been small.

Sterile as is the Seri's hinterland, for a time each summer the thorny plants with which it is so profusely stocked ripen an abundant crop of fruit. The cacti in particular yield a wonderful harvest of luscious and succulent fruits, and toward this fortuitous supply the Seris were accustomed to move in June and July. The foothills of Sierra Seri on the mainland are adorned with great numbers of giant cacti, *Pachycereus Pringlei*, *Carnegiea gigantea* and *Lemairocereus Thurberi* from which the luscious pitahayas were readily knocked down when ripe. The Indians wandered into the cactus forest and after a simple ritual marking the beginning of the feast, proceeded to gorge themselves for weeks on the succulent fruit until waning supply and cloying appetite drove them back to more severe food-getting activity by the sea. They did not customarily find it necessary to leave the cactus forest, however, as soon as the supply of fruits was no longer sufficient, for by the time the fruiting season was ended they had provided themselves with a second harvest. The pitahayas, gorged in such tremendous quantity throughout the season, were very imperfectly digested; the miriads of hard seeds, particularly, passed through the system unchanged and with the preservation of these in mind the Indians carefully collected with the aid of large sea shells all such seedy discharges and let them dry in the desert sun. Thus, as the supply of fresh fruit faded they proceeded to the use of this hoard

5:Dawson N-5 (1940) 1944 NU31 Seri NU31

of nutritious material which was ground to powder on their stone ahsts, winnowed in shallow baskets and made into a meal or paste.

The abundant cacti of many species served several other functions in the domestic economy of the Seris. The thorny cholla whose insipid fruits were not fit to eat and whose spines were a constant threat to the unprotected bodies of the Seris, found one use, nevertheless, in the burial procedure. After a body was partly covered with earth in the three foot deep grave, it was densely overlaid with chollas before leveling, to discourage the coyotes from digging for the body.

The dry skeletons of the giant cacti provided the long, cylindrical poles used in knocking off ripe pitahayas as well as in all other instances in which a straight, slender pole was needed. Since the advent of the open boat in modern times, the cactus skeleton has come in for a new use, for after trituration between stone ahst and hupf, it was found to yield a satisfactory caulking compound when mixed with sea-lion oil.

The barrel cacti, *Ferocactus Wislizenii* and *F. Coulteri*, though ordinarily abundant on the Sonoran desert are rare in Seriland and practically absent from Isla Tiburon where they may easily have been exterminated by the improvident Seris during their centuries of occupancy on account of their recognized value as water providers on the wastelands over which the Seris so frequently ventured.

These Indians found housing no problem, for, living under a climate in which frost is rare and rain infrequent, they found little need for shelters except for protection against the blazing desert sun. Camps that were occupied for more than a day or two, however, usually saw the appearance of a group of crude sun shelters. These were usually made of long, flexible ocotillo branches, *Fouquieria splendens*, stuck in the sand and fashioned into an arched framework over which a more or less complete covering of brush was piled. If, by the sea, a windbreak were desired, the brush top and siding were usually augmented by the addition of several empty turtle shells.

On the delta plain of the Rio Sonora, the mesquite, *Prosopis juliflora*, grows in remarkable luxuriance, these gnarled, spiny trees forming an almost continuous open forest 20-40 feet high. Its fruit, consisting of small, hard beans borne in slender, woody pods forms a concentrated, starchy food that the Seris found highly nutritious if not appetizing. In late summer when all fresh vegetable food had withered and disappeared, provided the turtle fisheries had not yet attracted them back to their island, they often spent some weeks gathering the beans and grinding them into a meal which was eaten as a watery atole or as a paste mixed with sea-lion oil. The more straggly and thorny cat's claw mesquite, *Acacia Greggii*, and the ironwood, *Olneya tesota*, also yielded woody beans in limited quantity.

In the deeper gorges of the mountains the Seris found *Guaiacum Coulteri* yielding a berry of medicinal properties and also *Jacquinia pungens* which produced a nut, edible when not quite ripe, and forming a favorite rattlehead when dry.

Along sandy washes, particularly on the lower flood plain of the llano grows a low, shrubby weed, *Hymenoclea monogyra*. Although during times of drought it shrinks to stunted tussocks, after periods of heavy rain its flourishing fens produce abundant seeds eaten both by the beasts of the plain and formerly by the Seris.

Before the advent of the tin can and the cardboard carton, basketry was

[TEXT CONTINUES ON P. 138--ANALYST]

5:Dawson N-5 (1940) 1944 NU31 Seri NU31

an important handicraft among these Indians. They made a shallow, coil type basket such as is characteristic of many southwestern tribes. The Seri basket, however, was remarkable for its extreme lightness in proportion to capacity, a quality due to the spongy character of the coil made of a whisp of splints of the torote. Several torotes are found in the region, the commonest species being *Jatropha cardiophylla*. Also used were the torote amarillo, *Jatropha spatulata*, torote blanco, *Bursera microphylla*, and torote prieto, *Bursera laxiflora*. The woof consisted of splints of palo blanco, *Acacia Willardiana*, or of baraprieta, *Caesalpinia gracilis*, deftly interlaced by means of a bone awl to form a smooth, practically waterproof utensil.

In pre-Columbian times the Seris commonly sought wild game, mostly deer, without the aid of weapons, using only their tremendous physical endurance against their prey, chasing the animal until it was exhausted and could be thrown to the ground. With the introduction of iron, however, the development of the bow and arrow achieved prominence, for the shaping and fastening of points had long retarded the exploitation of these implements. Few straight stemmed or straight grained plants grow in Seriland suitable for making arrow shafts, but on the flanks of the deeper gorges of Sierra Seri and Sierra Kunkaak on Tiburon Island, the Indians found one leafy shrub that filled the need, *Sapium biloculare*. The juice of this plant is also said to have been used for arrow poison. The bow was preferably of paló blanco, wrapped and strung with mesquite fiber cord.

The modern Seri tribe consists of barely more than 100 souls, with early extinction threatening from imported diseases. Their natural habits are now vastly modified and they live a comparatively sedentary life near the village of Kino, scavengering for fish heads and other refuse discarded by the fishermen, now and then fishing for themselves when in need. Every year, however, they trek off to the cactus forest for the annual feast, and in late summer many may be seen camping among the mesquite groves near the Kino well where an abundance of both mesquite beans and water makes for easy living.

8: Ascher E-5 (1960) 1962 NU31 Seri NU31

for the point may come from the transmission of an abandoned car or from flotsam. The wood for the hafting can be mesquite or ironwood, both indigenous in the area; waste from boat construction or other scraps of wood may also be used. Rubber for the gasket may be obtained from a worn automobile tire. The wrapping cord and lead cord are store bought, and mesquite gum is used to seal the hafting.

In manufacturing foreshafts Seri fishermen use three tools: a knife, a hacksaw blade, and a triangular file. The hacksaw blade is used to cut an appropriate length of metal for the point and to rough out the barb; the triangular file is employed to finish the point barb and stem; the tang of the file is used to puncture the hole in the gasket which is to receive the point. The shaping of the hafting and gasket, and the cutting and wrapping of the lead cords, are accomplished with a knife.

With regard to the method of manufacture, all fishermen report essentially the same procedure. They describe the pattern as a series of steps under two headings: (1) shaping and (2) assembling. Two individuals did not mention steps 1c and 2b, and the others considered these two steps to be optional.

1) Shaping
   a) Shaping the metal into a point
   b) Shaping the wood for hafting the point
      α) Shaping the general form
      β) Splitting the form lengthwise and grooving each half to receive the point (see section in Figure 1)
   c) Shaping the rubber for the gasket

2) Assembling
   a) Placing the mesquite gum in the grooved portions of each half of the hafting (see section in Figure 1)
   b) Placing the gasket on the point
   c) Inserting the point base into the hafting and reuniting the split hafting form
   d) Wrapping with the wrapping cord and with it interweaving the lead cord
   e) Refinishing the hafting base to fit the mainshaft socket

Four men were able to explain the foregoing procedure in detail and were in agreement in the following matters. The point is shaped before the hafting because its length determines the length of the latter, and because the diameter of the point base dictates the grooving of the haft. The gasket is shaped after the point and the hafting because the diameter of its hole is determined by that of the point base and its total diameter by that of the hafting. The mesquite gum then secures the point and seals the hafting. Interweaving the lead cord with the wrapping cord secures the former to the hafting.

The amount of time required to complete a foreshaft shows marked variation. This is not primarily a function of the working habits of the artisan. If all the materials are present, the time it takes to make a foreshaft ranges from four to eight hours, but if all the materials are not available, as much as a year may be required. There may, for example, be a considerable lapse of time between the shaping of a point and the shaping of a gasket when material for the

9:Malkin E-5 (1953-1955)1962 MU31 Seri MU31

IX

MISCELLANEOUS

136

Scientific	Common Name
ANNELIDA	
Annelid worm (tube)	
POLYCHAETA	
Eurythoe	Stinging worm
ECHINODERMATA	
Heliaster sp.	Star fish
Holothiurioides	Sea cucumber
Encope grandis	Sand dollar
Echinometra vanbrutti	Regular sea urchin
COELESTERATA	
Anthozoa	Sea-anemone
Medusa	Jelly-fish
PORIFERA	
Porifera	Sponge

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136 All these miscellaneous animals are grouped together and discussed together simply because only few species from each group are represented and any generalized comments are not reliable.

The following individuals identified the material. Annelid worm (from tube only)—J. E. P. Morrison, U.S. National Museum.

Sea-urchins — Elisabeth Deichman, Harvard University.

Remainder—Borys Malkin

Taxonomy

*825 With an exception of the sponge, all of the forms listed here are considered animals and not plants. The criterion is movement and when questioned for reasons the informants invariably replied "this is an animal because it moves." It applies equally to the jelly-fish and the *Echinoderms*. The *Annelid tubular worm* is also considered an animal and its shell is instantly recognized as an animal shell. This is surely owing to the movement of the worm in and out of the shell, although the worm does not move with the shell, being imbedded on rocks.

● [824] The sponge, on the other hand, was said to "stay on rocks for 5-6 years. It does not walk. It is an alga or plant, not an animal. There are several different kinds, different in color." Thus the minutest sort of movement is shown again to be the basic criterion for the distinction between animals and plants.

Sexing

The Seris know nothing about sex differences in these groups. Of course, several of these beasts are hermaphroditic and self-fertilizing, and there are no visible differences. But in any case the informants simply didn't know what the differences between the sexes are.

Food

No knowledge.

[P.45A]

*825 ence of feather. Uncertainty about the bat then is significant, considering the combination of traits. Other criteria may also be employed. Crabs are distinguished from some of the other marine crustaceans by their hairiness. Differences among the insects are suggested by general shape, hairiness and habitat although also certain features of behaviour sometimes suggested affinity.

Distinctions made within the groups coincide on the whole with the natural groupings, at least for the more conspicuous forms. Hence, comes the breakdown of fishes into two major categories: fishes proper on one hand, and mantas and sharks on the other, snakes and lizards among the reptiles and mammals proper and Cetaceans among the mammals. In a way the Seris' greatest talents appear to be in their ability to recognize the reptilians and amphibians. Here they confused only two species: the two small inconspicuous Utaa.

[182] As for the ability to identify an animal, it is directly related to its economic importance and relative degree of frequency in the territory, as one may well expect.

[824] A movement represents the basic difference between animals and plants to the Seris. This is why a sponge is considered a plant while sessile molusces are animals.

Sexing

Three tendencies distinguishing sexes run through the entire gamut of the animal forms, through all the classes except in the birds: the males are larger, darker and more brightly colored than are the females. These tendencies the Seris may combine in different ways. In the reptiles it is color pattern rather than size that suggests to them the male animal and while the male snakes tend to be darker than the females, in the lizards they tended to indicate the prevalence of the bright color in the males.

Then also in several groups very specific diagnostic traits are employed, as a rule in form of all sorts of extra appendages which are supposed to decorate the males. This is interesting, because it suggests the presence of such extra structures in the males rather than in the females, and, as has been seen from the text, these structures are often attributed to the males regardless of whether or not they really exist in them. The femoral ridge in the male lizards is an especially good illustration of this principle.

[182] There is also a suggestion that in one instance at least the Seris transpose their own social situation on the animals. The bees they claim have "chiefs" and these "chiefs" are males and they are also larger. Here socio-anthropomorphic interpretation is very clear.

But as indicated in the text, the sexing criteria differ often in different groups and it is only fair to show that birds represent an exception to the three major tendencies. The birds have sexes all right but the Seris cannot tell them apart. This requires no further commentary if we reflect why the Seris must think that way.

[182] [562] Finally, there is one more interesting point: [P. 55 A]

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Alverto Mendoza and Lupe Astorga getting water from cactus - used for cooking

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Child leading Petra - blind woman, Kino Bay - 1936

261 will exist on very small rations, bear burdens, and walk long dis-
262 tances. Their food is anything that walks, flies, crawls or swims,
[252] and they eat it raw with the same relish that we eat it cooked. There is but one thing they will not eat; they draw the line on the Gila monster. They are the most perfect type of human being adapted to desert conditions that exists today. Convey them blindfolded many miles into the heart of the desert, empty-handed, remove their blinders, and they will find both food and water where others would perish. The Papagos and Yaquis do almost as well."

302 We gave the women a small bag of flour and three or four cubes of
[123] sugar around, and the men three packets of tobacco each and two boxes of matches. Matches with them are very precious and are rarely used. Rather than use a match a woman came over to our fire and borrowed some coals to rebuild her fire. From this point the nearest matches are a good deal over one hundred and twenty miles distant, so they have to economize in every thing.

422 Each rag is valuable, and flour, sugar, coffee and rifle shells
[436] are absolutely priceless. While they know money, it has no value here.
[437] Only commodities go here. The most highly prized things are boards to
[389] make boats and rifle shells to get game and protect themselves. All empty shells are saved, the primer punched out, straightened, a match head put in, a little pinch of powder on top, the shell filled up, a long bullet inserted, the shell pinched tight, and a fresh set of ammunition is made.

142 The women and children certainly did look wild. Their hair was
291 frowsy and unkempt, their skirts and waists a patchwork of dirty rags
302 coming just below the knees; their features seamed and hard and cruel. Their complexion was very dark. They had no under garments. The children wore only a dirty shirt coming a little below their thighs, and even that is ragged. One or two of the women had a dirty bandanna over their heads. How I wished I could have seen them in their ancient, picturesque pelican-skin kilts!

302 I happened to witness the operation of a Seri beauty parlor. A
[824] mother brushed the hair of her thirteen-year-old daughter with a brush
[283] made from the fibrous roots of a certain grass tied together with
[515] sinew. During the operation if she came across a *piojo*, and she found several, she plucked him away from his feeding ground and dropped him in the fire.

The hair neatly brushed, the mother then mixed paint in a small vessel and with a tiny stick painted a bright blue design under the eyes and across the cheeks and nose, and then she added narrow white stripes, which, contrasting with the blue and the dark skin, produced a very striking effect. This paint is easily removed and the women often paint and remove three different face designs in one day.

304 I did not see tattoo work on either men or women, nor did they
301 wear ceremonial feathers as did our western Indians.

000 wear ceremonial feathers as did our western Indians. I saw no skin or
164 cutaneous disease, or evidence of tuberculosis or of trachoma---the curse of our Indians.

142. One boy-child of five years was a handsome child---fat, round,
302 sturdy, with roving great black eyes, large thick lips, a picture of
[21] perfect health. He was almost naked. His hair was done in a pigtail
[85] with a red string braided into it. His face like all the others was dirty, but he waded into the shallow water with a short spear and I saw him catch two crabs with his little harpoon. The water did not bother his face.

415 They had no plates or eating tools, except large deep clam shells,
412 cast up by the sea, which served as cups and dippers. Their long, keen
264 belt knives were used for cutting, carving or skinning, and always the
[23] fingers for eating. They gathered in a circle around an olla of seeds of long grass growing on the sea bottom prepared by winnowing, parching and grinding, and then cooked with turtle oil. Each one dipped his or her fingers into the olla and conveyed them to the mouth without losing a drop, and licked them off with great relish.

231 The dogs eat with the family. There were six or seven half-starved
244 ones. If someone picked up a piece of turtle flipper the dog often took the first lick at it, bit off a piece or licked it before it reached the owner's mouth. The dogs were not punished. They were just slapped to keep them out of the pots.

123 We had a great time that evening in Seriland. The young man played
534 his violin. This consisted of a hollow box cut out of a *palo verde*
[82] tree, and a piece of pine about sixteen inches long; terminating in a
[28] hollow where a single peg was fitted. The one string was twisted deer
[23] sinew, and the bridge was a small round clam shell at the far end. The
[53] bow was a small bent stick and some black horsehair. On the handle was a wad of rosin fastened underneath. By fingering this string a few weak squeaky notes were made, and this was the classical music of the Seris.

Manuel Encina seized his gourd rattle and began chanting. Herrera tapped a tin can and I beat on an inverted basket and the orchestra
535 was in full swing. A young girl, Rosa, dragged out a turtle shell and
123 standing on it began to dance. This dance consisted of stepping up and down quickly with each foot alternately, and this stamping, barefooted, emitted a hollow sound. Every once in a while I let out an
[12] Indian yell which pleased the Seris very much. For two hours they had a real swell time. We took one flashlight of the proceeding.

[34] Each family was in their hut, which afforded very slight shelter
[36] as they were only partially roofed over and the sides were broken
[35] down in places. The huts were all adjoining and each had a little
[36] campfire, which did not give much illumination, so the dancing was in semi-darkness.

(text continues on p. 163)

285 I watched a woman make a basket. She used young branches from the [824] terote tree, I think *terote blanco*. The bark was peeled and shredded into two parts, the heart taken out and kept separate. The coils of the round part were put in a pot of hot water to soften, and the edge of the basket was soaked a little in hot water. The center of the coils or woof consisted of six or eight strips of heart while the outer sap wood was woven around in regular coil-weave fashion.

[287] A brad of deer shin-bone sharpened on pumice to a needle point [412] was used as a brad. With this brad she split the fiber, held one piece in her mouth, and stripped the back down. Then she punched a hole in the bone brad, inserted the sharp end of the fiber and pulled it almost through. She then repeated the operation, adding a strip of heart once in a while. These baskets are coarse and unattractive, but they are hard and tough and stand heavy use.

323 Cooking vessels consist of two or three cooking ollas that nest together to facilitate transportation. These are made of coarse clay, solely for utility without regard for beauty of shape, color or design. In burning these ollas they use the shell of the sea turtle. [237] The cells of the shell are filled with a fine oil and this burns the [372] ollas. On most of the other places on the mainland, the Indians use cow chips, or dried droppings to fire the clay.

283 We proposed to shift camp to Tinajanita, our first landing place, 484 where Herrera was to meet us in two days with the Chief and some of 123 his men. Since it was blowing, he said the men couldn't fish and they would be on land probably hunting, so he would be able to see them. [277] At this time they gathered *aescal* on an island off the west coast to make the liquor they used at fiestas, weddings and other celebrations.

Herrera left at five o'clock in the morning, with a swinging gait, for the opposite side of the Island. The distance around by boat would be fifty miles, and across, only about twenty or twenty-five---a full day's trip and hard, as mountains would have to be crossed and the rocks were sharp and the way difficult.

123 We had breakfast on rice and bread. Our rations are running low and we expect to move this morning. We made arrangements about the native boat and saw Blanco trot off with two five-gallon cans for water, a distance of ten miles. We went to the camp to get a few things---an old basket, a Pelican hide and other things, and then we asked the help of everybody to get the boat down to water---the tide was very low. The one man, the women and five of us were required to drag and push the boat to water.

We waved goodbye, loaded her up and then rowed against the tide and wind for miles, and finally landed in a lovely sheltered lagoon, built our fire and had lunch. A few crabs were speared, and late in the afternoon the wind shifted. We loaded the boat again and pushed off for Tinajanita, our first landing place. After rowing, we raised

[text continues on p.174]

The Pelican Skin Robe

133

Toshne or Pelican Island - Kino Bay - 1936

It was the dark of the moon and a very black night, ideal for surprising the Pelicans asleep, roosting on the steep slope above the waters of the Sea of Cortez. The Pelican is a very wary bird and cannot be approached in the light of the moon. 123 223

At sundown we had climbed several hundred feet to the saddle between two peaks on the Island of Alcatraz in Kino Bay off the coast of Sonora. We rolled up in our blankets and hugged the great volcanic rocks at the crest, to be as inconspicuous as possible to the great birds circling the peaks to seek a roosting place on the west slope of the Island.

Santo Blanco had provided himself with a torch made from the slender rods of a dead *pitahalla* (organ) cactus which he had tied together in a long bundle. The four young Seris who joined him also had a torch and in addition, each had provided himself with a club. We took no fire arms. Senor Roberto Thomson, my companion, had arranged this trip with Santo Blanco, for my benefit. [416] [124]

[text continues on p. 215]

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[For the use of various plants and minerals in the preparation of ?antez/ kóil or blue clay used in Seri facial ornamentation, see category 386.]

SERI BLUE

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ABSTRACT

The blue which the Seri Indians of Sonora, Mexico, use in face painting is not the mineral dumortierite, as previously believed, but is a prepared pigment. This paper is a description of the process in which three elements are combined to produce this pigment.

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McGee and Kroeber reported the mineral dumortierite as the source of the blue pigment used in Seri face painting (McGee 1898: 165-6; Kroeber 1931: 27). Coolidge described two blues, one a mixture of gypsum and a boiled root, the other a blue stone found on Tiburon Island (Coolidge 1939: 200). Xavier mentioned dumortierite and commercial bluing. She also referred to a third blue obtained from a plant on Tiburon (Xavier 1946). Present investigation has shown that as far as the Seri know, the only blues they have ever used are *ika?óil* "to cause to be blue" (commercial bluing) and the highly prized *?antezj kóil* "blue clay" of their own manufacture.[1]

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The components and the method of manufacture of *?antezj kóil* are said to have been taught to the women long ago by *?ant i?akímxoj* "they who tell the things about the earth." The actual color transformation is veiled in mystery to the Seri who say that if the process of making the clay is observed by any girl who has not passed the menarche, the blue will not appear. Its appearance is not attributed to shaman power, however.

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?antezj kóil has been in less demand during the last few decades since commercial bluing has been readily available. Nevertheless, *?antezj kóil* is the blue preferred by those women who continue to adorn their faces in the traditional manner.

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The three ingredients used in making the blue clay are the root bark of *xkoktz (Franseria dumosa)*, *iki kóizj* "to grind with" (a mixed clay in which montmorillonitic layers predominate), and *mokni óoxW* "excrement (sap) of *mókni (Guaiacum coulteri)*." The Seri say that the *iki kóizj* and the *mókni* are found only on Tiburon Island. The root bark of *tinkl (Franseria ambrosioides* Cav.) or of *xneejan siiktoj (Stegnospermum halimifoliam)* can be used instead of *xkoktz*. *tinkl* gives a distinct aroma to the clay. The plants mentioned are fairly common along the Sonoran coast.*

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*EDITOR'S NOTE: It is interesting to note that none of the ingredients is blue in its unaltered state.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

one of the huts. The condition of the remains and the various indications connected with the rancheria corroborated the tradition that the great creature had afforded unlimited and acceptable food for many moons; and various expressions of the tradition indicated that the event, though the most memorable of its class, was not unique in Seri lore.

A few bones and fragments of skin of the seal were found in and about the rancherias on Isla Tiburon, and an old basket rebottomed with sealskin was picked up in a recently abandoned jacal on Bada Ballena; a few bones provisionally identified with the porpoise (which haunts Boco Infierno in shoals) were also found amid the refuse about the old rancheria at the base of the long sand-spit terminating in Punta Tormenta; but nothing was learned specifically concerning the chase and consumption either of these animals or of the abundant sharks from which the island is named.

Among the exceedingly limited food supplies brought from the coast by the Seri group at Costa Rica in 1894, were rank remnants of partly desiccated fish, usually gnawed down to heads and tails; and Mashém and others spoke of fish as a habitual food, while Señor Encinas regarded it as the principal element of the tribal dietary. The harder bones and heavier scales of several varieties of fish were also found abundantly among the middens of both mainland and Tiburon shores in 1895. None of the remains bore noticeable traces of fire; and all observations, including those of Señor Encinas, indicate that the smaller varieties of fish are habitually eaten raw, either fresh or partially dried, according to the state of appetite at the time of taking—or the condition of finding when picked up as beach flotsam. But a single piscatorial device was observed, i. e., the barbed point and foreshaft, shown in figure 21—the iron point being, of course, accultural, and probably obtained surreptitiously. This harpoon, which measures 6 inches in length over all, is designed for use in connection with the main shaft of a turtle-catching tackle; and it is evidently intended for the larger varieties, perhaps porpoises or sharks. In 1827 Hardy observed a related device:

FIG. 21.—Fish-spearhead.

> They have a curious weapon which they employ for catching fish. It is a spear with a double point, forming an angle of about 5°. The insides of these two points, which are 6 inches long, are jagged, so that when the body of a fish is forced between them, it can not get away on account of the teeth.[1]

Don Andrés Noriega, of Costa Rica, described repeatedly and circumstantially a method of obtaining fish by aid of pelicans, in which a

[1] Travels, p. 292.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

young or crippled fowl was roped to a shrub or stone, to be fed by his fellows; when at intervals a youth stole out to rob the captive's pouch. At first blush this device would seem to rise above the normal industrial plane of the Seri and to lie within the lower stages of zooculture, like the cormorant fishing of China if not the hawking of medieval Europe; yet on the whole it may be deemed fairly consistent with that cruel yet mutually beneficial toleration between tribesmen and pelicans attested by the preservation of the avian communal, as already noted. Moreover, Don Andrés observations are in accord with early notes of the exceedingly primitive aborigines of California, from whom the Seri have undoubtedly borrowed various cultural suggestions; thus Venegas quotes Padre Torquemada as saying:

> I accidentally found a gull tied with a string and one of his wings broke. Around this maimed bird lay heaps of excellent pilchards, brought thither by its companions; and this, I found, was a stratagem practiced by the Indians to procure themselves a dish of fish; for they lie concealed while the gulls bring these charitable supplies, and when they think that little more is to be expected they seize upon the contributions.

The padre says also of these gulls that "they have a vast craw, which in some hangs down like the leather bottles used in Peru for carrying water, and in it they put their captures to carry them to their young ones"—from which it is evident that he refers to the pelican. Venegas adds, "Such are the mysterious ways of Providence for the support of his creatures!"[1] And in the margin of his accompanying "Mapa de la California", he introduces a vigorous picture of a captive fowl, its free fellow, and the mess of fish, the cut being headed "Alcatrazes" (pelicans).

Despite these devices, the dearth of fishing-tackle among the Seri is evidently extreme. Save in the single specimen figured, no piscatorial apparatus of any sort was found among the squalid but protean possessions at the Costa Rica rancheria; neither nets nor hooks nor rods nor lines nor any other device suitable for taking the finny game were found in the scores of jacales containing other artifacts on Tiburon; while Señor Encinas was conversant only with the simple method of taking fish by hand from the pools and shallows left by receding breakers or ebbing tides. This dearth of devices is significantly harmonious with other Seri characteristics: it accords with the leading place assigned the turtle in their industry and their lore; it is in harmony with that primitive and nonmechanical instinct which leads them to rely on bodily strength and skill and swiftness rather than on extracorporeal artifacts in their crude and incomplete conquest of nature; and it is a manifest expression of relation with their distinctive physical environment—for the ever-thundering breakers of their gale-swept coast are abundant, albeit capricious, bringers of living grist, while the offshore gales at low tide lay bare hundreds of acres of shoaler

[1] History of California, 1759, vol. 1, p. 41.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

smaller rodents, especially the long-tail nocturnal squirrel, are excluded from the Seri menu by a rigidly observed tabu of undiscovered meaning. A general consequence of this tabu is readily observed on entering Seriland; there is a notable rarity of the serpents, the high-colored and swift efts, and the logy lizards and dull phrynosomas so abundant in neighboring deserts, as well as of song birds and their nests; and this dearth is coupled with a still more notable abundance of the rodents, which have increased and multiplied throughout Seriland so abundantly that their burrows honeycomb hundreds of square miles of territory. A special consequence of the tabu is found in the fact that the myriad squirrel tunnels have rendered much of the territory impassable for horses and nearly so for pedestrians, and have thereby served to repel invaders and enable the jealous tribesmen to protect their principality against the hated alien. Seriland and the Seri are remarkable for illustrations of the interdependence between a primitive folk and their environment; but none of the relations are more striking than that exemplified by the timid nocturnal rodent, which, protected by a faith, has not only risen to the leading place in the local fauna, but has rewarded its protectors by protecting their territory for centuries.

In both the collective and the strategic chase, constant advantage is taken of weakness and incapacity, whether temporary or permanent, of the prospective quarry; so that diseased and wounded as well as sluggish and stupid animals are eliminated. The effect of this policy on the fauna is undoubtedly to extinguish the less capable species and to stimulate and improve the more capable; i. e., the presence of the human factor merely intensifies the bitter struggle for existence in which the subhuman things of this desert province are engaged. At the same time, the entrance of the human folk into the struggle characteristic of subhuman species serves to bar them from one of the most helpful ways to the advancement of their kind—i. e., the way leading through cotoleration with animals to perfected zoeculture. The most avidly sought weaklings in the Seri chase are the helpless young, and the heavily gravid dams which are pursued and rent to fragments with a horrid fury doubtless reflecting the practical certainty of capture and the exceptionally succulent tidbits afforded by the fetal flesh; naturally the cruel custom reacts on habitual thought in such wise that the very sight of pregnancy or travail or newborn helplessness awakens slumbering blood-thirst and impels to ferocious slaughter. To such custom and deep-planted mental habit may be ascribed some of the most shocking barbarities in the history of Seri rapine, tragedies too terrible for repetition save in bated breath of survivors, yet explaining the utter horror in which the Seri marauder is held on his own frontier. At the same time the hunting custom and the mental habit explain the blindness of the Seri to the rudiments of zoeculture, and clarify their intolerance of all animal associates, save the sly coyote that habitually

I: McGee E-5 (1894-1895)1898 NU31 Seri NU31

224 [225] hides its travail and suckling in the wilderness, and perhaps the deified pelican.[1]

Parallel to the chase of the larger land game is the hunting of horses and other imported stock; for the animals are regarded in no other light than that of easy quarry. The horses of the Seri frontier, like those of wild ranges generally, are strongly gregarious, and the herds are well regimented under recognized leaders, so that the chase of their kind is necessarily collective on the part of both hunters and game; and the favorite method is for a considerable group of either warriors or women to surround the entire herd, or a band cut out from it, "mill" them (i. e., set them running in a gradually contracting circle) and occasionally dash on an animal, promising by reason of exceptional fatness or gravidness. The warrior's customary clutch is by the mane or foretop with one hand and the muzzle with the other, with his weight thrown largely on the neck, when a quick wrench throws the animal, and, if all goes well, breaks its neck;[2] while the huntress commonly aims to stun the animal with a blow from her hupf. In either case the disposition of the carcass is similar to that of other large quarry, save that thought is given to the danger of ensuing attack by vaqueros; so that it is customary to consume at once only the blood and pluck, and if time permits the paunch and intestines with their contents, and then to rend the remainder into quarters, which warriors or even women shoulder and rush toward their stronghold. Burros (which, next to the green turtle, afford the favorite Seri food) and horned cattle are commonly stalked and slain, or, at least, wounded with arrows, so that it is commonly the stragglers that are picked off; though sometimes several animals are either milled or rushed, and thrown by a

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[1] A single incident expressing the first sentiment toward travelling animals must be noted: a few minutes after the group shown in plate 37 was photographed, a starveling cur—a female apparently of nearly pure coyote blood and with a brood of two—shook toward the broken olla-bottle in the left center of the picture, in which a rank horse-foot was simmering; the women heading over the knoll suddenly straightened and shot out her foot with such force and directness that the cur was lifted entirely over the corner of the nearest jacal, and the poor beast fell stunned and moaning, a premature born pup protruding from her two-thirds of its length. The sound of the stroke and fall attracted attention throughout the group; the women smiled and grunted approval of the well-aimed kick, and a dozen children gathered to continue the assault. Partially recovering, the cur struggled to its feet and started for the chaparral, followed by the jeering throng; at first the chase seemed sportive only, but suddenly one of the smaller boys (the third from the left in the group shown in plate 37) took on a new aspect—his figure stiffened, his jaws set, his eyes shot purple and green, and he plunged into the lead, and just before the harried beast reached cover he seized the protruding embryo, jerked it away, and ran off in triumph. Three minutes afterward he was seen in the shelter of a jacal greedily gorging his spoil in successive bites, just as the Comanche boy devours a peeled banana. Meanwhile, two or three mates who had struck his trail stood around begging bites and smoking at obscene blood spatters on earth, skin, or tattered rags; and as the victor came forth hale, licking his chops, he was met by half jocular but admiring plaudits for his prowess from the dozen matrons lounging about the neighboring jacales. Parallel instances, both observed and gathered at second hand, might be added in numbers; but this may suffice as the data specific basis for the generalization which places the Seri below the plane of possible nomadism—a generalization so broad as to demand ample record of data which it would be more agreeable to ignore.

[2] This warrior's clutch, and the notion that it is discreditable if not criminal for the nonwarlike adult to take recourse to weapons in hand-to-hand slaughter, are strongly suggestive of nonsexual motives and of studied mimicry of the larger carnivorous, such as the jaguar—the "mark-imitate" of the Maya.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

171 726 measure; so that the Seri frenzy is at once more instinctive and more fortuitous, or in general terms more inchoate, than the corresponding condition among most of their contemporaries. Accordingly the war customs, like several other features of the tribe, seem to afford a connecting link between the habits normal to carnivorous beasts and the well-organized war customs of somewhat higher culture-grades; and thus they contribute toward outlining the course of human development through some of its darker stages.

712 Conformably with their poverty in offensive devices, the Seri are exceedingly poor in devices for defense. It is an impressive fact that a restricted motherland which has been successfully protected against invasion for nearly four centuries of history should be destitute of earthworks, fortifications, barricades, palisades, or other protective structures; yet no such structures exist on any of the natural lines of approach, and none are known anywhere in Seriland save in a single spot—Tinaja Trinchera—where there are a few walls of loose-laid stone, so unlike anything else in Seriland and so like the structures characteristic of Papagueria as to strongly indicate (if not to demonstrate) invasion and temporary occupancy by aliens. The jacales are not fortified in the slightest degree, unless the turtle-shells with which they are sometimes shingled be regarded as armor; even the most ancient rancherias are absolutely devoid of contravallations of earth, stone, or other material; and both the structures themselves and the expressions of the folk concerning them indicate that the jacales are not regarded as fortresses or places of refuge against enemies, but only as comfortable lodges for use in times of peace. Nor are walls like those of the borderland Tinaja Trinchera known in the interior of the tribal territory—e. g., the similarly conditioned Tinaja Anita, which differs only in the greater abundance and permanence of the water-supply, is entirely devoid of artificial structures, not even a pebble or bowlder being artificially placed save perchance by the casual trampling of the pathways. As already noted, the Seri seem to be practically devoid of knife-sense; they are still more completely devoid of fort-sense, although (and evidently because) they rely so fully on natural things, including tutelaries and their own fleetness, for safety.

713 Although devoid of even the germ of fortification-sense, so far as can be discovered, the Seri are not without a sort of shield-sense, which is of much significance partly by reason of its inchoate character. The ordinary shield is a pelican pelt, or a robe or kilt comprising several skins; it is employed either for confusing the enemy by swift brandishing, something after the fashion of the capa of the banderillero in the bull ring, or for actual protection of the body against arrows and other missiles or weapons. So far as known it is not backed or otherwise strengthened, the user relying solely on the stout integument and [825] thick feathers—or rather on the mystical properties imputed to the pelt as the mystery-tinged investiture of their chief creative tutelary.

1: McGee E-5 (1894-1895)1898 NU31 Seri N731

On the coast bucklers are improvised from turtle-shells, though, according to Mashém (confirmed by direct observation), these are not carried inland for the purpose; but the protective function imputed to the turtle was well represented in the rancheria at Costa Rica by several fetiches made from phalanges of turtle-flippers tricked out in rags in imitation of Caucasian dress (somewhat like the mortuary fetiches illustrated in figure 40*a* and *b*). On the whole, the most conspicuous feature of the individual shields or protectors is their emblematic character; they are sortilegic rather than practical, and express imputation of mystical potencies rather than recognition of actual properties; and in this as in other respects they correspond closely with the offensive devices, and aid in defining the ideas and motives of the primitive warriors.

The actually effective protection of the Seri in warfare is their fleetness, coupled with their habitual and constitutional timidity, i. e., their wildness—for they are verily, as their Mexican neighbors say, "gente muy bronco". Moreover, they are adepts in concealing their persons and their movements behind shrubbery and rocks, and in finding cover on the barest plains; and suggestions are not wanting that the protecting shrub-clumps and rocks of their wonted ranges are credited with occult powers and elevated to the lower places of their zoic pantheon, after the customary way of that overpowering zootheism, or animism, which the Seri so well exemplify in many of their habits.

Summarily, the warfare of the Seri complements the pacific industries of the tribe in every essential respect. It is notable for improvidence, i. e., for reliance on chance; the dearth of devices for offense and defense parallels the poverty in industrial artifacts; and the disregard of fortifications is of a kind with the squandering of present food supplies and the utter neglect of provision for the future. A striking correspondence between workfare and warfare is found in the fierce blood-lust displayed alike in chase and battle, a feature manifestly borrowed from beasts and intensified by besetting beast-faith; and more striking still is the correspondence in motive, as revealed by the overlapping functions of the protective kilt, by the borrowing of animal symbols alike in peace and war, and by the imitation of animal movements on the warpath as in the chase.

In the last synthesis the warfare of the Seri may be considered as characterized by two attributes: (1) The motives, so far as developed, are zoomimic in even greater degree than the prevailing motives of the pacific industries; and (2) the methods are shaped largely by mechanical chance, like those normal to protolithic industry.

Nascent Industrial Development

Industries form the chief bond between man and his environment. The esthetic activities arise in the individual and extend to his fellows; the institutional activities express the relations among individual men

SERI ETHNOECOLOGY: A PRELIMINARY REPORT[1]

Boryx Malkin

121 In this paper I shall attempt to summarize briefly some of the possibilities inherent in ethnoecological studies. Ethnoecologies, published so far, have either stressed only the economic or medicinal uses of animals or have just included them as part and parcel of mythology and religion. The emphasis here, on the other hand, is primarily on the aboriginal knowledge of natural history and naturalistic concepts about animals. A comparison with the actual situation in nature will be frequently made in order to test the acuteness of the native observation.

This account is part of a wider comparative study in ethnoecology of several aboriginal groups. Additional field work has recently been completed among two other tribes, the Cora in Nayarit, Mexico, and the Sumu in northern Nicaragua.

Ethnoecological studies of such scope require much more extensive background in natural history than anthropologists or even ecologists today are likely to have. One has to deal with very diverse groups of animals and I have found my own knowledge of the subject repeatedly inadequate on many occasions. It is hoped that a study of this sort will attract individuals who will cover more satisfactorily the entire range of the animal kingdom.

Economic Uses

825 262 439 Almost all major classes of animals, with the exception of the insects, are used for food. Only a very limited number of species serve other purposes such as trade with the Mexicans. Among these are various species of large fishes, sea-turtles and a number of shells. Some are used for the basic non-dietary products such as utensils, clothing, and other items of the material culture, for these are purchased ready-made in the local Mexican "tiendas" (small general store).

925 [illegible] As a major source of income for their livelihood the Seris depend mainly upon a few commercially significant species of large fish and sea-turtles. Yet they do exploit a wide range of the animal environment as a source of additional food. Of the total number of species of animals[2] upon which information has been available, 45% were reported as economically exploited. The table below gives the breakdown of the major groups.

[p. 73]

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Class	Species Reported	Species Exploited	Percentages
Mammals	21	2	
Birds	24	6	
Reptiles and Amphibians	25	11	
Fish	43	23	
Molluscs	36	21	
Crustaceans	10	2	
Total:	160	72	45

These figures show clearly the dependence of the Seris on marine life for a major source of their diet. Today, pinta, bays, cabon and sardinera are their primary source of income with meat and sea-turtles ranking second in importance. Several species of clams, limpets and gastropods supplement this diet.

All other animals represent only incidental additions to the menu. During the last war, sharks and mantas were hunted extensively for their liver, then a source of vitamin D. But since the war, the demand for shark liver has declined and because of this, a considerable income for the Seris has been lost. Shark and manta fishing have been abandoned for these fish were taken only for the commercially profitable liver and not for their flesh.

Fishing and Hunting

Seri fishing techniques are simple. In the past they used double-pronged spears and for the larger fish, harpoons. Today the spears are employed chiefly in fishing while the harpoons are reserved exclusively for sea-turtles. Hook and line fishing was introduced after 1930, as Kroeber (1931) saw none during his visit to Kino in 1930, and it is now the standard method of fishing. An abortive and unsuccessful attempt was made several years ago with net fishing. Another change has occurred within the past fifty years. The old balsas have been replaced by flat-bottomed plank boats outfitted with five-horsepower motors or sails. These motors, incidentally, are leased from the Mexican fish traders because none of the Seris are rich enough to own one.

Bait is obtained by dynamiting schools of small fish in coastal waters or by collecting them at low tide in the tidal pools and from under rocks. Fishing usually begins at dawn and lasts until noon when, as a rule, all of the "pangas", as the boats are called, return to Desemboque. In stormy weather no fishing expeditions are made and when this occurs, starvation becomes a real menace. Harpooning of sea-turtles takes place far out in the Gulf. It is done only at night in exceptionally calm weather by the light of torches or Coleman lanterns.

Hunting as it is done today has changed from the time of McGee's visit in 1894-95. The bow and arrow has disappeared completely except for a crude and diminutive form used as a toy by small boys. Iron spears once used in shark and manta hunting are now carried primarily as a weapon against the numerous and much feared rattlesnake. They are said to be used occasionally in the peccary hunt. Old .22s or 30/30 rifles are owned by several of the men, some of whom specialize in hunting.

224 Game pursuit is usually done on foot, mostly in the winter and very little in the summer. The intense heat of the desert in the summer makes hunting unattractive. The most frequent trophies are the Sonoran bighorn, peccary, cottontail and jack-rabbits. Sometimes, semi-wild burros, running loose on the adjacent extensive Mexican "rancherias", are poached for meat. The peccary is the only animal hunted with the aid of dogs. Large rodents are dispatched by [223] sling-shot, stick, stone, or shot with a .22 caliber rifle. Birds, such as sea- [411] gulls, ducks and pelicans, are clubbed, stoned or shot with a small caliber rifle.

462 While fishing and hunting are primarily men's occupations, the gathering 224 of the terrestrial and marine animals is almost exclusively women's work. 226 Rattlesnakes and other reptiles are often killed and brought to the encampments by the women from their morning trek into the desert after firewood and fruit. Small fish and marine invertebrates in the tidal pools are collected by women, aided by children of both sexes.

252 Preparation of meat is quite simple. It is either boiled in hot water with salt added as the only seasoning or else roasted whole, if small enough, over an [263] open fire with or without a grill. The use of spices such as tomato sauce, chili, peppers, and the like, depend upon the tastes of the individuals and also upon the availability of money.

● 225 In individual competence as hunters or fishermen the men show a great deal 224 of variability. Some excel in fishing while others do so in hunting. Hand in 226 hand with this, goes the degree of knowledge of the local natural history and, as expected, the best fishermen lead in the knowledge of fishes while the best hunters possess the most extensive knowledge of terrestrial animals and insects. It has also been observed that boys were far ahead of adults in their knowledge of inconspicuous or otherwise commercially unimportant creatures such as insects, obscure marine invertebrates and small fishes. Interest in the commercially or otherwise economically important forms of animals unquestionably becomes overwhelming in adult life while much of the natural history lore learned in youth is forgotten.

Food Preferences and Taboos

262 A number of animals were reported as being a part of their diet in the past but which were not used at the present time. Several species of shells collected from kitchen middens along the coast were thus identified. In some instances it has been denied that a certain animal was used for food; yet, later when such a beast was brought to the camp, it would be added to the menu. Undoubtedly, some of the species were held in low esteem as food and the Seris preferred not to admit eating them.

Large fishes, especially pinta and baya, sea-turtles, and the very large chuckawalla lizard, which is brought back from rare expeditions to San Esteban Island, are the preferred cuisine. Cochi fish, also called puercos, are disdained. Large catches of these were frequently brought in from the sea, only to be unceremoniously dumped on the beach and left to the dogs and the vultures. But when other fish were scarce, the puercos were eaten. Pelicans, once an

important source of meat for the Seris, and sea-gulls are occasionally killed and likewise abandoned, except when famine threatens. The above examples most likely apply to other varieties of animals as well.

No specific food taboos were discovered in the course of field work except the unexplained reluctance to eat certain species. McGee (1898) reports a taboo on eating sea-lions but my informants asserted that these mammals were hunted in the past for both their flesh and hide. All of my informants denied that the Seris eat cougars, and this abhorrance has been confirmed by the Mexicans. Yet the Mexicans themselves do hunt and eat these big cats. McGee (1898:196, 202) again casually mentions cougars and jaguars as being hunted by by the Indians but gives no evidence for this. It should be mentioned that only a few Seris know what sort of an animal the jaguar is, and these know it only from hearsay as "huge animal inhabiting the mountains far in the interior". There are occasionally some migrant jaguars in Seri territory.

Pets

The Seris have only a limited variety of pets. Dogs are very numerous, each family keeping many of them. Although they maintain that the dogs are acquired in order to keep the coyotes away from the camps, there is nothing in their camps that a coyote would want to steal. There are a few cats and several species of wild desert doves which are often caged. Wild animals in captivity are, as a rule, those which accidentally come into the hands of the Indians. On one occasion a badger was kept tied to a house post for a couple of weeks and fed on fish heads, snakes, lizards and water until one night when it made its escape.

Of the insects, only the singing male Cicadas are captured by the roving Seri boys. These are tied to a long thread and having their fore-wings partly clipped, they are released into the air like kites. Local Mexicans also provide a similar kind of toy for their children.

Classification of Animals

Seri taxonomic notions of the animal world are vague and indistinct. No conscious classification exists and perhaps none should be expected of non-literate people. But there is a random association of animals based on the external similarities of form, habits and habitat. A clear distinction is made between plants and animals. Quite obscure animals, for example, the Echinoderms, Holothurians, Coelenterates or barnacles, are classed as animals and not as plants. It seems that voluntary movement is used here to distinguish the two categories. Thus, informants insisted that sea-anemones and jelly-fish are animals and not plants. One difficulty arises in the case of sessile barnacles. It is hard to account why those growing on the sea-turtles are classified as animals and are called "turtle fleas".

In the assemblage of major animals, the mammals form one group and birds and fish others. Since general similarity of form and not real structural affinities are the primary reason for these associations, the bats "are not birds, but are probably mammals because they have fur". Thus, sharks and

835 mantas are classed together and separate from the fishes while whales and dolphins represent another group; the latter two being considered as neither mammals nor fishes but as a category of their own. Yet, in many instances, especially in dealing with the smaller categories, natural affinities are placed together as is well shown in the case of many insects. For example, tiger beetles of the genera Tetracha and Cicindela are called by the same name, kʷo-pe. Some of the Buprestid and Tenebrionid beetles also share a common name. In general, for the insects, similarity of shape, color, pilosity associated with the similarities of the habitat, behavior and particularly similarities of movement suggested natural affinities. This is very clear from the association of the two different kinds of tiger beetles in which the determining factors are the type of flight and running behavior plus the type of habitat in which both happen to live.

Sex Differentiation

All animals are said to have both the female and the male sexes, although it is not always possible to tell them apart. In almost half of the total number of species for which information has been obtained, the informants were unable to tell whether the sexes were different or alike in appearance. This proved to be particularly true in the case of insects. Of the remainder, in more than sixty cases, specific individual traits were given for the distinguishing of the two sexes. In most of these, the males are said to be larger than the females, which is actually the case. Another generalized trait of this sort was the supposedly darker coloration of the males. An analysis of these responses and a comparison with the actual sexual differences revealed that this was most likely a cultural pattern in operation and not a result of direct observation. This is certainly the reason why several pairs of different insects belonging not only to different genera but also to different orders were classified as being a male and female of the same kind. Thus two different Scarabeid beetles of the genera Ligyrus and Cyclocephala were considered the same, with Ligyrus being the larger and darker of the two, it was identified as the male. Informants also guessed that the male of the American Cockroach was darker and larger, not knowing that the female is quite different in appearance in being wingless. Confronted with several specimens of the grasshopper, Anconia integra, the informants suggested that the largest of them was a male. In another instance, the darkling beetle, Endrodes vendricosus, was described as being the female of Arenivaga, a round roach, the smaller size of the beetle suggesting femaleness. But these examples do not exhaust the multitude of ways in which the Seris distinguish between the sexes.

For the land mammals, one of the standard characteristics distinguishing them was said to be the presence of "dos hueves", literally "two eggs", in the male. For the kangaroo rat it is the protruding penis which denotes the male, while for the bighorn it is the presence of larger horns. In the mule deer it is only the male that has horns and then only seasonally. An interesting attempt to generalize sexual differences in several species of lizards was made. Informants first searched for "ridges" on the ventral side of the femora, which supposedly denote the males. This, however, is a trait typical of separate genera of lizards and not of the sexes. But if here they have failed to uncover actual sexual differences, they have succeeded in the case of the gridiron-

tailed lizard, Callisaurus draconoides insulitans, in which the males have blue abdomens, this fact being quickly pointed out by the informants. This association of more colorful pattern with the male was applied to several of the molluscs and to many of the fishes. In the fishes, another and standardized sexual distinction has been given; the males being longer and narrower and less bulky than the females. More specific characteristics have been given in sexing sharks and mantas. Here the males are said to have "two penises" near the vent. Indeed, they do have two claspers which are absent in the females. Interestingly, no sexual differences were given concerning birds. The informants simply could not tell the female from the male bird. This is not surprising at all for in most birds sexes cannot be distinguished without dissection.

Knowledge of Habitats

Habitat distinctions are sharply impressed upon the Seris. They are well aware of the fact that various marine animals and terrestrial animals have strong preferences in this respect. They know that some of the marine animals prefer deep waters while others prefer shallow water and that some will be found on sandy bottoms and others on rocky bottoms. They also know of similar preferences among the terrestrial animals; some being partial to the proximity of fresh water, others to sandy beaches, some to the mountains and others to the desert. This knowledge is frequently exact and often extends to quite small and inconspicuous creatures. Presented with Hydrophilus insularis, a large water beetle, the informants unhesitatingly gave its name as ?ax-hahak, the prefix ?ax meaning water. They indicated also that it lives in fresh water. Yet this beetle is extremely rare in the locality, only one specimen having been seen and captured in the course of my field work. A giant tarantula-hunting wasp, Pepsis, was also said to live near water and its name has been given as ?ax ?ax . These tarantula killers indeed do often congregate near water. The tiger beetles were invariably associated with the "playas" and marine beaches, even when the informants were not told where they were captured and when they came from localities distant from Desemboque.

Likewise, the nesting grounds of egrets in the mangrove mud flats of the Estero Sargento, an estuary south of Desemboque, were correctly associated with the mud where these birds find an excellent feeding ground. In giving the distribution of the coastal animals, the informants often indicated their presence or absence at Porto Kino or Desemboque, stressing that the sandy sea bottom at Porto Kino and the rock sea bottom at Desemboque accounted for this fact. This is especially true of many fishes which prefer one or the other of these two habitats.

Seasonal Differences

The seasonal turnover in Sonora from winter to summer is very great; the summers being extremely hot and the winters quite chilly. This was particularly stressed by the informants in relation to reptiles and insects which are not much in evidence during the cold season. Most mammals, on the other hand, were indicated as equally numerous in both seasons. The fishes, accordingly, migrate a great deal. Most important commercial species were said to travel north in the spring and to return south in the late fall. Similar migrations were

ascribed to whales. Some of the Birds are supposed to be migratory, but the direction of their migration is a mystery to the Seris. The swallows "pass in great numbers" but that is all that was known about them. The ducks winter on Isla Patos and then depart for the north in the spring without ever laying any eggs. Hence, their eggs were totally unknown to the informants. Egrets are said to remain in Estero Sargento for the winter.

Sometimes seasonal differences in the appearance of an animal were noted; for example, the loss of horns by the male mule deer during the winter. Seasonal differences are more sharply impressed upon the Seris than on either the Cora or the Sumu. This is not surprising because seasonal changes in Sonora are more contrasting than in either Nayarit or Nicaragua.

Age

The Seris find this feature of animal life the most difficult to ascertain. Hardly any responses were given that could be correlated with the actual length of life. Most replies were standardized according to the individual notions of the informant, such as "4 or 5 years", "about 6 months", and so on. In general, the larger the animal the greater the longevity attributed to it. In many cases it has been suggested that "perhaps the animal dies with the beginning of the cold season". This was frequently said especially in regard to reptiles. There is very little understanding of reptile hibernation through the winter.

Transformation and Immature Stages

No generalized idea of the transformation or metamorphosis of one kind of animal into another has been discovered, with the exception of two instances among the insects. Maggots are correctly associated with flies, but this is not surprising in an encampment where untold millions of them infest offal and other remains. It is also possible that this idea came to the Seris by way of the more sophisticated Mexicans. A hawk moth larva, found in great numbers on the jimson weed, was said to turn into a butterfly within 10 to 20 days if it rained, but if the rains failed, it would continue in its larval stage. These two unconnected cases represent the total knowledge of insect metamorphosis discovered in the course of my field work.

In other animals, the immature individuals are always described as being similar to the adults except for their smaller size. In addition to this, the young of several of the birds were supposed to have differently colored plumage.

Nocturnal and Diurnal Variation

As expected, there is very little knowledge of the activity of fishes, but there is a great deal of accurate knowledge of these phenomena for the mammals, many birds and reptiles. By way of illustration, rattlesnakes and most other snakes are reported as coming out at night and resting in the ground during the day, whereas the opposite is noted for the lizards. They are most active in the brilliant sunshine and go into hiding at night. For many mammals, decreased activity was noted during the day. Peccary, coyote, deer and cottontail were some of the mammals listed.

Food Habits

The food habits of all but a very few of the insects are totally unknown to the Indians but they do have accurate and detailed knowledge of the food habits of fish. This is probably due to the great economic importance of fish to the Seris. They also have very full data for the mammals, including bats, which are said to be insectivorous. The responses varied concerning lizards and often did not parallel the situation in nature. In some instances, the acuteness of the observation was remarkable. Thus, the Northern Crested lizard, Dipsosaurus dorsalis somorensis, which occurs on the sands of Rancho San Francisco, inland from Desemboque, has been mentioned as climbing trees after fruit. Even more unusual, the leopard lizard, Crotaphytus wislizeni, was said to feed on other species of lizards. And indeed, it is one of the very few species of lizard in the region which habitually devours others of its own kind.

Mating Seasons, Eggs and Nesting

In most of these aspects of natural history the native information is quite deficient. In the case of birds, it is assumed that mating occurs in early spring, that the eggs are laid a month later, that in another month the young hatch out and about the third month they fly from the nest. This sequence seems to represent a conventionalized idea rather than a reflection of direct observation. Another difficult question for them to answer, with respect to the reptiles, was whether the young are born alive or whether they hatch from an egg. Only a few of the species are correctly described, among them the rattlesnakes. Sharks and mantas are said to give birth to live young.

Guesses as to the number of eggs varied from fairly accurate estimates for some of the birds to rough approximations ("many") for some of the reptiles and most of the fishes. The knowledge of bird nesting habits was fair. The informants had no difficulty in pointing out the particular localities where one or another species of bird nests nor in the identification of the nest by its shape and construction. This was especially true of the cormorants, egrets, sea-gulls and pelicans. All these are either marine or shore birds as will be noted.

Animals: Venomous and Otherwise Feared

In contrast to the Mexicans, the Seris fear relatively few animals and they are almost always those which can inflict a vicious or toxic bite or sting. The Mexicans, on the other hand, are afraid of a great many animals. European folklore plays a part in this as does unfamiliarity with the desert and the consequent fear of it.

The Seris fear most the rattlesnake, both the Western Diamondback and the Sidewinder. These snakes, they say, bite with their fangs but the venom is located in the rear of the body, about two inches in front of the anus. A plant called "hueco" (?) is used as a remedy both in the form of a drink and as a dressing for the wound. The Mexicans claim this remedy is effective. The coral snake is also considered to be venomous although the Seris believe that its bite is fatal only to Mexicans and not to themselves (!). Most of the

other snakes are also viewed as venomous but are claimed to be of mild disposition and do not bite people.

Among the lizards, curiously, the one feared most is not the highly poisonous Gila Monster, but the harmless little gekko, Coelonyx variegatus concrensis, which lives in fallen and dried-up saguaros. The informants could not even be induced to touch specimens killed in alcohol. It is believed that this creature could kill humans either by contact or by allowing them to inhale its vapors which cause a fatal lung illness. This little lizard is reminiscent of the European salamander in some ways. The Mexicans call it locally "salamancesa", and attribute to it the same unpleasant traits which the Seris do. Since this little lizard does resemble the European salamander and the beliefs about it are quite similar to those in European folklore, it is possible that here is a case of a transfer of this folklore upon an animal of a different kind. These beliefs eventually perhaps diffused to the Seris.

A small desert night lizard, Xantusia vigilis, is also very much feared and is frequently confused with the gekko. It lives in an identical habitat. A toad, Bufo alvarius, is said to bite with its tongue and is supposed to be able to inject venom with it. Its blood and "milk" are also very toxic.

Several of the arthropods are believed to be dangerous. The Seris claim that the blood sucking cone-nosed beetle, Triatoma rubida, stings with its mouth parts and also causes an illness called cyxhil'i ve kmop, which can be fatal to children. This bug actually is a vector of the Chagas disease and its repeated bites may cause a sensitization to them. But in this case it is impossible to tell which is the situation without a clinical analysis. Scorpions, which sting with their tails, are considered to be very dangerous. The Black Widow spider, which is very numerous in the locality, is also viewed as very toxic and is said to be sometimes fatal, although a few days' illness is all that its bite usually causes. The tarantula spider also bites but its venom is never fatal. The Sun spiders, Soliphugida, are venomous but their venom supposedly kills horses but not people. All of these spiders and their relatives, according to the informants, sting with the rear end of their body in wasp-like fashion. No medicant is applied on the bite, nature being allowed to take its own course in the recovery.

Concerning other animals, the sting rays are much feared because of the venom in their thorns and their ability to inflict a nasty wound. The bats, according to some informants, can cause disintegration of the body by spitting on it and they also have venom in their tongues, although this belief was not shared by one of the more sophisticated informants.

Only a few animals are considered to be dangerous to eat owing to their toxicity. The toad is one and a little fish, Sphaeroides annulatus, is another. Of this fish it is said that "one hundred years ago, a man ate one; he died", hence the avoidance. However, rattlesnakes are eaten with relish; only the head and the part of the body where venom is believed to be located being discarded.

The above discussion suggested some of the differences in the attitudes toward animals between the Mexicans and the Seris. While the former fear many,

the latter are largely unconcerned with by far the greater majority of them. If there is any magical importance attached to any of the species, it has not been discovered in the course of this field work and this fact has been corroborated by other recent observers.[3]

Summary

Extensive field work of this sort has many ramifications. One of the main items investigated has been the acuteness of the native observation of animals. In the case of the Seris, this knowledge progressively increases both in volume and in accuracy with the increasing economic importance of the group. The mammals and large fish are the best known followed in order by birds, reptiles, smaller fish, insects and marine invertebrates. It is also obvious that local ecology, habits and anatomy of the various species of animals set definite limitations upon observation. Lack of understanding of the hibernation of reptiles through the winter is a case in point. Another example is in the Seris' inability to distinguish between the sexes of birds. Purely cultural factors are also potent as can be seen in the standardized responses to the questions about the age of animals and the development of birds. Seri knowledge of animals is remarkably free from mythology, although a number of animals are known to have had mythological significance in the past.

There is little fear of animals except of those which are actually dangerous.

An interesting fact emerges from the comparison of the particular aspects of the knowledge of natural history. Namely, that this knowledge is not always symmetrical in that some facets of natural history are far better known by the Seris than others. An excellent illustration is provided here in the complicated ways of sexing animals, in their extensive knowledge of the food habits of some of the animals and their ecological environment, and by their very limited ability to guess correctly the age of animals.

Not all of these differences can be accounted for in natural terms and it is suggested that the answer to this asymmetry lies, perhaps, in the cultural factors unaccounted for in this study. In spite of their dependence upon a relatively few economically important species of animals, the Seris do make use of much of their animal environment in their diet, as would be expected of a marginal people who still live today in a fishing and gathering economy.

FOOTNOTES

1. This field work was made possible by research grants from the Department of Anthropology, University of Washington. Most of the work was done in Desemboque, Sonora, during the summer of 1953 with some additional work there in May 1955.

For much help in carrying out this field work I am indebted to my friend, Leo Sandoval, a school teacher in Desemboque.

2. In addition to these 160 species of animals, data has been obtained on more than 100 species of insects and their terrestrial allies, none of which are eaten.

3. Edward Spicer and William Smith, Jr., in verbal communication.

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/For detailed information on Seri beliefs about native animals, see category 116, pp. 10B-16B, 17B-46B, 47B-57B, 61-68.

124 Seri alike, is acquainted (Cougar, Jaguar, Whale, etc.) questioning had been done by referring to such and such beast without the use of pictures or actual specimens. This procedure had been followed for the majority of mammals, which are well enough known in the area. But otherwise, questioning had been done with actual specimens in hand, alive where possible. This was owing to
●[825] the fact that response may be different to the dead specimens than to the live ones and grew out of a conviction (entirely substantiated in the course of work) that many animals, of a small variety especially, are recognized more by their distinctive behaviour pattern, flight, selection of habitat, voice, running posture, etc., than by the shape and form alone. All invertebrates, all reptiles and all but the best known and largest fish had produced the data from actual specimens, dead or alive. Finally, where neither common colloquial name nor specimens were available, I resorted to pictures. That way I obtained data for a small number of animals and for a good many birds. This method has its weakness. The line drawings in the excellent guide to the *Birds of Mexico* by Blake I used are somewhat on the "dead" side and may be good aid in bird identification to someone who also will read the text, but they often fail to be of much use to someone who rarely has seen the drawings in any book, let alone a bird guide. From the replies it was obvious that a certain amount of misidentification took place in the naming of the birds or mammals from the sketches. I took account of this and eliminated from consideration all those forms where misidentification on the part of the informant was obvious. This in itself may be a worthwhile object of study but it was not my concern at the moment.

In working with the informants I studiously avoided giving them any suggestion that I already knew what the animal was or that I had a fair idea about the general features of its natural history. This is especially important in considering the Seris' knowledge of the animal distribution, ecology and other salient features. When available, I often brought along specimens of species I knew did not occur in Desemboque which had been captured elsewhere, in the absence of the Seris. This was in order to test better their recognition of animal forms.

115 Altogether 10 informants had been used. Of these the bulk were questioned in 1953, some again in 1955 and that year Chico Romero, now an old man of over 70, had been also added to the roster. Chico was Kroeber's star informant in 1930 and from him came the bulk of Kroeber's original information.

The two main informants were Miguel Barnett, then aged about 45 and one of the Seris' best hunters, and Jose Juan Moreno, a fellow about 25, recognized as their best fisherman. As expected, their preoccupations and interests slanted their replies. Accordingly, Jose Juan had the best knowledge of the marine animals and Miguel of the terrestrial animals. Jose Juan aided me again with some information in 1955.

[165] Other informants were as follows: Juan Torres, aged 40 or so; Ramon Montayo, one of the

[P. 4B]

115 [165] oldest Seris then alive of over 70; Ramon Corrales, claiming to be 37 and on the dim-witted side; Jesus Montanyo, a quiet, cooperative man of 21; Natcheo Molina, aged 35 or so, whose interest in the protestant hymnals was unfortunately far greater than in giving me the information I wanted; Jose Manuel Romero, about 37 years old on his own claim; and Jose Barnett, Miguel's son, aged 14. Inclusion of young Barnett was a lucky ● 825 strike because it indicated clearly differences in the natural history knowledge between the older men and the young men, later confirmed also in the incidental questioning of several young boys. [868] Young men start out with general interest in animals of all sorts, including the small invertebrates, but as they grow up they end up with solid knowledge of economically important species and slim, forgotten knowledge of the insignficant invertebrates.

124 I made an endeavor to obtain the same sort of information from several informants in order to eliminate as far as possible aberrant answers or peculiarities. The most solid information is available for the mammals, which are, of course, well-known. Here in some cases the same kind of information had been obtained from five individuals. In other instances only two to three were available and sometimes only one. What was surprising about the information given were not the differences, which I often indicated in the text, but the amount if identical agreement on almost every single item of data between different individuals.

Since it was impossible to obtain information on all animals from the same individuals, the questioning proceeded in "blocks." By this I mean, I would question for example two individuals about the entire order of mammals (every species of them) and another two on the birds. Two other individuals then would be questioned on half of the birds and half of the mammals, while the other two on half of the reptiles and half of the fishes; still another two on half of the insects and half of the marine invertebrates, while others would yet cover all of the insects or reptiles or fishes independently. This I believe is a useful procedure. It allows to test generalized concepts of natural history for several individuals for diverse groups. It is motivated by the question of no little importance. What does so-and-so know about mammals and what does he know about birds? What are his generalized ideas of each group? It [825] had been soon discovered that when it concerns special points, the informants were apt to have standardized notions of what the animals did, regardless of the actual situation. The less actual observational knowledge they actually had, the more frequent were pat replies. Obvious demonstration of this helped a great deal to eliminate such pat answers or to recognize them for what they were and to account for them in the final analysis.

ooo Another point in the procedure is of par-

[P.5A]

121 Another point in the procedure is of par-
amount importance in this type of research. Fair
[[20]] general knowledge of practical field natural history can have no substitute. The investigator must have this basic knowledge, to realize the range of possibilities in the answers and identify any answers not commensurate with the actual events. This way, even without interest in the mythology, one may get on the track of a myth. Although, in
● 825 general, anthropologists seem to think that natural history knowledge of the primitive folks
121 must be ridden with the mythology and must be different than ours, my rather extensive field work persuaded me that this is not so at all. Mythology there is, if one looks for it. But the bulk of their knowledge is based on sound obervation as anyone acquainted with the natural history will readily discover. One must be able to disentangle the two qualities. That this is so is well indicated in a large number of animals where the informants simply replied to queries on this or that subject in the usual *quien sabe*. And indeed, the more obscure the subject, the more likely one got that sort of an answer.

128 In the analysis of the actual material a certain schematic programme has been followed. For the sake of convenience, material has been grouped according to the major divisions of the animal kingdom. Some may object to this saying that this is just our way of classifying animals but that aboriginal classification does not follow these lines. For certain purposes, this may be true, but for my own purpose I find my procedure more convenient. Regardless of the hypothetical native mode of classification, one may form a question.
128 How do the Seri distinguish different mammals?
825 I may say also that our own groupings are not different from those of the Seri or any other tribes. Their recognition of differences among animals may be at times hazy or from our point of view erroneous. But by and large, birds to them are birds and snakes are snakes and even within the insects, without actually naming differences, they tended to group together insects according to their order. Exceptional cases, bat, whale and the like, remain exceptions just as they were to the early Western naturalists, the 16th century Gesner or Alrovandi, for example, to whom their place in the scheme of nature was based on the analogies. But this didn't prevent these men from grouping other animals much the same as we do. In the same way, the South African Bushmen may regard Mantis as a supreme diety, but this does not prevent them to say that it is also like an insect.

128 The scheme I followed turned out useful. In the end I have obtained generalized ideas on the salient features of natural history of different animal groupings which I could compare with each other. The internal evidence is most interesting, more so that in some details it differs qualitatively and quantitatively from the materials I have gathered among other tribes.

[P. 5 B]

535 semi-darkness.

123 Soon two little boys joined the dance, stepping up and down in the sand. Lighted only by the flickering flames of the driftwood fires on the shores of this mysterious and dreaded isle, the soft murmur of the sea as a refrain to the wild chanting, the weird circling of glittering eyes, and wild dark faces, presented a scene of uncanny and savage fascination witnessed by white men probably for the first time.

[533] After each stanza there was a short rest. The singing was similar to most other tribal chanting.

582 836 622 Bob made the remark that the girl was old enough to be broken in by the old Chief. I said, "How?"

583 [929] He said, when a girl thirteen or fourteen has her menses, the Chief takes her and goes through the family act. This is called 'breaking her in'. She is then eligible for marriage. A young man desiring marriage has to purchase the girl by giving the father a boat or rifle, both being necessary to the Seri's existence and protection. At the wedding they have sort of a fiesta and much mescal is drunk, which properly solemnizes a wedding.

585 944 845 When a girl has a baby it usually comes very naturally and easily, but I remember one girl's first baby was three days in coming, and she suffered a great deal. This was on a subsequent trip. She was staying with many of her people on the mainland and someone asked them if they didn't want a doctor or other help. They said: No, they had one. It was a Medicine Man who chanted over the girl and dug hollows in the sand to fit her heels into. He said that the legs had to be kept apart. This was all he did. But ordinarily there is no trouble, and if a baby is born at noon the mother is up and doing, and cooks supper for her lord and master. The men treat their wives with kindness and each shares with the other any delicacy.

[593]

462 [303] [482] In Seriland domestic duties are reversed from the usual Indian methods. The men get the water and the women get the wood. This consists mostly of driftwood gathered along the shore, and it is a picturesque sight to see a string of women and girls bringing in loads of wood in baskets on their heads at sunset.

622 595 There are no plural marriages, but sometimes when a Chief is old, or rather when his wife is old and can have no more babies, he can take a younger woman as his wife. The present Chief is getting old now, almost too old to break in the girls, so they may get a younger man. This might be called the perquisites of office. He takes the cream.

932 825 They hunt lice in the head and eat them. This is said to increase the amorous desires. The penis of the male turtle is cut out and dried. This is pounded and pulverized and placed in the food of the women. This is said to create a desire for a man and the family act.

123 relief and contentment rose, and everybody smiled. This concoction I placed on the fire while the Indian stirred with a long stick. It took half an hour to cook into a thick sticky paste, gummy white.

[345] Meanwhile, the women vanished and returned with various vessels: greasy baskets, a black chamber pot, frying pans, ollas, stew pots, shells, any old thing---even a cuspidor. When ready, the Indians dipped the sticky mess out with a cup into the various vessels and the women and children licked it up. Some of the children covered the back of a large clam shell with the paste and then licked it off, repeating this until it was gone. Most of the people hooked their fingers into it and licked them off time and again. Any drip on the outside was carefully licked off that four gallons of goo. I do not think one single drop was lost.

126 123 As one little girl was carrying away a clam shell of paste I secured her photograph. It was a sight not soon to be forgotten, to watch these little ones dip in their fingers, mostly two, sometimes three fingers and contentedly lick them off.

Wishing to secure a photo of the Indians in Pelican skin kilts, Roberto induced Chico Romero to strip and wrap a kilt of Pelican skins around his waist. He did this and Roberto secured a good photograph. For this service, Chico demanded three oranges which he gave to his children.

By coaxing and wheedling and joking, Roberto finally persuaded a young woman to put on the Pelican kilt, and she gradually pulled off her shirt, or waist, or whatever name it goes by, and laughingly permitted it. As her brown shoulders and breasts were exposed she covered them with her arms and hands while I took the photo. I gave her some blue powder to decorate herself and a little round mirror.

372 Chico Romero made a fire drill out of a piece of dry driftwood from a cottonwood tree, and then made a fire by turning the stick between his hands. After three or four minutes the fine dust became punk and turned into a live coal. This he carefully put in some dry grass and by holding it up in the wind it was fanned into a flame. The price of this was a red bandanna.

372 773 825 The legend of Fire was told to me later by the campfire. The Seris' god sent down a fly to Seriland to show the Indians how to make fire. The fly was pointed out to me one day. It was a trifle larger than a house fly with a body of shining green and blue.

"Now," they said to me, "notice when it lands. Did you not see it take its two hands, rub them over its head and then rub them together a few times?". . ."Each time it settles it rubs its hands together, and our Indians noticed this and in this way we were taught by this little fly how to make fire by rubbing a stick between our two hands, back and forth. One fly came to earth and found something dead and he rubbed a stick between his hands and made a smoke signal

so all the other flies could see and also come to this dead thing."

A few weeks ago, Antonio Herrera had a very vivid dream. He dreamed that he was hunting in the mountains for deer and came across a cave. (These volcanic mountains are pitted with caves.) He went into the cave and saw all kinds of things dear to the heart of a Seri---plenty of rifles, lots of cartridges, knives, *manta* (unbleached cotton), necklaces, red bandannas, blue overalls, *plata*, or silver, and many other things.

When he awoke he sought his father Manuel Encinas, who is a medicine man and interpreter of dreams, to explain his dream to him. The price demanded by Manuel was six *tiras*---or 30-30 cartridges, a very high price, according to Seri standard. The explanation was this:

It was true that the cave was there and all the things in it just as seen and described by Antonio, but in order to find it he would have to fast nine days and go without water that length of time also, in the heat of summer. Then the way would appear to reach the cave. So far, Antonio has not attempted the fast.

I witnessed the operation of making a certain kind of pitch or tar which the Seris use to make the seams in their canoes or boats tight. The women pound up the dried pulp next to the outside skin of a dead *pitahalla* cactus (organ cactus). This is very dry and brown in color and the pieces are pounded up to a dry powder with a wash or shore rock in a dried deer hide. This is placed in a *batella*, or flat basket, and manipulated so that the coarse pieces come to the top and are scraped off and thrown away. The fine powder is then put in a five gallon can and some porpoise or sea-lion oil or horse oil is poured on it and stirred into a thick gummy mass. When thoroughly mixed it is put over the fire, in an olla, to boil and continually stirred for an hour or two until it is the consistency and has the appearance of coal tar. While being worked it is kept heated and applied to seams inside and outside the boat. It hardens just like tar and answers the same purpose.

Since the corn, which had kept this band of Seris in food, disappeared two days before we came, and they had barely kept going on seeds and a few fish, and they all had decided to leave camp with us in the morning---the women walking and the men and some children in boats---it was necessary to supply them with some food to take them to the hunting grounds of the *cahuasa*, or sea turtles, and land them on the Island. The *cahuasa* would furnish them meat---their favorite and national food, and the shores would supply them with clams, oysters, crabs and other sea food.

So the whole band was called around our camp and each family was furnished with two cups of corn, two of beans, some green coffee and a cup of cube sugar. For the first time our camp was free of Indians, and we ate and went to bed in peace.

The amenities of civilization were laid aside and forgotten in

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

412 rubbing face-paint, for bruising woody tissue to aid in breaking ekatilla poles for house-frames or mesquite roots for harpoons (both afterward finished by firing), and on occasion for weapons; and this many-functioned tool is initially but a wave-worn pebble, is artificially shaped only by the wear of use, and is incontinently discarded when sharp edges are produced by use or fortuitous fracture. The hupf is supplemented chiefly by the simple perforator of mandible or bone or fire-hardened wood; and these two primitive implements, together with molluscan shells in natural condition, apparently serve as the primary tools for all the mechanical operations of the tribe.

726 The dearth of tools and the absence not only of knives but of knife-sense among the Seri illumine those traditions of Seri fighting made tangible by the teeth-torn arm of Jesus Omada; for they explain the alleged recourse of the Seri warriors to nature's weapons, used in the centripetal fashion characteristic of nascent intelligence.

186 The Seri are distinguished by another trait hardly less striking than the pedestrian habit, and even more conspicuous than the tooth-and-nail habit with the correlative absence of tool-sense; the trait is not tangible enough for ready definition or description in terms (of course because so unusual as not to have bred words for its expression), but is akin to—or, more properly, an exceeding intensification of—race-pride in all its protean manifestations; it may be called *race-sense*. Like other primitive folk, the Seri are self-centered (or egocentric) in individual thought, i. e., they habitually think of the extraneous phenomena of their little universe with reference to *self*, as in the labyrinth of consanguineal relationship extending and ramifying from the speaker; furthermore, they typify primitive culture in their collective thinking, which is tribe-centered (or ethnocentric), i. e., they view extraneous things, especially those of animate nature, with reference to the tribe, like all those lowly folk who denote themselves by the most dignified terms in their vocabulary and designate aliens by opprobrious epithets; but the Seri outpass most, if not all, other tribes in dignifying themselves and derogating contemporary aliens. Concordantly with this habitual sentiment, they glory in their strength and swiftness, and are inordinately proud of their fine figures and excessively vain of their luxuriant locks—indeed, they seem to exalt their own bodies and their own kind well toward, if not beyond, the verge of inchoate deification. The obverse of the same sentiment appears in the hereditary hate and horror of aliens attested by their history, by their persistent blood-thirst, and by the rigorous marriage regulations adapted to the maintenance of tribal purity; for just as their highest virtue is the shedding of alien blood, so is their blackest crime the transmission of their own blood into alien channels. The potency of the sentiment is established by the unparalleled isolation of the tribe after centuries of contact with Caucasians, by their irreducible love of native soil, by their implacable animosity toward invaders, and by

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186 609

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1: McGee E-5 (1894-1895)1898 NUJJ Ser. 0031

Summarily, the customary apparel of Seri men and women may be regarded as limited to three articles—(1) a kilt, normally of coarse textile fabric, which is made a prime necessity by a well-developed pudency; (2) a short wammus, also normally of coarse textile fabric, which is apparently regarded as a convenience and luxury rather than a necessity; and (3) a robe, normally of pelican skin, sometimes substituted for either or both of the other articles, but ordinarily used as bedding or as a buckler. The most valued of these articles is the robe, which in the absence of the others replaces the kilt; yet pudency demands the habitual use of some form of kilt, while both wammus and robe are held so far superfluous that they may be laid aside or bartered or otherwise dispensed with whenever occasion arises.

On considering the special functions and probable genesis of the Seri apparel, the student is impressed by the absence of the breech-clout, except perhaps in temporary improvisations—though the absence of this widespread article of primitive costumery need awaken little surprise in view of the environment, and especially of the abounding barbs of Seriland, which render all apparel of doubtful value save for the protection of tissues softened by habitual covering. The prevailing thornlessness of the habitat renders the free-flowing and easily removable apron the most serviceable protection for the exposed vitals of the pubic region; and this device, a common one in thorny habitats generally, grades naturally into the short skirt or kilt; while it would well accord with the maritime habit and habitual thought of the Seri to apply the tough and densely feathered skin of the pelican to the purpose. This suggestion as to the nascent covering of the tribe consists with the tribal faith, in which the Ancient of Pelicans ranks as the creative deity, while its modern representative is esteemed a protective tutelary possessing talismanic powers against cold, wet, bestial claw and fang, alien arrows, and all other evils; so that the use of this feathered pelt as a shield against spiny shrubbery, sharp-leaved sedges, and barb-thorned cacti is quite in harmony with Seri philosophy. Accordingly it seems clear that the pelican-skin kilt was autochthonous among the Seri, and that it was the original form of tribal apparel; and it is of no small significance that the type persists in actual use as well as in suggestive vestigial forms, such as pelican-down swaddling for infants, pelican-feather plumes on cradle nets, etc.

The passage from the pelican-skin kilt to the garment of textile fabric under the slow processes of primitive thought may not be traced confidently, though a strong suggestion arises in the Seri hair-cult (a Samoan faith not without parallel in far higher culture) under which mystical powers and talismanic virtues are imputed to the human pelage. It is in connection with this cult that the Seri locks are so attentively cultivated and so assiduously preserved and consecrated to more intimate personal uses in belts, necklaces, and the like; and although the connecting links have not been found, it is thoroughly

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

174 In accord with Seri thought to assume that in earlier times the hair
291 necklaces were expanded into rudimentary apparel in connection with
[826] pelican-skin shields, and after the conquest of vegetal fibers into more finished garments probably woven partly of hair and worn in such wise as to supplement the natural pelage in the protection of back, shoulders, chest, and arms. If the indication of the tribal cult be valid, it would appear that the wammus was the second piece of apparel in order of genesis, though the first to be made of artificial fabric; and it is noteworthy that the suggestion is supported by the form of the short and free-flowing garment underlying the flowing tresses of warriors and matrons, as well as the vestigial use of human-hair cords for neckbands and fastening strings; while its antiquity in comparison with the textile kilt is indicated by the fact that it is a finished artifact, evidently fitted to its functions by generations of adjustment.

The step from the making of the wammus to the substitution of artificial fabrics for the pelican-skin kilt was an easy and natural one; and it need only be noted that the transition is still incomplete, since the feathered pelt is unquestioningly substituted for the fabric whenever occasion demands, yet that the kilt in some form must be much more archaic than the wammus, since it is correlated with the pudency sense,[1] while the complete garment is not so correlated save in slight and incipient degree.

Accordingly the three articles of apparel may be seriated genetically as (1) the pelican-skin robe, used long as a kilt, and only lately relegated to emergency use and bedding; (2) the well-differentiated wammus of textile fabric with hair-cord fastenings; and (3) the textile kilt, with or without a hair-cord belt. And the three artifacts are local and presumptively—indeed manifestly—autochthonous, and exemplify the interdependence of artifacts and environment no less strikingly than the Seri balsa or basket or jacal.

TOOLS AND THEIR USES

000 In advanced culture tools are finished products, made and used in accordance with preconceived designs or established arts for the production of commodities; in primal life (as well exemplified by Seri handicraft) tools are mere by-products incidental to the largely instinctive activities directed toward the maintenance of life. Accordingly, the tools of advanced culture form the nucleus of industries, while the designless tools of the prime cluster about the outskirts of industrial

[1] In this writing the conclusion reached in an unpublished discussion of the beginning of clothing is assumed—i. e., that the primal apparel was purely protective, and that the habitual concealment of portions of the body incidental to its wearing gradually planted the pudency sense. The germ of clothing, without attendant pudency, is well illustrated in Karl von den Steinen's observations and discussions of the Brazilian natives (Unter den Naturvölkern Zentral-Brasiliens, Berlin, 1894, pp. 159-165). It is noteworthy that the Seri, more primitive as they are in so many respects than any other American aborigines known, are much farther advanced than the Brazilian natives in apparelling and its effects on character. The similarities and the differences are alike interesting; yet in both cases the customs reflect environmental conditions and wants with remarkable fidelity.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

relation may be considered to begin in the animal realm with organisms adapted to environment through physiologic processes, and to end in that realm of enlightened humanity in which mind molds environment through complete nature-conquest. In the serial scale so defined the various primitive tribes and more advanced peoples may be arranged in the order of mental power or culture-status; when the same arrangement will express in inverse order the relative closeness with which the several tribal minds reflect their environments. It follows that the lowly minds and craft of the Seri reflect their distinctive environment with exceeding, perhaps unparalleled, closeness, because of their very lowliness; it follows, too, that any other equally lowly folk imported into the region and perfectly wonted to it by generations of experience would equally reflect the physical features of the region in their craft and in their thinking; it follows, also, that if the Seri were transported into any other district of equally distinctive physical features, they would gradually adapt themselves to the new environment—though with some added intelligence, and hence with diminished closeness, as is the way of demotic development—in such manner that their craft and thinking would reflect its features. In a more general way it follows that those similarities in culture, or activital coincidences, which have impressed the ethnologic students of the world (notably Powell and Brinton), are normal and inevitable in primitive culture and of diminishing prominence with cultural advancement.

Social Organization

Among the Seri, as among many other aboriginal tribes, the social relations are largely esoteric; moreover, in this, as in other savage groups, the social laws are not codified, nor even definitely formulated, but exist mainly as mere habits of action arising in instinct and sanctioned by usage; so that the tribesmen could not define the law even if they would. Accordingly the Seri socialry[1] is to be ascertained only by patient observation of conduct under varying circumstances. Unfortunately, the opportunities for such observation have been too meager to warrant extended description, or anything more, indeed, than brief notice of salient points.

Clans and Totems

The most noticeable social fact revealed about the Seri rancherias is the prominence of the females, especially the elder women, in the management of everyday affairs. The matrons erect the jacales without help from men or boys; they carry the meager belongings of the family and dispose them about the habitation in conformity with general custom and immediate convenience; and after the household is prepared, the men approach and range themselves about, apparently in a definite

[1] A convenient term proposed by Patten.

642
621 Little information could be elicited about subdivisions 7, 8, 9, and 10. The reason for this might be that Band VI was slow in [167] abandoning those coastal areas (if it actually did inhabit them) [628] as it was being displaced by Bands III and IV.

621 The Seri say that long ago several men, called *ʔant iʔakimhoh* 642 "they who explain the land," came to Tiburon Island and told the 173 people along the eastern shore that they owned also a corre- 425 sponding strip of land on the mainland. Thus the inhabitants of 167 subdivisions 2, 3, 4, 5, and 6 laid claim to the coastal areas directly across the channel from them as shown by the dotted lines on Fig. 4. They assumed that their new territories extended inland [922] to include as much terrain as they chose to claim. At first the people went to their mainland areas primarily to gather cactus fruit. Eventually some of them remained on the mainland and established subdivisions 11 and 12. This establishment superseded the claims of the five Tiburon Island subdivisions to their main- [101] land territories. Although the mainland subdivisions 11 and 12 formed, in some respects, a separate band in their own right, they retained their name, *taʔeowkw kongkaak* "the people of Tiburon Island." Eventually this group returned to Tiburon.

621 Of subdivisions 13 and 14 which are shown on Fig. 4, very 642 little is known. The people of subdivision 13 inhabited an area 131 encompassing the northern end of the dry lake, La Playa Noriega [829] (San Bartolo). Some of the Seri believe that these people were [172] giants. Although in this area I have found clay figurines and other [173] artifacts common to abandoned camps elsewhere, the Seri do not know the names of the camps of this subdivision. Subdivision 14 occupied the area surrounding the southern end of the same dry lake.

Subdivision 15 occupied the general area which is now Villa de Seris, a settlement on the southern edge of Hermosillo. As [167] Hermosillo grew, it became increasingly difficult for these Seri to maintain their customary way of life, and they eventually returned to Tiburon Island.

642 BAND VI
621 Band VI became divided into four subdivisions, the names of 101 which are:

ɪnitom	"_____"
pahtii	"flint"
kofte okl ifa	"large iguana peninsula"
koiih	"tubular"

semi-darkness.

Soon two little boys joined the dance, stepping up and down in the sand. Lighted only by the flickering flames of the driftwood fires on the shores of this mysterious and dreaded isle, the soft murmur of the sea as a refrain to the wild chanting, the weird circling of glittering eyes, and wild dark faces, presented a scene of uncanny and savage fascination witnessed by white men probably for the first time.

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2: Kroeber E-5 (1930)1931 NU31 Seri NU31

Society

583 [595] Marriage is monogamous. The wife is bought, in spite of the poverty of the Seri. Santa Blanco paid 150 pesos in property for his wife. Chico Romero, a widower, paid more for his, a widow, "because she had three daughters, and a family with daughters is rich" (in expectation of bride prices).

591 562 The wife goes to live with the husband. A young couple lives with the young man's parents, perhaps in an annex to the house. "The man commands." Chico was emphatic on this point, and repeated that when his son married he would live with him, not with the girl's relatives. Both he and Santo have step-sons-in-law as well as daughters-in-law living with them, but this is because they are chief and boat-owner respectively; (and the sons-in-law are young).

833 [843] Copulation was said to take place immediately on marriage. McGee's statement of a period of continence being cited as the custom of a foreign tribe, the informant obviously wondered and laughed. Intercourse goes on during pregnancy; but not for some months after birth, for fear of a new pregnancy, which would be injurious to the child. A good man respects his wife at all times and does not constantly pursue her.

144 164 No half-breeds were seen, and the Seri declare they are free of venereal disease.

551 614 Nothing could be elicited from the informant as to anything like the group-inherited names of lineages, or clans, of the Yuman tribes.

768 When a woman dies, the widower may give the children to his dead wife's parents to raise. This is the only item learned that might point to McGee's "matriarchate"; but the informant may have been thinking of particular cases. His son lives with him, though he lost the boy's mother.

582 Cross-cousin marriage is as prohibited as that of parallel-cousins. This is in accord with the sibling terminology for all cousins; but in view of the present small number of the tribe, the rule must work difficulty.

[587] A man does not marry his dead wife's sister. Apparently he may not. Nor is there levirate. The informant volunteered the question if marriage with step-daughters was permitted by other peoples. Being told of the Navaho custom, he seemed shocked.

606 183 Neither husband nor wife looks at or addresses either parent-in-law. In the isolated, small-group life of the Seri, this rule can hardly be adhered to with complete rigor, and its conspicuous carrying out was not observed; but then everything in their behavior is casual, informal, and slovenly.

607 The kinship system as recorded contains a note as to a woman not addressing her younger sister's husband by kinship term except

2: Kroeber E-5 (1930)1931 NU31 Seri NU31

789 Some shamans display their ability to hold live coals in their mouth.

Taboos

[88] 784 At first menstruation, the girl eats nothing (!) for 8 days, only drinking water. For 4 nights a *fiesta* is held for her, men and women dancing in a circle, anti-sunwise. She is outside the ring. Her head is not covered. San-pit roasting was unknown to the informant.

[841] At menstruation a woman drinks hot water. She may cook for others. She may not eat deer meat.

[844] After childbirth, both husband and wife eat only *atole* (gruel) and water, he for 4, she for 8 days. She may not work at all, he only a little, such as getting wood, "hunting" as necessary, etc.

[81] There is no puberty ceremony for boys. Nothing is said to be [224] known of any rule forbidding a boy to eat of the first game killed by him.

[833] Continence before hunting deer was not observed. Nor was there any special treatment or respect due the deer carcass. It is said that deer meat could not be left behind unless there was too much, but this is probably a statement of practise rather than a taboo.

Dances

535 [727] Besides the girl's puberty dance, the Seri also had a scalp dance. Only the frontal piece of the scalp was used. This was hung on a pole. Men (armed) and women danced together around it. If the scalp fell down, all would die.

Dances seen were solo on a plank laid over a shallow pit. Several singers sat by, beating or rattling anything convenient. Each song and dance lasted scarcely three minutes. The tempo is fast. The step is a quick double shuffle with alternate feet. In one type, the dancer held to a stick with one hand, his body and hanging arm remaining as motionless as possible. Another type was without the stick, the dancer holding a gourd rattle and keeping his body bent forward somewhat.

534 171 Rattles are of gourds, e'Xèc, on a stick, or of cocoons, Xekakë'ntta. Deer-hoof rattles were denied. The cocoons are on a band worn below the knee. The Yaqui-Mayo wear such knee-bands of cocoons; and sometimes of deer-hoofs. The Gila Pima also know the cocoon band.

Various Religious Items

276 Datura (toloache, jimsonweed) does not appear to have been used. Even the plant seems unknown, although it is said to occur in the Seri range.

778 789 Rain making seems to be by amulet rather than by direct shamanistic power. For instance, Antonio Herrera wears a small object

2: Kroeber E-5 (1930) 1931 NU31 Seri NU31

ing, because it would be swamped in a sea which it could resist. The joining and calking are always carried far enough that the boat can be bailed faster than it leaks. That the Seri prefer to bail rather than to finick over joints, is a matter of preference. Most of our real frontier life runs on much the same plan, though sprung from a tradition of intrinsic standard and provided with a superior tool equipment. Tribes like the Walapai and Papago, who live in nearly the same desert, show much of the Seri combination of technological crudeness and effectiveness. They do make an exception in basketry, which is what has chiefly reached our museum cases from their culture; but the Davis-Heye collection shows that the Seri too can make baskets of unsuspected quality. My impression, based on the way the Seri handle their knives, boats, bows, and the like, is that they have excellent practical mechanical sense, but that their standards are astonishingly different from our own. Most people that depended so much on sailing their boats as the modern Seri do, would not be content with two sticks, a blanket, and a harpoon line. But, given the willingness to operate with this equipment, very few would be as successful in quickly rigging and skilfully handling the sail. And sailing is something the Seri have recently learned or evolved. They are the frontiersmen of native culture: hardy, rude, unorganized, practical, efficient; but, like our own frontiersmen, in no sense only half emerged from the tool-less animal. McGee was so inspired by the desire to find ultimate "primitiveness" among the Seri that he often ignored the tremendous effect of their habitat which he so well observed and described. After all, in his day cultural evolutionism was still in vogue.

As to race sense, McGee seems partly but only partly right. Chico Romero of his own accord asked me if other Indians had venereal diseases, and on the return question replied that the Seri were entirely free from them. I also saw and heard of no half-breeds. On the other hand, Chico's historical tradition told of the violation and keeping of captive Tepoca women, and since his own son was descended from one of them, in the second generation, Chico's mother-in-law must have been a Tepoca. McGee's "alien conjugal union" as the "blackest crime" (p. 11) is therefore an exaggeration, and his informant's statement that a Papago woman captive among the Seri never could have had children because she was an alien slave (p. 278), must rest upon a misunderstanding.

The groom's continence for a year after marriage as a moral test before admission to full husbandly status (pp. 280-3), is probably a matriarchally colored fantasy based on another misunderstanding. As already mentioned, Chico was interested, but mildly rihaldly amused; at the idea when it was put before him as a foreign Indian custom. He reacted like the average white man under the circumstances, not in the least like an actor skilfully feigning ignorance.

semi-darkness.

Soon two little boys joined the dance, stepping up and down in the sand. Lighted only by the flickering flames of the driftwood fires on the shores of this mysterious and dreaded isle, the soft murmur of the sea as a refrain to the wild chanting, the weird circling of glittering eyes, and wild dark faces, presented a scene of uncanny and savage fascination witnessed by white men probably for the first time.

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In Seriland domestic duties are reversed from the usual Indian methods. The men get the water and the women get the wood. This consists mostly of driftwood gathered along the shore, and it is a picturesque sight to see a string of women and girls bringing in loads of wood in baskets on their heads at sunset.

There are no plural marriages, but sometimes when a Chief is old, or rather when his wife is old and can have no more babies, he can take a younger woman as his wife. The present Chief is getting old now, almost too old to break in the girls, so they may get a younger man. This might be called the perquisites of office. He takes the cream.

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2: Kroeber E-5 (1930) 1931 NU31 Seri NU31

in endearment when drunk. This may apply also to other siblings-in-law. 607

Younger siblings (? and other relatives) may say nothing obscene before the older, out of respect for them; but the older talk freely before the younger. This applies to both men and women. Otherwise there seems to be little prudery; the informant recited the names of the private parts before his wife and children, and she indifferently repeated them after him in confirmation. 593 834

There is no teknonymy. 551

The dead are buried. Cremation of the body seemed unknown to the informant. All property of the dead person is burned or destroyed. His balsa was burned; modern boats are not, because they "belong to the government," which furnishes the lumber. The house is abandoned and a new one built a short distance away. The name of the dead is not spoken. 76 [422]

Kinship

The Seri kinship system is distinguished by three general features: the large number of terms; the strong tendency to terms reciprocal in meaning; and the distinction made between older and younger siblings of nearer relatives if they are of the same sex. All of these are characteristic Yuman traits. 601

The number of terms obtained is 50; which number might have been increased if step-relatives, great-grandparents, great-uncle-aunts, siblings of siblings-in-law, spouses of uncles-aunts, and spouses had been inquired for. However, the informant seemed to feel that the list was exhausted with the set obtained; before that, he pursued the subject of his own accord. Fifty is an unusually large number of kinship names in any language; the more so, since there are no cousin terms. The 12 siblings-in-law terms—a quite extraordinary number—swell the total.

Conceptually reciprocal terms dominate the system except in the sibling class. The informant soon realized this principle. Some of the reciprocals are derivatives; others are not; self-reciprocals are lacking. This last fact helps increase the size of the system.

The distinction between older and younger siblings of the same (but not of the opposite) sex as nearer relatives is consistently carried out for uncles-aunts and spouses' siblings (or siblings' spouses).

ôi	father	reciprocals iaâ'k	(man's son), ôq (man's daughter)
e't·a	mother	rec. iq/t	(woman's child)
e'p·âe	father's father	rec. ik-e'pâe	(man's son's child)
emdo	father's mother	rec. eka'sak	(woman's son's chd.)
ô'de	mother's father	rec. iqôci	(man's dtr.'s child)
ôkt	mother's mother	rec. iqaq	(woman's dtr.'s chd.)

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

the character of the man; in very fact, it at the same time both measures and makes the character of the woman. Among other privileges bestowed on the bride during the probationary period are those of receiving the most intimate attentions from the clanfellows of the groom; and these are noteworthy as suggestions of a vestigial polyandry or adelphogamy. At the close of the year the probation ends in a feast provided by the probationer, who thereupon enters the bride's jacal as a perpetual guest of unlimited personal privileges (subject to tribal custom); while the bride passes from a half-wanton heyday into the duller routine of matronly existence.

These details were elicited at Costa Rica in 1894 through methodical inquiries made in connection with the linguistic collection. This collection was made with the cooperation of Señor Alvemar-Leon as Spanish-English interpreter, together with Mashém and (commonly) the clanmother known as Juana María. Usually quite a group of Seri matrons with two or three warriors were gathered about, and to these Mashém frequently appealed for advice and verification, while they constantly expressed approval or disapproval of questions and replies, as gathered through Mashém's words and mien, in such manner as to afford a fair index of their habitual thought—e. g., when the Seri vernacular for "twins" was obtained and the inquiry was extended (by normal association of ideas) to the term for "triplets", Mashém collapsed into moody silence while the rest of the group decamped incontinently with horror-stricken countenances—thereby suggesting cautious subsequent inquiry, and the discovery that triplets are deemed evil monsters and their production a capital crime. It was in one of the earlier conferences that the first intimations concerning the unusual marital customs were incidentally brought out; the Caucasian interpreter and bystanders were diverted by the naive reference to the moral test, but their expressions were hastily checked lest the native informants might be startled and rendered secretive; then, during two later conferences, when Mashém and several matrons were freely participating in the proceedings, the line of inquiry was so turned as to touch on various aspects of the marriage custom and bring out all essential features; so that much confidence is reposed in the accuracy of the details.[1] The confidence in the verity of the customs was such as not to be impaired seriously by the fact that no records of coincident moral tests were known in the voluminous literature of marriage and its concomitants; nor was it shaken by the still weightier fact that none of the experienced ethnologists to whom inquiries were addressed during ensuing months were acquainted with parallel customs—indeed the only shadow of corroboration thus obtained came in the form of references to the widespread requirement of continence in war and ceremonies,

[1] It may be observed that Kolusio, when visited in January, 1895, failed to corroborate the descriptions of Mashém and the matrons, but his failure occasioned little surprise for the reason that he has not lived with his tribe since early boyhood, and is equally uninformed (or uncommunicative) concerning the myths, ceremonies, and even the totems of the tribe.

[91 cont.]

582 promiscuity of gatherers corroborative of the ideas of Morgan,
is very far from being simple, tending more to confirm the ideas
of Kirchoff regarding the greater restriction and regulation of
marital relations in societies having a rudimentary economy.
In all Seri marriages close consanguineous relatives seem to be
avoided. More precisely, a classification of relatives is estab-
582 lished, from which only one group can provide a spouse. To
621 differentiate the Seri system from clan systems and marital
601 classes, in which each member belongs to a fixed class in rela-
tion to all the other members, in this system the classification
varies with respect to the position of each person, that is to say,
it is a true system of kinship. The factors of sex, polarity,
generation, relative age, affinity, and consanguinity are in-
volved in it, acting to deny or permit the possibility of mar-
riage. Perhaps because of the small size of the Seri group,
only within which are marriages concluded, the kinship system
results in a clear identification of all persons by terms that are
functions of marital relationships: approximately 50 per cent
are excluded for being of the [92] same sex; 30 per cent for
being of a distinct generation (very few aged or very young);
the consanguineous relatives close to the affinal relatives and
married persons are also excluded, leaving only so many persons
as possible mates, a situation that is reflected in the kinship
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It is not that sexual relations may be prohibited, for
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[837] sexual relations, but the "marriage" association, sanctioned by
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spite of the disadvantages of the disappearance of sexual liberty,
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With regard to individual development, this social struc-
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2: Kroeber E-5 (1930)1931 NU31 Seri NU31

789 Some shamans display their ability to hold live coals in their mouth.

Taboos

[88] 784 At first menstruation, the girl eats nothing (!) for 8 days, only drinking water. For 4 nights a *fiesta* is held for her, men and women dancing in a circle, anti-sunwise. She is outside the ring. Her head is not covered. San-pit roasting was unknown to the informant.

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Dances

535 [720] Besides the girl's puberty dance, the Seri also had a scalp dance. Only the frontal piece of the scalp was used. This was hung on a pole. Men (armed) and women danced together around it. If the scalp fell down, all would die.

Dances seen were solo on a plank laid over a shallow pit. Several singers sat by, beating or rattling anything convenient. Each song and dance lasted scarcely three minutes. The tempo is fast. The step is a quick double shuffle with alternate feet. In one type, the dancer held to a stick with one hand, his body and hanging arm remaining as motionless as possible. Another type was without the stick, the dancer holding a gourd rattle and keeping his body bent forward somewhat.

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Various Religious Items

276 Datura (tolnache, jimsonweed) does not appear to have been used. Even the plant seems unknown, although it is said to occur in the Seri range.

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1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

614 earlier paragraphs (pp. 164–169); these symbols evidently represent an
[302] exclusively maternal organization into clans consecrated to zoic tutelaries. The tutelaries, or totems, together with the clan names and all personal designations connected with the totems, are highly esoteric, and were not ascertained save in the few cases mentioned above.[1]

593 It should be observed that the identification of kindred by the alien observer is difficult and somewhat uncertain, since the relationships recognized in Seri society are not equivalent to those customary among Caucasians. It was found especially difficult to identify the husband
[582] of the jacal, partly because he is commonly incongruously younger (and hence relatively smaller) than the mistress, and partly because of the undignified position of outer guard into which he is forced by the tribal etiquette. Moreover, his connection with the house is veiled by the absence of authority over both children and domestic affairs, though he exercises such authority freely (within the customary limits) in the
● [842] jacales of his female relatives. There is, indeed, some question as to the clear recognition of paternity; certainly the females have no term
601 for "my father", i. e., the term is the same as that for "my mother", *em*, though the males distinguish the maternal ancestor by a suffixed syllable (*e*="my father"; *e-ta* or *i'-tah*="my mother"), which seems to be a magnificative or an intensificative element. It is noteworthy that the kinship terminology is strikingly meager; also that while the records suggest various significant points, the material is hardly rich enough to warrant complete synthesis of the consanguineal system.

421 While the burden of the more permanent property pertains to the women, there is a decided differentiation of labor with a concomitant vesting of certain property in the warriors—the distinctively masculine chattels comprising arrows, quivers, bows, turtle-harpoons, etc. There are indications that the balsas, too, are regarded as masculine property. The impermanent possessions—water, food, etc—seem to be the common property of men, women, and children, except in so far as the
[264] right is regulated by regimentation; for the privileges of eating and drinking are enjoyed in the order of seniority. In the reckoning of
554 seniority, the chief (who is comonly such in virtue of his position as
602 nominal elder brother of a prolific dame) ranks first, and is followed by other warriors in an order affected in an undetermined way by conjugal relations as well as by their prowess or sagacity (the equivalents of age in primitive philosophy) down to an undetermined point—apparently fixed by puberty; then comes the clanmother, followed by her daughters in the order of nominal age, which is affected by the status of spouses and the number of living offspring; finally come the children, practically in the order of their strength (which also is deemed an equivalent of age), though the girls—especially those

[121] [1] The chief object of the 1895 expedition was to pursue the inquiries concerning social organization, totems, etc; but, as mentioned elsewhere, this object was defeated by the troublous history of the tribe during the earlier part of 1895, and the consequent revival and intensification of their animosity toward aliens.

2: Kroeber E-5 (1930)1931 NU31 Seri NU31

Society

583 Marriage is monogamous. The wife is bought, in spite of the
[595] poverty of the Seri. Santa Blanco paid 150 pesos in property for his wife. Chico Romero, a widower, paid more for his, a widow, "because she had three daughters, and a family with daughters is rich" (in expectation of bride prices).

591 The wife goes to live with the husband. A young couple lives
562 with the young man's parents, perhaps in an annex to the house. "The man commands." Chico was emphatic on this point, and repeated that when his son married he would live with him, not with the girl's relatives. Both he and Santo have step-sons-in-law as well as daughters-in-law living with them, but this is because they are chief and boat-owner respectively; (and the sons-in-law are young).

833 Copulation was said to take place immediately on marriage.
McGee's statement of a period of continence being cited as the custom of a foreign tribe, the informant obviously wondered and laughed.
● [843] Intercourse goes on during pregnancy; but not for some months after birth, for fear of a new pregnancy, which would be injurious to the child. A good man respects his wife at all times and does not constantly pursue her.

144 No half-breeds were seen, and the Seri declare they are free of
164 venereal disease.

551 Nothing could be elicited from the informant as to anything like
614 the group-inherited names of lineages, or clans, of the Yuman tribes.

768 When a woman dies, the widower may give the children to his dead wife's parents to raise. This is the only item learned that might point to McGee's "matriarchate"; but the informant may have been thinking of particular cases. His son lives with him, though he lost the boy's mother.

582 Cross-cousin marriage is as prohibited as that of parallel cousins.
This is in accord with the sibling terminology for all cousins; but in view of the present small number of the tribe, the rule must work difficulty.

[587] A man does not marry his dead wife's sister. Apparently he may not. Nor is there levirate. The informant volunteered the question if marriage with step-daughters was permitted by other peoples. Being told of the Navaho custom, he seemed shocked.

606 Neither husband nor wife looks at or addresses either parent-
183 in-law. In the isolated, small-group life of the Seri, this rule can hardly be adhered to with complete rigor, and its conspicuous carrying out was not observed; but then everything in their behavior is casual, informal, and slovenly.

607 The kinship system as recorded contains a note as to a woman
not addressing her younger sister's husband by kinship term except

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7: Marroquin E-5 (1955) 1957 NU3₁ Seri NU31

POPULATION ABLE TO WORK
(between 11 and 65 years)

Men, 71 or 69%, of the masculine population. 464
Women, 76 or 70% of the feminine population. 162
462

We can add that, at least as far as the male population is concerned, the figure of 69% with a potential work capacity is equivalent, in general terms, to the percentage of the population economically active, since one of the singular characteristics of the Seri population is the fact that they constitute a community fully occupied: all the men of working age have a place set aside in the fishing activities; this is an advantageous position for increasing economic development of the tribe. With relation to the women the situation is not the same, since the majority of girls of marriageable age carry on very few productive activities; it could be said that economic responsibility begins with matrimony. [226]

If it is true that all the Seri men are fishermen, it is also true that there is the beginning of some specialization of jobs, which are carried on complementing or as an accessory to the principal occupation. Thus we have among the men: 463 462 162

Carpenters, constructors of *piraguas* (a kind of canoe)	6
Medicine men	14
Farmers	2

And among the women:

Seamstresses	4
Farmers	1
Midwives	22

The relatively high number of medicine men and midwives should not be surprising; Seri popular medicine is very well known and depends principally on magical propitiation and since the magic powers are acquired in a variety of ways, including dreams, and the healing rites are, on the other hand, very simple, it is not strange that medicine men should abound. As for the midwives, it can be said that every woman who has undergone the experience of childbirth feels herself able to help at a birth; nevertheless, it is said that the more experienced women are those best able to take care of those giving birth. 755 756 844

Problems which should be attended to

In addition to the sanitary problem mentioned above, mention should also be made of the problem of agriculture, linked with the necessity for supplying food to an Indian population which since economically it depends principally on fishing, needs to complement its diet with agricultural products to achieve a better one. In close relation 185 262 241 423

535 semi-darkness.

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462 [393] [482] In Seriland domestic duties are reversed from the usual Indian methods. The men get the water and the women get the wood. This consists mostly of driftwood gathered along the shore, and it is a picturesque sight to see a string of women and girls bringing in loads of wood in baskets on their heads at sunset.

622 595 There are no plural marriages, but sometimes when a Chief is old, or rather when his wife is old and can have no more babies, he can take a younger woman as his wife. The present Chief is getting old now, almost too old to break in the girls, so they may get a younger man. This might be called the perquisites of office. He takes the cream.

932 825 They hunt lice in the head and eat them. This is said to increase the amorous desires. The penis of the male turtle is cut out and dried. This is pounded and pulverized and placed in the food of the women. This is said to create a desire for a man and the family act.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

the character of the man; in very fact, it at the same time both measures and makes the character of the woman. Among other privileges bestowed on the bride during the probationary period are those of receiving the most intimate attentions from the clanfellows of the groom; and these are noteworthy as suggestions of a vestigial polyandry or adelphogamy. At the close of the year the probation ends in a feast provided by the probationer, who thereupon enters the bride's jacal as a perpetual guest of unlimited personal privileges (subject to tribal custom); while the bride passes from a half-wanton heyday into the duller routine of matronly existence.

These details were elicited at Costa Rica in 1894 through methodical inquiries made in connection with the linguistic collection. This collection was made with the cooperation of Señor Alvemar Leon as Spanish-English interpreter, together with Mashém and (commonly) the clanmother known as Juana María. Usually quite a group of Seri matrons with two or three warriors were gathered about, and to these Mashém frequently appealed for advice and verification, while they constantly expressed approval or disapproval of questions and replies, as gathered through Mashém's words and mien, in such manner as to afford a fair index of their habitual thought—e. g., when the Seri vernacular for "twins" was obtained and the inquiry was extended (by normal association of ideas) to the term for "triplets", Mashém collapsed into moody silence while the rest of the group decamped incontinently with horror-stricken countenances—thereby suggesting cautious subsequent inquiry, and the discovery that triplets are deemed evil monsters and their production a capital crime. It was in one of the earlier conferences that the first intimations concerning the unusual marital customs were incidentally brought out; the Caucasian interpreter and bystanders were diverted by the naive reference to the moral test, but their expressions were hastily checked lest the native informants might be startled and rendered secretive; then, during two later conferences, when Mashém and several matrons were freely participating in the proceedings, the line of inquiry was so turned as to touch on various aspects of the marriage custom and bring out all essential features; so that much confidence is reposed in the accuracy of the details.[1] The confidence in the verity of the customs was such as not to be impaired seriously by the fact that no records of coincident moral tests were known in the voluminous literature of marriage and its concomitants; nor was it shaken by the still weightier fact that none of the experienced ethnologists to whom inquiries were addressed during ensuing months were acquainted with parallel customs—indeed the only shadow of corroboration thus obtained came in the form of references to the widespread requirement of continence in war and ceremonies,

[1] It may be observed that Kolonia, when visited in January, 1895, failed to corroborate the descriptions of Mashém and the matrons, but his failure occasioned little surprise for the reason that he has not lived with his bride since early boyhood, and is equally unacquainted (or unconcerned) concerning the mythic ceremonies, and even the taboos of the tribe.

2: Kroeber E-5 (1930) 1931 NU31 Seri NU31

on a string around his neck, which he got from his father. It is a two inch length of cane, with a wooden stopper, containing a white powder of stone (?). A little of this powder put into fresh water, brings dew; into salt water, rain. 778 781

Similarly, Chico Romero wears on his neck a tiny spool-shaped object of wood, scarcely 2 cm. long, with notched ends. When he dies, this will burst; or rather, it seems that a larger object of the same shape, which another man keeps, will burst with thunder.

To get luck, a man paints a "cross" on his forehead, breast, and "heel" and goes to sleep. Then a dream comes in which he gets what he is thinking of. Sometimes the dream comes true; sometimes not. Some dreams are lies. 787

The soul (*alma*), he'ë'sax, is all over the body and is noiseless. It is "nearly the same as blood": when the blood is lost, the soul goes. Some say that when the Seri die they are reborn in the north as Cocopa. 774 775

There seem to be no special beliefs or practises about twins. 845

Antiso'ma (— Montezuma?) is the size of a child, has a beard, a golden staff, white clothes inside and black outside. He lives in a cave. Once he tried to take a young man away with him in order to dress him nicely. Later the young man's relatives went with him to find Antiso'ma again, but could not. 776

Songs

Toad was a woman who had only a breech-clout and wanted a cotton shirt. She said she would give herself to a man for one. 533

Coyote was a Seri once.

Pinacate (dung-beetle?) wanted a bride and was jealous about her.

Colaprieta, the black-bellied ant, also was a man and wanted to marry the hokó'ctim ant. He was making a house of grass for her. She was afraid of him, and her relatives took her away.

Games

The four-tube-hiding game is played with canes open at one end. These canes are: blackened all over, old man; unpainted, old woman; blackened at one end, boy; blackened in the middle, girl. The boy and girl are made by slitting off slivers on two sides. The names serve as designations only; the differences between the tubes do not enter into the game. The player with the tubes turns around, puts a piece of twig into one, fills them all with sand, and throws them before his opponent, who tries to empty the twig from the *third* tube he selects. If so, he wins the canes, that is, the right to play. If the twig is in the first tube emptied, he loses 10; if in the second, 6; if in the fourth, 4. Counters are little natural shell disks. 524

semi-darkness.

Soon two little boys joined the dance, stepping up and down in the sand. Lighted only by the flickering flames of the driftwood fires on the shores of this mysterious and dreaded isle, the soft murmur of the sea as a refrain to the wild chanting, the weird circling of glittering eyes, and wild dark faces, presented a scene of uncanny and savage fascination witnessed by white men probably for the first time.

After each stanza there was a short rest. The singing was similar to most other tribal chanting.

Bob made the remark that the girl was old enough to be broken in by the old Chief. I said, "How?"

He said, when a girl thirteen or fourteen has her menses, the Chief takes her and goes through the family act. This is called 'breaking her in'. She is then eligible for marriage. A young man desiring marriage has to purchase the girl by giving the father a boat or rifle, both being necessary to the Seri's existence and protection. At the wedding they have sort of a fiesta and much mescal is drunk, which properly solemnizes a wedding.

When a girl has a baby it usually comes very naturally and easily, but I remember one girl's first baby was three days in coming, and she suffered a great deal. This was on a subsequent trip. She was staying with many of her people on the mainland and someone asked them if they didn't want a doctor or other help. They said: No, they had one. It was a Medicine Man who chanted over the girl and dug hollows in the sand to fit her heels into. He said that the legs had to be kept apart. This was all he did. But ordinarily there is no trouble, and if a baby is born at noon the mother is up and doing, and cooks supper for her lord and master. The men treat their wives with kindness and each shares with the other any delicacy.

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They hunt lice in the head and eat them. This is said to increase the amorous desires. The penis of the male turtle is cut out and dried. This is pounded and pulverized and placed in the food of the women. This is said to create a desire for a man and the family act.

242 Burro meat comes first in their estimation, then mares, then steers, but they take what they can get and no questions asked. Burro deer or black tail is a great article of diet, and these deer are on the Island. Wolves and coyotes are on the Island also. I do not think they eat them.

266 As I have said, the Seris are reputed to be cannibals, or to have been. Since those who furnished the meals cannot speak, it is a matter not entirely proven.

648 177 There is a war on between Mexican fishermen and the Seris. The Seris are wild for boats and will do almost anything to get one, so two years ago a chance occurred and they killed seven drunken Mexican fishermen and seized their boat. Last summer, some fishermen surprised the Seris, killed one, and recovered the boat. They mourn this boat a lot more than they do the dead man.

648 Twenty or thirty years ago, Governor Ysabel came here with some troops to capture some Yaquis who had joined the Seris. The Governor told the Chief he would have to give up the Yaquis, as they were outlaws. The next day the Seris brought in six right hands. They said they had killed the Yaquis. Asked how and why, they said they had killed them while they slept and they wanted their guns. They cut off the right hand of each as proof.

With all their apparent friendship, we never go without arms. When we sleep our rifles are alongside of us, and we wear our revolvers with us. Sometimes we roll in with our clothes on. But they have never, by sign or act, shown anything but friendship.

851 123 177 A baby boy about four months old was in camp, so Rafael Ysabel baptized him and gave his name Rafael, and presented him with a little gold cross of which his mother was very proud. She held the baby while he poured a little precious fresh water over its head and repeated:

"In the name of the Father, Son and Holy Ghost, I name thee Rafael. . ."

123 Curious black eyes follow us always. When we eat, the Seris often squat around us and watch every mouthful. If there is any bread, gravy, grease, beans or meat left over, we pass it on and they certainly clean up.

While we eat, the waves are always lapping on the shore upon which many pretty shells are thrown by the tide, besides water-worn pumice stone in all sizes down to a small marble.

Our meals are very simple. We bake biscuit in the dutch oven for every meal, cook turtle meat, if we have it, or beans or rice or spuds.

[Text continues on p. 171]

3:Davis & Dawson E-5 (1922-1940) 1948
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FIG. 12. SERI MOTHER AND BABE

SERI MOTHERS COMMONLY HAVE TOO MUCH MILK AND FREQUENTLY RELIEVE THEMSELVES BY SUCKLING AN ORPHANED PUPPY OR SOMETIMES EVEN A BABY PIG.

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ing, and were carried in cane tubes. The paints were carefully prepared, applied, and preserved, and, as indispensable feminine accompaniments even on the longest journeys, were among the most highly prized of the people's possessions. The importance of the face-painting custom, established in the old tribal life, remained strong even as the slaughter of the warring tribe progressed

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[p. 201(B)]

123 484 Then Chico Romero and his load of children and dogs arrived and he unloaded his impediments on the beach, and soon the women came walking along the beach and joined the party. The boats carrying the heavy things and children; the women, with their babies and a few light things on their heads, walk along the beach when possible and follow the boats, which hug the shore to avoid the strong currents and tide. The boats are propelled by paddles mostly, though some of the Indians use oars. The women are slightly built, slender and inclined to be gaunt, owing to the hard life and lack of food. Their cheek bones are quite prominent and their profiles present protruding lips.

412 [36] Having no permanent homes, moving hither and thither for their various food supply, household things are not accumulated and life is reduced to its very simplest elements and absolute necessities.

Crude baskets made from shoots of the torote tree, vessels in which to cook, and some patched rags in place of Pelican skins to serve as blankets to the fortunate few, constitute the family possessions. Strange to relate, many of the women have an over-supply of milk, and according to Roberto have puppies nurse what the babies cannot take. One woman was known to nurse a baby pig on one side and a puppy on the other.

[264] [264] Family dogs lick all cooking vessels which is unnecessary as they are thoroughly clean when the Seris are through with them, and also lick the infants clean after performing their natural functions, so they are quite indispensable. I saw a Seri girl place on the sand a small can of water for a dog and then saw her drink some of the remainder and pour the rest back in a five-gallon can. Dogs frequently swim across the Infernillo to join their masters.

732 Asked about cripples and incompetents, Roberto said they probably did not exist. The conditions of survival were too precarious to admit of anyone living who was unable, by physical disability, to hunt or fish. There are two or three men who are nearly blind or so. The wives of these men eke an uncertain living for them by the hardest struggle. The sea turtle is the staple; one man and one good boat can secure a living for five families. There are now nine boats, but one boat to a family would practically free them from continual want. With the exception of four bones in the flippers and the bones of the head, all the sea turtle is used---the meat, blood, entrails, shell which furnishes food and oil, skin of flippers which furnishes sandals, sinew for strings. Nothing is wasted except contents of the entrails.

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123 Again, we laid our blankets on the clean white sand of the shore and were lulled to rest by the murmuring sea.

123 484 Daylight found us up the next morning, and we breakfasted, rolled up our blankets, pushed the boats into the sea and were off by the time the sun rose over the mountains and shone over a glassy sea. Two Seris towed their boat by a tump line, while a boy of twelve steered

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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SERI MOTHER AND CHILD

[P 142 A]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

291 [177] Of all the party at Costa Rica in 1894 subchief Masbém was the only one who wore Caucasian apparel with any air of comfort and fitness; yet even he, with hat and shirt, boots and breeches, and loose bandana about his neck in cowboy style (plate XVII), did not feel fully dressed without the slender hair-cord necklace of his kin in its wonted place. On the frontier improvised fig-leaves were sometimes put on the children of less than a dozen years (as illustrated by the standing infant shown in plate XIV, who was thus dressed hastily for her picture); and a common garb of the smaller children at Costa Rica, as they played about the rancheria or wandered in directions away from the white

[412] [854]

FIG. 29—Seri hairbrush.

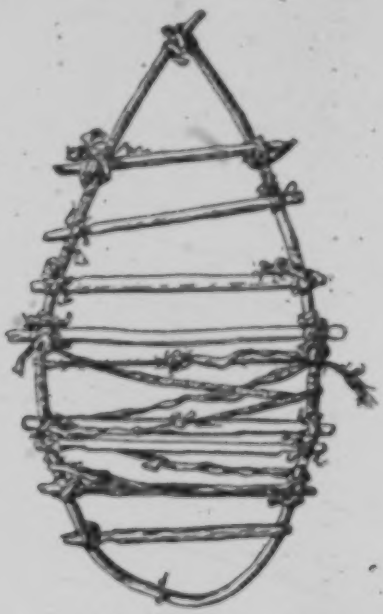

FIG. 30—Seri cradle.

man's rancho, was limited to a cincture of hair cord or snake skin, or perhaps of agave fiber, under which an improvised kilt might be tucked on the Caucasian's approach.

281 513 In addition to the individual apparel, each clan, or at least the elder woman or her fraternal executive, accumulates some surplus material as opportunity offers, and this serves as family bedding until occasion arises for converting it to other uses. Of late the prevailing materials are pelican skins, lightly dressed and joined into robes by sinew stitching; deerskins, dried or partially dressed; cormorant skins, treated like those of the pelican; seal skins, usually fragmentary; peccary skins,

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

281 apparently dried without dressing, together with
513 skins of rabbits, mountain sheep, antelope, etc, usually tattered or torn into fragments. Commonly the hides and pelts are nearly or quite in natural condition, retaining the hair, fur, or feathers. The dressing is apparently limited to scratching and gnawing away superfluous flesh, followed by some rubbing and greasing; tanning is apparently unknown. By far the most abundant of the collective possessions are the pelican-skin robes, which form
[439] the sole article of recognized barter with aliens. The aggregate stock accumulated at any time is but meager, never too much to be borne on the heads and backs of the clan in case of unexpected decamping.

412 Aside from the painting paraphernalia, there is
302 but a single conspicuous toilet article; this is a hair-brush made of yucca fiber bound into cylindrical form, as illustrated in figure 29. This article is in frequent use; both women and men give much attention to brushing their own long and luxurious locks and cultivating the hair and scalps of their children, the process being regarded as not only directly useful but in some measure sacramental. Ordinarily the hair is parted in the middle and brushed straight, the tresses being permitted to wander at will and never braided or bound or restrained by fillets save in imitation of Caucasian customs on the frontier; though in certain ceremonies the pelage is gathered in a lofty knot on the top-head.[1]

854 The Seri cradle is merely a bow of paloblanco or other switch with rude cross-sticks lashed on, as shown in figure 30. On this is laid a small pelican-skin robe, with a quantity of pelican down for a diaper, and perhaps a few pelican feathers attached as plumes to wave over the occupant's face; though on the frontier these primitive devices are largely replaced by rags.

283 Among the important appurtenances of Seri life are the cords used for belts and necklaces, as well as for the attachment of ceremonial headdresses, for converting the kilts into bags, and for numberless minor purposes. The finest of these are made from human hair; and for this purpose the combings are carefully kept, twisted into strands, and wound on thorns or sticks in slender bobbins, such as that illustrated

FIG. 31.—Hair spindle.

[1] Cf. Bandelier, Travels, p. 200.

2: Kroeber E-5 (1930) 1931 NU31 Seri NU31

is what their "shirt" (McGee, pl. 29) probably was. The fabrics of McGee's Mexican informant may refer to gunny-sacks made over into improvised imitations of civilized garments; or to single-element carrying bags. It is entirely possible that contact with the cloth-weaving tribes of Sonora long ago induced the Seri to shrink from habitual complete nudity; but it is difficult to imagine them producing even a coarse wearable cloth. McGee's interpretation of the historic sequence of Seri garments is of course wholly speculative.

The cradle shown by McGee (p. 226, fig. 30) consists of a kite-shaped hoop with eight sticks tied across it and a lashing thong passed back and forth across it half-a-dozen times. Even allowing for some slip of the parts in transport to Washington, this specimen is quite typical in Seri disregard of evenness, neatness, order, or finish. The Yaqui cradle illustrated by Hrdlička[7] consists of eight or nine lengthwise sticks or canes twined close together. The Lower Californians used a basket or a turtleshell. The Gila Pima and river Yuman cradle is of "ladder" type, and therefore similar in structure to the Seri except that it lacks the point at the bottom and has the sides parallel; it also carries a hood of wickered or twilled splints. As regards basic structure, one form of Maidu cradle is most similar to the Seri; just as the plan of the Yaqui one reappears among Miwok, Yokuts, and Mono a little further south in California.[8] It appears from this irregular distribution that so simple an apparatus as the open or flat baby-carrier, which can be just as serviceable without a definite technique or style entering into it, is likely to vary locally without much significance, and that its forms will indicate historic connection only when they are parallel in a number of details. In these respects it resembles house types. In both these objects, new "inventions," certainly of detail elements and perhaps of basic structure, seem to be readily made and adopted.

McGee's finding (p. 247) that the Seri are "not habitual stone arrow-makers" has a parallel among the river Yumans, and, at least partially, among the remaining Sonoran tribes. His conclusion (p. 259) that the *yerba de la flecha* (magot, Sebastiana bilocularis?) was an Opata but probably not a Seri arrow poison, seems sound. The plant was shown me on the island, and the Seri knew it as venomous, but volunteered nothing as to using it on arrows.

That the question of Seri cannibalism must be left open, with a preponderance of evidence against the practice (p. 263), also seems a conservative judgment.

As to shields, McGee learned of loose pelican pelts and turtle-shells (p. 264), I of armor and a large upright shield of hide. Both accounts may be right, one referring to emergency pick-ups, the other ——— to prepared defence or attack.

[7] AA 9, pl. 9, 1904.
[8] BAE-B 78:535, fig. 62, pls. 38, 46.

2: Kroeber E-5 (1930) 1931 NU31 Seri NU31

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FIG. 5 (upper left). *Maria, wife of Chico, with their baby.*

FIG. 6 (upper right). *Heavier Seri type on beach of Tiburon Island, a bay of El Infernillo in background.*

FIG. 7 (lower left). *Man, youth, and boy.*

FIG. 8 (lower right). *On Punta San Miguel, mainland, mangroves in background.*

2: Kroeber E-5 (1930)1931 NU31 Seri NU31

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FIG. 9 (upper). *Seri children showing variety of expressions at camera experience.*
FIG. 10 (lower left). *Young woman with sickly baby.*
FIG. 11 (lower right). *Two girls, the shorter unmarried.*

3:Davis & Dawson E-5 (1922-1940) 1945
NU31 Seri NU31

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FIG. 12. SERI MOTHER AND BABE
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302 the face-painting custom, established in the
614 old tribal life, remained strong even as the slaughter of the warring tribe progressed

[p. 201(B)]

[92 cont.]

156 They are principally the result of influences that act dur-
●854 ing the first years of life: constant contact of the skin with that
155 of adults; immobilization of the extremities by cloth wrappings; provision of a permanent support in the form of a cradle to which the child is fastened; constant attention to his alimentary needs, and continuous supervision of his actions.

155 "Give me bread," "give me coffee," "you have food, I
156 am hungry," "why do you keep food?" "that's the way things are," etc., are very common expressions that manifest the Seri personality.

000 On the other hand, from the practical point of view (2),

226 3. For the present fishing promoters, the
439 Seri personality is a serious obstacle: because of the wealth of marine fauna, the competent Seri obtain a good catch in a few hours, and their earnings permit them to live several days, which would be multiplied if the yori would not resort to the sale
[276] of marijuana at excessive prices to obligate them to work.

it has to be greatly altered, above all in so far as it influences the personality, in order to raise the Seri standard of living, changing their habits, ideas, and values.

7: Marroquin E-5 (1955) 1957 NU31 Seri NU31

Geographical Distribution

The Seri Indians live in two small Indian villages on the coast of the Gulf of California, State of Sonora, Desemboque and Punta Chueca. From there they frequently go to Isla Tiburón in the Gulf of California.

Approximately 35 Seri families live in Desemboque and 16 in Punta Chueca. Only in the first of these two places are there five "yori" (mestizo) families.

Sanitary Problems

The Seris have no defense against certain diseases which, like measles and flu, they acquire in their relations with the "yoris"; these diseases cause many deaths among the Indians. According to the ancient Seri Chico Romero, last Seri Governor, there was a great smallpox epidemic there about 1897 which caused the death of a third of the tribe which was living in Costa Rica, a small ranch on the coast of Sonora.

Seri Indian woman of Desemboque, Sonora. *Photo Henriette Yurchenco.*

In 1955 measles appeared among the Seris, with a great number of victims, children and adults; the actions of the rural teacher Leo Sandoval, the Linguistic Eduardo Mosser and of the sanitation authorities of Hermosillo, succeeded in keeping the mortality rate down; nevertheless, the number of deaths reached 5% of the total native population.

123 handed to show their friendliness.

142 One was a young man with rather pleasant features, his braided
291 hair hanging below his shoulders. His name was Antonio Herrera. The
123 other was a wild-looking specimen called Ramon Blanco. His hair was a
[302] tangled mat with a short braid behind, suspicious black piercing eyes,
long sparse moustache and chin-beard hiding a broad cruel mouth. He
[411] wore the remnants of an old sweater, a short dirty kilt, or skirt,
nearly to his knees, a belt full of cartridges, mostly empty, and a
long knife in a rawhide scabbard.

123 The young man had been baptized and given a name by Roberto, who
[785] had acted as godfather or *patrona*, many years ago. He wore a hat,
[291] jacket, and pants of blue denim, and *guaraches*, or sandals of rawhide.

We shook hands all around and then they called and halloed in the brush and soon three women and a lot of children, wild and half-
[415] clothed, filed into camp. The women were tall, gaunt, unkempt, ragged
[482] and barefooted, paying us not the slightest notice. They were bearing
[422] on their heads large baskets filled with all their earthly posses-
[850] sions---cooking ollas, scraps of cloth, pieces of turtle meat, bone
[231] brads, hair brushes, and odds and ends. They carried, also, an infant or two wrapped in odd bits of rags. Several gaunt dogs followed in their wake.

342 In all, three families came trailing in, removed their household
[512] equipment from their heads and resumed their interrupted and primitive housekeeping. Each family occupied its apartment in the row of brush shelters, separated from each other only by brush partitions with a total lack of privacy. These shelters, always open to the sea, serve as shade from the fierce rays of the sun, and also as windbreaks, but
[561] are no protection from infrequent rains. They are occupied only for a brief period and then their nomadic tenants move on to fresh *cahuamas*, or sea turtle range.

123 Soon, a third man arrived while we were near the huts, Manuel
[142] Encina. He was a man of sixty-five, gray hair and mustache, seamed features, and not evil looking. He was out of breath. He had gone for water to the same water hole where we had been yesterday, struck our tracks, had left his water cans and hurried back to warn his people. He was greatly relieved to find friends.

Since he had gone for water, inquiry revealed there had been no water in camp for two days, and six adults and one girl of thirteen and six children were thirsty. We gladly gave them one of our five-
[225] gallon cans of water and they were very grateful. They had caught a
[262] sea turtle the day before and gave us some turtle steaks which looked like beef or mutton.

312 As the camp was without water and we were running short, the young
482 man and Encina offered to get some. Each took a *palanca*, or short
123 shoulder pole with knotched ends, fitted empty five-gallon cans in

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Santo Blanco and Edward H. Davis - this hombre gambled away his only shirt - Sonora - 1929

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Seri method of carrying infant

123 Then Chico Romero and his load of children and dogs arrived and
484 he unloaded his impediments on the beach, and soon the women came walking along the beach and joined the party. The boats carrying the heavy things and children; the women, with their babies and a few light things on their heads, walk along the beach when possible and follow the boats, which hug the shore to avoid the strong currents and tide. The boats are propelled by paddles mostly, though some of
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[859] are thoroughly clean when the Seris are through with them, and also lick the infants clean after performing their natural functions, so they are quite indispensable. I saw a Seri girl place on the sand a small can of water for a dog and then saw her drink some of the remainder and pour the rest back in a five-gallon can. Dogs frequently swim across the Infernillo to join their masters.

732 Asked about cripples and incompetents, Roberto said they probably did not exist. The conditions of survival were too precarious to admit of anyone living who was unable, by physical disability, to hunt or fish. There are two or three men who are nearly blind or so. The wives of these men eke an uncertain living for them by the hardest
262 struggle. The sea turtle is the staple; one man and one good boat can
433 secure a living for five families. There are now nine boats, but one
501 boat to a family would practically free them from continual want.
262 With the exception of four bones in the flippers and the bones of the
237 head, all the sea turtle is used--the meat, blood, entrails, shell which furnishes food and oil, skin of flippers which furnishes sandals, sinew for strings. Nothing is wasted except contents of the entrails.

123 Again, we laid our blankets on the clean white sand of the shore and were lulled to rest by the murmuring sea.

123 Daylight found us up the next morning, and we breakfasted, rolled
484 up our blankets, pushed the boats into the sea and were off by the time the sun rose over the mountains and shone over a glassy sea. Two Seris towed their boat by a tump line, while a boy of twelve steered

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

blocks or metates, though it is manifest that most of the camps were fireless and many fireless. It is particularly noteworthy that even the more temporary resting-places are seldom if ever less than a mile or two from the nearest fresh water. In short, the Seri are not a domiciliary folk, but rather homeless wanderers, customarily roving from place to place, frequently if not commonly sleeping where overtaken by exhaustion or storm, ordinarily slumbering through a part of the day and watching by night, habitually avoiding fresh waters save in hurried and stealthy visits, and apparently gathering in their flimsy huts only on special occasions. 361 [312]

In conformity with their rovingness the Seri are notable burden-bearers. They habitually carry their entire stock of personal belongings (arms, implements, utensils, and bedding), as well as their stock of food and—weightiest burden of all—the water requisite for prolonged sustenance amid scorching deserts, in all their wanderings, the water being borne chiefly by women, in ollas, either balanced on the head singly or slung in pairs on rude yokes like those of Chinese coolies. And they have never grasped the idea of imposing their burdens on their bestial associates; their coyote-curs are not harnessed or even led; when they surround and capture horses, burros, and kine they make no use of ropes, never think of mounting even when pursued by vaqueros, but immediately break the necks or club out the brains of the beasts, perchance to tear the writhing body into quarters and flee for their lives with the reeking flesh still quivering on their sturdy heads and brawny shoulders—and scores of vaqueros agree in the affirmation (wholly incredible as it would be if supported by fewer witnesses) that even when so burdened the Seri skim the sand wastes of Desierto Encinas more rapidly than avenging horsemen can follow. 482 [231] 224 177 [481]

The hardly conceivable fleetness of the Seri is conformable with their habitual rovingness and their ability as burden-bearers; and this faculty is established by cumulative evidence so voluminous and consistent as to outweigh the presumption arising from the standards attained among other peoples. A few minutes after they were photographed, the group of boys shown in plate XVI, with several others of about the same size, provided themselves with a stock of their favorite human-hair cords, "rounded up" a dozen mongrel coyote-dogs haunting the rancheria at Costa Rica, and herded the unwilling animals toward a shrubbery-free space a quarter of a mile away, in order to race them in imitation of the work of the Mexican cowboys earlier in the morning. From time to time as they went a frightened cur sneaked or broke through the cordon of boys, and made for distant shrub-tufts at top speed; yet in every case a boy darted from the ring, headed off the animal within one or two hundred yards, and lashed it back to its place. On arriving at their miniature rodeo the boys widened their ring, and at a signal scattered and frightened the dogs; then, when the fleeing animals had a fair start, each selected his victim and fol- 177 231 481 857

I: McGee E-5 (1894-1895)1898 NU31 Seri NU31

lowed it, yelling and swinging his light lasso, until, after much doubling and dodging and many unsuccessful casts, he caught and dragged the howling beast back to the open; and it was only after half a dozen repetitions that enough dogs had escaped to spoil the sport. As the boys lounged chattering back toward the rancheria their course lay between two clumps of the usual desert shrubbery, so placed that when the first was obliquely left and 40 or 50 feet distant from them, the other was obliquely right and 100 feet away. At this point a bevy of small birds (perhaps blackbirds—at any rate corresponding to blackbirds in size and flight) fluttered suddenly out of the nearer clump toward the more distant one, when, too instantaneously for the untrained eye to catch exchange of signal or beginning of movement, the boys lunged forward in a common effort to seize the birds; and though none were entirely successful, one exultantly displayed a tuft of feathers clutched by his fingers as the bird darted into and through the thorny harbor. When the distances were paced it was found that, although the birds had the advantage of the start, the boys covered at least 90 per cent of their distance in the same time; while the spontaneity of the impulse demonstrated habitual chase of flying game under fit conditions.

While obtaining the Seri vocabulary with Mashém's aid, advantage was taken of every opportunity to secure collateral information concerning the actual use of the terms, and thereby of gaining insight into the tribal habits. Through his naive explanations, usually repeated and corroborated by the elderwoman of the Turtle clan (Juana María) and others of the tribe, it was learned that half-grown Seri boys are fond of hunting hares (jack-rabbits); that they usually go out for this purpose in threes or fours; that when a hare is started they scatter, one following it slowly while the others set off obliquely in such manner as to head it off and keep it in a zigzag or doubling course until it tires; and that they then close in and take the animal in their hands, frequently bringing it in alive to show that it was fairly caught—for it is deemed discreditable, if not actually wrong, to take game animals without giving them opportunity for escape or defense by exercise of their natural powers. Similarly, Mashém described the chase of the bura and other deer as ordinarily conducted by five persons (of whom one or two may be youths), who scatter at sight of the quarry, gradually surround it, bewilder it by confronting it at all points, and finally close in either to seize it with their hands, or perhaps to brain it with a stone or short club; the former being held the proper way and the latter a partial failure. This hunting custom, described as a commonplace by Mashém, is established by the vaqueros who had frequently witnessed it from a distance; and the same extra-tribal observers described still more striking feats of individual Seri hunters: Don Manuel, son of Señor Encinas, and Don Ygnacio Lozania were endeavoring to train to work a robust Seri (one of a band sojourning temporarily at Costa

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

224 While by far the larger share of Seri sustenance is drawn from the sea, a not inconsiderable portion is derived from the land; for the warriors and striplings and even the women are more skilful hunters than fishers.

The larger objects of the feral chase are deer of two or three species (the bura, or mule-deer, being most conspicuous and easiest taken), antelope, and mountain sheep; to which the puma, the jaguar, and perhaps two or three other carnivores might be added. The conventional method of taking the bura and other deer is a combination of stalking and coursing, usually conducted by five of the younger warriors, though three or four may serve in emergency; any excess over five being regarded as superfluous, or as a confession of inferiority. The chase is conducted in a distinctly ceremonial and probably ritualistic fashion, even when the finding of the game is casual, or incidental to a journey: at sight of the quarry, the five huntsmen scatter stealthily in such manner as partially to surround it; when it takes fright one after the other strives to show himself above the shrubbery or dunes in order to break its line of flight into a series of zigzags; and whether successful in this effort or not they keep approximate pace with it until it tires, then gradually surround it, and finally rush in to either seize it in their hands or cripple it with clubs—though the latter procedure is deemed undignified, if not wrong, and hardly less disreputable than complete failure. When practicable the course is laid toward the rancheria or camp; and in any event the ideal finish is to bring the animal alive into the family group, where it may be dissected by the women, and where the weaklings may receive due share of the much-prized blood and entrails. The dissection is merely a ravenous 264 rending of skin and flesh, primarily with the teeth (perhaps after oblique bruising or tearing by blows with the hupf over strongly flexed joints), largely with hands and fingers aided anon by a foot planted on the carcass, and partly with some improvised device, such as a horn or tooth of the victim itself, the serrated edge of a shell cup, or perhaps a sharp-edged cane-splint from a broken arrow carried for emergency's sake. Commonly the entire animal, save skin and harder bones, is gulped at a sitting in which the zeal of the devotee and the frenzy of the carnivore blend; but in case the group is small and the quarry large, the sitting is extended by naps or prolonged slumberings, and [252] the more energetic squaws may even trouble to kindle a fire and partially cook the larger joints, thereby inciting pallid appetite to new efforts. Finally the leg bones are split for the marrow and their ends [237] preserved for awls; the horns are retained by the successful huntsman as talisman-trophies; while the skin is stretched in the desert sun, [281] scratched and gnawed free of superfluous tissue, rubbed into partial 224 pliability, and kept for bedding or robe or kilt.

857 The chase of the hare is closely parallel to that of the deer save that it is conducted by striplings, who thereby serve apprenticeship in hunt-

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

ing and at the same time enrich the tribal larder with a game beneath the dignity of the warriors; while still smaller boys similarly chase the rabbit, which is commonly scorned by the striplings. The conventional hare-hunting party is three, and it is deemed disreputable to increase this number greatly. The youths spread at sight of the game and seek to surround it, taking ingenious and constant advantage of the habit of the hare to run obliquely or in zigzags to survey more readily the source of its fright; for some time they startle it but slightly by successive appearances at a distance, but gradually increase its harassment until it bounds hither and thither in terror, when they rapidly close in and seize it, the entire chase commonly lasting but a few minutes. The quarry is customarily taken alive to camp, where it is quickly rent to fragments and the entrails and flesh and most of the bones consumed; the skin usually passes into possession of a matron for use as infantile clothing or cradle bedding, while the ears are kept by the youth who first seized the game until his feat is eclipsed by some other event—unless chance hunger sooner tempts him to transmute his trophy into pottage.

While the collective, semiceremonial style of chase alone is thoroughly good form in Seri custom, it is often rendered impracticable by the scattering of the tribe in separate families or small bands, in which case the bura and its associates, like the larger carnivores customarily, are taken by strategy rather than by strength. This form of chase is largely individual; in it archery plays a leading rôle; and in it, too, ambuscade, stealthy lying in wait, and covert assault attain high development. It is closely analogous with the warfare typical of the tribe; and it is especially noteworthy as one of the most effective stimuli to intellectual activity, and hence to the development of invention—if the term may be applied to industrial products so lowly as those of the Seri.

The chief artifact produced by the strategic chase on land would seem to be the analogue of the harpoon used at sea, i. e., the arrow. This weapon is one of the three or four most highly differentiated and thoroughly perfected of the Seri artifacts, ranking with canteen-olla and balsa, and perhaps outranking the turtle-harpoon. It is fabricated with great care and high skill, and with striking uniformity in details of material and construction. A typical example is 25 inches in length and consists of three pieces—point, foreshaft, and main shaft (feathered toward the nock). The foreshaft is 8¼ inches long, of hard wood carefully ground by rubbing with quartzite or pumice into cylindrical form, about three-eighths of an inch in diameter at the larger end and tapering slightly toward the point; the larger end is extended by careful grinding into a tang which is fitted into the main shaft, the joint being neatly wrapped with sinew. This main shaft is a cane-stalk (*Phragmites communis*?) 15 or 16 inches long, carefully selected for size and well straightened and smoothed; it is feathered with three equidistantly-

262 important source of meat for the Seris, and sea-gulls are occasionally killed and likewise abandoned, except when famine threatens. The above examples most likely apply to other varieties of animals as well.

No specific food taboos were discovered in the course of field work except the unexplained reluctance to eat certain species. McGee (1898) reports a taboo on eating sea-lions but my informants asserted that these mammals were hunted in the past for both their flesh and hide. All of my informants denied that the Seris eat cougars, and this abhorrance has been confirmed by the Mexicans. Yet the Mexicans themselves do hunt and eat these big cats. McGee 225 (1898:196, 202) again casually mentions cougars and jaguars as being hunted by by the Indians but gives no evidence for this. It should be mentioned that only a few Seris know what sort of an animal the jaguar is, and these know it only from hearsay as "huge animal inhabiting the mountains far in the interior". There are occasionally some migrant jaguars in Seri territory.

Pets

231 The Seris have only a limited variety of pets. Dogs are very numerous, each family keeping many of them. Although they maintain that the dogs are acquired in order to keep the coyotes away from the camps, there is nothing in their camps that a coyote would want to steal. There are a few cats and several species of wild desert doves which are often caged. Wild animals in captivity are, as a rule, those which accidentally come into the hands of the Indians. On one occasion a badger was kept tied to a house post for a couple of weeks and fed on fish heads, snakes, lizards and water until one night when it made its escape.

257 Of the insects, only the singing male Cicadas are captured by the roving Seri boys. These are tied to a long thread and having their fore-wings partly clipped, they are released into the air like kites. Local Mexicans also provide a similar kind of toy for their children.

Classification of Animals

215 Seri taxonomic notions of the animal world are vague and indistinct. No conscious classification exists and perhaps none should be expected of non-literate people. But there is a random association of animals based on the external similarities of form, habits and habitat. A clear distinction is made between plants and animals. Quite obscure animals, for example, the Echinoderms, Holothurians, Coelenterates or barnacles, are classed as animals and not as plants. It seems that voluntary movement is used here to distinguish the two categories. Thus, informants insisted that sea-anemones and jelly-fish are animals and not plants. One difficulty arises in the case of sessile barnacles. It is hard to account why those growing on the sea-turtles are classified as animals and are called "turtle fleas".

In the assemblage of major animals, the mammals form one group and birds and fish others. Since general similarity of form and not real structural affinities are the primary reason for these associations, the bats "are not birds, but are probably mammals because they have fur". Thus, sharks and

8: Ascher E-5 (1960) 1962 NU31 Seri NU31

McGee (1898:214)

estimated that maritime resources provided two-thirds of the Seri diet. Kroeber (1931: 20), approximately 30 years later, estimated the proportion at about three-fifths. In the winter of 1960, 30 years after Kroeber's visit, the Seri were obtaining at least three-fifths of their food from the sea.

In pursuit of their main source of subsistence, the Seri travel up and down the narrow coastal band. In the winter of 1960 they were occupying one temporary camp toward the southern end of the band and a permanent camp at the northern extreme. Seri women and children gather molluska; fishing is a male occupation. In addition to gathering and fishing for their own needs, the Seri dispose of a portion of their catch on the commercial market. This enterprise began about 1930, and was encouraged by the establishment, in 1958, of the Sociedad Cooperative de Produccion Pesquera Seri with the cooperation of the Mexican government.

The Pacific green turtle constitutes the largest single item in the Seri diet for at least six months of the year—from January to June—and it is also caught occasionally at other seasons. In 1896 McGee estimated that it provided 25 per cent of the total food supply. Emphasizing the intimate ecological relationship between the Seri and the turtle, McGee (1898: 186-187) wrote:

> ... perhaps half of the aggregate life of the tribe is spent within easy reach of its [the turtle's] feeding and breeding grounds, and tribesman and turtle have entered into an inimical communality something like that of the Siouan Indian and buffalo in olden time. ...

Kroeber (1931: 20) believed that McGee stressed the Seri-turtle relationship too strongly and overestimated its contribution to the diet. McGee (1898: 187), in support of the importance of the turtle to the Seri, points to the fact that the turtle carapace is used for, among other things, a house covering and buckler, a cradle, a coffin, and footgear. The carapace is currently used for supporting and roofing houses and as a starvation food. The contribution of the turtle to the diet varies from year to year, but observations made in 1960 suggest a range of from 15 to 20 per cent as a reasonable estimate.

Seri men fish for turtle from boats, which are manned by two or three men and are propelled by oars, sails, outboard engines, or any combination of the three. The boats operate either individually or in groups. The men fish by night or day, depending on the weather and sea conditions. When they fish at night, they use a kerosene lamp to attract turtles to the surface. The principal implement is the harpoon.

The harpoon tackle of the Seri is illustrated in Figure 1. It consists of a foreshaft (c-h), a mainshaft (j-k), and an extension cord (i). The component parts of the foreshaft are a projectile point (c), a gasket (d), a wrapping cord (f), a hafting base (g), and a lead cord (e and h). In preparation for turtle fishing, the hafting base (g) is plugged into the socket (j) on the main shaft (k), and the extension cord (i) is looped through the lead cord (h).

262 178 I have no idea, of course, what the diet may have been in the past since only archaeology can suggest the answer. But I am sure that there has been much change in their diet since Kroeber saw them, not in the basic pattern but in the composition. With the introduction of hook and line [177] fishing, the percentages swung in favor of fish, [226] while decimation of the marine turtle cut down the importance of this animal. Simultaneously, 262 the Seris now have available manufactured or [177] imported Mexican food items: flour, sugar, rice, [439] potato (when no one is looking; potatoes are not supposed to be sold to them because they make *tepache* from them which makes them grossly fish in cans, coffee and tea. Dependence on the products of the desert has dwindled. Rattlesnakes, desert turtles and chuckawalla still find their way to the Seri kitchen but not too frequently. Pelican and sea gull will be eaten only when rough times beset them but are disdainfully refused at other times. My own estimates, impressions not supported by any attempt to measure their diet, are as follows:

fish	50+%
turtle	8
Mexican import	20
desert plant	7
desert land animals incl. stock	5
shellfish	10
total marine origin	68+
total desert origin	12
imported origin	20

224 178 [685] Another important change in the pattern is the unquestionable decrease of hunting (other than marine animals) in Seri life, as of the domestic stock stealing, the place of which has been taken in a way by the dependence on manufactured foods and items. Hunting nowadays is done rarely and only few individuals will devote some months out of the year to it. Stealing of domestic stock [685] has ceased for practical purposes, since in the past it lead to virtual extermination of these Indians. Occasionally the Seri kill off a semi-wild burro, herds of which run about loose in the desert or they'll get leavings off one, hunted down by a Mexican trader or fishermen.

411 224 [857] The Seris' basic tools of game procurement have changed. Bow and arrow were still much in evidence and in use in McGee's time but seem to have gone out soon after. Kroeber did not mention them and by now they are quite extinct, except as clumsy toys little boys use to play with. The throwing stick is still used on rabbits—any stick one can scrounge on a moment's notice will do for the purpose. If any traps or falls had been used we do not know of them. Accidental stones may be used much in the same way as throwing sticks. In general, various sorts of fire arms, mostly .22 and .38 [177] caliber are owned by a good many Seri men and have replaced other weapons in the terrestrial hunt.

226 411 177 More important are changes in the fishing procedures. Formerly spear and detachable harpoon were their only marine weapons. Even as late as 1930, during Kroeber's visit, the Seris made no use of hook and line. But now, hook and line of

[P. 7A]

apparently a line of type has been omitted here-Analyst]

462 desert plants or littoral fishlets from tide-pools or of the shellfish. Both men and women will [224] bring in an occasional rattler, although women [857] are more likely to do this because they spend more time in the desert. Children of both sexes are [883] engaged in the female occupations here, but adolescent boys already join in their fathers' hunts on land or sea.

342 Housing has undergone some changes. In the 184 desert or on Tiburon the Indians construct the kind of shelter they did in the recorded past, an ocotillo frame, bent over in the middle and covered up with dried plant debris and twigs from the desert, or with the sail cloth. But in Desemboque they have more substantial houses—of wattle and adobe, with flat roofs, rectangular or square, often with corrugated tin or drift planks and other debris piled up on top, or along the walls.

178 In the remainder of their material culture, not much has been left from years past although one must remember that from the very beginning of recorded Serian history it has been of a most [291] meager sort. Pelican robes, which some Seris ap- [412] parently still wore in 1930 are gone for good. [323] So are the stone tools. So is the pottery which had probably disappeared in Kroeber's time. The hu- [301] man hair necklace with rattlesnake rattles is also [291] a thing of the past. The rattlesnake skin belts McGee (1898:170) described and figured are probably all gone. I havn't seen or heard of any.

412 But what remains much as they had been in 285 1894 are the bone-awls. These are made of burros' carpals and the blossoming of basketry, owing to

[p. 8A]

262 pelicans are not; they are regarded as "bad food," unfit for eating. No further explanation has been offered here and it might be that the same sort of prejudice works here as in the case of the adult birds. Otherwise, reasons for rejecting eggs for food are probably a matter of mere customary attitude without any particular rationalization. In a few instances, the dove being one example, the eggs were said to have been rejected because they were "too small to bother."

237 291 Other economic uses made of the birds are extremely few. At one time, the pelican skins were used for clothing and, in fact, in McGee's time they represented, perhaps, the most important item of clothing for the Seris, having been worn in shape of wrap-around robes, usually covering the lower part of the body. Moreno reported these robes as still is use "30 years ago or more," in the early twenties, but in Kroeber's time these [177] robes were already discarded in favor of the European garment. The Seri, nevertheless, still preserve skins of these birds—the white pelican, [439] larger of the two, always had been favored here—and occasionally sell them to the visitors. Another 237 use made of the feather is in the arrows. The 411 cormorants, heron and the owls had been especially mentioned in this connection. But it is certain that they were not the only birds so exploited and also that this particular use went out of business along with the disappearance of the bow and arrow as the principal weapons. The use of feather for arrows may well continue into the present in a somewhat degraded form. The Seri boys play a ● [857] great deal with bows and arrows, shooting them at any moving available target. They'll pick up any available feathers.

Pets

231 Somewhat desultory use is made of birds as pets. During my visit I have seen doves and an egret kept in houses as pets by the adults and fed quite frequently. The number and variety of birds which may become pets in households may well * 825 be larger. Pelicans and sea-gulls are less fortunate. They are often shot at and over-powered by 857 the boys. But instead of taking them to the households, the boys stage games, shooting them at point blank from bows and arrows and pea- shooters. These somewhat bloody executions take place almost every day. The pattern is the same. Only the subject of the game changes, depending on the available species of bird or animal.

Hunting

223 It is hard to speak of hunting in connection with birds, because there is so little effort made to go out and get them. The main exception is the duck and this, as I already mentioned, is hunted on Isla Patos and clobbered at night with sticks and stones in great numbers. This is one of the few instances in which the Seris will go out of their way to get a bird. Sea-gulls and cormorants and, more rarely, pelicans are dispatched by pea- [411] shooter (stone), sticks, small clubs and, on occasion, with a shot from a .22 caliber rifle.

[P.18A]

9:Malkin E-5 (1953-1955)1962 NU31 Seri NU31

*825 unmistakenly, nests in the mangroves of the Estero Sargente. Finally, the seagull is supposed to nest only on San Esteban, Isla Raza and Isla Patos which is not surprising when we consider the Seris' interest in the sea-gull eggs and the relentless persecution to which the adults are subjected.

Eggs

Along with some knowledge of the nesting habits, the Seris seem to have fairly detailed knowledge of the birds' eggs. Undoubtedly the prowling habits of the Seri boys help the matter. In any case, they were able to give a fairly detailed account of the number of eggs laid by each of the 11 species discussed above and of the size and color of the eggs. The number varied from species to species, from four (raven, hummingbird) to 8-9 (pelicans). On the whole, the size given increased with the size of the bird. as one might expect, but not always proportionately. This suggests another evidence for actual observation of these matters. The humming-bird egg has been described as unusually large in proportion to the size of an adult bird which is quite so.

[857]

The time of the deposition of the eggs has been usually indicated as March or April. A nondescript comment "in hot season" has been given for the cormorant. but evidently less is known about this bird and it is said to nest, as already pointed out. on the distant coast of Baja California. The only exception to the rule seems to be the barn owl. Here November has been indicated for the egg laying activity.

Development of the Young

Not much information concerning the nestlings has been obtained and such as there is concerns the time of their emergence. The standard idea on the subject seems to be roughly this: the young emerge one month. more or less, after the eggs are laid, and fly out of the nest a month later yet. Thus the time of emergence has been given in almost always either April or May, and the time of departure in May or June. The only exception is the barn owl where these three events, the Seris think. take place in November, December and January respectively.

From this it is plain that the Seris once more actually observed these matters and that according to them, almost all birds reproduce in the spring after the passing of the cold season but before the onset of the intolerable heat of the Gulf region.

Feeding Habits

Information concerning food habits of the birds is available for all but nine of the species listed in this section. With the sole exception of the humming-bird. dove and the woodpecker. all of the remaining 12 species are considered carnivorous, either predatory or carrion feeders or both. This is not surprising; the shore or marine birds are the most conspicuous and noticeable components of the bird fauna of the region. A majority of the species are said to be fish feeders, although some, like

[P. 19 B]

* 825 237 [322] quite possible but I couldn't substantiate the story from contemporary evidence. Perhaps during the height of the shark hunting for the liver oil, the Seris used the oil also for wood polish, although it isn't very clear just what sort of artifact they make would require such treatment. The wooden tools or artifacts among them are in short supply at all times. Finally, the huge horned manta was supposedly hunted also for its hide but just in what circumstances it was not explained. It is the only fish which the Seri ever mentioned as having been put to such use.

Fishing

226 As already mentioned, fishing nowadays is largely accompanied from flat-bottomed boats with hook and line. The old ways of getting fish by spearing are almost gone for good. Recently, an [177] attempt has been made to teach the Seris siene fishing, but 10 years of these endeavors accomplished only ruination of a number of expensive nets and of much fishing gear and the desertion [157] of the project by the Indians. It may be that their individualistic and almost anarchistic attitudes preclude cooperation, essential in this type of fishing.

The bait is obtained in any one of the three ways: by dynamiting fish in tide pools or along the shore, or by catching small fry with small hook and line, or finally by collecting small fishlets in the tide pools, prying them out from under rocks or simply—and here the Seri boys ex- [857] cel—by shooting them in the tide pools with tiny toy arrows or simply spearing them with a stick. [177] The dynamiting is done with the purchased sticks of dynamite which the Seris obtain in the tiendas. The procedure is often risky and down right dangerous. Some of the Seris have blown themselves up with dynamite. I have seen one of them, who lost both arms and had a jaw broken during a dynamiting trial. He went about with a dirty rag tied up over his head to support the wrecked [164] jaw-bone. He was carried off by measles two years later in the 1955 epidemic.

226 The Seris' commercial fishing is pretty much 648 controlled and exploited by the two or three Mexi- 439 can fish traders from Nogales and Hermosillo. 443 These have their tiendas in Desemboque, which at set price sell things to the villagers. They also provide the Indians with the five horse-power mo- [501] tors for fishing trips and pleasure cruises and with the oil and gasoline essential to run these—also at set price. They finally purchase the fish—at a set price—and from the proceeds the Seris purchase goods at the tiendas, completing the cycle. Not all Seris are compelled to work for the Mexicans, and, in fact, they do not always do so. Some [501] families stay away from Desemboque and depend on the sail and oars for propulsion. They come to the village only once every few months to obtain supplies. Even when in the village, the Seris make little effort to fish for more than they wish to get in order to satisfy their immediate needs.

226 Fishing expeditions usually take place in the morning. Most Seris will set off before daybreak and will return with the catch by 11 a.m. or noon.

*825 439 [226] [415] [435] que (as a result of the ecology of the coastal waters) it is gathered in huge quantities largely on the shores of Tiburon where it is said to occur in great numbers. This animal is gathered in large bulk in 5 gallon gasoline cans and then sold either as finished necklaces at the rate of five pesos each, or as bulk, by the liters, with 20 liters for each gasoline can. There is a steady market for these shells.

226 e) *Bait:* Only the octopus has been reported as used for fish bait for the *pinta*, *baya* and *pescaru*, and I have seen it used in that manner. But it is certain that on occasion the Seri will use also for bait the flesh of some of the shelled smaller molluscs, especially when they wish to capture live fishlets for bait.

Hunting

[462] [857] Collecting of molluscs is almost invariably a job of adult women and of the children of both sexes who at low tides scavenge the exposed mud flats and gather or dig out various marine animals. Some are collected on the surface only. Among those that must be excavated are the octopus and *Nioche* which hide in burrows or mud, respectively. A large shell is usually used as a tool to pry the *Nioche* out.

Taxonomy

*825 Molluscs on the whole are recognized as one group of animals. However, this does not include the octopus and the chitons which are considered as different sort of creatures. Some sort of feeble association between the *Pelecypods* and the *Gastropods* is recognized and various species of both are placed together. I noticed a tendency to consider some of the *Gastropods*, the limpets and *Crepidula* for example, as supposedly having two valves while in fact they are both univalves. The explanation offered for this was "it lost one side," meaning one valve.

Although *Chitons* spend most of their time motionless attached to rocks they are both considered animals. The motions of these animals may not [857] have been observed by the adult, but the Indians, young boys especially, certainly noticed the changed positions after a period of time.

In some instances the Seris observed quite small differences between animals—recognizing them as different species. In the *Neritina* two different forms were correctly identified as representative of the same species, although they differed considerably in size and color. On the other hand *Columbella* and *Solenostira* had been given the same Seri name palémex[x] but were recognized as different kinds of animals.

Sexing

A distinct tendency to consider the molluscan males larger than the females emerges readily from the Seri answers. This can be shown in the table below:

[P. 40 A]

9:Malkin E-5 (1953-1955)1962 NU31 Seri NU31

VIII

CRUSTACEA

Scientific	Common Name
Cirripedia	Barnacle
Axius vivesi	Mud-shrimp
Leptodius occidentalis	
Microphyrus platisoma	
Speleophorus schmitti	
Petrolistus armatus	
Callinectes arcuatus	
Glyptoxanthus meandricus	
Pilumnus townsendi	

All animals in this group are considered live animals—and not plants. This interestingly includes the barnacle. The only way one may account for this is probably the Seris' observation of the cracked barnacles and of the moving flesh inside. Barnacles growing on the marine turtles are also classed as animals, though of a different kind than the barnacles growing on rocks or on the mangroves. They are called *piojos de cahuama*, literally, turtle lice.

The Seris regard *Glyptoxanthus* and *Pilumnus* as the same kind of animal. *Pilumnus* is considered to be merely a large specimen and "maybe an adult," the other *Pilumnus* "is young." When questioned about the reason for the identity the informants pointed out the hairiness of both crabs.

On the other hand, although *Spelenophorus* and *Microphyrus* have the same Seri name, they are considered two different species.

Economy

Crustaceans play little role in the Seri diet. Very few are eaten at all and when they are, the amounts are insignificant and they are considered an inferior sort of food. The informants denied that they have eaten any of them in recent years, but allowed that two species, *Callinectes* and *Axius*, had been part of their diet in the past, although how long ago they didn't specify. There is no doubt, however, that in time of frequent sub-famines, the Indians resort to these lowly creatures.

In addition to this, *Microphyrus* had been mentioned as a fish bait. It is possible that in a pinch other forms are also so used. Finally, the most frequent function that the crustaceans play in the Seri life is as objects of play for the boys who spear them with the miniature two-pronged "pueros."

Sexing

For three species of the crustaceans the Seris indicated distinction differences between the sexes. In the two crabs, *Callinectes* and *Leptodius*, the males have narrow center plate while the female's center plate is wide, which in fact is a well-known sex difference in crab. In *Glyptoxanthus* and *Lep-*

9:Malkin E-5 (1953-1955)1962 NU31 Seri NU31

VIII

CRUSTACEA

* 825 *todius*, they say the male is also much larger than the female although colors of both are alike. We then have here one of the general sexing criteria that runs through the entire animal kingdom.

For the remaining five species, the informants simply din't know how to tell the sexes apart, although they asserted that they are both present.

Age

No data are available for this topic.

Size and Weight

There is little information for this. It appears that the Seri considered the specimens shown to them as representing the usual size for each species. Only in *Callenectes* they indicated that "it grows a little larger."

Food

The Seris have very little information about the feeding habits of the crustaceans; with the exception of two species they simply didn't know what the animals eat. The two, *Leptodius* and *Callinectes*, they believe, are scavengers feeding on dead fish. Of course, with the lot of offal floating along the shore in the Seri encampments such observation is not difficult.

Development

The tendency is to consider the crustaceans as oviparous animals. In half of the species, it is true, the informants didn't know the answer. But the remaining four they indicated laid eggs. It is not amiss to point out here that in these matters, as also in general in matters concerning obscure marine invertebrates, the young or adolescent boys did much better than older men. Older men devote their time to fishing, boys to the gathering and persecution of all sorts of small animals. The adult men simply may have forgotten some of the things they learned in their younger age. In any event, *Callinectes*, *Leptodius* and *Glyptoxanthus* and *Pilumnus* are all egg-bearing species in their view. The female of the *Callinectes* carries the eggs under its carapace. The *Glyptoxanthus* delivers its eggs in the cold season, which is the reversal of the usual Seri idea about the reproductive season of the marine invertebrates and other animals.

● [857]

Seasonality

Here again there is distinct tendency to associate the rarity or abundance of animals with the season. Half of the species, according to the informants, are equally common in the hot or the cold season but the other half occur predominatly

9:Malkin E-5 (1953-1955)1962 NU31 Seri NU31

X

INSECTS AND ARACHNOIDS

114 Altogether information has been collected concerning 92 species of insects, scorpions, ticks, myriapods and arachnoids.

Economic uses

262 [114] McGee says that "good many insects" are part of the Seri diet, although he does not specify just which they were nor how significant. There is no doubt that in his days, the insects played some role in the Seris' food and that they were probably far more important in the distant past, in the [177] XVIII and early XIX centuries, before large flocks of livestock, horses and cattle of the Spanish rancheros offered excellent opportunities to supplement the usual diet.

Of all this but minor traces remain today. The Seris even have forgotten which insects had been eaten by their ancestors. Apart from the bees, only the Sphingid caterpillar has been indicated as "eaten in the past, but not now." As for the bees, [263] their honey still is part of the Seri diet. But with the availability of sugar, even this addiction dwindles.

† 825 ● 857 Other than this I have been unable to discover any uses whatever, except perhaps as playthings of little boys, with the usual torture in view. The *Cicada* is most significant of these, of which more later.

Pets

231 [171] The only insect pet is a *Cicada*. This insect is usually tied to a long thread, its forewings partly clipped off and then released into the air like a kite. Local Mexicans also provide their own boys with a similar kind of toy.

Hunting

222 Only bees are hunted. They are usually flushed out of the cave shelters in the mountains. The operation is accomplished without the use of smoke. The honey is cut out with a knife.

Taxonomy

* 825 Seris' ideas of association of various insects are very loose. Few insects are recognized to form natural groupings; bees, butterflies, wasps, spiders are most distinct. However, there are all sorts of gradations blending confusedly with each other, often dependent on the knowledge and interest of particular informants.

Simple recognition is not always present. Out of 92 forms, 13 the informants could not identify, simply saying that they didn't know them. *Cicindela lemniscata*, *Melanotus cribricollis*, *Horistonotus*, *Meloid*, *Oxacis*, both species of *Cymatodera*, *Photopis*, *Scolopsella*, tiny Scarab, *Leptoremus*, *Homolocorus*, and *Reduviid*—all these were in the

[P 47 B]

9:Malkin E-5 (1953-1955)1962 NU31 Seri NU31

* 825 it is said to live "in refuse, fish and fish offal and only in the fishing camp." This is one that one must reconcile with the Seris' simultaneous belief that it is parasitic on dogs and that it sucks human blood as well. More difficulty here creates their belief that it is found only in the camp but that the dogs on Tiburon are free from it.

The Phasmids interestingly are associated with trees and sticks, a very correct notion and the Mantids also with the trees.

However, the information is incomplete and apart from the few cases cited above usually contradictory and hazy.

Toxic Insects

Only 19 species out of 92, or little more than 20% of the total, are considered toxic in anyway. Unlike in most of the other phases of the Seri knowledge of the natural history of insects, the natural groupings are quite clear. The three main groups the Seris consider toxic or harmful are the Arachnids, the Arachnoids (*Acarina* included) and the *Hymenoptera*, all very much as one would expect. In addition few beetles and bugs complement the list of the dangerous creatures. tures.

Among the *Hymonoptera* are all of the species listed, with the exception of the bee. This may be due to the fact that the bee in the Seri country is the stingless Melipoind (?). Of the toxic kind, *Pepsis* (the Tarantula hawk) is probably most feared. The sting the Seris think is very painful but disappears after a few minutes as it contains [152] little venom. A plant is applied to the bite and also taken internally with hot water. The *Pepsis* must [857] be really feared because the informants assured me it was one insect the children preferred not to play with—an excellent confirmation of the caution. *Chlorion aeriatus*, the Sphecid wasp, induces [752] similar symptoms by its sting. Here as a cure, Vic's mentholate tablets were said to be used, [177] smeared on the injured spot. This cure is also applied by the Mexicans and the Seris probably adopted it from them. The sting of this wasp is [753] considered more dangerous to children than to adults. The Velvet wasps[12] (Multillids) are also supposed to sting with the rear of the body causing some pain. Finally the *Hemisia*, and Anthrophorid bee inflict a good bite but otherwise are harmless.

Arachnids on the whole are more feared than the *Hymenoptera* and include what the Seris believe to be the most dangerous of all terrestrial arthropods, with a very good justification. The effects of the damage inflicted by these creatures is more lasting and overpowering. The Black Widow easily takes first place and is feared as much as the gecko or the rattler. Some Seris even claim it is the most dangerous of all creatures. It [753] may cause death, they say, although usually one can do with a 2-3 day illness. However, to small children the bite (or as they say "sting" owing

[12] *Ptiloglossa mexicana* causes swelling and much pain lasting 2-3 hours and is considered most unpleasant of all Hymenopterans.

[P. 52B]

*825 on the other hand usually falls very close to what happens in the natural situation. Here cultural factors enter: the Seri boys habit of collecting eggs.

[857]

In general, in association with the development, the insignificance or complete absence of the male's parental function is well recognized. Only in the birds and mammals occasionally male's interest in the young had been indicated but even that rarely.

Food

In this field the Seris' knowledge is much better than their knowledge of the development. Herbivores and carnivores are usually quite correctly identified, at least for the majority of the animal groups. Crustaceans they think are largely scavengers—with great degree of accuracy. Predators and their victoms are as a rule scaled down according to the size. Some animals are considered relatively or completely free from predation and when this is so, reasons were usually stated in terms of some peculiarity of structure, size or behaviour. Power of flight figures strongly in this, because only a few birds, they thought, are subject to predation.

DISTRIBUTION

a) Geographical

[182] Knowledge of the geographical distribution of animals as expected is a function of the acquaintance with the particular area or locality and of the frequency of visits to them. It also indicates strong association with the ecology of the habitat, with such features as presence or absence of sand, rocks, types of bottom in waters and so forth. On the relative scale, once more the mammals are best known, insects least.

b) Seasonal

General suggestion of the greater number of species occurring in the hot than in the rainy season runs through all classes of animals. But while in most birds included, the suggestion is only slightly in favor of the hot season, for the reptiles and amphibia it is overwhelmingly in favor of the summer. Oddly, there is no such clear cut association between the presence of insects and season except for few select groups. The *Lepidoptera* and *Neuroptera* are, according to the Seris, largely creatures of warmth. while the *Orthoptera* are of the rains. In general this short of knowledge is quite conspicuous.

c) Ecological

Here the Seris excell and this knowledge of habitats of a very large number of animals is considerable and perhaps more solid than any other feature of the natural history. In species after species, in all groups, habitat preferences were stated (and correctly). It is interesting that the detailed information here was available for practically all listed species of birds, molluscs and fishes. Great deal of information was also pro-

[P.56 A]

vided for other creatures and even 2/3 of the insects. This indicates on one hand the connection between this type of knowledge and economic activity of the adults and on the other hand between the Seri boys' habit to collect and play with all sorts of animals from very early age. This knowledge of the habitats sometimes is even reflected in the aboriginal name of the animal such as for example the use of suffix or prefix *ax* meaning water in several forms associated with water.

Migrations

In contrast to the ecological distribution, knowledge of animals' migrations stands somewhere very near the very bottom in the richness, detail and accuracy. There is but bare suggestion of migration among the mammals and birds and where it does exist among the latter it curiously includes all three overwintering species. This is in contrast to this lack of knowledge or perhaps interest (or both) of migrations of all other animals, Seris' knowledge of the fish migration is much richer. Here at least there is a distinction between the migrating numbers and the size of fish: large fishes migrating supposedly singly, little ones in "millions."

Rhythmic Activity

Rhythmic differentiation is interesting because it clearly divides animals into the nocturnal, diurnal or those that are active in day and at night and because there is a clear association by the groups. Thus all marine animals are considered as both diurnal and nocturnal. But there are also differences in the relative degree of knowledge of different classes. While reptiles, amphibians and mammals stand at the top, the knowledge of this type of behaviour in birds is very fragmentary and in the insects scant and inconclusive, while for the molluscs non-existent.

In this respect, the reptiles probably are most clearly defined and best known.

There is also a clear recognition of the existence of the noon siesta or at least of slowing up of the animal activity. But this applies to the terrestrial animals and there is no suggestion of the siesta for the inhabitants of the sea.

Toxicity

At the apex of toxicity as a group stand unquestionably reptiles and amphibians, with the insects coming next and the marine animals which I loosely brought together under the heading of "miscellaneous" a poor third. Of the reptiles and amphibians 11 species are considered toxic, in various degrees and another seven as dangerous, 44 and 28% respectively, making the total an impressive 72% of all reported species. Among the insects about 20% are considered dangerous and fewer yet toxic; among the mammals fewer yet, with the bat only listed among the toxic forms and that on a disputed evidence; among the birds the eagle as the only dangerous beast and that admittedly on the hearsay; and finally among the molluscs none at all.

The fact is that only rarely these ideas were amiss and only few forms are believed dangerous

000 wear ceremonial feathers as did our western Indians. I saw no skin or
164 cutaneous disease, or evidence of tuberculosis or of trachoma---the curse of our Indians.

142 One boy-child of five years was a handsome child---fat, round,
302 sturdy, with roving great black eyes, large thick lips, a picture of
[241] perfect health. He was almost naked. His hair was done in a pigtail
[657] with a red string braided into it. His face like all the others was dirty, but he waded into the shallow water with a short spear and I saw him catch two crabs with his little harpoon. The water did not bother his face.

415 They had no plates or eating tools, except large deep clam shells,
412 cast up by the sea, which served as cups and dippers. Their long, keen
264 belt knives were used for cutting, carving or skinning, and always the
[259] fingers for eating. They gathered in a circle around an olla of seeds of long grass growing on the sea bottom prepared by winnowing, parching and grinding, and then cooked with turtle oil. Each one dipped his or her fingers into the olla and conveyed them to the mouth without losing a drop, and licked them off with great relish.

231 The dogs eat with the family. There were six or seven half-starved
264 ones. If someone picked up a piece of turtle flipper the dog often took the first lick at it, bit off a piece or licked it before it reached the owner's mouth. The dogs were not punished. They were just slapped to keep them out of the pots.

123 We had a great time that evening in Seriland. The young man played
534 his violin. This consisted of a hollow box cut out of a *palo verde*
[224] tree, and a piece of pine about sixteen inches long; terminating in a
[283] hollow where a single peg was fitted. The one string was twisted deer
[237] sinew, and the bridge was a small round clam shell at the far end. The
[533] bow was a small bent stick and some black horsehair. On the handle was a wad of rosin fastened underneath. By fingering this string a few weak squeaky notes were made, and this was the classical music of the Seris.

Manuel Encina seized his gourd rattle and began chanting. Herrera tapped a tin can and I beat on an inverted basket and the orchestra
535 was in full swing. A young girl, Rosa, dragged out a turtle shell and
123 standing on it began to dance. This dance consisted of stepping up and down quickly with each foot alternately, and this stamping, barefooted, emitted a hollow sound. Every once in a while I let out an
[124] Indian yell which pleased the Seris very much. For two hours they had a real swell time. We took one flashlight of the proceeding.

[342] Each family was in their hut, which afforded very slight shelter
[365] as they were only partially roofed over and the sides were broken
[354] down in places. The huts were all adjoining and each had a little
[361] campfire, which did not give much illumination, so the dancing was in semi-darkness.

[text continues on p. 163]

1: McGee E-5 (1894-1895)1895 NU31 Seri NU31

As an illustration of the ordination in some 129
what unusual circumstances, it may be noted that when the "Seri 562
belle" (Candelaria) refused to pose for a photograph she was supported 626
by the clanmother (Juana María) until the latter was placated by presents; and that when the belle refused to obey the mother's command—to the vociferous scandal of the entire group—Juana María appealed to Señor Encinas, as the conqueror of the tribe and hence as the virtual head of both rancho and rancheria. And when a younger Seri maiden (plate XXV) similarly refused to pose, and in like manner disobeyed her mother (again to the general disgust), the latter appealed to Mashém; when he, after first exacting additional presents for both girl and mother and a double amount for himself, put hands on the recalcitrant demoiselle and forced her into the pose required, despite the shrinking and tremulous terror perceptible even in the picture.

Commonly the regimentation of family, clan, and larger group appears 592
to be indicated approximately by the placement assumed spontaneously in the idle lounging of peace and plenty. A typical placement of a small group is illustrated in plate XIV. Here the family are assembled outside the jacal, but in the relative positions which would be assumed within. The matron (a Red Pelican woman) squats in easy reach of her few and squalid possessions; on her left, i. e., in the group background and place of honor, sits the elderwoman of the rancheria (a Turtle); then comes the daughter of the family, followed by two girl-child guests of the group, the three occupying positions pertaining to chiefs or elder brothers or, in their absence, to daughters; opposite the matron sits a younger brother,[1] whose wife is a Turtle woman (daughter of the dame in the place of honor) and matron of another jacal. A few feet behind this brother (just outside the limits of the photograph reproduced, though shown on the duplicate negative) squats the husband, with his side to the group and face toward the direction of natural approach; while the place belonging to the sons of the family on the matron's right is temporarily occupied by a White Pelican girl, together with a dog, notable in the local pack for largely imported blood and correspondingly docile disposition. The place for the babe, were there one in the family, would be on the heap of odds and ends behind the matron. As in this group so in most others, the place of the sons [858]
is vacant; for the boys are at once the most restless and the most law- [882]
less members of the tribe—indeed, the striplings seem often to ignore the maternal injunctions and even to evade the rarely uttered avuncular orders, so that their movements are practically free, except in so far as they are themselves regimented or graded by strength and fleetness and success in hunting.

The raison d'être of the proprietorship and regimentation reflected in 302
the everyday customs is satisfactorily indicated by that totemic feature 614
of the social organization revealed in the face-painting described in

[1] This man was one of those involved in the Robinson butchery on Tiburon island a few months before the picture was taken; and he was one of those executed or transported for the affair during the interval between the 1894 and 1895 expeditions.

773 Before this it was day all the time, but then it became night and coyote only laughs at night. The black strings still hang about badger's neck."

It is strange to find, too, that a flood legend is traditional among the Seris. Chico said: "In the times of the ancients a great flood came, the ocean rose up and all the country of the Seris was under water except the top of Cerro Alto. There a few Seris gathered and were saved. Everyone else was drowned. To this day the top of Cerro Alto is covered with brush which the flood did not submerge. All Seri children are taught this flood tradition, and they must learn it by heart so as to teach their children and their grandchildren."

764 The death of a tribesman gives no cause for ceremony among the Seris, although the [765] nearest relatives may customarily wail, sometimes for months, morning and evening. The disposal of the bodies of the dead, is, however, of considerable interest. A hole about [412] three feet deep is dug by means of large clam shells and a cave is excavated for the head such that the earth will not touch it. The deceased Indian is wrapped in his own blanket and laid in the grave with the head to the East, face up. The body is covered and the grave is partly filled with earth, then covered with a layer of the spiniest of chollas and thorny brush, further filled, leveled and covered with another layer of chollas to discourage the coyotes from digging up the body. When the Seris are on the move, how- [766] ever, and grave-digging is too great a task, a body may simply be lifted high to the fork of a giant cactus and left there.

583 Marriage among the Seris is not so much 585 a ceremony as it is the completion of a bargain. Under ordinary circumstances, when a man buys a woman he strikes a bargain with the bride's parents and makes a down payment. Only after completion of the bargain does the woman go to live with the man, but even then payments do not cease but continue intermittently through life. Chico Romero, although "married" for fifteen years, gave his wife's father some paint that he had received in payment for guiding and 425 packing. It is also considered natural to 858 buy and sell children. One Seri, Santo

[p. 266 (B)]
[Text continues on p. 267 (B)]

3:Davis & Dawson E-5 (1922-1940) 1945
NU31 Seri NU31

425 Blanco, whose son was only sixteen years
458 old, bought outright for him a little girl of
six years.

When contracts for fish were secured by
621 the Mexicans from American markets in

[p.267(B)]

115 oldest Seris then alive of over 70; Ramon Cor-
[165] rales, claiming to be 37 and on the dim-witted side; Jesus Montanyo, a quiet, cooperative man of 21; Natcheo Molina, aged 35 or so, whose interest in the protestant hymnals was unfortunately far greater than in giving me the information I wanted; Jose Manuel Romero, about 37 years old on his own claim; and Jose Barnett, Miguel's son,
825 aged 14. Inclusion of young Barnett was a lucky strike because it indicated clearly differences in the natural history knowledge between the older men and the young men, later confirmed also in the incidental questioning of several young boys.
●[868] Young men start out with general interest in animals of all sorts, including the small invertebrates, but as they grow up they end up with solid knowledge of economically important species and slim, forgotten knowledge of the insignficant invertebrates.

124 I made an endeavor to obtain the same sort of information from several informants in order to eliminate as far as possible aberrant answers or peculiarities. The most solid information is available for the mammals, which are, of course, well-known. Here in some cases the same kind of information had been obtained from five individuals. In other instances only two to three were available and sometimes only one. What was surprising about the information given were not the differences, which I often indicated in the text, but the amount if identical agreement on almost every single item of data between different individuals.

Since it was impossible to obtain information on all animals from the same individuals, the questioning proceeded in "blocks." By this I mean, I would question for example two individuals about the entire order of mammals (every species of them) and another two on the birds. Two other individuals then would be questioned on half of the birds and half of the mammals, while the other two on half of the reptiles and half of the fishes; still another two on half of the insects and half of the marine invertebrates, while others would yet cover all of the insects or reptiles or fishes independently. This I believe is a useful procedure. It allows to test generalized concepts of natural history for several individuals for diverse groups. It is motivated by the question of no little importance. What does so-and-so know about mammals and what does he know about birds?
[825] What are his generalized ideas of each group? It had been soon discovered that when it concerns special points, the informants were apt to have standardized notions of what the animals did, regardless of the actual situation. The less actual observational knowledge they actually had, the more frequent were pat replies. Obvious demonstration of this helped a great deal to eliminate such pat answers or to recognize them for what they were and to account for them in the final analysis.

ooo Another point in the procedure is of par-

[P.5A]

9:Malkin E-5 (1953-1955)1962 NU31 Seri NU31

XI

SUMMARY

224 Hunting is very decidedly secondary to fishing, although it is still much practiced by certain individuals and in a desultory way probably by all.

462 There is a clean cut division of labor in all these occupations. Fishing and hunting are men's occupations, gathering of the desert animals and beachcombing for the intertidal animals is largely the job of women and children. Boys get broken [868] into men's occupations in adolescence, girls into women's jobs very much earlier.

224 Avoidance of fishing or hunting certain creatures appears much more a matter of custom than of well defined and socially rationalized attitude. Frequently an animal is not hunted simply because the Seri feel it is too big and too strong for them to tackle.

157 Through all these activities, Seri individualism is curiously woven and accounts for the failure of anything that might resemble a collective effort.

Food Preferences and Preparation

252 Seri food is prepared in a simplest sort of way. Boiling in water is usual with salt and sometimes [263] a few other spices added. While most food is prepared that way, snakes and fishes are usually fried, without any ingredients. There has been a [178] notable shift toward greater fanciness in the ingredients, as they have become more readily available.

262 There are many preferences. Animals are scaled in desirability. Some fishes, marine turtles, chuckawalla, deer and peccary and duck are at the top of the list; lower animals, smaller fishes including puerco in the middle, while the sea gull and the pelican are probably at the very bottom of the pit. This again reflects temporal changes in tastes [178] although not necessarily a direct influence from the Mexicans.

Pets

231 Few pets are kept, other than dogs. Such animals as come are those captured accidentally. In most cases they are bird nestlings.

Taxonomy

* 825 Differential criteria are applied in the classification of different groups. There is less tendency to group birds than to group different mammals and classificatory ideas break down almost completely in smaller animals, especially insects and molluscs. Considering the economic importance of the molluscs, poor ability to distinguish the Gastropods from the Pelecypods is striking.

The classificatory criteria differ for different groups. Mammals are generally recognized by the furiness, birds by the ability to fly and the pres-

2: Kroeber E-5 (1930)1931 NU31 Seri NU31

789 Some shamans display their ability to hold live coals in their mouth.

Taboos

[88] 784 At first menstruation, the girl eats nothing (!) for 8 days, only drinking water. For 4 nights a *fiesta* is held for her, men and women dancing in a circle, anti-sunwise. She is outside the ring. Her head is not covered. San-pit roasting was unknown to the informant.

[841] At menstruation a woman drinks hot water. She may cook for others. She may not eat deer meat.

[844] After childbirth, both husband and wife eat only *atole* (gruel) and water, he for 4, she for 8 days. She may not work at all, he only a little, such as getting wood, "hunting" as necessary, etc.

[861] [224] There is no puberty ceremony for boys. Nothing is said to be known of any rule forbidding a boy to eat of the first game killed by him.

[833] Continence before hunting deer was not observed. Nor was there any special treatment or respect due the deer carcass. It is said that deer meat could not be left behind unless there was too much, but this is probably a statement of practise rather than a taboo.

Dances

535 [787] Besides the girl's puberty dance, the Seri also had a scalp dance. Only the frontal piece of the scalp was used. This was hung on a pole. Men (armed) and women danced together around it. If the scalp fell down, all would die.

Dances seen were solo on a plank laid over a shallow pit. Several singers sat by, beating or rattling anything convenient. Each song and dance lasted scarcely three minutes. The tempo is fast. The step is a quick double shuffle with alternate feet. In one type, the dancer held to a stick with one hand, his body and hanging arm remaining as motionless as possible. Another type was without the stick, the dancer holding a gourd rattle and keeping his body bent forward somewhat.

534 171 Rattles are of gourds, e'Xēc, on a stick, or of cocoons, Xekakē'ntta. Deer-hoof rattles were denied. The cocoons are on a band worn below the knee. The Yaqui-Mayo wear such knee-bands of cocoons; and sometimes of deer-hoofs. The Gila Pima also know the cocoon band.

Various Religious Items

276 Datura (toloache, jimsonweed) does not appear to have been used. Even the plant seems unknown, although it is said to occur in the Seri range.

778 789 Rain making seems to be by amulet rather than by direct shamanistic power. For instance, Antonio Herrera wears a small object

12: Moser L-5 (no date) 1964
(ca. 1960) NU31 Seri NU31

SERI BLUE

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ABSTRACT

The blue which the Seri Indians of Sonora, Mexico, use in face painting is not the mineral dumortierite, as previously believed, but is a prepared pigment. This paper is a description of the process in which three elements are combined to produce this pigment.

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McGee and Kroeber reported the mineral dumortierite as the source of the blue pigment used in Seri face painting (McGee 1898: 165-6; Kroeber 1931: 27). Coolidge described two blues, one a mixture of gypsum and a boiled root, the other a blue stone found on Tiburon Island (Coolidge 1939: 200). Xavier mentioned dumortierite and commercial bluing. She also referred to a third blue obtained from a plant on Tiburon (Xavier 1946). Present investigation has shown that as far as the Seri know, the only blues they have ever used are *ika?óil* "to cause to be blue" (commercial bluing) and the highly prized *?antezj kóil* "blue clay" of their own manufacture.[1]

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The components and the method of manufacture of *?antezj kóil* are said to have been taught to the women long ago by *?ant i?akímxoj* "they who tell the things about the earth." The actual color transformation is veiled in mystery to the Seri who say that if the process of making the clay is observed by any girl who has not passed the menarche, the blue will not appear. Its appearance is not attributed to shaman power, however.

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?antezj kóil has been in less demand during the last few decades since commercial bluing has been readily available. Nevertheless, *?antezj kóil* is the blue preferred by those women who continue to adorn their faces in the traditional manner.

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The three ingredients used in making the blue clay are the root bark of *xkoktz (Franseria dumosa)*, *iki kóizj* "to grind with" (a mixed clay in which montmorillonitic layers predominate), and *mokni óoxW* "excrement (sap) of *mókni (Guaiacum coulteri)*." The Seri say that the *iki kóizj* and the *mókni* are found only on Tiburon Island. The root bark of *tinkl (Franseria ambrosioides* Cav.) or of *xneejan siiktoj (Stegnospermum halimifoliam)* can be used instead of *xkoktz*. *tinkl* gives a distinct aroma to the clay. The plants mentioned are fairly common along the Sonoran coast.*

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*EDITOR'S NOTE: It is interesting to note that none of the ingredients is blue in its unaltered state.

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ACKNOWLEDGMENTS

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NOTES

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1. The phonetic values of the symbols used are the following: t is voiceless dental stop; k is vl. velar stop; ? is glottal stop; W is vl. labial grooved-rounded spirant; s is vl. alveolar spirant; z is vl. alveo-palatal spirant; l is vl. lateral spirant; j is vl. velar spirant; x is vl. back velar spirant; m is labial nasal; n is dental nasal; i is a high close front vowel; e is a low close front vowel; a is a low open central vowel; o is a mid close back vowel.

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2. The restriction as stated to me by various women pertains only to young girls below the age of menarche. Actually, however, none of the above-mentioned young men and women, most of them in their twenties, was allowed to observe.

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3. Plant specimens are deposited in the Herbarium of The University of Arizona.

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4. The blue "pencil" which McGee describes (McGee 1898: 166) and pictures (McGee 1898: Plate XXVII facing p. 170) is apparently the *?antezj kóil*.

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1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

what unusual circumstances, it may be noted that when the "Seri belle" (Candelaria) refused to pose for a photograph she was supported by the clanmother (Juana María) until the latter was placated by presents; and that when the belle refused to obey the mother's command—to the vociferous scandal of the entire group—Juana María appealed to Señor Encinas, as the conqueror of the tribe and hence as the virtual head of both rancho and rancheria. And when a younger Seri maiden (plate XXV) similarly refused to pose, and in like manner disobeyed her mother (again to the general disgust), the latter appealed to Mashém; when he, after first exacting additional presents for both girl and mother and a double amount for himself, put hands on the recalcitrant demoiselle and forced her into the pose required, despite the shrinking and tremulous terror perceptible even in the picture.

Commonly the regimentation of family, clan, and larger group appears to be indicated approximately by the placement assumed spontaneously in the idle lounging of peace and plenty. A typical placement of a small group is illustrated in plate XIV. Here the family are assembled outside the jacal, but in the relative positions which would be assumed within. The matron (a Red Pelican woman) squats in easy reach of her few and squalid possessions; on her left, i. e., in the group background and place of honor, sits the elderwoman of the rancheria (a Turtle); then comes the daughter of the family, followed by two girl-child guests of the group, the three occupying positions pertaining to chiefs or elder brothers or, in their absence, to daughters; opposite the matron sits a younger brother,[1] whose wife is a Turtle woman (daughter of the dame in the place of honor) and matron of another jacal. A few feet behind this brother (just outside the limits of the photograph reproduced, though shown on the duplicate negative) squats the husband, with his side to the group and face toward the direction of natural approach; while the place belonging to the sons of the family on the matron's right is temporarily occupied by a White Pelican girl, together with a dog, notable in the local pack for largely imported blood and correspondingly docile disposition. The place for the babe, were there one in the family, would be on the heap of odds and ends behind the matron. As in this group so in most others, the place of the sons is vacant; for the boys are at once the most restless and the most lawless members of the tribe—indeed, the striplings seem often to ignore the maternal injunctions and even to evade the rarely uttered avuncular orders, so that their movements are practically free, except in so far as they are themselves regimented or graded by strength and fleetness and success in hunting.

The raison d'être of the proprietorship and regimentation reflected in the everyday customs is satisfactorily indicated by that totemic feature of the social organization revealed in the face-painting described in

[1] This man was one of those involved in the Robinson butchery on Tiburon island a few months before the picture was taken; and he was one of those executed or transported for the affair during the interval between the 1894 and 1895 expeditions.

462 desert plants or littoral fishlets from tide-pools or of the shellfish. Both men and women will [224] bring in an occasional rattler, although women [857] are more likely to do this because they spend more [883] time in the desert. Children of both sexes are engaged in the female occupations here, but adolescent boys already join in their fathers' hunts on land or sea.

342 Housing has undergone some changes. In the 184 desert or on Tiburon the Indians construct the kind of shelter they did in the recorded past, an ocotillo frame, bent over in the middle and covered up with dried plant debris and twigs from the desert, or with the sail cloth. But in Desemboque they have more substantial houses—of wattle and adobe, with flat roofs, rectangular or square, often with corrugated tin or drift planks and other debris piled up on top, or along the walls.

178 In the remainder of their material culture, not much has been left from years past although one must remember that from the very beginning of recorded Serian history it has been of a most [291] meager sort. Pelican robes, which some Seris ap- [412] parently still wore in 1930 are gone for good. So are the stone tools. So is the pottery which had [323] probably disappeared in Kroeber's time. The hu- [301] man hair necklace with rattlesnake rattles is also a thing of the past. The rattlesnake skin belts [291] McGee (1898:170) described and figured are probably all gone. I havn't seen or heard of any.

412 But what remains much as they had been in 285 1894 are the bone-awls. These are made of burros' carpals and the blossoming of basketry, owing to

[P. 8A]

237 On the other hand, the hides of all of these three animals had been traded off to the Mexicans, [439] but this again was now discarded. This would [182] merely indicate the fluctuation of collapse of the demand from the outside rather than any intrinsic change in the Seri values.

Incidental use of the horns of the bighorn had been denied by all of the younger informants although admitted by Miguel Barnett. However, as [415] I observed, the horns of this sheep are sometimes used as drinking cups. Several of them were [181] lying around in the usual disorderly way of the Seris, now and then picked up for drinking and then again discarded. But the use of them struck me as most casual.

224 *Hunting:* Hunting takes a variety of forms 411 and includes a variety of weapons, from .22 caliber and .30/.30 caliber rifles to spear, stone and throwing stick. Bighorn and deer are followed on foot but without dogs, probably because without dogs they may be easier to surprise. This hunt takes place in daytime. But the peccary is hunted with both the spear and the rifle and with a pack [231] of dogs, and only by the adult men. There is an [885] emphasis on the "adult," this surely owing to the certain amount of danger connected with the chase of the peccaries. The weapons of the chase dwindle to the throwing stick or a stone when it comes to the jackrabbit. Badgers, I was told, are also killed with the same weapons. But formerly, the informants said, bow and arrow was much instrumental in hunting the smaller beasts.

* 825 Other animals, according to the Seris, are not [224] hunted now, nor had they been in the past. Justification for this ranged from the usual "because it isn't done" to the more specific reasons. The skunk is "neither hunted nor eaten because it [225] stinks." The whale is considered "too big to kill" while the killer whale is "too fierce." The harmless *tonita* (dolphin)[1] was reported somewhat hazily as "sometimes killed" but the comments were inconclusive and were denied by other informants.

[224] Two other species had been reported as hunted in the past but not at the present time. The Ringtail cat was supposedly hunted with the slings while the sea lion was hunted down "with a rifle [225] or rock but not with the harpoon because of its great strength, it would break the harpoon." This, however, was "perhaps 25 years ago." Why the sea lion is no longer pursued is uncertain, unless there is again a lack of demand from the outside while the Serian economy is so much centered on fishing.

231 *Pets:* How many species of animals are kept as pets on and off is difficult to say. Like most hunting and gathering groups the Seris are fond of pets but their interest in them depends entirely on an accidental capture. Among the wild mammals of the region there are few that could be captured and tamed easily. The badger which I mentioned already was the only mammal I saw

[237] [1] I have seen bones of beached whales used for stools and [352] also the skull of the *tonita* used as a chair. But it must be remembered that these animals got stranded on the beach. They were not deliberately hunted down.

[P. 10 B]

½ [i.e - deer, bighorn and peccary - Analyst]

8: Ascher E-5 (1960) 1962 NU31 Seri NU31

225 In fishing for turtle, one man stands at the bow of the boat, holding the mainshaft and extension cord in one hand. When he sights a turtle, he propels the mainshaft at the animal's carapace, retaining a firm grip on the mainshaft and the extension cord. If it is struck, the turtle lurches away, loosening the foreshaft and unplugging it from the mainshaft. Tired eventually by the tension [411] applied by the fisherman on the extension cord, the turtle is finally stunned by a wooden club and lifted into the boat.

225 There is evidence that the turtle-fishing complex has consider-175 able time depth and stability. The Seri were using similar apparatus and methods at least as early as 1825 (Hardy 1829: 296-297). At [501] this time they employed balsa boats rather than wooden boats with outboard motors and torches of cactus fibers instead of kerosene lamps. The complex continued, apparently with little change, through 1896 (McGee 1898: 187-193). Wooden boats and kerosene [177] lamps began to be adopted during the 1920s, and outboard motors were introduced in the 1940s.

411 During the entire period of 135 years (1825-1960), however, the 225 harpoon tackle underwent only one important innovation. The 176 gasket on the foreshaft was introduced by a Seri Indian about the year 1935. The addition of the gasket was related to, and coincided [439] in time with, the first attempts of the Seri to supply turtles to the commercial market. When they caught turtles solely for their own use, they did not need to keep the animals alive for very long, but when they began to sell them it became important to preserve them alive until they reached the market. The gasket acts like the hilt on a sword, preventing the entrance of the foreshaft hafting into the turtle's body. Through its contact with the carapace, it restricts the rotation of the point within the animal's body and provides a seal which inhibits the loss of blood, and thus prevents early death. After the turtle is stunned with a club and lifted into the boat, the foreshaft is removed and the hole which it made is stuffed with a piece of cloth.

124 Seri men were shown a harpoon foreshaft from a museum archive 411 and asked what it was for and whether they themselves made similar ones. If an informant acknowledged that he made them, he was asked, at the minimum, to detail the materials he used, the procedures he followed, and the approximate amount of time it would take him to produce one. Later he was requested to show the field worker examples of the foreshafts he had made. Of the approximately 40 adult Seri males, about 25 were available for questioning. Of these, approximately ten did not make foreshafts or had made them in the past but did so no longer; they were mainly older men and those [474] engaged in the administration of the Sociedad Cooperative de Pro-[887] duccion Pesquera Seri. Five men either would not or could not volunteer information. Data were obtained from the remaining ten adult men and from one eight-year-old boy; they include 21 foreshafts made by these eleven people.

411 The materials from which a foreshaft can be shaped and as-325 sembled vary within what is available in the Seri environment. Iron

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

all are at least fairly compatible with the inference that the tribe is exceptionally (if not incomparably) low in the scale of general human development, yet at the same time highly specialized along certain lines; and the inference in turn is corroborated by the coincidence between the special lines of development and the peculiar conditions of environment characterizing the habitat of the tribe.

A striking correspondence between Seri physique and Seri habitat is revealed in the pedal development, with the attendant development of muscle and bone, lung capacity, and heart power, together with other faculties involved in the pedestrian habit. Seriland is a hard and inhospitable home; sea-food is indeed abundant and easily taken, but water is terribly—often fatally—scarce, and obtainable only by distant journeying from the places of easy food supply; moreover, the monotony of the diet is alleviable only by extensive wandering for the collection of vegetal products or severe chase after land animals; while the warlike spirit, apparently inherited from a still less humane ancestry and fostered by the geographic isolation, combines to keep the tribe afoot, avoiding waters, conducting raids, and moving constantly from place to place in the endless search for safety. There is a widespread Sonoran tradition that the Seri systematically exterminate weaklings and oldsters; and it is beyond doubt that the tradition has a partial foundation in the elimination of the weak and helpless through the literal race for life in which the bands participate on occasion. A parallel eliminative process is common among many American aborigines; the wandering bands frequently undergo hard marches under the leadership of athletic warriors with whom all are expected to keep pace, and this leads both to desertion of the aged and feeble and to increased strength and endurance on the part of the strong and enduring; yet it would appear that this merciless mechanism for improving the fit and eliminating the unfit attains unusual, if not unequaled, perfection among the Seri. Now pedal development is one of the special processes of peripheral (or centrifugal) functioning and growth involved in the general process of *cheirization*, which, coordinately with cephalization, defines human progress;[1] and this developmental process explains the specialization of the Seri along one or more lines, and connects the special development directly with environing conditions.

A notable correspondence between structure and function, of such sort as to reflect the habit and habitat, appears in the conspicuous manual development of the Seri. Enjoying a climate too mild to make houses necessary, finding animal food too plentiful to necessitate elaborate contrivances for the chase or milling or other devices for reducing vegetal food, provided by nature with material (in the form of carrizal) for an ideally suitable water craft, barred by geographic boundaries from neighboring tribes, and having neither material for nor interest in commerce, the denizens of Seriland were never forced into the way of mechanical development; yet their simple industries, involving as they

[1] The Trend of Human Progress, American Anthropologist, new series, vol. I, 1899, p. 403.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

CHIEFSHIP

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The unformulated tribal laws of the Seri are intimately connected with leadership, which is, in turn, largely a reflection of personal characteristics; so that the tribal organization is about as variable as that of the practically autonomous herds of cattle ranging the Sonoran plains adjacent to Seriland. Indeed, just as the stock-clans enjoy a precedence on pasturage and at waterholes, determined by the valor and strength of the bulls by which they are led, so the Seri clans appear to be graded by the prowess of their masculine leaders, combined with the sortilegic success of the leaders' consorts; while, just as the leadership of the cattle shifts from band to band as the years go by, according to the fairly equal hazard of natural selection, so the clan dynasties of the human group rise, flourish, and decline in an endless succession shaped by the chances of birth and survival under a capricious environment, by the fate of battles internecine and external, and by various other factors. The instability of the Seri organization is demonstrated by the tribal changes recorded in history, as well as by the vicissitudes within the memory of Señor Encinas and others. At the beginning of the records the Upanguayma were already exiled from Seriland proper [175] and apparently suffering from raids of their collinguals; within a century the Guayma, also, were expatriated and nearly annihilated; then, in the early part of the present century, the Tepoka were extruded and (after a series of wars in active progress in Hardy's time) forced far up the coast to one of the poorest habitats ever occupied by any folk. So, too, throughout the Encinas régime the internal dissensions continued whenever the clans were not combined against aliens; and the veteran pioneer has seen much intratribal strife, attended by the rise and passing of many chiefs, both acknowledged and pretended, and often exercising chiefly prerogatives two or three at a time. This instability grows largely out of the fact that the essential unit is the clan, and that the tribe is nothing more than a lax aggregation; and it is measurably explained by the crude customs accompanying the choice of leaders.

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As already noted, the clan organization is maternal, and the clan-mother is the central figure of the group; but the executive power resides in her brothers in the order of seniority—i. e., while the personal arrangement of the group is maternal, the appellate administration is fraternal. So far as could be ascertained, the form of government is clearly discriminable from that commonly styled avuncular; for, in the first place, the minor administration accompanying the control of property invests the elderwomen with exceptional legislative and judicative powers, while, in the second place, there are no old men (by reason of the militant habit), so that the reverence for age so assiduously cultivated in primitive life extends to matrons much more than to men. [888]